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MANUFACTURES: 1919

AGRICULTURAL IMPLEMENTS

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EXPLANATION OF TERMS.

Scope of census.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than $500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

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

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date did not portray such conditions, an earlier date was requested.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

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

In order to determine as nearly as possible the age distribution of the average number of wage earners for an industry, the per cent distribution by age of the wage earners for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year to determine the average numbers 16 years and over, and under 16, employed.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital (amount actually invested).—The instructions on the schedule for securing data relating to capital were as follows:

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

These instructions were identical with those employed at the censusus of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power equipment of the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuel is impracticable.

AGRICULTURAL IMPLEMENTS.

GENERAL STATISTICS.

General character of the industry.—The agricultural implements manufactured by the establishments here considered may be subdivided into four principal classes: (1) Planters and seeders, (2) plows and cultivators, (3) harvesting implements, and (4) seed separators. In many establishments, however, minor or subsidiary products are manufactured which can not properly be assigned to any of the four main groups, but the value of which is necessarily included in the total value of the products of the factory reporting. In 1919 the total value of these subsidiary or minor products was $132,605,560, exclusive of repair work, such products including hand tools, engines, tractors, automobiles, wagons, and other miscellaneous products.

Agricultural implements were also made by establishments engaged primarily in the manufacture of other products to the value of $14,938,340 in 1919 and $4,033,797 in 1914. The value of such manufactures, however, is not included in the total value of products shown for the agricultural implement industry.

Importance and growth of the industry.—Table 1 summarizes the statistics for each census since 1879, with percentages of increase.

With few exceptions increases are noticeable at each succeeding census. The large increases, however, from 1914 to 1919, in salaries and wages, cost of materials, and value of products are due largely to the general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the increases in the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 will account for the increase in "Rent and taxes."

States ranked by value of products.—Illinois, as shown by Table 2, was preeminently the leading state in the manufacture of agricultural implements in 1919, a condition which has existed for the past several censuses. In 1919 this state reported 41.5 per cent of the total number of wage earners and 42.1 per cent of the total value of products. Wisconsin, second in importance, contributed only 9.6 per cent and 14.3 per cent, respectively, of these two items. In this connection it should be explained that a considerable proportion of the total value of products for Wisconsin represents the manufacture of automobiles and if the ranking of the states were made on the basis of the value of products actually pertaining to the agricultural implement industry, both Indiana and Ohio would take precedence over Wisconsin. Although a majority of the states were engaged in the manufacture of agricultural implements to a limited extent, the industry has become centralized in Illinois, Wisconsin, Indiana, Ohio, New York, Michigan, and California, named in the order of their rank by value of products. Combined these seven states produced 89 per cent of the total value of products for the industry in 1919.

Persons engaged in the industry.—The age classification of the average number of wage earners in Table 3 is an estimate obtained by the method described in the "Explanation of terms." The classification, by sex, for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. Figures in detail will be found in Table 15.

Wage earners, by months.—The statistics for wage earners in Table 4 show the regularity of employment, or the reverse, in accordance with existing industrial conditions during the several census years, together with the percentage which the number reported for each of the several months forms of the number reported for the maximum month.

Wage earners, by months, on the 15th day of the month, or nearest representative day.—As shown by Table 5, the number of wage earners employed in the industry month by month ranged from a maximum of 59,748 in February to a minimum of 49,483 in August, the minimum number being equivalent to 82.8 per cent of the maximum. Figures are given for the states separately, while for the United States the number of males and of females is also shown.

Prevailing hours of labor.—Table 6 shows a marked shortening of the working-day for the industry since 1914. In that year only 14.6 per cent of the wage earners were reported as employed less than 54 hours per week as against 56.2 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 23.8 per cent of the total wage earners, as compared with 4.3 per cent in 1919.

Size of establishments, by average number of wage earners.—Table 7 discloses the significant fact that 218 establishments, or 41.8 per cent of the total number for the industry, employed fewer than 6 wage earners each, while only 393, or seven-tenths of 1 per cent of the total number of wage earners, were em-

ployed therein, showing the predominance of the small establishments based upon the average number of wage earners. On the other hand, the classes "501 to 1,000" and "Over 1,000" wage earners, comprising 23 establishments, employed 32,870 wage earners, or 60.5 per cent of the total average number.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "$100,000 to $1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "$100,000 to $500,000," and "$500,000 to $1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. Table 8, therefore, gives combined figures for these two groups for all items for 1909, and for the average number of wage earners and value added by manufacture for 1914. The statistics in this table show the degree of concentration of production in large establishments. In 1919, the groups "$500,000 to $1,000,000" and "$1,000,000 and over" included 87 establishments, or 16.7 per cent of the total number for the industry, employed 47,013 wage earners, or 86.5 per cent of the total average number, and reported products to the value of $273,232,857, or 89.6 per cent of the total value of products.

Character of ownership.—Table 9 emphasizes the predominance of the corporate form of ownership. Corporations owned 59.1 per cent of the total number of establishments for the industry in 1919, employed 97.5 per cent of the total average number of wage earners, and reported 97.5 per cent of the value of products. During the five-year period, 1914 to 1919, the average number of wage earners in corporations increased 6,796, or 14.7 per cent, and the value of products $139,811,574, or 88.8 per cent.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 10, there was an increase in the total horsepower for the industry of 6,821 horsepower, or 5.6 per cent, due wholly to an increase of 16,906 horsepower, or 54.6 per cent, in rented power, since owned power decreased 10,085 horsepower, or 11.1 per cent, during this five-year period.

Fuel consumed.—Table 11 shows the principal kinds of fuel used for the industry in 1919 and 1914, with per cent of increase, and also gives separately the amounts consumed in states requiring considerable quantities of fuel for such manufactures. Of the totals for the three chief kinds of fuel used in connection with the industry in 1919, Illinois reported 52.5 per cent of the bituminous coal, 37.4 per cent of the coke, and 47.9 per cent of the fuel oils. Anthracite coal is naturally consumed in the Eastern states, and three states—New Jersey, New York, and Pennsylvania—combined, reported 92 per cent of this kind of coal used by the industry in 1919.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	NUMBER OR AMOUNT.							PER CENT OF INCREASE.[1]					
	1919	1914	1909	1904	1899	1889	1879	1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments	521	601	640	648	715	910	1,943	−13.3	−6.1	−1.2	−9.4	−21.4	−53.2
Persons engaged	67,177	58,118	60,229	55,089	57,254	(2)	(2)	15.6	−3.5	9.3	−3.8	.....	.....
Proprietors and firm members	321	431	465	496	626	(2)	(2)	−25.5	−7.3	−6.2	−20.8	.....	.....
Salaried employees	12,488	9,228	9,213	7,199	10,046	(2)	(2)	35.3	0.2	28.0	−28.3	.....	.....
Wage earners (average number)	54,368	48,459	50,551	47,394	46,582	38,827	39,580	12.2	−4.1	6.7	1.7	(3)	(3)
Primary horsepower	128,249	121,428	100,601	89,738	70,646	50,395	44,731	5.6	20.7	12.1	27.0	40.2	12.7
Capital	$366,962,052	$338,531,673	$256,281,086	$196,740,709	$157,707,951	$145,313,997	$62,109,608	8.4	32.1	30.3	24.8	8.5	134.0
Salaries and wages	88,630,177	47,603,799	38,748,613	32,575,296	30,814,090	21,811,761	15,359,610	86.2	22.9	19.0	5.7	41.3	42.0
Salaries	21,925,743	13,010,465	10,139,998	7,572,646	8,363,210	(2)	(2)	68.5	28.3	33.9	−9.5	.....	.....
Wages	66,704,434	34,593,325	28,608,615	25,002,650	22,450,880	(2)	(2)	92.8	20.9	14.4	11.4	.....	.....
Paid for contract work	113,421	104,488	93,632	133,420	138,146	(2)	(2)	8.5	11.6	−29.8	−3.4	.....	.....
Rent and taxes	12,174,851	1,714,209	1,117,440	[4] 795,949	[4] 597,679	(2)	(2)	610.2	53.4	40.4	33.2	.....	.....
Cost of materials	144,571,943	73,508,645	60,306,519	48,281,406	43,944,628	31,603,265	31,531,170	96.7	21.9	24.9	9.9	39.1	0.2
Value of products	304,961,265	164,086,835	146,329,268	112,007,344	101,207,428	81,271,651	68,640,486	85.9	12.1	30.6	10.7	24.5	18.4
Value added by manufacture[5]	160,389,322	90,578,190	86,022,749	63,725,938	57,262,800	49,668,386	37,109,316	77.1	5.3	35.0	11.3	15.3	33.8

[1] A minus sign (−) denotes decrease.
[2] Figures not available.
[3] Figures not strictly comparable.
[4] Exclusive of internal revenue.
[5] Value of products less cost of materials.

TABLE 2.—AGRICULTURAL IMPLEMENTS FOR STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	521	54,368	100.0	.....	$304,961	100.0	.....	$160,389	100.0	.....
Illinois	68	22,548	41.5	1	128,285	42.1	1	63,125	39.4	1
Wisconsin	34	5,237	9.6	3	43,623	14.3	2	25,138	15.7	2
Indiana	29	5,533	10.2	2	31,824	10.4	3	19,209	12.0	3
Ohio	46	4,931	9.1	4	26,556	8.7	4	13,589	8.5	4
New York	40	4,626	8.5	5	20,421	6.7	5	10,482	6.5	5
Michigan	23	2,708	5.0	6	11,091	3.6	6	6,043	3.8	6
California	34	1,578	2.9	7	9,490	3.1	7	5,773	3.6	7
Iowa	26	906	1.7	9	5,959	2.0	8	3,137	2.0	8
Pennsylvania	27	1,371	2.5	8	5,536	1.8	9	2,940	1.8	9
Kentucky	8	773	1.4	11	4,407	1.4	10	2,127	1.3	10
Georgia	13	892	1.6	10	3,476	1.1	11	1,663	1.0	11
Tennessee	14	727	1.3	12	2,516	0.8	12	1,279	0.8	12
Minnesota	16	501	0.9	13	2,341	0.8	13	986	0.6	13
Missouri	14	254	0.5	14	1,457	0.5	14	656	0.4	15
New Jersey	10	219	0.4	18	1,365	0.4	15	665	0.4	14
Virginia	14	239	0.4	16	926	0.3	16	557	0.3	16
Washington	9	146	0.3	19	913	0.3	17	467	0.3	17
North Carolina	17	230	0.4	17	877	0.3	18	557	0.3	16
Kansas	14	129	0.2	20	770	0.3	19	317	0.2	18
Vermont	10	241	0.5	15	601	0.2	21	310	0.2	20
Nebraska	8	66	0.1	23	350	0.1	23	143	0.1	23
Colorado	5	19	(1)	27	122	(1)	27	64	(1)	26
All other states	42	494	0.9	.....	2,055	0.7	.....	1,162	0.7	.....

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

TABLE 3.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
All classes	1919	67,177	63,781	3,396	94.9	5.1
	1914	58,118	56,400	1,718	97.0	3.0
	1909	60,229	58,517	1,712	97.2	2.8
Proprietors and officials	1919	3,187	3,130	57	98.2	1.8
	1914	2,087	2,050	37	98.2	1.8
	1909	2,489	2,445	44	98.2	1.8
Proprietors and firm members	1919	321	298	23	92.8	7.2
	1914	431	409	22	94.9	5.1
	1909	465	448	17	96.3	3.7
Salaried officers of corporations	1919	587	565	22	96.3	3.7
	1914	552	540	12	97.8	2.2
	1909	569	564	5	99.1	0.9
Superintendents and managers	1919	2,279	2,267	12	99.5	0.5
	1914	1,104	1,101	3	99.7	0.3
	1909	1,455	1,433	22	98.5	1.5
Clerks and other subordinate salaried employees.	1919	9,622	7,276	2,346	75.6	24.4
	1914	7,572	6,384	1,188	84.3	15.7
	1909	7,189	6,137	1,052	85.4	14.6
Wage earners (average number)	1919	54,368	53,375	993	98.2	1.8
	1914	48,459	47,966	493	99.0	1.0
	1909	50,551	49,935	616	98.8	1.2
16 years of age and over	1919	54,314	53,322	992	98.2	1.8
	1914	48,377	47,884	493	99.0	1.0
	1909	50,345	49,730	615	98.8	1.2
Under 16 years of age	1919	54	53	1	98.1	1.9
	1914	82	82	.....	100.0	.....
	1909	206	205	1	99.5	0.5

TABLE 4.—WAGE EARNERS, BY MONTHS: 1919, 1914, AND 1909.

MONTH.	NUMBER.[1] 1919	NUMBER.[1] 1914	NUMBER.[1] 1909	PER CENT OF MAXIMUM. 1919	PER CENT OF MAXIMUM. 1914	PER CENT OF MAXIMUM. 1909
January	57,926	61,746	51,540	97.0	99.8	92.9
February	59,748	61,900	53,673	100.0	100.0	96.8
March	58,653	58,143	54,759	98.2	93.9	98.7
April	55,771	54,305	53,165	93.3	87.7	95.9
May	53,994	49,904	50,990	90.4	80.6	91.9
June	52,817	46,990	48,727	88.4	75.9	87.9
July	52,900	45,169	45,027	88.5	73.0	81.2
August	*49,483*	37,340	*44,906*	82.8	60.3	81.0
September	51,256	*35,208*	46,484	85.8	56.9	83.8
October	51,059	39,536	49,477	85.5	63.9	89.2
November	52,610	44,219	52,410	88.1	71.4	94.5
December	56,199	47,048	**55,465**	94.1	76.0	100.0

[1] The figures represent the number employed on the 15th of each month or the nearest representative day. Maximum number indicated by bold-faced figures, minimum by *italic* figures.

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment for each state is indicated by **bold-faced** figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States	54,368	57,926	**59,748**	58,653	55,771	53,994	52,817	52,900	*49,483*	51,256	51,059	52,610	56,199	82.8
Males	53,375	56,859	**58,684**	57,617	54,765	53,043	51,925	51,950	*48,680*	50,326	49,981	51,518	55,152	83.0
Females	993	1,067	1,064	1,036	1,006	951	892	950	*803*	930	1,078	**1,092**	1,047	73.5
California	1,578	2,112	2,067	1,796	1,675	1,621	1,451	1,287	*1,184*	1,196	1,393	1,522	1,632	56.1
Georgia	892	1,019	**1,093**	1,014	829	734	*730*	815	838	880	873	909	970	66.8
Illinois	22,548	24,513	**25,045**	24,474	22,811	21,940	21,613	22,448	*18,920*	21,784	21,848	22,016	23,164	75.5
Indiana	5,533	5,650	5,697	5,379	*5,054*	5,214	5,244	5,426	5,519	5,416	5,770	5,909	**6,118**	82.6
Iowa	906	886	913	924	915	881	892	900	*854*	856	909	951	**991**	86.2
Kentucky	773	879	909	**924**	885	838	653	645	*627*	656	706	716	838	67.9
Michigan	2,708	2,644	2,943	3,111	**3,113**	2,913	2,818	2,668	2,683	*2,110*	2,273	2,468	2,752	67.8
Minnesota	501	475	485	481	451	*448*	480	512	541	**559**	503	544	533	80.1
New York	4,626	4,971	**5,341**	5,247	5,118	4,908	4,520	4,477	4,193	4,023	*3,779*	4,134	4,801	70.8
Ohio	4,931	5,263	5,344	**5,411**	5,032	4,813	4,669	*4,406*	4,642	4,741	4,765	4,938	5,148	81.4
Pennsylvania	1,371	1,500	1,476	1,439	1,494	**1,531**	1,445	1,392	1,515	*987*	1,092	1,127	1,454	64.5
Tennessee	727	706	692	705	681	678	707	*630*	707	769	806	817	826	76.3
Wisconsin	5,237	5,190	5,627	**5,681**	5,625	5,368	5,474	5,307	5,259	5,302	*4,365*	4,612	5,034	76.8

TABLE 6.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States	1919	54,368	169	76	2,372	27,952	6,256	15,180	2,348	15
	1914	48,459	(2)	(2)	4,461	2,632	4,559	25,258	11,539	10
	1909	50,551	(2)	(2)	453	2,029	4,081	27,549	16,307	132
California	1919	1,578	30	.....	1,235	265	48	.....	.....	.....
	1914	704	(2)	(2)	8	26	670	.....	.....	.....
Georgia	1919	892	.....	.....	1	132	10	487	262	.....
	1914	577	.....	.....	.....	77	.....	52	448	.....
Illinois	1919	22,548	.....	.....	179	17,732	3,086	1,339	212	.....
	1914	19,556	(2)	(2)	1,197	730	566	13,752	3,311	.....
Indiana	1919	5,533	.....	.....	163	2,990	162	2,046	172	.....
	1914	3,991	(2)	(2)	2,898	407	332	.....	354	.....
Iowa	1919	906	.....	76	2	213	204	315	96	.....
	1914	1,164	(2)	(2)	1	141	37	405	580	.....
Kentucky	1919	773	.....	.....	.....	58	11	698	6	.....
	1914	660	.....	.....	.....	32	28	599	1	.....
Michigan	1919	2,708	.....	.....	2	219	120	2,266	101	.....
	1914	2,143	(2)	(2)	199	411	788	411	334	.....
Minnesota	1919	501	.....	.....	6	230	14	111	140	.....
	1914	872	(2)	(2)	1	.....	9	179	683	.....
New York	1919	4,626	.....	.....	309	3,200	774	267	76	.....
	1914	5,392	.....	.....	.....	13	132	3,571	1,675	1
Ohio	1919	4,931	4	.....	4	1,864	634	2,006	416	3
	1914	5,464	(2)	(2)	10	593	811	3,519	531	.....
Pennsylvania	1919	1,371	125	.....	.....	540	343	262	101	.....
	1914	2,018	(2)	(2)	1	16	571	1,178	252	.....
Tennessee	1919	727	5	.....	.....	44	50	192	436	.....
	1914	517	.....	.....	.....	.....	91	.....	418	8
Wisconsin	1919	5,237	.....	.....	216	48	3	4,899	71	.....
	1914	3,143	(2)	(2)	4	65	88	802	2,183	1

[1] Includes 48 and under for 1914 and 1909.

[2] Corresponding figures not available.

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TABLE 7.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States....1919..	521	54,368	49	178	393	103	1,165	67	2,281	43	2,961	46	7,204	21	7,494	13	10,621	10	22,249
1914..	601	48,459	35	242	520	110	1,367	76	2,408	45	3,156	50	8,286	22	7,894	14	8,948	7	15,880
California	31	1,578	2	19	35	7	81	3	124	.....	.....	2	335	.....	.....	1	1,000	.....	.....
Georgia	13	892	1	4	10	3	37	2	64	.....	.....	2	348	1	433	.....	.....	.....	.....
Illinois	68	22,548	5	13	39	7	66	4	141	11	768	12	1,896	5	1,780	7	5,010	4	11,948
Indiana	29	5,533	1	7	17	6	71	5	144	3	200	3	496	2	719	.....	.....	2	3,886
Iowa	26	906	2	9	18	8	90	2	75	1	77	4	646	.....	.....	.....	.....	.....	.....
Kentucky	8	773	.....	4	5	2	28	1	42	.....	.....	.....	.....	.....	.....	1	698	.....	.....
Michigan	23	2,708	.....	6	19	4	59	6	234	3	202	1	208	2	944	.....	.....	1	1,042
Minnesota	16	501	.....	5	14	5	56	4	141	.....	.....	2	290	.....	.....	.....	.....	.....	.....
New York	40	4,626	1	8	12	10	120	12	378	3	210	1	111	2	748	1	850	2	2,188
Ohio	46	4,934	3	14	36	5	70	4	152	4	325	9	1,493	5	1,593	2	1,262	.....	.....
Pennsylvania	27	1,371	7	3	7	4	33	4	115	4	244	3	347	2	625	.....	.....	.....	.....
Tennessee	14	727	1	4	9	3	34	2	87	2	133	1	119	1	345	.....	.....	.....	.....
Wisconsin	34	5,237	6	12	28	3	31	5	170	2	143	3	481	1	307	1	892	1	3,185

TABLE 8.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes	521	601	640	54,368	48,459	50,551	$304,961,265	$164,086,835	$146,329,268	$160,389,322	$90,578,190	$86,022,749
Less than $5,000	98	169	156	74	176	171	241,262	407,827	359,971	126,093	250,073	227,415
$5,000 to $20,000	103	129	172	317	653	844	1,137,315	1,335,821	1,827,822	617,609	742,048	1,059,129
$20,000 to $100,000	130	142	142	1,672	2,062	2,928	6,617,812	6,845,330	6,927,862	3,425,192	3,789,067	3,779,091
$100,000 to $500,000	103	93	136	5,202	14,601	16,287	23,732,019	21,668,107	43,075,407	12,418,551	23,497,005	23,531,486
$500,000 to $1,000,000	20	32		4,388			20,511,703	21,398,998		10,958,339		
$1,000,000 and over	58	36	34	42,625	30,367	30,321	252,721,064	112,430,752	94,138,206	132,843,538	62,299,997	57,425,628
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	18.8	28.1	24.4	0.1	0.4	0.3	0.1	0.2	0.3	0.1	0.3	0.3
$5,000 to $20,000	19.8	21.5	26.9	0.6	1.3	1.7	0.4	0.8	1.3	0.4	0.8	1.2
$20,000 to $100,000	25.0	23.6	22.2	3.1	5.5	5.8	2.2	4.2	4.7	2.1	4.2	4.4
$100,000 to $500,000	19.8	15.5	21.3	9.7	30.1	32.2	7.8	13.2	29.4	7.7	25.9	27.4
$500,000 to $1,000,000	5.6	5.3		8.1			6.7	13.0		6.8		
$1,000,000 and over	11.1	6.0	5.3	78.4	62.7	60.0	82.9	68.5	64.3	82.8	68.8	66.8

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TABLE 9.—CHARACTER OF OWNERSHIP, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Census year.	Number of establishments owned by— Individuals.	Corporations.	All others.	Average number of wage earners. Total.	In establishments owned by— Individuals.	Corporations.	All others.	Per cent of total. Individuals.	Corporations.	All others.	Value of products. Total.	Of establishments owned by— Individuals.	Corporations.	All others.	Per cent of total. Individuals.	Corporations.	All others.
United States	1919	139	308	74	54,308	546	53,029	733	1.0	97.5	1.5	$304,961,265	$2,301,965	$297,301,964	$5,267,336	0.8	97.5	1.7
	1914	188	318	95	48,459	819	46,233	1,407	1.7	95.4	2.9	164,086,835	2,087,593	157,490,300	4,508,942	1.3	96.0	2.7
	1909	184	349	107	50,551	965	48,141	1,145	1.9	95.2	2.9	146,329,268	2,171,896	140,603,575	3,490,827	1.5	96.1	2.4
California	1919	20	10	4	1,578	46	1,513	19	2.9	95.9	1.2	9,490,169	233,287	9,091,928	164,894	2.5	95.8	1.7
	1914	14	8	6	704	26	665	13	3.7	94.5	1.8	1,962,235	177,020	1,740,221	44,994	9.1	88.7	2.2
Georgia	1919	3	9	1	892	[1] 4	888	.....	0.4	99.6	.....	3,475,705	[1] 18,943	3,456,762	.....	0.5	99.5	.....
	1914	4	9	5	577	14	531	32	2.4	92.0	5.5	1,501,347	21,876	1,380,941	98,530	1.5	92.0	6.6
Illinois	1919	3	55	10	22,518	4	22,469	75	(2)	99.6	0.3	128,284,716	43,430	127,941,845	329,441	(2)	99.7	0.3
	1914	11	51	11	19,556	48	19,443	65	0.2	99.4	0.3	65,337,663	151,057	65,017,298	169,308	0.2	99.5	0.3
Indiana	1919	5	22	2	5,533	[1] 30	5,503	.....	0.5	99.5	.....	31,823,733	[1] 102,304	31,721,429	.....	0.3	99.7	.....
	1914	8	23	2	3,991	[1] 32	3,959	.....	0.8	99.2	.....	12,791,461	[1] 55,657	12,735,804	.....	0.4	99.6	.....
Iowa	1919	4	17	5	906	21	871	14	2.3	96.1	1.5	5,959,129	60,396	5,869,261	89,562	1.1	97.5	1.4
	1914	9	16	9	1,164	12	965	187	1.0	82.9	16.1	5,216,245	48,430	4,300,085	867,730	0.9	82.4	16.6
Michigan	1919	6	16	1	2,708	[1] 95	2,613	.....	3.5	96.5	.....	11,090,069	[1] 274,717	10,815,352	.....	2.5	97.5	.....
	1914	8	18	4	2,143	96	2,027	20	4.5	94.6	0.9	7,731,217	273,131	7,390,617	67,469	3.5	95.6	0.9
Minnesota	1919	3	12	1	501	[1] 11	490	.....	2.2	97.8	.....	2,341,311	[1] 46,635	2,294,676	.....	2.0	98.0	.....
	1914	3	11	3	872	5	857	10	0.6	98.3	1.1	3,812,728	21,785	3,740,339	50,604	0.6	98.1	1.3
Missouri	1919	4	7	3	254	33	213	8	13.0	83.9	3.1	1,456,774	150,450	1,258,402	47,922	10.3	86.4	3.3
	1914	6	9	3	240	41	192	7	17.1	80.0	2.9	569,904	116,600	390,034	63,270	20.5	68.4	11.1
New York	1919	10	24	6	4,626	72	4,487	67	1.6	97.0	1.4	20,424,368	236,562	19,846,625	398,181	1.2	97.2	1.7
	1914	14	20	7	5,302	90	5,263	39	1.7	97.6	0.7	14,576,694	187,918	14,137,363	251,413	1.3	97.0	1.7
Ohio	1919	5	34	7	4,631	4	4,531	396	0.1	91.9	8.0	20,556,631	35,175	23,164,938	3,355,918	0.1	87.2	12.6
	1914	14	41	4	5,464	59	5,232	173	1.1	95.8	3.2	17,484,615	168,920	16,335,978	979,717	1.0	93.4	5.6
Pennsylvania	1919	11	12	4	1,371	80	1,219	72	5.8	88.9	5.3	5,536,111	205,640	5,142,980	187,491	3.7	92.9	3.4
	1914	17	15	6	2,018	137	1,209	672	6.8	59.9	33.3	4,843,655	211,440	3,169,077	1,463,138	4.4	65.4	30.2
Tennessee	1919	2	9	3	727	.....	706	[3] 21	.....	97.1	2.9	2,516,339	.....	2,143,159	[3] 373,180	.....	85.2	14.8
	1914	6	8	3	517	71	440	6	13.7	85.1	1.2	1,121,694	193,636	913,509	14,549	17.3	81.4	1.3
Wisconsin	1919	9	19	6	5,237	33	5,196	8	0.6	99.2	0.2	43,623,308	128,566	43,450,503	44,239	0.3	99.6	0.1
	1914	13	24	9	3,143	21	3,100	22	0.7	98.6	0.7	26,119,058	112,234	19,928,945	77,879	0.6	99.1	0.4

[1] Includes the group "All others." [2] Less than one-tenth of 1 per cent. [3] Includes the group "Individuals."

TABLE 10.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	Number of engines or motors. 1919	1914	1909	Horsepower. Amount. 1919	1914	1909	Per cent distribution. 1919	1914	1909
Primary power, total	5,168	3,437	1,794	128,249	121,428	100,601	100.0	100.0	100.0
Owned	574	823	862	80,407	90,492	84,717	62.7	74.5	84.2
Steam [1]	334	470	504	69,942	79,688	71,894	54.5	65.6	71.5
Engines	303	(2)	(2)	51,107	(2)	(2)	39.8	.....	.....
Turbines	31	(2)	(2)	18,835	(2)	(2)	14.7	.....	.....
Internal-combustion engines	166	280	261	4,092	5,113	4,433	3.2	4.2	4.4
Water wheels, turbines, and motors	74	73	97	6,373	5,691	8,390	5.0	4.7	8.3
Rented	4,594	2,614	932	47,842	30,936	15,884	37.3	25.5	15.8
Electric	4,594	2,614	932	47,842	30,764	15,684	37.3	25.3	15.6
Other	.....	.....	.....	.....	172	200	.....	0.1	0.2
Electric	7,993	5,780	2,057	100,263	83,117	38,905	100.0	100.0	100.0
Rented	4,594	2,614	932	47,842	30,764	15,684	47.7	37.0	40.3
Generated by establishments reporting	3,399	3,175	1,125	52,421	52,353	23,221	52.3	63.0	59.7

[1] Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power. [2] Not reported separately.

TABLE 11.—FUEL CONSUMED, BY STATES: 1919.

STATE.	Census year.	COAL. Anthracite (tons, 2,240 pounds).	COAL. Bituminous (tons, 2,000 pounds).	Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
United States	1919	13,497	549,557	115,368	342,547	29,054	435,393
	1914	8,863	555,271	104,386	240,060	(1)	234,349
Per cent of increase [2]		52.3	−1.0	10.5	55.0	(1)	85.8
California	1919	63	450	807	13,185	4,772	14,916
	1914	21	564	153	2,957	(1)	5,106
Georgia	1919	.....	3,938	2,390	.....	818	.....
	1914	4	4,720	1,531	6	(1)	.....
Illinois	1919	98	288,295	43,202	164,194	5,052	296,742
	1914	536	289,849	46,500	131,241	(1)	5,049
Indiana	1919	34	56,328	15,526	63,664	9,429	1,616
	1914	25	45,630	10,486	13,760	(1)	826
Iowa	1919	5	4,280	2,420	3,382	694	4,545
	1914	551	7,073	1,205	579	(1)	2,704
Kentucky	1919	.....	3,097	66	120	5	12,213
	1914	.....	8,305	463	2	(1)	392
Michigan	1919	82	23,040	4,882	4,[illegible]65	112	1,722
	1914	115	23,242	2,996	11,716	(1)	146
Minnesota	1919	3	3,6[illegible]6	630	35	124	26
	1914	8	5,707	1,407	369	(1)	40
New Jersey	1919	7,215	20	3,405	4,920	61	629
	1914	697	291	308	1,713	(1)	336
New York	1919	2,096	56,910	10,595	25,354	939	3,320
	1914	2,109	63,680	12,497	41,197	(1)	9,564
Ohio	1919	27	42,777	11,523	10,525	281	174,734
	1914	.....	44,408	9,089	9,558	(1)	193,264
Pennsylvania	1919	3,101	10,851	1,177	12,243	184	1,488
	1914	2,400	16,903	1,691	11,047	(1)	2,109
Tennessee	1919	3	5,144	3,982	21	75	544
	1914	.....	6,045	5,995	76	(1)	.....
Wisconsin	1919	29	44,338	11,004	34,454	6,118	11,171
	1914	96	29,342	6,340	6,403	(1)	8,854
All other states	1919	738	6,443	3,699	5,985	990	1,727
	1914	2,301	9,512	3,635	9,436	(1)	5,959

[1] Included in figures for fuel oils.

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

SPECIAL STATISTICS.

Certain additional detailed information concerning the quantity and value of products for the industry is collected by means of supplemental schedules, data for which are presented in Table 12. In 1919, of the four specified classes of agricultural implements shown, "Plows and cultivators" was first in importance, measured by value of products, constituting 41 per cent of the total for the four groups and 21.4 per cent of the total value of all products of the industry. "Harvesting implements" held first position in this group in 1914 and was second in importance in 1919.

Large increases are shown in the values of "All other agricultural implements" and "Amount received for repair work" during the five-year period from 1914 to 1919, amounting to $36,261,347, or 130.2 per cent, and $11,509,243, or 800.8 per cent, respectively. During this five-year period "All other products" shows an increase of $37,223,012, or 119 per cent. In 1919 "All other products" included tractors valued at $42,697,610; engines, $3,223,103; wagons, $2,647,859; automobiles, $2,190,067; and other miscellaneous products to the value of $17,741,394. In an analysis of Table 12, relative to the number of the different kinds of implements manufactured from census to census, consideration should be given to the fact that in making comparisons there is considerable variety of sizes and types as well as to the fact that some establishments failed to report the number of implements separately.

TABLE 12.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919, 1914, 1909, AND 1904.

	1919	1914	1909	1904
Products, total value [1]	$301,961,265	$161,086,835	$146,329,268	$112,007,344
Plows and cultivators	65,329,111	38,662,037	36,784,477	30,607,960
Planters and seeders	17,490,403	12,188,757	12,141,474	11,225,122
Harvesting implements:				
Hayrakes and hay tedders	4,772,493	3,233,630	31,568,131	30,862,135
Mowers and reapers	40,169,591	30,971,709		
Other	9,282,656	5,372,947		
Seed separators:				
Thrashers	16,593,273	9,832,043	11,030,112	6,639,883
Other	5,771,670	3,264,246		
All other agricultural implements, including parts	61,105,527	27,844,180	48,690,082	30,703,618
All other products	68,500,033	31,277,021		
Amount received for repair work	12,946,508	1,137,265	3,114,692	1,998,296
Principal kinds of implements.				
Implements of cultivation:				
Cultivators—	*Number.*	*Number.*	*Number.*	*Number.*
Heel	7,088	2,184	3,172	3,459
Hand, garden, or garden plows	419,085	238,081	469,696	239,173
One and two horse	390,122	251,158		
Wheeled—				
One row	144,259	317,329	435,120	313,088
Two rows	44,847	31,605		
Cotton scrapers	10,807	17,537	20,180	22,519
Fertilizing machines	82,554	180,854	(2)	(2)
Harrows—				
Disk	175,712	209,677	193,060	101,324
Spring-tooth	79,532	187,370	112,832	86,408
Spike-tooth	222,709	308,219	394,988	262,142
Land rollers	8,651	22,170	(2)	(2)
Land packers	19,501	(3)	(3)	(2)
Listers	31,680	37,953	44,840	23,012
Plows—				
Disk	15,131	15,708	22,132	39,146
Gang	42,240	75,839	91,080	(3)
Shovel	108,887	181,550	254,737	121,899
Engine	4,952	3,265	2,355	1,599
Sulky (single)	60,909	108,232	134,936	138,899
Tractor	98,836	(3)	(3)	(3)
Walking	720,174	870,414	1,110,005	956,898
Pulverizers	7,131	12,721	(2)	(2)
Other	29,295	80,096	(2)	(2)
Planters and seeders:				
Seeders—				
Broadcast	18,360	34,175	[4] 61,970	33,546
Wagon or endgate	16,391	16,122	(2)	(2)
Seeder attachments	34,339	10,090	(2)	(2)
Corn planters—				
Hand	28,005	101,850	96,465	86,553
Horse	93,976	114,657	122,780	90,929
Cotton planters	87,408	101,250	79,271	127,052
Potato planters	5,961	37,191	23,092	35,756
Drills—				
Corn	29,809	55,710	20,137	28,228
Grain	93,255	89,370	[5] 89,903	76,929
All other	5,870	10,088	32,507	606
Planters and seeders—Con.				
Seed sowers, hand, field	86,763	12,608	7,847	59,910
Seed drills, hand, garden	8,971	43,113	(2)	(2)
Other planters and seeders	16,198	4,121	(2)	(2)
Harvesting implements:				
Binders—				
Grain	155,166	215,386	129,274	108,810
Corn	22,886	52,087	19,693	6,024
Grain cradles	58,239	38,728	22,635	30,056
Grain elevators for use on farm	5,995	(3)	(3)	(3)
Harvesters—				
Bean	9,528	3,401	1,409	665
Push	2,337	(3)	(3)	(3)
Harvesters and thrashers combined	2,392	270	543	(3)
Other	22,887	2,758	1,707	3,161
Headers	4,187	(3)	(3)	(3)
Hay carriers	11,805	41,277	45,064	85,121
Hay forks, horse	6,323	31,976	43,675	62,801
Hay loaders	20,570	25,865	31,705	27,174
Hay rakes—				
Sulky	61,265	139,565	266,260	236,207
Sweep	18,308	23,301		
Side delivery	14,270	20,213		
Hay stackers	7,099	6,437	17,212	8,670
Hay tedders	10,282	9,706	31,396	35,715
Hay presses	7,151	(3)	(3)	(3)
Mowers	151,133	271,521	359,264	273,385
Other haying tools	130,052	37,706	(3)	(3)
Potato diggers, horse	12,484	25,758	25,632	11,703
Reapers	8,368	56,982	58,294	60,966
Stalk cutters	19,033	(3)	(3)	(3)
Other	1,036,087	13,746	(3)	(2)
Seed separators:				
Clover hullers	597	321	437	351
Corn huskers	1,194	311	318	1,327
Corn huskers and shredders	2,884	4,338	1,294	(2)
Corn pickers	3,078	(3)	(2)	(3)
Corn shellers—				
Hand	37,272	63,266	74,223	47,189
Power	8,486	11,143	9,049	6,082
Fanning mills	13,302	23,017	33,805	22,994
Feed mills	10,311	(3)	(3)	(3)
Thrashers—				
Horsepower	3,766	362	822	2,247
Engine	16,162	13,246	12,957	7,950
Other	9,586	6,212	(2)	(2)
Miscellaneous:				
Dairy machinery—				
Cream separators	11,255	(3)	(3)	(3)
Other	1,001			
Manure spreaders	80,891			
Equalizers	13,989			
Knife grinders	22,173			
Feed grinders	13,971			
Ensilage cutters	18,013			
Saw trucks	328			
Pumps	21,172			
Windmills	419			
Spraying outfits	14,014			

[1] In addition to the amounts shown, agricultural implements to the value of $14,038,340 in 1919, $4,033,797 in 1914, $2,089,276 in 1909, and $1,349,679 in 1904 were made by establishments engaged primarily in the manufacture of products other than those covered by the industry designated.
[2] Not reported. [3] Not reported separately. [4] Includes 23,963 combination seeders. [5] Includes 21,292 disk drills of all kinds.

Summary, by states.—Table 13 gives, by states, the total value of each of the four principal groups of agricultural implements, as reported at the censuses of 1919, 1914, and 1909.

TABLE 13. COMPARATIVE SUMMARY—FOUR CHIEF GROUPS OF AGRICULTURAL IMPLEMENTS, BY STATES: 1919, 1914, AND 1909.

PRODUCT AND STATE.	1919	1914	1909
PLOWS AND CULTIVATORS, value	$65,329,111	$38,662,037	$36,784,477
Illinois	26,822,582	17,653,276	15,061,417
Indiana	12,415,810	4,447,550	4,606,748
Ohio	6,701,388	4,627,101	3,662,194
New York	4,784,370	3,176,951	3,348,263
Wisconsin	2,028,830	2,077,159	2,324,579
Georgia	1,114,452	(1)	(1)
Tennessee	857,632	(1)	(1)
Pennsylvania	791,590	954,113	1,147,063
California	763,102	(1)	(1)
All other states	6,049,355	5,725,797	6,334,273
HARVESTING IMPLEMENTS, value	54,224,740	39,581,286	34,568,131
Illinois	35,805,793	27,177,513	22,417,070
New York	8,016,235	6,543,936	5,950,777
Ohio	2,223,127	2,573,726	2,675,727
Iowa	1,610,684	936,505	1,157,701
All other states	5,668,901	2,349,606	2,366,856
SEED SEPARATORS, value	$22,364,943	$13,096,289	$11,030,412
Illinois	5,663,590	2,183,640	1,847,026
Wisconsin	(1)	(1)	1,435,296
Indiana	(1)	(1)	2,748,913
Michigan	(1)	2,109,552	1,753,043
Pennsylvania	1,351,891	885,017	828,617
Ohio	1,195,874	1,364,269	858,106
All other states	14,213,588	6,553,871	1,550,411
PLANTERS AND SEEDERS, value	17,490,403	12,188,757	12,141,474
Illinois	5,352,515	3,654,223	4,142,234
Ohio	(1)	(1)	2,245,512
Indiana	(1)	(1)	1,499,039
Wisconsin	(1)	2,032,753	1,039,205
New York	460,150	463,999	247,357
All other states	11,677,729	6,037,782	2,367,437

[1] Included in "All other states" to avoid disclosing the operations of individual establishments.

In 1919 Illinois ranked first in the value of its manufactures of each of these four principal classes of agricultural implements. In 1914 Wisconsin held first position in the manufacture of seed separators, but the exact figures for the state were not published separately in order to avoid disclosing the operations of individual establishments. In 1919, measured by value, about two-thirds of the harvesting implements, over two-fifths of plows and cultivators, nearly one-third of planters and seeders, and about one-fourth of seed separators were manufactured in Illinois.

GENERAL TABLES.

Table 14 gives for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the agricultural-implement industry.

Table 15 presents, for 1919, statistics in detail for the industry as a whole, and for each state that can be shown separately without the possibility of disclosing the operations of individual establishments.

TABLE 14.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	521	54,368	128,249	$66,704	$144,572	$304,961
	1914	601	48,159	121,428	34,593	73,509	161,087
	1909	640	50,551	100,601	28,609	60,307	146,329
California	1919	31	1,578	4,668	1,966	3,717	9,490
	1914	28	704	1,533	566	900	1,962
	1909	25	622	1,186	451	1,441	2,670
Georgia	1919	13	892	2,072	654	1,813	3,476
	1914	18	577	1,516	230	845	1,501
	1909	17	552	1,307	190	583	1,117
Illinois	1919	68	22,548	54,608	28,342	65,160	128,285
	1914	73	19,556	50,014	15,668	32,878	65,338
	1909	79	19,240	38,040	11,718	24,824	57,268
Indiana	1919	29	5,533	10,864	7,401	12,615	31,824
	1914	33	3,991	10,892	2,556	3,487	12,791
	1909	39	4,749	9,254	2,565	4,864	13,670
Iowa	1919	26	906	2,396	1,082	2,822	5,950
	1914	34	1,164	2,459	704	2,052	5,216
	1909	42	1,318	2,551	683	2,171	4,757
Kansas	1919	14	129	268	118	453	770
	1914	11	64	233	40	151	315
	1909	18	126	434	74	162	369
Michigan	1919	23	2,708	6,197	3,003	5,048	11,091
	1914	30	2,143	5,911	1,456	2,640	7,731
	1909	32	2,359	5,195	1,261	2,899	9,273
Minnesota	1919	16	501	723	498	1,355	2,341
	1914	17	872	2,480	707	1,474	3,813
	1909	17	1,014	1,468	632	1,090	3,014
Missouri	1919	11	254	656	253	800	1,457
	1914	18	240	742	142	270	570
	1909	25	438	1,080	219	501	981
New Jersey	1919	10	219	591	230	700	1,365
	1914	9	270	518	178	445	931
	1909	10	224	721	112	327	755
New York	1919	40	4,626	12,736	$5,312	$9,910	$20,421
	1914	50	5,392	11,774	3,428	7,073	14,577
	1909	57	5,717	10,744	3,270	6,415	14,971
North Carolina	1919	17	230	431	244	319	877
	1914	17	149	389	71	98	305
	1909	22	132	356	50	90	262
Ohio	1919	46	4,931	10,470	5,076	12,967	26,556
	1914	59	5,464	11,677	3,826	7,810	17,485
	1909	55	5,997	9,867	3,155	6,319	14,440
Pennsylvania	1919	27	1,371	3,006	1,541	2,596	5,536
	1914	38	2,018	4,472	1,121	1,907	4,844
	1909	36	2,401	3,842	1,223	2,082	4,805
Tennessee	1919	14	727	2,011	720	1,237	2,516
	1914	17	517	1,450	253	391	1,122
	1909	16	615	1,236	268	413	1,094
Vermont	1919	10	241	1,141	200	291	601
	1914	9	311	1,245	182	310	605
	1909	11	360	1,194	185	272	582
Virginia	1919	14	239	507	212	369	926
	1914	20	269	539	122	168	484
	1909	16	272	503	117	244	516
Washington	1919	9	146	320	179	446	913
	1914	7	131	202	115	184	392
Wisconsin	1919	31	5,237	10,673	7,582	18,436	43,623
	1914	46	3,143	9,196	2,198	8,676	20,119
	1909	45	2,704	7,301	1,506	3,937	11,411
All other states	1919	63	1,352	3,881	1,452	3,438	6,934
	1914	67	1,481	4,117	940	1,747	3,895
	1909	78	1,681	4,316	930	1,679	4,464

TABLE 15.—DETAILED STATEMENT FOR THE INDUSTRY, BY STATES: 1919.

STATE.	Number of establishments	Persons engaged in the industry. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	Wage earners Dec. 15, or nearest representative day. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male	Under 16. Female	Capital.	Expenses. Salaries and wages. Officials.	Expenses. Salaries and wages. Clerks, etc.
															Dollars.	*Dollars.*	*Dollars.*
United States	521	67,177	321	2,866	7,276	2,346	54,368	Fe 59,748	Au 49,483	57,539	56,496	962	80	1	363,962,052	9,329,013	12,596,730
California	34	2,283	29	88	420	168	1,578	Ja 2,112	Au 1,184	1,625	1,609	15	1	.....	10,032,253	407,287	766,720
Colorado	5	30	4	4	2	1	19	Se 30	Fe[1] 10	22	21	.....	1	.....	194,106	8,300	2,050
Georgia	13	974	5	28	35	14	892	Fe 1,093	Je 730	914	898	9	7	.....	2,603,499	121,946	63,791
Illinois	68	26,555	27	1,025	2,103	852	22,548	Fe 25,045	Au 18,020	23,262	22,811	448	33	.....	150,484,328	3,306,170	4,034,713
Indiana	29	7,149	10	313	979	314	5,533	De 6,118	Ap 5,054	6,122	5,937	176	9	.....	42,534,365	1,098,908	1,432,434
Iowa	26	1,141	20	93	69	53	906	De 991	Au 854	1,017	985	22	10	.....	5,232,384	327,991	156,642
Kansas	14	182	14	16	14	9	129	Je 150	Ja 108	140	140	.....	.....	.....	1,223,922	46,800	26,599
Kentucky	8	1,272	4	20	368	107	773	Mh 924	Au 627	838	826	11	1	.....	5,502,435	60,452	429,465
Michigan	23	3,259	8	138	273	132	2,708	Ap 3,113	Se 2,110	2,727	2,665	61	1	.....	11,405,102	404,968	504,629
Minnesota	16	618	3	50	41	23	501	Se 559	My 448	554	549	5	.....	.....	2,623,932	115,826	77,806
Missouri	14	315	8	18	22	13	254	Je 346	De 199	257	256	.....	1	.....	1,893,844	42,844	41,248
Nebraska	8	82	10	2	1	3	66	Se 81	Ja[1] 52	84	84	.....	.....	.....	344,364	2,100	3,775
New Jersey	10	303	10	26	22	26	219	Ja 284	Oc 175	206	206	.....	.....	.....	2,306,138	68,379	69,192
New York	40	5,539	25	259	488	141	4,626	Fe 5,341	Oc 3,779	5,268	5,134	134	.....	.....	27,473,112	708,142	817,813
North Carolina	17	269	14	17	5	3	230	De 241	Je 216	238	238	.....	.....	.....	740,280	60,717	11,335
Ohio	46	5,991	27	240	585	208	4,931	Mh 5,411	Jy 4,406	5,283	5,216	67	.....	.....	27,884,087	946,901	1,130,349
Pennsylvania	27	1,687	22	76	158	60	1,371	My 1,531	Se 987	1,505	1,494	11	.....	.....	8,626,304	220,501	269,487
Tennessee	14	820	11	33	32	17	727	De 826	Jy 630	809	791	18	.....	.....	2,520,435	94,060	59,183
Vermont	10	267	2	15	3	6	241	Mh 255	Jy 226	236	231	5	.....	.....	858,148	44,903	9,252
Virginia	14	283	4	22	12	6	239	Ja 282	Je 188	254	253	.....	1	.....	836,232	69,814	18,839
Washington	9	177	8	16	6	1	146	Je 207	De 84	123	122	.....	1	.....	805,226	39,518	12,133
Wisconsin	34	7,341	21	319	1,599	165	5,237	Mh 5,681	Oc 4,365	5,582	5,564	6	12	.....	54,956,330	1,005,170	2,564,729
All other states	42	640	35	48	39	24	494	.....	.....	473	466	4	2	1	2,701,247	133,298	94,537

STATE.	Expenses—continued. Salaries and wages—Continued. Wage earners.	For contract work.	Rent and taxes. Rent of factory.	Rent and taxes. Taxes, Federal, state, county, and local.	For materials. Principal materials.	For materials. Fuel and rent of power.	Value of products.	Value added by manufacture.	Power. Primary horsepower. Total.	Owned. Steam engines (not turbines).	Owned. Steam turbines.	Owned. Internal-combustion engines.	Owned. Water power.[2]	Rented.[3]	Electric horsepower generated in establishments reporting.
	Dollars.	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*							
United States	66,704,434	113,421	188,432	11,986,119	139,533,431	5,038,512	304,961,265	160,389,322	128,249	51,107	18,835	4,092	6,373	47,842	52,421
California	1,066,168	24,715	12,527	1,078,312	3,592,172	124,930	9,490,109	5,773,007	4,608	95	.....	616	.....	3,957	164
Colorado	25,834	.....	1,025	681	56,126	1,830	122,050	64,094	57	.....	.....	5	.....	52	.....
Georgia	653,900	3,780	414	104,948	1,755,062	58,040	3,475,705	1,662,663	2,072	740	.....	27	.....	1,305	.....
Illinois	28,342,271	47,081	50,244	4,734,058	62,893,499	2,266,411	128,284,716	63,124,896	54,608	22,000	10,134	72	1,000	21,312	24,979
Indiana	7,401,107	20,779	3,452	2,075,023	12,167,498	447,424	31,823,733	19,208,811	10,864	3,848	3,350	73	2,025	1,568	7,516
Iowa	1,082,273	350	3,149	184,829	2,740,546	81,651	5,959,129	3,136,932	2,396	305	.....	99	.....	1,992	2
Kansas	117,451	1,683	2,300	5,460	446,101	6,902	769,914	316,911	268	.....	.....	63	.....	205	.....
Kentucky	866,749	.....	776	432,327	2,241,379	38,634	4,407,137	2,127,124	2,073	653	.....	31	.....	1,389	.....
Michigan	3,003,362	427	2,061	442,721	4,837,772	210,196	11,090,669	6,042,701	6,197	2,993	.....	50	.....	3,154	332
Minnesota	498,176	253	1,619	26,929	1,349,700	35,570	2,341,311	986,041	723	340	.....	14	.....	369	221
Missouri	252,540	1,000	4,789	15,242	774,376	25,887	1,456,774	656,511	656	280	.....	61	.....	315	.....
Nebraska	69,319	18	4,737	1,720	107,167	9,613	349,828	143,048	185	70	.....	11	.....	104	33
New Jersey	239,414	.....	1,104	36,263	671,165	20,026	1,364,819	664,628	591	120	.....	356	100	15	.....
New York	5,311,978	4,921	23,076	572,855	9,432,590	507,164	20,421,368	10,481,614	12,736	5,619	1,512	601	1,696	3,308	5,794
North Carolina	243,718	1,299	414	32,061	394,307	15,241	876,814	557,266	431	65	30	54	.....	282	1
Ohio	5,675,451	1,500	10,480	571,380	12,611,928	354,807	26,556,031	13,589,296	10,470	4,170	1,433	1,565	220	3,082	5,893
Pennsylvania	1,541,228	150	240	125,041	2,420,777	175,504	5,536,111	2,939,830	3,006	1,935	.....	50	100	921	1,486
Tennessee	720,269	3,615	100	98,931	1,174,722	62,296	2,516,339	1,270,321	2,041	1,075	.....	6	2	958	.....
Vermont	209,401	.....	84	14,544	267,725	23,143	600,912	310,044	1,141	220	.....	40	585	296	.....
Virginia	241,871	1,200	7,045	43,863	347,524	21,193	926,019	557,302	507	100	.....	27	14	366	.....
Washington	178,460	80	1,388	49,207	433,985	11,769	912,940	467,192	320	.....	.....	.....	.....	320	.....
Wisconsin	7,582,321	70	45,928	1,285,284	17,090,671	494,920	43,623,368	25,137,777	10,673	5,953	2,375	163	.....	2,182	5,903
All other states[4]	490,173	500	11,489	63,753	856,789	36,361	2,055,463	1,162,313	1,566	527	.....	108	541	390	97

[1] Same number reported for one or more other months.
[2] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[3] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).
[4] All other states embrace: Alabama, 1 establishment; Arkansas, 3; Connecticut, 2; Florida, 3; Idaho, 2; Louisiana, 3; Maine, 2; Maryland, 2; Massachusetts, 2; Mississippi, 2; New Hampshire, 2; North Dakota, 1; Oklahoma, 2; Oregon, 1; South Carolina, 3; South Dakota, 4; Texas, 5; Utah, 1; and West Virginia, 1.

DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES

MANUFACTURES: 1919

AMMUNITION, FIREARMS, AND ORDNANCE AND ACCESSORIES

Prepared under the supervision of EUGENE F. HARTLEY, Chief Statistician for Manufactures

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EXPLANATION OF TERMS.

Scope of census.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than $500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

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

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date did not portray such conditions, an earlier date was requested.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

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

In order to determine as nearly as possible the age distribution of the average number of wage earners for an industry, the per cent distribution by age of the wage earners for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year to determine the average numbers 16 years and over, and under 16, employed.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital (amount actually invested).—The instructions on the schedule for securing data relating to capital were as follows:

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

These instructions were identical with those employed at the censuses of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power equipment of the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuel is impracticable.

AMMUNITION, FIREARMS, AND ORDNANCE AND ACCESSORIES.

GENERAL STATISTICS.

Scope and relationship of the industries.—The statistics presented in this report relate to the classes of establishments that produce as manufactured products (1) ammunition, (2) firearms, and (3) ordnance and accessories. Each is treated by the Census Bureau as a separate industry, but they are to a certain extent interrelated, and the statistics are here presented as a group, in conjunction with those for the governmental establishments manufacturing these products.

During the World War many establishments in other lines of manufacture produced large quantities of ammunition and related war material. Such establishments were classified according to the products of chief value in 1919, ammunition, firearms, ordnance, or other industry, as the case might be. If an establishment was engaged primarily in the manufacture of products pertaining to another industry, but incidentally produced ammunition, firearms, or ordnance, the subsidiary products were included as by-products in the special statistics relating to the section of this report to which they appertain, although other data regarding the establishment were included in the general statistics for the industry to which the establishment belonged.

The census of 1919 was the first to employ a special schedule for these industries. At prior censuses the establishments reported, with respect to products, total values only.

Detailed statistics for the group—Governmental and commercial establishments.—Table 1 presents the general statistics for the commercial in conjunction with the corresponding governmental establishments. The industrial group as a whole employed 73,309 wage earners in 1919, this being the average number for the year, of which 62 per cent were in commercial and 38 per cent in governmental establishments. A comparison of the magnitude of operations, based upon value of products, credits the commercial establishments with 67.6 per cent and the governmental plants with 32.4 per cent. The figures for products, as given in this table, do not include the products of commercial establishments in other lines of manufacture.

Products, governmental and commercial establishments.—Table 2 presents the statistics for products, by commodity groups, for all classes of establishments. This includes for the commercial establishments a large production reported by plants outside of the respective classified industries. The products reported for the commercial establishments necessarily include the value of some products other than ammunition, firearms, or ordnance, these amounting to $24,866,094. Deducting this amount from the total reported for commercial establishments and also from the grand total, it gives figures which can be taken as a measure of the relative importance of the respective product groups, and on this basis the production of ordnance and accessories constituted 45.1 per cent of the total for all establishments, ammunition 40.2 per cent, and firearms 14.7 per cent; the proportions for commercial establishments being ammunition 48.2 per cent, ordnance and accessories 40.3 per cent, and firearms 11.5 per cent; and for governmental establishments, ordnance and accessories 58.7 per cent, firearms 23.6 per cent, and ammunition 17.7 per cent.

Of the total value of the output, commercial establishments reported 88.5 per cent of the ammunition, 57.9 per cent of the firearms, and 65.9 per cent of the ordnance and accessories.

TABLE 1.—DETAILED STATISTICS FOR THE GROUP—GOVERNMENTAL AND COMMERCIAL ESTABLISHMENTS: 1919.

	Total.	Governmental.	Commercial.
Number of establishments [1]	105	11	94
Persons engaged	85,027	31,422	53,605
Proprietors and firm members	22	.....	22
Salaried officers, superintendents, and managers	2,496	751	1,745
Clerks, etc.	9,200	2,793	6,407
Male	5,119	1,439	3,680
Female	4,081	1,354	2,727
Wage earners—			
Average number	73,309	27,878	45,431
Number 15th day of month—			
Maximum month	January.	January.	January.
Number	112,479	32,845	79,634
Minimum month	September.	September.	August.
Number	62,137	26,100	35,942
Wage earners Dec. 15 or nearest representative day	74,322	27,186	47,136
16 and over—			
Male	65,221	26,378	38,843
Female	8,889	786	8,103
Under 16—			
Male	164	22	142
Female	48	.....	48
Capital	$583,856,039	$351,980,451	$231,875,588
Salaries and wages	112,151,182	45,869,626	66,281,556
Salaries—			
Officials	9,404,001	1,917,025	7,486,976
Clerks, etc.	10,016,923	3,700,172	6,316,751
Wages	92,730,258	40,252,429	52,477,829
Paid for contract work	$2,076,685	$1,928,679	$148,006
Rent and taxes	$12,236,015	$8,090	$12,227,925
Cost of materials	$110,917,577	$38,609,533	$72,308,044
Principal materials	$105,981,550	$37,163,090	$68,818,460
Fuel and rent of power	$4,936,027	$1,446,443	$3,489,584
Value of products	$277,829,909	$90,114,688	$187,715,221
Value added by manufacture [2]	$166,912,443	$51,505,266	$115,407,177
Power:			
Primary horsepower	166,564	60,617	105,947
Owned	82,933	38,350	44,583
Steam	74,416	32,760	41,656
Engines	21,409	6,904	14,505
Turbines	53,007	25,856	27,151
Internal-combustion engines	2,508	80	2,428
Water wheels and turbines	6,009	5,510	499
Rented electric	83,631	22,267	61,364
Electric, generated in establishments reporting	106,335	74,747	31,588
Fuel consumed:			
Coal—			
Anthracite, tons (2,240 pounds)	75,035	13,002	62,033
Bituminous, tons (2,000 pounds)	435,032	139,970	295,062
Coke, tons (2,000 pounds)	8,855	1,872	6,983
Fuel oils, barrels	323,635	116,438	207,197
Gasoline and other volatile oils, barrels	11,334	6,581	4,753
Gas, 1,000 cubic feet	3,114,898	27,594	3,087,304

[1] Distributed by states as follows:
Governmental, 11—California, 1; District of Columbia, 1; Georgia, 1; Illinois, 1; Massachusetts 2; New York, 2; Pennsylvania, 1; Rhode Island, 1; and Virginia, 1.
Commercial, 94—California, 3; Colorado, 1; Connecticut, 16; Illinois, 2; Indiana, 3; Maryland, 2; Massachusetts, 15; Michigan, 4; Minnesota, 2; New Jersey, 8; New York, 14; Ohio, 6; Pennsylvania, 14; Rhode Island, 1; and Wisconsin, 3.
[2] Value of products less cost of materials.

TABLE 2.—PRODUCTS—GOVERNMENTAL AND COMMERCIAL ESTABLISHMENTS: 1919.

PRODUCT.	Total.	Governmental.	Commercial.
Total value	$368,973,514	$90,114,688	$278,858,826
The classified industries	277,829,909	90,114,688	187,715,221
Subsidiary products, ammunition, firearms, and ordnance, of establishments outside of the industrial group	91,143,605	.....	91,143,605
Ammunition	$138,366,040	$15,908,181	$122,457,859
Firearms	50,477,201	21,264,751	29,212,450
Ordnance and accessories	155,264,179	52,941,756	102,322,423
All other products	24,866,094	.....	24,866,094

AMMUNITION.

General character of the industry.—This report not only covers the commercial manufacture of all kinds of ammunition in the strict sense, both for small arms and for artillery, but for convenience includes navy depth charges and torpedoes; safety and miners' squibs; common fuses and fuses for shells; bombs; hand, rifle, and signal grenades; detonators and detonating caps; gas shells; bomb lances; and railroad torpedoes.

The ammunition industry, in census usage, does not include the manufacture of dynamite and other explosives for agricultural use, nor that of torpedoes, or "cartridges" used in oil wells. Neither does it cover establishments engaged primarily in the manufacture of rockets, colored fire, and similar products, which are classified under "Fireworks."

Detail statistics of products were first reported at the present census. Prior thereto there was no special schedule, and the establishments reported only the total value of products, though the steel mills manufacturing ordnance reported tonnage and value of same.

Statistics for establishments operated by the Federal Government are not here included, but are given in the introductory section for the combined industries, ammunition, firearms, and ordnance.

Comparative summary.—Table 3 summarizes the statistics for the censuses from 1879 to 1919, inclusive, with percentages of increase. Earlier censuses reported for the ammunition industry the number of establishments, number of wage earners, and value of products, as follows: In 1869, 17 establishments, 657 wage earners, and products valued at $2,484,720; in 1859, 16 establishments, 400 wage earners, and $601,840 in value of products; and in 1849, 7 establishments, 85 wage earners, and $1,018,550 in value of products.

Principal states, ranked by value of products.—Table 4 shows the more important statistics, by states, ranked according to value of products. The state of Maryland, which ranked second in the industry, and Illinois, which ranked fifth according to the value of products, are included with "All other states," as the statistics for these states can not be reported separately.

Persons engaged in the industry.—The age classification of the average number of wage earners in Table 5 is an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 15.

Wage earners, by months, for state.—The statistics presented in Table 6 are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions which obtained in 1919. The industry gave employment to a relatively large number of female wage earners, and the figures therefor are given for the leading states. Of the total number employed in the industry, 31.5 per cent were females. Massachusetts shows the highest proportion, namely, 63.4 per cent of the total number for the state, followed by Connecticut with 30.5 per cent, Pennsylvania 28.7 per cent, New York 20.8 per cent, and New Jersey 18.9 per cent.

Average number of wage earners, by prevailing hours of labor, per week, for states.—Table 7 shows a marked shortening of the working-day since 1914. In that year only 1.7 per cent of the wage earners were included in the group "48 and under," as against 47.3 per cent in 1919. On the other hand, in 1914 the "60" and "Between 54 and 60" groups constituted 79.5 per cent of the total number of wage earners, as against 5 per cent in 1919.

Size of establishments, by average number of wage earners.—The industry is one of large units, as shown in Table 8. In 1919, 18 establishments with 97.1 per cent of the total number of wage earners were in the groups employing over 100 wage earners.

Size of establishments, by value of products.—The increase in the ammunition industry, due to the World War, together with the inflation of values, has resulted in a marked shift from lower to higher groups as shown in Table 9. In 1914 the average value of products per establishment was $963,765, and in 1919, $2,096,148.

Character of ownership.—In 1919, of the 42 establishments, 38 were owned by corporations and 4 were under partnership or other form of ownership. In 1914, of the 32 establishments in the industry, 24 were corporations, 3 were owned by individuals, and 5 were in the group "All other." Table 10 shows the value of products of establishments under corporate ownership in 1919 was $87,895,531, or 99.8 per cent of the total value of products for all establishments, and in1914, $30,535,656, or 99 per cent.

Number and horsepower of types of prime movers.—The total horsepower reported in 1919, as compared with that of 1914, shows an increase of 27,774, or 244.7 per cent. Electric power is the chief factor as shown in Table 11. In 1919 purchased electric power constituted 44.9 per cent of the total primary power as compared with 8.1 per cent in 1914, and, moreover, a large proportion of the owned power was employed in electric generation and so used.

Fuel consumed.—Table 12 presents the statistics for fuel consumed in the industry, by kinds, for 1919 and 1914 and by states for 1919. The figures for gas include both natural and manufactured gas.

TABLE 3.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. 1914–1919	1909–1914	1904–1909	1899–1904	1889–1899	1879–1889
Number of establishments	42	32	39	32	33	35	4	.....	.....	.....	.....	.....	.....
Persons engaged	27,471	12,715	(2)	7,799	5,435	(2)	(2)	116.1	.....	.....	43.5	.....	.....
Proprietors and firm members	10	16	(2)	389	204	(2)	(2)	.....	.....	.....	90.7	.....	.....
Salaried employees	4,645	1,206	(2)					285.2					
Wage earners (average number)	22,816	11,493	8,713	7,410	5,231	2,158	1,066	98.5	31.9	17.6	41.7	142.4	102.4
Primary horsepower	39,128	11,354	10,317	5,056	2,980	(2)	(2)	244.6	10.1	104.1	69.7	.....	.....
Capital	$94,558,643	$37,454,175	$26,344,000	$12,117,000	$6,719,000	(2)	(2)	152.5	42.2	117.4	80.3	.....	.....
Salaries and wages	31,194,843	8,333,656	(2)	4,623,012	2,931,522	(2)	(2)	274.3	.....	.....	57.7	.....	.....
Salaries	7,607,151	1,582,670	(2)	591,602	370,568	(2)	(2)	380.7	.....	.....	59.6	.....	.....
Wages	23,587,692	6,750,986	4,508,597	4,032,310	2,560,954	$969,951	$361,778	249.4	49.7	12.1	57.1	164.0	168.1
Paid for contract work	146,531	847	.....	21,001	(2)	(2)	(2)	(1)	.....	.....	.....	.....	.....
Rent and taxes	6,999,154	232,439	(2)	[3] 2,942,030	(2)	(2)	(2)	(1)	.....	.....	.....	.....	.....
Cost of materials	38,101,602	16,276,575	15,451,929	10,600,929	7,436,748	2,759,782	1,223,452	134.1	5.3	45.8	42.5	169.5	125.6
Value of products	88,038,223	30,840,472	26,053,065	19,930,821	13,027,635	6,538,959	1,904,966	185.5	18.4	30.7	53.0	99.2	243.3
Value added by manufacture [4]	49,936,621	14,563,897	10,601,136	9,329,892	5,590,887	3,779,177	681,514	242.9	37.4	13.6	66.9	47.9	454.5

[1] Percentages are omitted where base is less than 100 or where comparable figures can not be given.
[2] Figures not available.
[3] Exclusive of internal revenue.
[4] Value of products less cost of materials.

TABLE 4.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	42	22,816	100.0	...	$88,028	100.0	...	$49,937	100.0	
Connecticut	3	12,489	54.7	1	39,987	45.4	1	24,063	48.2	1
Massachusetts	6	2,449	10.7	3	5,961	6.8	3	4,794	9.6	3
New Jersey	5	979	4.3	5	3,946	4.5	5	2,002	4.0	6
Pennsylvania	10	669	2.9	8	3,394	3.9	7	1,363	2.7	9
New York	3	264	1.2	10	1,904	2.2	9	1,494	2.8	8
California	3	298	1.3	9	1,767	2.0	10	753	1.5	10
All other states	12	5,668	24.9	...	31,069	35.3	...	15,558	31.2	..

TABLE 5.—PERSONS ENGAGED IN THE INDUSTRY: 1919 AND 1914.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	Female.
All classes	1919	27,471	18,594	8,877	67.7	32.3
	1914	12,715	(1)	(1)	.....	.....
Proprietors and officials	1919	1,120	1,105	15	98.7	1.3
	1914	267	261	6	97.8	2.2
Proprietors and firm members	1919	10	7	3	70.0	30.0
	1914	16	(1)	(1)	.....	.....
Salaried officers of corporations	1919	103	101	2	98.1	1.9
	1914	38	(1)	(1)	.....	.....
Superintendents and managers	1919	1,007	997	10	99.0	1.0
	1914	213	(1)	(1)	.....	.....
Clerks and other subordinate salaried employees	1919	3,535	1,854	1,681	52.4	47.6
	1914	955	701	254	73.4	26.6
Wage earners (average number)	1919	22,816	15,635	7,181	68.5	31.5
	1914	11,493	(1)	(1)	.....	.....
16 years of age and over	1919	22,674	15,548	7,126	68.6	31.4
Under 16 years of age	1919	142	87	55	61.3	38.7

[1] Figures not available.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

[The month of maximum employment is indicated by **bold-faced** figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919	22,816	**46,771**	33,327	25,965	20,436	19,113	18,869	18,768	17,285	*17,121*	17,713	18,795	19,629	36.6
Males	15,635	**31,553**	21,844	17,622	13,717	13,283	13,325	13,396	12,032	*11,804*	12,250	13,032	13,672	37.7
Females	7,181	**15,218**	11,483	8,343	6,719	5,830	5,544	5,372	5,253	*5,227*	5,463	5,763	5,957	34.3
1914	11,493	10,826	10,768	10,934	10,886	10,814	10,936	10,820	*10,002*	11,366	12,565	13,422	**14,577**	68.6
California	298	307	325	308	283	*240*	266	285	299	290	308	332	333	72.1
Connecticut	12,489	**15,816**	13,695	13,516	12,555	11,912	11,670	11,518	*10,869*	11,048	11,557	12,531	13,181	68.7
Massachusetts	2,449	**9,111**	4,398	2,316	1,905	1,665	1,617	1,463	1,406	1,441	1,418	*1,323*	1,325	14.5
New Jersey	979	**2,134**	1,880	1,748	995	625	624	*622*	623	623	625	624	625	29.1
New York	264	**1,771**	321	204	115	110	98	90	90	*85*	87	94	103	4.8
Pennsylvania	669	**2,919**	805	697	523	405	*323*	339	353	380	422	434	428	11.1
States showing large proportion of females.														Per ct. av. is of state.
Connecticut	3,810	**4,554**	4,420	4,583	4,154	3,697	3,486	3,343	*3,194*	3,237	3,417	3,747	3,888	30.5
Massachusetts	1,553	**5,744**	2,830	1,448	1,190	1,049	1,023	934	897	915	918	848	*840*	63.4
New Jersey	185	**540**	476	460	90	82	82	83	84	*80*	81	*80*	82	18.9
Pennsylvania	192	**266**	234	218	182	143	*110*	128	147	186	217	233	240	28.7

TABLE 7.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
		44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.
United States ..1919..	22,816	1,027	3,975	5,785	9,023	1,868	935	203
1914..	11,493	(2)	(2)	195	287	1,879	8,613	519
California	298	163	.....	135	.....	.....	.....	.....
Connecticut	12,489	.....	3,975	.....	8,045	469	.....	.....
Massachusetts	2,449	.....	.....	2,304	110	.....	.....	35
New Jersey	979	856	.....	123	.....	.....	.....	.....
New York	264	.....	.....	.....	.....	145	.....	119
Pennsylvania	669	8	.....	292	182	187	.....	.....

[1] Includes 48 and under for 1914 and 1909.

[2] Corresponding figures not available.

TABLE 8.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States....1919..	42	22,816	1	2	9	8	77	9	289	4	281	8	1,262	3	1,084	2	1,530	5	18,284
1914..	32	11,493	1	3	8	5	61	5	164	6	396	7	1,105	1	491	2	1,193	2	8,075
California	3	298	.....	.....	.....	.....	.....	1	28	.....	.....	2	270	.....	.....	.....	.....	.....	.....
Connecticut	3	12,489	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	469	.....	.....	2	12,020
Massachusetts	6	2,449	.....	.....	.....	2	15	2	57	1	73	.....	.....	.....	.....	.....	.....	1	2,304
New Jersey	5	979	.....	1	5	.....	.....	.....	.....	.....	.....	2	359	2	615	.....	.....	.....	.....
New York	3	264	.....	.....	.....	.....	.....	1	37	.....	.....	2	227	.....	.....	.....	.....	.....	.....
Pennsylvania	10	669	1	1	4	2	23	1	28	3	208	2	406	.....	.....	.....	.....	.....	.....

TABLE 9.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919 AND 1914.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
	1919	1914	1919	1914	1919	1914	1919	1914
All classes	42	32	22,816	11,493	$88,038,223	$30,840,472	$49,936,621	$14,563,897
$5,000 to $20,000	4	[1] 6	17	[1] 41	32,462	[1] 52,981	19,673	[1] 33,470
$20,000 to $100,000	9	7	215	245	478,406	391,377	223,611	160,585
$100,000 to $500,000	8	10	290	1,939	1,514,204	3,017,148	885,920	2,437,289
$500,000 to $1,000,000	11	5	1,691		8,201,957	3,042,442	3,851,356	
$1,000,000 and over	10	4	20,603	9,268	77,811,194	24,336,524	44,956,061	11,932,553
	PER CENT DISTRIBUTION.							
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
$5,000 to $20,000	9.5	18.8	0.1	0.4	(1)	0.2	(1)	0.2
$20,000 to $100,000	21.4	21.9	0.9	2.1	0.6	1.3	0.5	1.1
$100,000 to $500,000	19.1	31.2	1.3	16.9	1.7	9.8	1.8	16.7
$500,000 to $1,000,000	26.2	15.6	7.4		9.3	9.9	7.7	
$1,000,000 and over	23.8	12.5	90.3	80.6	88.4	78.9	90.0	82.0

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

TABLE 10.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Census year.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
All classes	1919	42	22,816	$88,038,223	$49,936,621
	1914	32	11,493	30,840,472	14,563,897
Individual	1919	.....	.....	.....	.....
	1914	3	138	126,568	68,621
Corporation	1919	38	22,608	87,895,531	49,860,584
	1914	24	11,244	30,535,656	14,387,903
All other	1919	4	118	142,692	76,037
	1914	5	111	178,248	107,373

CHARACTER OF OWNERSHIP.	Census year.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
Per cent distribution:					
Individual	1919	.....	.....	.....	.....
	1914	9.4	1.2	0.4	0.5
Corporation	1919	90.5	99.5	99.8	99.8
	1914	75.0	97.8	99.0	98.8
All other	1919	9.5	0.5	0.2	0.2
	1914	15.6	1.0	0.6	0.7

TABLE 11.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919 AND 1914.

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.			
			Amount.		Per cent distribution.	
	1919	1914	1919	1914	1919	1914
Primary power, total	1,858	238	39,128	11,354	100.0	100.0
Owned	94	83	21,542	10,436	55.1	91.9
Steam	80	62	19,160	7,140	49.0	63.0
Engines	59	(1)	6,990	(1)	17.9	.....
Turbines	21	(1)	12,170	(1)	31.1	.....
Internal-combustion engines	11	17	2,241	3,135	5.7	27.6
Water wheels and turbines	3	4	141	152	0.4	1.3
Rented, electric	1,764	155	17,586	918	44.9	8.1
Electric	3,641	893	33,559	12,698	100.0	100.0
Rented	1,764	155	17,586	918	52.4	7.2
Generated by establishments reporting	1,877	738	15,973	11,780	47.6	92.8

[1] Figures not available.

TABLE 12.—FUEL CONSUMED, BY STATES: 1919.

STATE.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
	Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States 1919	23,112	154,863	3,146	137,378	2,475	79,424
1914	12,946	87,972	2,957	11,203	(1)	20,193
California	.....	.....	.....	6,653	22	.....
Connecticut	16,351	84,588	1,500	117,877	2,000	21,000
Massachusetts	.....	6,673	.....	842	.....	45
New Jersey	6,100	14,989	.....	4,914	.....	678
New York	418	5,310	.....	110	5	84
Pennsylvania	218	1,526	267	.....	102	51,902
All other states	25	41,777	1,379	6,982	346	5,625

[1] Included in figures for fuel oils.

SPECIAL STATISTICS.

Products; detailed statistics.—Table 13 presents the statistics for products in 1919 for the 42 commercial establishments engaged primarily in the manufacture of ammunition and also for ammunition produced as a subsidiary product by establishments engaged primarily in other lines of manufacture. This and the following table cover the total production of ammunition by all establishments, whether as a primary or a subsidiary product. Many of them manufacture firearms, ordnance, and other products that fall under other industrial classifications. This variety arises in part from the fact that many of the establishments now producing ammunition were engaged before the war in the manufacture of firearms, ordnance, and articles of a nonmilitary nature, and hence the establishments being classified according to the product of chief value, include a considerable production of firearms, ordnance products, and products not affiliated with ammunition. In like manner there was a large production of ammunition by establishments assigned to the firearms, ordnance, and other industries, among which are steel works and rolling mills, manufactures of brass, bronze, and copper products, electrical machinery, etc. Of the total output of the ammunition industry in 1919 as defined by the Bureau of the Census, 13.4 per cent consisted of firearms and ordnance, which are accounted for in the sections on firearms, and ordnance and accessories, in the same manner that the ammunition manufactured by establishments in these industries is here included, in order to assemble the statistics for all ammunition. The table includes some products which are not ammunition strictly speaking, though somewhat allied thereto, for instance, railroad torpedoes.

A number of establishments engaged normally in other lines of manufacture were diverted to the war industries, and especially to the production of ammunition, and had not returned to their normal base in 1919. More than 70 per cent of the artillery ammunition that was manufactured in 1919 was produced by establishments engaged primarily in other lines of manufacture, and of the item "shot and shell other than for small arms," amounting to $46,287,326 included under artillery "Ammunition," 81.1 per cent were manufactured as subsidiary products by establishments outside of the industry.

Products, by geographic divisions.—Table 14 shows the distribution of the production of ammunition, by geographic divisions, so far as it can be given without disclosing the operations of individual establishments. The table shows a marked concentration of the industry, especially in New England.

TABLE 13.—PRODUCTS; DETAILED STATISTICS: 1919.

KIND.	Value.
Total value	$143,677,869
The ammunition industry, all products	88,038,223
Subsidiary ammunition products of other industries	55,639,646
Ammunition and allied products [1]	122,457,859
Artillery ammunition [2]	53,416,393
Ammunition for small arms	39,550,789
Paper shells	16,935,149
Loaded	9,979,455
Unloaded	4,809,196
Not specified	2,146,498
Metal shells, loaded and unloaded	1,717,371
Cartridges	16,425,999
Revolver	7,228,652
Rifle	7,233,174
Not specified	1,965,173
Ammunition and allied products—Continued.	
Percussion caps	$676,081
Primers	403,165
Shot (8,836 tons, value $1,364,630; for balance, $1,396,669, quantity not reported)	2,761,299
Wads	630,725
Blasting and detonating caps	2,630,365
Detonating fuses	3,839,517
Safety fuses	3,322,195
Other fuses and naval torpedoes	9,648,531
Railroad torpedoes	4,288,422
Contract settlements	3,354,382
Miscellaneous allied products, not classified	2,407,265
Firearms, products of ammunition establishments	6,604,803
Ordnance, products of ammunition establishments	5,228,152
All other products, other than ammunition or allied products	9,387,055

[1] Not including products of 5 governmental establishments, $15,908,181.
[2] Includes shot and shell other than for small arms $46,287,326, of which quantity was reported for $6,322,485, viz, 12,569 tons; for balance, quantity not reported.

TABLE 14.—NUMBER OF ESTABLISHMENTS AND VALUE OF PRODUCTS, BY GEOGRAPHIC DIVISIONS: 1919.

	Number of establishments.	Value.
Ammunition and allied products	.....	$122,457,859
Ammunition for artillery	39	53,416,393
New England (Connecticut, 3; Massachusetts. 4; other, 2)	9	11,159,690
Middle Atlantic (Pennsylvania, 12; other, 3)	15	19,339,969
East North Central (Indiana, 4; Ohio, 4; other, 2)	10	3 181,237
Other divisions	5	19,735,497
Rifle cartridges	6	7,233,174
New England	3	6,704,444
Other divisions	3	528,730
Revolver cartridges	6	7,228,652
New England	3	6,390,034
Other divisions	3	838,618
Ammunition and allied products—Continued.		
Paper shells, unloaded (New England, 3; other, 1)	4	$4,809,196
Blasting and detonating caps (North Atlantic, 3; other, 2)	5	2,630,365
Railroad torpedoes	8	4,288,422
New England	3	3,501,757
Middle Atlantic (Pennsylvania, 4; other, 1)	5	786,665
Primers (New England, 3; other, 2)	5	403,165
Mscellaneous, distrbuted [1]	29	21,725,217
New England (Massachusetts, 6; Connecticut, 3)	9	7,901,580
Middle Atlantic (Pennsylvania, 6; other, 2)	8	10,748,071
East North-Central	9	2,104,959
Other divisions	3	970,607
Miscellaneous, not distributed	.....	20,723,275

[1] Includes chiefly detonating, safety, and other fuses, naval torpedoes, and contract settlements.

GENERAL TABLE.

Detailed statement, by states.—Table 15 presents for 1919 the statistics in detail for the industry as a whole and for each state that can be shown without the disclosure of individual operations.

TABLE 15.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.	EXPENSES. Salaries and wages. Officials.	EXPENSES. Salaries and wages. Clerks, etc.
United States	42	27,471	10	1,110	1,854	1,681	22,816	Ja 46,771	Se 17,121	22,709	16,333	6,237	91	48	$94,558,643	$4,277,331	$3,329,820
California	3	343	.....	17	19	9	298	De 333	My 240	296	150	146	.....	.....	3,072,442	57,291	30,838
Connecticut	3	15,385	.....	595	1,103	1,198	12,489	Ja 15,816	Au 10,869	13,181	9,243	3,851	50	37	44,189,578	2,169,609	1,716,803
Massachusetts	6	2,603	.....	30	73	111	2,449	Ja 9,111	No 1,323	1,778	767	971	30	10	7,128,069	125,780	197,189
New Jersey	5	1,280	.....	54	142	105	979	Ja 2,134	Jy 622	1,056	942	110	3	1	6,898,104	198,796	288,832
New York	3	444	.....	32	86	68	264	Ja 1,771	Se 85	1,724	1,551	173	.....	.....	2,874,797	160,780	84,207
Pennsylvania	10	904	7	138	71	19	669	Ja 2,919	Je 323	1,033	771	262	.....	.....	6,105,657	305,449	120,176
All other states[1]	12	6,452	3	244	366	171	5,068	.....	.....	3,641	2,909	724	8	.....	24,289,936	1,259,626	891,775

STATE.	EXPENSES—continued. Salaries and wages—Con. Wage earners.	For contract work.	Rent and taxes. Rent of factory.	Rent and taxes. Taxes Federal, state, county, and local.	For materials. Principal materials.	For materials. Fuel and rent of power.	Value of products.	Value added by manufacture.	POWER. Primary horsepower. Total.	Owned. Steam engines (not turbines).	Owned. Steam turbines.	Owned. Internal-combustion engines.	Owned. Water power.[2]	Rented.[3]	Electric horsepower generated in establishments reporting.
United States	$23,587,602	$146,531	$9,545	$6,989,609	$36,548,160	$1,553,442	$88,038,223	$49,936,621	39,128	6,990	12,170	2,241	141	17,586	15,973
California	223,946	.....	.....	193,990	995,260	18,940	1,767,321	753,121	626	20	.....	31	.....	575	.....
Connecticut	12,253,790	.....	.....	2,091,563	15,073,855	859,866	39,996,945	24,003,224	21,542	3,530	10,170	2,085	96	5,661	12,552
Massachusetts	2,403,567	.....	738	1,092,037	1,050,372	117,036	5,961,390	4,793,982	2,694	50	.....	.....	.....	2,644	.....
New Jersey	969,031	.....	.....	202,383	1,852,362	92,320	3,946,431	2,001,749	3,843	700	2,000	.....	.....	1,143	1,260
New York	358,426	22,517	6,012	362,486	442,132	37,059	1,993,610	1,404,419	1,580	900	.....	.....	.....	680	55
Pennsylvania	618,030	124,014	2,795	228,843	1,964,498	65,816	3,303,738	1,363,424	2,600	.....	.....	.....	.....	2,600	.....
All other states[1]	6,760,902	.....	.....	2,808,247	15,149,681	362,405	31,068,788	15,556,702	6,243	1,790	.....	125	45	4,283	2,106

[1] All other states embraces Colorado, 1 establishment; Illinois, 1; Indiana, 2; Maryland, 1; Michigan, 1; Minnesota, 2; Ohio, 3; and Rhode Island, 1.
[2] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[3] Chiefly electric motors operated by rented (or purchased current; other power included (chiefly shaft or transmitted power from neighboring power plants.

FIREARMS.

General character of the industry.—The following report on the firearms industry covers the commercial manufacture of portable firearms—that is, those that can be fired from the shoulder—together with their parts and accessories, bayonets and scabbards. Machine guns, properly speaking, being mounted, find their place in the report on ordnance.

Statistics for establishments operated by the Federal Government are not included in this report but are given in the introductory section for the combined industries—ammunition, firearms, and ordnance. Prior to the present census, detailed statistics of products were not reported; there was no special schedule and the establishments reported only the total value of products.

Comparative summary.—Table 16 summarizes the statistics for the censuses from 1879 to 1919, inclusive, with percentages of increase. The general statistics for the industry at earlier censuses are as follows: In 1869 the industry was represented by 46 establishments, with 3,297 wage earners (average number) and products valued at $5,582,258; in 1859 by 242 establishments, with 2,065 wage earners and products valued at $2,368,931; and in 1849 by 317 establishments, 1,547 wage earners, and products valued at $1,173,014.

Principal states, ranked by value of products.—Statistics by states can only be presented for Connecticut, New York, and Massachusetts. Table 17 shows these states ranked in the order named with respect to value of products, wage earners, and value added by manufacture.

Persons engaged in the industry.—The age classification of the average number of wage earners in Table 18 is an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 27.

Wage earners, by months, for states.—The statistics presented in Table 19 are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions existing during 1919. Of the total average number of wage earners employed in the industry, 9.9 per cent were females. New York with 553 females shows the highest ratio, 13.7 per cent.

Average number of wage earners, by prevailing hours of labor per week, for states.—The statistics in Table 20 show in a marked degree the reduction in the prevailing hours of labor in 1919 as compared with 1914. In 1914 practically all of the wage earners were employed in establishments where the prevailing hours of labor were 54 or more per week, whereas in 1919 the wage earners employed "54" hours per week and more constituted but 17 per cent of the total number, and 79.2 per cent were employed in establishments where the hours were "48" per week or less.

Size of establishments, by average number of wage earners, for states.—The industry is one of large units. In 1919, 13 establishments employed over 100 wage earners each, and represented 96.5 per cent of the total number employed in all establishments. Table 21 shows that the group "Over 1,000 wage earners" carries the largest number of wage earners, the number employed representing 54.4 per cent of all wage earners in 1919, compared with 34.3 per cent in 1914.

Size of establishments, by value of products.—The natural increase in the firearms industry, due to the World War, together with the inflation of values, has resulted in a marked shift to the group of establishments with products valued at "$1,000,000 and over" in 1919 as compared with 1914 as presented in Table 22. In 1919 the average value of products per establishment was $1,160,822 as compared with $363,578 in 1914.

Character of ownership.—Table 23 shows that the industry is mainly in the hands of corporations. In 1919, 4 individual establishments with 44 wage earners reported products valued at $78,618, or three-tenths of 1 per cent of the value of all products for the industry, and 3 firms with 714 wage earners reported products to the value of $1,662,283, or 5.5 per cent of the value of all products for the industry, the balance being corporations. In 1914 there were 8 individual establishments with 665 wage earners and products valued at $1,184,920, and 3 establishments owned by firms with 580 wage earners and products valued at $1,013,180.

Number and horsepower of types of prime movers.—The total horsepower presented in Table 24 for 1919 as compared with that for 1914 shows an increase of 18,693, or 250.1 per cent. Electric power is an important factor, and in 1919 purchased electric power constituted 45.1 per cent of the total primary power, and in 1914, 54 per cent. A large proportion of the owned power is employed in electric generation and is so used.

Fuel consumed, by states.—Table 25 shows the total quantities of the principal kinds of fuel used for the industry as a whole, and the distribution of same, by states.

TABLE 16.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE.[1] 1914–1919	1909–1914	1904–1909	1899–1904	1889–1899	1879–1889
Number of establishments	26	29	27	30	32	34	39	.....	.....	.....	.....	.....	.....
Persons engaged	12,534	7,518	(2)	6,563	4,710	(2)	(2)	66.7	.....	.....	39.3	.....	.....
Proprietors and firm members	9	16	(2)	339	228	(2)	(2)	.....	.....	.....	48.7	.....	.....
Salaried employees	1,238	438	(2)					182.6					
Wage earners (average number)	11,287	7,064	6,002	6,224	4,482	2,660	4,862	59.8	17.7	—3.6	38.9	68.5	—45.3
Primary horsepower	26,167	7,474	7,523	16,352	4,490	(2)	(2)	250.1	—0.7	—54.0	264.2	.....	.....
Capital	$51,917,782	$15,610,809	$13,033,000	$10,376,264	$6,916,231	(2)	(2)	232.6	19.8	25.6	50.0	.....	.....
Salaries and wages	15,427,678	5,776,500	(2)	4,231,190	2,785,572	(2)	(2)	167.1	.....	.....	51.9	.....	.....
Salaries	2,094,183	709,447	(2)	508,340	243,206	(2)	(2)	195.2	.....	.....	109.0	.....	.....
Wages	13,333,495	5,067,053	3,918,652	3,722,850	2,542,366	$1,575,931	$2,700,281	163.1	29.3	5.3	46.4	61.3	—41.6
Paid for contract work	.....	.....	(2)	43,494	(2)	(2)	(2)	.....	.....	.....	.....	.....	.....
Rent and taxes	1,388,410	109,733	(2)	[3] 1,085,183	(2)	(2)	(2)	1,165.3	.....	.....	.....	.....	.....
Cost of materials	7,613,784	2,669,618	1,568,734	1,738,012	1,305,421	485,946	1,859,026	185.2	70.2	—9.7	33.1	168.6	—73.9
Value of products	30,181,370	10,543,753	8,058,490	8,275,560	5,444,659	2,922,514	5,730,936	186.2	30.8	—2.6	52.0	86.3	—49.1
Value added by manufacture	22,567,586	7,874,135	6,489,765	6,537,548	4,139,238	2,436,568	3,877,910	186.6	21.3	—0.7	57.9	69.9	—37.2

[1] A minus sign (—) denotes decrease. Percentages are omitted where base is less than 100 or where comparable figures can not be given.
[2] Figures not available.
[3] Exclusive of internal revenue.
[4] Value of products less cost of materials.

TABLE 17.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	26	11,287	100.0	...	30,181	100.0	...	22,568	100.0	...
Connecticut	9	4,561	40.4	1	15,929	52.8	1	11,631	51.5	1
New York	7	4,049	35.9	2	8,181	27.1	2	6,150	27.3	2
Massachusetts	5	2,253	20.0	3	5,645	18.7	3	4,578	20.3	3
All other states	5	424	3.8	...	426	1.4	...	209	0.9	..

TABLE 18.—PERSONS ENGAGED IN THE INDUSTRY: 1919 AND 1914.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	Female.
All classes	1919	12,534	10,950	1,584	87.4	12.6
	1914	7,518	(1)	(1)	(1)	(1)
Proprietors and officials	1919	204	202	2	99.0	1.0
	1914	129	126	3	97.7	2.3
Proprietors and firm members	1919	9	8	1	88.9	11.1
	1914	16	(1)	(1)	.....	.....
Salaried officers of corporations	1919	38	38	.....	100.0	.....
	1914	34	(1)	(1)	.....	.....
Superintendents and managers	1919	157	156	1	99.4	0.6
	1914	79	(1)	(1)	.....	.....
Clerks and other subordinate salaried employees	1919	1,043	577	466	55.3	44.7
	1914	325	198	127	60.9	39.1
Wage earners (average number)	1919	11,287	10,171	1,116	90.1	9.9
	1914	7,064	(1)	(1)	.....	.....
16 years of age and over	1919	11,239	10,123	1,116	90.1	9.9
Under 16 years of age	1919	48	48	.....	.....	.....

[1] Figures not available.

TABLE 19.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

[The month of maximum employment is indicated by **bold-faced** figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Per cent minimum is of maximum.
United States:														
1919	11,287	**13,428**	12,369	11,606	11,022	10,885	10,545	*10,194*	10,683	10,926	11,284	11,251	11,251	75.9
Males	10,171	**11,806**	10,966	10,302	9,878	9,828	9,602	*9,239*	9,696	9,940	10,273	10,237	10,225	78.3
Females	1,116	**1,622**	1,403	1,244	1,144	1,057	*943*	955	987	986	1,011	1,014	1,026	58.1
1914	7,064	7,401	7,437	7,443	7,343	7,227	7,018	6,816	*5,742*	6,926	6,879	6,987	**7,549**	76.1
Connecticut	4,561	**8,075**	5,681	4,949	4,504	4,369	3,827	3,652	*3,615*	3,821	4,153	4,129	3,957	44.8
Massachusetts	2,253	*1,986*	1,764	2,124	2,385	2,498	**2,570**	2,312	2,351	2,363	2,397	2,435	2,451	53.9
New York	4,049	*3,568*	4,431	4,081	3,746	3,638	3,801	3,871	4,305	4,327	4,299	4,278	**4,443**	75.8

TABLE 20.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
		44 and under.	Between 44 and 48.	48.	Between 48 and 54.	54.	Between 54 and 60.	60.
United States..1919..	11,287	282	3,080	5,576	434	932	961	22
1914..	7,064	.....	.....	.....	4	2,001	4,032	1,027
Connecticut.....	4,561	.....	1,088	3,131	192	36	112	2
Massachusetts.....	2,253	1	.....	691	.....	712	849	.....
New York.....	4,049	10	1,992	1,659	204	184	.....	.....

TABLE 21.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																		
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States.....1919..	26	11,287	1	3	7	3	41	4	146	2	194	3	580	2	582	5	3,595	3	6,139
1914..	29	7,064	2	4	10	5	73	3	108	1	63	4	674	5	2,059	3	1,652	2	2,425
Connecticut.....	9	4,561	.....	1	1	1	14	3	108	1	99	1	192	.....	.....	.....	.....	2	4,147
Massachusetts.....	5	2,253	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	316	3	1,936	.....	.....
New York.....	7	4,049	1	.....	.....	1	10	.....	.....	.....	.....	2	388	.....	.....	2	1,659	1	1,992

TABLE 22.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919 AND 1914.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
	1919	1914	1919	1914	1919	1914	1919	1914
All classes.....	26	29	11,287	7,064	$30,181,370	$10,543,753	$22,567,586	$7,874,135
Less than $5,000.....	4	5	8	6	10,109	12,980	8,506	10,478
$5,000 to $20,000.....	.....	5	.....	60	.....	66,978	.....	47,769
$20,000 to $100,000.....	6	5	154	188	353,777	322,762	260,472	184,614
$100,000 to $1,000,000.....	9	11	1,924	3,762	3,559,799	5,261,291	2,668,926	4,161,792
$1,000,000 and over.....	7	3	9,201	3,048	26,257,685	4,879,742	19,629,682	3,469,482
	PER CENT DISTRIBUTION.							
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000.....	15.4	17.2	0.1	0.1	(1)	0.1	(1)	0.1
$5,000 to $20,000.....	.....	17.2	.....	0.8	.....	0.6	.....	0.6
$20,000 to $100,000.....	23.1	17.2	1.4	2.7	1.2	3.1	1.2	2.3
$100,000 to $1,000,000.....	34.6	37.9	17.0	53.3	11.8	49.9	11.8	52.9
$1,000,000 and over.....	26.9	10.4	81.5	43.1	87.0	46.3	87.0	44.1

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

TABLE 23.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Census year.	Number of establishments	Average number of wage earners.	Value of products.	Value added by manufacture.
All classes.....	1919	26	11,287	$30,181,370	$22,567,586
	1914	29	7,064	10,543,753	7,874,135
Individual.....	1919	4	44	78,618	58,140
	1914	8	665	1,184,920	804,250
Corporation.....	1919	19	10,529	28,440,469	21,106,032
	1914	18	5,819	8,345,653	6,207,072
All other.....	1919	3	714	1,662,283	1,403,414
	1914	3	580	1,013,180	862,813
Per cent distribution:					
Individual.....	1919	15.4	0.4	0.3	0.3
	1914	27.6	9.4	11.2	10.2
Corporation.....	1919	73.1	93.3	94.2	93.5
	1914	62.1	82.4	79.2	78.8
All other.....	1919	11.5	6.3	5.5	6.2
	1914	10.3	8.2	9.6	11.0

TABLE 24.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919 AND 1914.

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.				POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.			
			Amount.		Per cent distribution.					Amount.		Per cent distribution.	
	1919	1914	1919	1914	1919	1914		1919	1914	1919	1914	1919	1914
Primary power, total	860	228	26,167	7,474	100.0	100.0	Rented	846	200	11,813	4,133	45.1	55.3
Owned	14	28	14,354	3,341	54.9	44.7	Electric	846	200	11,813	4,033	45.1	54.0
Steam	12	22	14,196	3,027	54.3	40.5	Other	.....	.....	.....	100	.....	1.3
Engines	6	(1)	846	(1)	3.2	.....	Electric	1,394	220	20,843	4,561	100.0	100.0
Turbines	6	(1)	13,350	(1)	51.0	.....	Rented	846	200	11,813	4,033	56.7	88.4
Internal-combustion engines	.....	1	.....	4	.....	0.1	Generated by establishments reporting	548	20	9,030	528	43.3	11.6
Water wheels and turbines	2	5	158	310	0.6	4.1							

[1] Figures not available.

TABLE 25.—FUEL CONSUMED, BY STATES: 1919.

STATE.	COAL.		Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).	STATE.	COAL.		Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
	Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).					Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).			
United States 1919	2,174	74,415	11,451	1,310	29,389	Massachusetts	30	6,440	2,113	199	997
1914	1,885	21,954	2,190	(1)	9,859	New York	2,047	18,251	4,851	450	11,245
Connecticut	.....	49,246	4,487	661	15,780	All other states	97	478	.....	.....	1,367

[1] Included in figures for fuel oils.

SPECIAL STATISTICS.

The foregoing tables relating to the firearms industry give the general statistics for the 26 commercial establishments engaged primarily in the manufacture of firearms. There is a large production of firearms, however, by establishments in other lines of manufacture, especially ammunition, and Table 26 gives the total production of firearms by all establishments, whether manufactured as a primary or subsidiary product.

Products; detailed statistics.—Table 26 gives the statistics of production, both as to quantity and value, with as much detail as the reports permit. Most of the subsidiary production was reported by establishments included under the "Ammunition" industry on account of the preponderance of ammunition products. In like manner the establishments assigned to the firearms industry reported a considerable output of products assignable to ordnance. These are included in the presentation of products for the ordnance industry. While rifles and shotguns were quite freely reported as to number, this information was not reported with as much detail for revolvers and pistols.

Production figures, by states, can not be given, but the industry is largely centralized in the New England and Middle Atlantic geographic divisions. With respect to the classified industry, the states of Connecticut, Massachusetts, and New York cover 98.6 per cent of the products. The subsidiary production of firearms included under other industries is more widely distributed but is still in the main the product of establishments located in the North Atlantic states.

TABLE 26.—PRODUCTS; DETAILED STATISTICS OF NUMBER AND VALUE: 1919.

KIND.	Number.	Value.	KIND.	Number.	Value.
Total value	.....	$37,314,686	Firearms—Continued.		
			Carbines	33,811	$578,345
The firearms industry, all products	.....	30,181,370	Shotguns	.....	6,173,989
Subsidiary firearms products of other industries	.....	7,133,316	Repeating	83,423	2,466,851
			Double barreled	90,158	1,803,284
Firearms [1]	.....	29,212,450	Single barreled	244,142	1,497,854
Revolvers and pistols	.....	12,560,901	Kind not specified	14,000	406,000
Revolvers	234,188	2,032,392	Other firearms (combination shotguns and rifles, shoulder and dart whale-guns, special guns for target practice), accessories, bayonets, and scabbards and parts	.....	2,004,852
Pistols, automatic	139,577	1,648,611	Ordnance, products of firearms establishments	.....	7,401,272
Pistols, other than automatic	.....	3,205,384	Ammunition, products of firearms establishments	.....	77,081
Quantity reported	7,280	31,178	Contract work	.....	395,521
Quantity not reported	.....	3,174,206	All other products	.....	228,362
Kind not specified	.....	5,674,514			
Rifles	.....	7,894,363			
Military and automatic	[2] 154,738	2,632,035			
Repeating	189,931	2,765,083			
Single	[3] 333,095	2,497,245			

[1] Not including products of 3 governmental establishments, $21,264,751.
[2] Includes estimated number (1,013) for rifles valued at $17,220.
[3] Includes estimated number (4,006) for rifles valued at $30,046.

GENERAL TABLE.

Detailed statement, by states.—Table 27 presents for 1919 the statistics in detail for the industry as a whole and for each state for which figures can be shown without disclosure of individual operations.

TABLE 27.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Capital.	EXPENSES. Salaries and wages. Officials.	EXPENSES. Salaries and wages. Clerks, etc.
United States	26	12,534	9	195	577	466	11,287	Ja 13,428	Jy 10,194	11,497	10,390	1,058	49	$51,917,782	$856,026	$1,238,137
Connecticut	9	4,952	3	74	176	138	4,561	Ja 8,075	Au 3,615	4,212	3,834	377	1	30,174,424	374,561	453,093
Massachusetts	5	2,440	1	13	78	95	2,253	Je 2,570	Ja 1,386	2,463	2,323	95	45	5,294,048	95,542	234,363
New York	7	4,663	1	84	313	216	4,049	De 4,443	Ja 3,368	4,423	3,891	529	3	15,731,559	337,701	533,456
All other states [1]	5	479	4	24	10	17	424	Ja 599	Je 347	399	342	57	.....	717,751	48,222	17,245

STATE.	EXPENSES—continued. Salaries and wages—Con. Wage earners.	Rent and taxes. Rent of factory.	Rent and taxes. Taxes, Federal, state, county, and local.	For materials. Principal materials.	For materials. Fuel and rent of power.	Value of products.	Value added by manufacture.	POWER. Primary horsepower. Total.	Primary horsepower. Owned. Steam engines (not turbines).	Primary horsepower. Owned. Steam turbines.	Primary horsepower. Owned. Water power.[2]	Primary horsepower. Rented, (electric).	Electric horsepower generated in establishments reporting.
United States	13,333,495	$17,896	$1,370,514	$6,757,191	$856,593	$30,181,370	$22,567,586	26,167	846	13,350	158	11,813	9,030
Connecticut	6,050,283	7,017	787,604	3,854,139	443,249	15,928,708	11,631,318	15,632	76	12,750	40	2,766	9,000
Massachusetts	2,599,197	520	372,572	961,022	105,185	5,644,510	4,578,303	2,121	570	.....	.....	1,551	.....
New York	4,524,422	6,382	204,311	1,736,522	295,220	8,181,429	6,149,687	8,146	150	600	118	7,278	30
All other states [1]	159,593	3,977	6,027	205,508	12,939	426,725	208,278	268	50	.....	.....	218	.....

[1] All other states embrace Illinois, 1 establishment; Michigan, 1; New Jersey, 1; and Pennsylvania, 2.
[2] Includes water wheels and turbines (irrespective of ownership of water supply).

ORDNANCE AND ACCESSORIES.

General character of the industry.—The following report pertains to the commercial establishments engaged in the manufacture of "ordnance and accessories," and with respect to products includes all ordnance and ordnance stores in the military sense, except those covered by the other sections of this report—"Firearms," or small arms, and "Ammunition."

At the census of 1914 only two establishments were engaged primarily in the manufacture of ordnance and accessories, and they were included in the group designated as "All other industries," which included the few industries for which separate statistics could not be published. Likewise at the census of 1909 the industry was represented by but one establishment; consequently comparative figures are not available for prior years. The term ordnance is not used in the broad military sense to include infantry and cavalry equipment and shot and shell for cannon, which latter are here classed under "Ammunition," but comprises only artillery, or mounted guns, gun mounts, carriages, caissons, limbers, and mounted machine guns, with accessories. Light portable machine guns are listed as automatic rifles in the statistics relating to firearms. With "accessories" are included miscellaneous manufactures which were so reported that they can not be easily separated, among which are artillery and car axles and spindles, cases and ball-bearing parts, gun-fire control, air compressors, coolers, periscopes, sights, lifting jacks, and electrical dials.

Projectiles, bushings, and caps for projectiles will be found under "Ammunition," and there is possibly an unknown quantity of armor plate included with the gun forgings reported by steel works and rolling mills.

Comparative summary.—As above stated, comparable figures with respect to previous censuses can not be given, and the full statistics for 1919 will be found in Table 36. At the censuses of 1904, 1899, and 1889 the industry was designated as ordnance and ordnance stores and included supplies now classified under "Ammunition."

Principal states, ranked by value of products.—In Table 28 the states are ranked according to value of products, and the rank shown for average number of wage earners and value added by manufacture. The states of New York, Ohio, Pennsylvania, Michigan, Indiana, and Wisconsin, included with "All other states," rank second, fourth, fifth, sixth, seventh, and eighth, respectively.

Persons engaged in the industry.—The age classification of the average number of wage earners in Table 29 is an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 36.

Wage earners, by months, for states.—The statistics presented in Table 30 are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions existing in 1919. The number of females employed is relatively small, the average number for the year constituting but 2.7 per cent of the total number.

Average number of wage earners, by prevailing hours of labor per week, for states.—Table 31 shows the prevalence of the short working-day in this industry. The majority of the wage earners, 71.3 per cent of the total, were employed in establishments in which the prevailing hours of labor were 48 per week, and 11.4 per cent were in establishments where the hours were 44 per week or less.

Size of establishments, by average number of wage earners, for states.—Table 32 shows that the industry is one of large units, the average for all establishments being 436 wage earners, and 5 establishments, each employing over 500 wage earners, account for 61.5 per cent of the total number.

Size of establishments, by value of products.—Of the 26 establishments, 14 had products each in excess of $1,000,000. These employed 9,647 wage earners, or 85.2 per cent of the total number, and reported products valued at $63,439,134, or 91.3 per cent of the total for the industry, and value added by manufacture to the amount of $39,172,259, or 91.3 per cent of the total for the industry. Only 6 establishments reported products, valued at less than $500,000, these having 357 wage earners, $1,099,632 in value of products, and $848,272 in value added by manufactures, and 6 had products of $500,000 but less than $1,000,000, these having 1,324 wage earners, products valued at $4,956,862 and value added by manufacture $2,882,439.

Character of ownership.—With one exception the industry is in the hands of corporations, this one establishment representing but a fraction of 1 per cent of the wage earners employed and the value of products.

Number and horsepower of types of prime movers.—Table 33 shows that electric power is an important factor in the manufacture of ordnance and accessories, and that purchased electric power constituted 78.6 per cent of the total primary power. In addition, a large proportion of the owned power is employed in electric generation and is so utilized.

Fuel consumed.—Table 34 shows the quantities and different kinds of fuels used in the industry and the distribution of the same, by states. The gas reported is chiefly natural gas.

TABLE 28.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	26	11,328	100.0	...	$69,496	100.0	...	$42,903	100.0	...
Massachusetts	4	1,805	15.9	2	18,347	26.4	1	11,919	27.8	1
Connecticut	4	1,443	12.7	3	11,697	16.8	3	6,361	14.8	3
All other states	18	8,080	71.4	...	39,452	56.8	...	24,623	57.4	..

TABLE 29.—PERSONS ENGAGED IN THE INDUSTRY: 1919.

CLASS.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
All classes	13,600	12,711	889	93.5	6.5
Proprietors and officials	443	440	3	99.3	0.7
Proprietors and firm members	3	3	.....	.....	.....
Salaried officers of corporations	90	90	.....	.....	.....
Superintendents and managers	350	347	3	99.1	0.9
Clerks and other subordinate salaried employees	1,829	1,249	580	68.3	31.7
Wage earners (average number)	11,328	11,022	306	97.3	2.7
16 years of age and over	11,326	11,020	306	97.3	2.7
Under 16 years of age	2	2	.....	.....	.....

[1] Figures not available.

TABLE 30.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

[The month of maximum employment is indicated by **bold-faced** figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States	11,328	**19,435**	15,331	15,038	13,200	11,730	10,022	8,353	*7,974*	7,990	8,174	9,159	9,530	41.0
Males	11,022	**18,504**	14,836	14,568	12,883	11,461	9,816	8,209	*7,837*	7,875	8,055	9,009	9,211	42.4
Females	306	**931**	495	470	317	269	206	144	137	*115*	119	150	319	12.4
Connecticut	1,443	1,486	1,596	2,665	**2,753**	2,268	1,487	856	*625*	659	768	992	1,161	22.7
Massachusetts	1,805	**3,937**	3,393	2,736	1,777	1,516	*902*	1,401	1,392	1,317	935	1,075	1,279	22.9

TABLE 31.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—				
		44 and under.	48.	Between 48 and 54.	Between 54 and 60.	Over 60.
United States	11,328	1,295	8,077	970	814	172
Connecticut	1,443	.....	764	.....	679	.....
Massachusetts	1,805	496	1,309	.....	.....	.....

TABLE 32.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—											
			21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
	Establishments.	Wage earners (average number).	Establishments.	Wage earners	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States	26	11,328	2	81	4	276	8	1,326	7	2,680	4	2,954	1	4,011
Connecticut	4	1,443	.....	.....	.....	.....	2	358	1	405	1	680	.....	.....
Massachusetts	4	1,805	.....	.....	.....	.....	.....	.....	3	1,256	1	549	.....	.....

TABLE 33.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919.

POWER.	Number of engines or motors.	HORSEPOWER.	
		Amount.	Per cent distribution.
Primary power, total	1,875	40,652	100.0
Owned	37	8,687	21.4
Steam	31	8,300	20.4
Engines	28	6,669	16.4
Turbines	3	1,631	4.0
Internal-combustion engines	5	187	0.5
Water wheels and turbines	1	200	0.5

POWER.	Number of engines or motors.	HORSEPOWER.	
		Amount.	Per cent distribution.
Rented, electric	1,838	31,965	78.6
Electric	2,403	38,550	100.0
Rented	1,838	31,965	82.9
Generated by establishments reporting	565	6,585	17.1

TABLE 34.—FUEL CONSUMED, BY STATES: 1919.

STATE.	COAL.		Coke (tons, 2,000 pounds)	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
	Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States	36,747	66,084	3,837	58,368	908	2,978,491
Connecticut	137	12,930	533	5,937	357	4,240
Massachusetts	40	13,366	451	2,077	.....	.....

STATE.	COAL.		Coke (tons, 2,000 pounds)	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
	Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
New York	18,161	2,996	2,740	19,795	.....	1,327
Ohio	.....	1,862	65	820	104	1,573
Wisconsin	.....	1,932	.....	.....	35	.....
All other states	18,409	33,598	48	29,730	472	2,971,351

SPECIAL STATISTICS.

The foregoing tables relating to ordnance and accessories give the general statistics for the 26 establishments assigned to this industry. There is, however, a very large production by establishments in other lines of manufacture for which the general statistics are included in the reports for the ammunition and firearms industries, for steel works and rolling mills, and likewise in certain of the general industries designated as foundry and machine-shop products, steel and electric railway cars, and agricultural implements. Table 35 gives the total production of ordnance and accessories by all establishments, whether manufactured as a primary or as a subsidiary product. There is included among accessories certain miscellaneous articles, such as periscopes, which were not segregated in the reports. There was a large production of gun forgings reported by steel plants which probably to a considerable extent is duplicated in the finished ordnance products reported by other establishments. Of the finished guns here reported, approximately 60 per cent of the machine guns were produced by establishments engaged primarily in the manufacture of firearms and over one-half of the gun mounts and the like were products of establishments outside of the ordnance industry as here classified. An ordnance production of $5,343,327 was reported by establishments included in the machine-shop industry, and a still larger amount came from establishments engaged primarily in the manufacture of steel and electric railway cars. These are all included in the item designated as "subsidiary products, ordnance and accessories, of other industries."

Products; detailed statistics.—The statistics of production are given in Table 35 with as much detail as is possible without disclosure of individual operation.

TABLE 35.—PRODUCTS; DETAILED STATISTICS: 1919.

KIND.	Number of establishments.	Value.
Total value		$130,588,482
Ordnance and accessories, the industry	26	69,495,628
Subsidiary products, ordnance and accessories, of other industries		61,092,854
Ordnance and accessories [1]		102,322,423
Guns—		
Machine guns [2]	5	15,577,764
Naval guns; number 910		4,568,901
Field guns [3]	3	706,827
Other guns		634,704
Gun mounts—		
Naval and steel gun mounts	9	6,472,751
Machine and antiaircraft mounts and sights		3,788,837
Gun mounts, kind not specified, and sights		7,877,876
Ordnance and accessories—Continued.		
Carriages, caissons and limbers, not specified		$10,200,212
Accessories and miscellaneous—		
Spares for—		
Machine guns	5	7,228,417
Caissons, limbers, and wagons, axles and spindles		6,461,363
Gunfire control		2,443,311
Sights, lifting jacks, elevator dials, etc	7	1,808,630
Other, including cases, bomb projectors, air compressors, coolers, periscopes, etc		7,029,302
Gun forgings (steel works)	6	21,185,931
Ordnance not specified (steel works)		6,337,592
Ammunition, products of ordnance establishments		13,410,903
Contract work		2,709,117
All other products, not ordnance or accessories		12,146,039

[1] Not including products of 3 governmental establishments, $52,941,756.
[2] Includes 46,542 machine guns, value $14,365,715 (unit value $309); number not reported for $1,212,049.
[3] Includes 1,522 field guns, value $541,427 (unit value $356); number not reported for $165,600.

GENERAL TABLE.

Detailed statement, by states.—Table 36 presents for 1919 the statistics in detail for the states for which figures can be shown without disclosure of individual operations.

TABLE 36.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments	Persons engaged in the industry.								Wage earners dec. 15, or nearest representative day.				Capital.	Expenses.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16, male.		Salaries and wages.	
					Male.	Female.	Average number.	Number, 15th day of— Maximum month.	Number, 15th day of— Minimum month.		Male.	Female.			Officials.	Clerks, etc.
United States	26	13,600	3	440	1,249	580	11,328	Ja 19,435	Au 7,974	12,930	12,120	808	2	$85,399,163	$2,353,619	$1,748,774
Connecticut	4	1,680	.....	80	92	65	1,443	Ap 2,753	Au 625	1,161	1,084	77	.....	15,988,439	436,303	218,500
Massachusetts	4	2,604	.....	128	421	250	1,805	Ja 3,937	Je 902	2,080	1,984	95	1	22,600,853	517,672	598,051
All other states [1]	18	9,316	3	232	736	265	8,080	.....	.....	9,689	9,052	636	1	46,719,871	1,399,644	932,223

STATE.	Expenses—continued.						Value of products.	Value added by manufacture.	Power.						
	Salaries and wages—Continued.		For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.
	Wage earners.			Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned. Steam engines (not turbines.)	Steam turbines.	Internal-combustion engines.	Water power.[2]	Rented (electric).	
United States	$15,556,042	$1,475	$110,402	$3,739,959	$25,513,109	$1,079,549	$69,495,628	$42,902,970	40,652	6,669	1,631	187	200	31,965	6,585
Connecticut	1,860,934	1,475	.....	251,485	5,209,038	126,513	11,696,554	6,361,003	5,073	1,625	.....	75	200	3,173	1,342
Massachusetts	2,789,639	.....	36,661	1,387,376	6,261,244	167,046	18,346,958	11,918,668	7,900	1,100	625	.....	.....	6,175	1,525
All other states [1]	10,906,069	.....	73,741	2,101,098	14,042,827	785,990	39,452,116	24,623,299	27,679	3,944	1,006	112	.....	22,617	3,718

[1] All other states embrace Indiana, 1 establishment; Maryland, 1; Michigan, 2; New Jersey, 2; New York, 4; Ohio, 3; Pennsylvania, 2; and Wisconsin, 2.
[2] Includes water wheels and turbines (irrespective of ownership of water supply).

DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES

MANUFACTURES: 1919

AUTOMOBILES

INCLUDING BODIES AND PARTS

Prepared under the supervision of EUGENE F. HARTLEY, Chief Statistician for Manufactures

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EXPLANATION OF TERMS.

Scope of census.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than $500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

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

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date did not portray such conditions, an earlier date was requested.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

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

In order to determine as nearly as possible the age distribution of the average number of wage earners for an industry, the per cent distribution by age of the wage earners for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year to determine the average numbers 16 years and over, and under 16, employed.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital (amount actually invested).—The instructions on the schedule for securing data relating to capital were as follows:

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

These instructions were identical with those employed at the censuses of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power equipment of the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuel is impracticable.

AUTOMOBILES, INCLUDING BODIES AND PARTS.

GENERAL STATISTICS.

General character of the industry.—The figures covering the operations of the automobile industry, as shown in this bulletin, are derived from a consolidation of the reports made (1) by establishments manufacturing complete automobiles as their product of chief value, and (2) those engaged chiefly in the production of automobile bodies and parts. The term "bodies and parts" as here used signifies all automobile parts other than tires, engines, lamps, springs, and electric motors and starting and lighting systems. The products of establishments of the second class largely become the material of those of the first class, while a number of establishments manufacturing chiefly complete automobiles reported considerable quantities of bodies and parts. There is thus a considerable duplication in the industry as a whole. The statistics for the factories which produce complete machines and those which manufacture bodies and parts do not, however, indicate the full extent and importance of the automobile industry, because of the large number of establishments in other industries, which manufacture engines, motors, parts of machinery, tools, rubber tires, and other parts and accessories of automobiles.

Statistics are also shown for the repairing of automobiles and vulcanizing of tires.

Comparative summary.—Table 1 summarizes the statistics for the combined industry for each census since 1899, with percentages of increase for each five-year period. The figures of each census up to and including that of 1914 are fairly comparable and indicate the remarkable growth of the industry during that period. In considering the exceedingly large increases from 1914 to 1919, in salaries and wages, cost of materials, and value of products, consideration must be given to the general rise of prices and wages, following the World War, which do not therefore fairly measure the growth of the industry for that period. A truer index of the conditions is found in the increase in the average number of wage earners and primary horsepower. Between 1914 and 1919 the manufacture of automobiles advanced in rank among the manufacturing industries of the country from eighth to third place with respect to value of products.

Summary of the industry.—Table 2 presents a summary of the combined industry and each of the branches, for the United States as a whole for 1919.

Of the 2,830 establishments in the combined industry, only 315, or 11.1 per cent, were engaged primarily in the manufacture of complete automobiles, but these establishments employed 61.4 per cent of the total number of wage earners and reported 77.5 per cent of the total value of products.

The net value of products of the automobile industry as a whole is probably most nearly represented by the total value of the complete machines manufactured, $1,554,881,496. This figure, however, excludes the value of bodies, parts, and accessories made for sale as such to garages and dealers.

Principal states, ranked by value of products.—Michigan, as shown by Table 3, was preeminently the leading state in the industry in 1919, as it was in 1914, 1909, and 1904. For 1919 the establishments in Michigan reported 51.3 per cent of the total average number of wage earners employed in the combined industry, 52.6 per cent of the value of products, and 58.0 per cent of the value added by manufacture. In 1919 this state employed 48,893, or 38.5 per cent, more wage earners and reported $987,551,882, or 156.1 per cent, greater product than was reported for the entire industry in the United States in 1914. The four leading states, Michigan, Ohio, New York, and Indiana, have held the same relative rank since the census of 1909, and in 1919 these four states produced 77.6 per cent of the total value of products for the industry.

Persons engaged in the industry.—The classification by sex for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. The age classification of the average number of wage earners in Table 4 is an estimate obtained by the method described in the "Explanation of terms," page 2. Figures by states will be found in Table 17.

Wage earners, by months, by states.—As shown by Table 5, the number of wage earners employed in the industry month by month ranged from a maximum of 399,044 in December to a minimum of 283,491 in January, the minimum number being equivalent to 71 per cent of the maximum. Figures are given for all states reporting an average of over 500 wage earners that could be shown without disclosing operations of individual establishments.

Average number of wage earners, by prevailing hours of labor per week, by states.—Table 6 shows a marked shortening of the working day for the industry since 1914. In that year only 33.3 per cent were reported as employed fewer than 54 hours as compared with 80.7 per cent in 1919. This reduction is especially noticeable in the state of Michigan, where only 8.9 per cent of the total wage earners were employed 54 hours or over.

Size of establishments, by average number of wage earners, by states.—Analysis of Table 7 discloses the significant fact that 1,362 establishments, or 48.1 per cent of the total number for the industry, employed less than six wage earners each while only 2,644, or eight-tenths of 1 per cent of the total number of wage earners, were employed therein, evidencing the predominance of the small establishments based on the average number of wage earners. On the other hand, the group "501 to 1,000 wage earners" and "Over 1,000 wage earners" comprising 107 establishments, or 3.8 per cent of the total number in the industry, employed 257,141 wage earners, or 74.9 per cent of the total average number, illustrating the extent of manufacturing operations in a few large establishments.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "$100,000 to $1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "$100,000 to $500,000," and "$500,000 to $1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. The table, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. The statistics in Table 8 show the degree of concentration of production in large establishments. In 1919 the group "$1,000,000 and over" included 270 establishments, or 9.5 per cent of the total number for the industry, employed 297,915 wage earners, or 86.8 per cent of the total average number, and reported products to the value of $2,871,134,025, or 93.2 per cent of the total value of products.

Character of ownership, by states.—Table 9 presents statistics concerning the character of ownership, or legal organization, of establishments engaged in the industry in 1919, 1914, and 1909.

For 1914 and 1909 considerably more than one-half of the total number of establishments were under corporate ownership, but for 1919 less than one-half, or 44.1 per cent, as reported as owned by corporations. This decline in proportion is due to the large number of small establishments under individual and firm ownership in the "automobile bodies and parts" branch of the industry. Out of the 315 establishments engaged in the manufacture of complete automobiles 292, or 92.7 per cent, were reported as owned by corporations. In the combined industry in 1919 that class of ownership employed 97.3 per cent of the wage earners and reported 98.6 per cent of the total value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 10, there was an increase in the total horsepower for the industry of 370,558 horsepower, or 213.4 per cent; owned power increased 88,986 horsepower, or 125.8 per cent; and electric rented power 277,232, or 271.4 per cent, during the five-year period. Not only has the use of electric rented power increased greatly, but a large proportion of the owned power was transformed into electric power, it representing 69.6 per cent of the total owned power reported in 1919.

Fuel consumed, by states.—Table 11 shows the principal kinds of fuel used for the industry in 1919 and 1914 and also gives separately the amounts consumed in states requiring considerable quantities of fuel for manufacturing purposes. Of the total for the three chief kinds of fuel used—bituminous coal, fuel oils, and gas—Michigan reported the largest consumption of each; using 50.8 per cent, 50.1 per cent and 38 per cent, respectively.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, AND 1899.

	1919	1914	1909	1904	1899	PER CENT OF INCREASE.[1]			
						1914–1919	1909–1914	1904–1909	1899–1904
Number of establishments	2,830	1,271	743	178	57	122.7	71.1	317.4	.....
Persons engaged	396,104	145,951	85,359	13,333	(2)	171.4	71.0	540.2	.....
Proprietors and firm members	2,165	760	405	103	(2)	184.9	87.7	293.2	.....
Salaried employees	56,824	18,099	9,233	1,181	268	180.8	96.0	681.8	340.7
Wage earners (average number)	343,115	127,092	75,721	12,049	2,241	170.0	67.8	528.4	437.7
Primary horsepower	544,242	173,684	75,550	10,109	3,164	213.4	129.9	647.4	219.5
Capital	$1,780,948,952	$407,729,915	$173,837,111	$23,083,860	$5,768,857	336.8	134.5	653.1	300.1
Salaries and wages	593,305,517	139,452,553	58,173,291	8,416,217	1,615,428	325.5	139.7	591.2	421.0
Salaries	102,184,144	37,525,679	9,479,424	1,257,259	294,770	172.3	295.9	654.0	326.5
Wages	491,121,373	101,926,874	48,693,867	7,158,958	1,320,658	381.8	109.3	580.2	442.1
Paid for contract work	1,758,343	3,954,924	550,329	1,060,576	(2)	−55.5	618.6	−48.1	.....
Rent and taxes	150,195,962	5,152,314	1,483,432	[3] 209,656	(2)	2,815.1	247.3	.....	.....
Cost of materials	1,940,678,876	356,207,930	131,645,736	13,151,365	4,804,287	444.8	170.6	901.0	628.9
Value of products	3,080,073,979	632,831,474	240,202,075	30,033,536	4,748,011	386.7	153.9	729.7	532.5
Value added by manufacture [4]	1,139,395,103	276,623,544	117,556,339	16,882,171	2,943,724	311.9	135.3	596.3	473.5

[1] A minus sign (−) denotes decrease; percentages are omitted where base is less than 100.
[2] Figures not available.
[3] Exclusive of internal revenue.
[4] Value of products less cost of materials.

TABLE 2.—SUMMARY OF THE INDUSTRY: 1919.

	Total.[1]	Automobiles.	Automobile bodies and parts.
Number of establishments	2,830	315	2,515
Persons engaged	396,104	242,922	153,182
Proprietors and firm members	2,165	36	2,129
Salaried employees	50,824	32,327	18,497
Wage earners (average number)	343,115	210,559	132,556
Primary horsepower	544,242	287,323	256,919
Capital	$1,780,948,952	$1,310,451,400	$470,497,552
Salaries and wages	$593,305,517	$379,381,674	$213,923,843
Salaries	$102,184,144	$67,215,804	$34,968,340
Wages	$491,121,373	$312,165,870	$178,955,503
Paid for contract work	$1,758,343	$198,142	$1,560,201
Rent and taxes	$150,195,962	$128,155,939	$22,040,023
Cost of materials	$1,940,678,876	$1,578,651,574	$362,027,302
Value of products	$3,080,073,979	$2,387,903,287	$692,170,692
Value added by manufacture[2]	$1,139,395,103	$809,251,713	$330,143,390
Automobiles made:			
Number	[3] 1,683,916	1,678,926	[3] 4,990
Value	[3] $1,554,881,496	$1,546,961,696	[3] $7,919,800

[1] In addition, automobiles and bodies and parts to the value of $25,337,068 were manufactured by establishments engaged primarily in other industries.
[2] Value of products less cost of materials.
[3] Includes 4,660 automobiles, valued at $7,794,495, made in establishments engaged in the manufacture of products other than automobiles or automobile bodies and parts.

TABLE 3.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	2,830	343,115	100.0	....	$3,080,074	100.0	....	$1,139,395	100.0	...
Michigan	271	175,985	51.3	1	1,620,383	52.6	1	660,616	58.0	1
Ohio	281	45,882	13.4	2	379,436	12.3	2	128,456	11.3	2
New York	344	30,483	8.9	3	211,137	6.9	3	75,340	6.6	3
Indiana	172	25,773	7.5	4	179,065	5.8	4	61,298	5.4	4
Wisconsin	95	13,585	4.0	6	119,381	3.9	5	44,204	3.9	5
Pennsylvania	202	14,708	4.3	5	113,820	3.7	6	37,691	3.3	6
Illinois	229	8,805	2.6	7	104,883	3.4	7	30,930	2.7	7
Missouri	86	3,240	0.9	10	71,940	2.3	8	16,996	1.5	9
New Jersey	116	5,519	1.6	8	54,671	1.8	9	17,586	1.5	8
California	265	3,008	0.9	11	44,362	1.4	10	14,044	1.2	10
Massachusetts	96	4,530	1.3	9	27,032	0.9	12	10,750	0.9	11
Iowa	43	564	0.2	18	$3,297	0.1	20	$1,328	0.1	19
Rhode Island	18	179	0.1	29	685	(1)	29	481	0.1	28
Alabama	9	89	(1)	31	263	(1)	33	170	(1)	30
Oregon	17	46	(1)	34	259	(1)	34	141	(1)	32
Florida	8	44	(1)	35	207	(1)	36	116	(1)	34
Mississippi	4	56	(1)	33	178	(1)	37	106	(1)	36
Utah	6	56	(1)	33	166	(1)	38	110	(1)	35
Maine	6	40	(1)	36	87	(1)	40	63	(1)	39
Delaware	5	11	(1)	41	64	(1)	41	48	(1)	41
North Dakota	5	12	(1)	40	63	(1)	42	35	(1)	42
Montana	6	4	(1)	43	34	(1)	44	18	(1)	44
Idaho	5	7	(1)	42	22	(1)	46	14	(1)	45
All other states	541	10,489	3.1	.....	148,639	4.8	....	38,854	3.4	...

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

TABLE 4.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

INDUSTRY AND CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	Female.
Automobiles, including bodies and parts.	1919	396,104	366,713	29,391	92.6	7.4
	1914	145,951	139,967	5,984	95.9	4.1
	1909	85,359	82,918	2,441	97.1	2.9
Proprietors and officials	1919	14,371	14,181	190	98.7	1.3
	1914	4,483	4,445	38	99.2	0.8
	1909	2,564	2,543	21	99.2	0.8
Proprietors and firm members	1919	2,165	2,126	39	98.2	1.8
	1914	760	749	11	98.6	1.4
	1909	405	397	8	98.0	2.0
Salaried officers of corporations	1919	2,214	2,163	51	97.7	2.3
	1914	1,150	1,128	22	98.1	1.9
	1909	758	748	10	98.7	1.3
Superintendents and managers	1919	9,992	9,892	100	99.0	1.0
	1914	2,573	2,568	5	99.8	0.2
	1909	1,401	1,398	3	99.8	0.2
Clerks and other subordinate salaried employees	1919	38,618	24,354	14,264	63.1	36.9
	1914	14,376	10,679	3,697	74.3	25.7
	1909	7,074	5,422	1,652	76.6	23.4
Wage earners (average number)	1919	343,115	328,178	14,937	95.6	4.4
	1914	127,092	124,843	2,249	98.2	1.8
	1909	75,721	74,953	768	99.0	1.0
16 years of age and over	1919	342,509	327,629	14,880	95.7	4.3
	1914	126,899	124,659	2,240	98.2	1.8
	1909	75,559	74,794	765	99.0	1.0
Under 16 years of age	1919	606	549	57	90.6	9.4
	1914	193	184	9	95.3	4.7
	1909	162	159	3	98.1	1.9
Automobiles	1919	242,922	225,372	17,550	92.8	7.2
	1914	91,997	88,207	3,790	95.9	4.1
	1909	58,142	56,541	1,601	97.2	2.8
Proprietors and officials	1919	6,467	6,392	75	98.8	1.2
	1914	2,178	2,172	6	99.7	0.3
	1909	1,350	1,344	6	99.6	0.4
Proprietors and firm members	1919	36	34	2	94.4	5.6
	1914	60	60	.....	100.0	.....
	1909	83	81	2	97.6	2.4
Salaried officers of corporations	1919	548	543	5	99.1	0.9
	1914	491	485	6	98.8	1.2
	1909	371	369	2	99.5	0.5
Superintendents and managers	1919	5,883	5,815	68	98.8	1.2
	1914	1,627	1,627	.....	100.0	.....
	1909	896	894	2	99.8	0.2
Clerks and other subordinate salaried employees.	1919	25,896	16,606	9,290	64.1	35.9
	1914	10,512	7,935	2,577	75.5	24.5
	1909	5,498	4,275	1,223	77.8	22.2
Wage earners (average number)	1919	210,559	202,374	8,185	96.1	3.9
	1914	79,307	78,100	1,207	98.5	1.5
	1909	51,294	50,922	372	99.3	0.7
16 years of age and over	1919	210,308	202,126	8,182	96.1	3.9
	1914	79,216	78,012	1,204	98.5	1.5
	1909	51,187	50,818	369	99.3	0.7
Under 16 years of age	1919	251	248	3	98.8	1.2
	1914	91	88	3	96.7	3.3
	1909	107	104	3	97.2	2.8
Automobile bodies and parts	1919	153,182	141,341	11,841	92.3	7.7
	1914	53,954	51,760	2,194	95.9	4.1
	1909	27,217	26,377	840	96.9	3.1
Proprietors and officials	1919	7,904	7,789	115	98.5	1.5
	1914	2,305	2,273	32	98.6	1.4
	1909	1,214	1,199	15	98.8	1.2
Proprietors and firm members	1919	2,129	2,092	37	98.3	1.7
	1914	700	689	11	98.4	1.6
	1909	322	316	6	98.1	1.9
Salaried officers of corporations	1919	1,666	1,620	46	97.2	2.8
	1914	659	643	16	97.6	2.4
	1909	387	379	8	97.9	2.1
Superintendents and managers	1919	4,109	4,077	32	99.2	0.8
	1914	946	941	5	99.5	0.5
	1909	505	504	1	99.8	0.2
Clerks and other subordinate salaried employees.	1919	12,722	7,748	4,974	60.9	39.1
	1914	3,864	2,744	1,120	71.0	29.0
	1909	1,576	1,147	429	72.8	27.2
Wage earners (average number)	1919	132,556	125,804	6,752	94.9	5.1
	1914	47,785	46,743	1,042	97.8	2.2
	1909	24,427	24,031	396	98.4	1.6
16 years of age and over	1919	132,201	125,503	6,698	94.9	5.1
	1914	47,683	46,647	1,036	97.8	2.2
	1909	24,372	23,976	396	98.4	1.6
Under 16 years of age	1919	355	301	54	84.8	15.2
	1914	102	96	6	94.1	5.9
	1909	55	55	.....	100.0	.....

TABLE 5.—WAGE EARNERS, BY MONTHS, BY STATES: 1919.

[The month of maximum employment for each state is indicated by **bold-faced** figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States	343,115	*283,491*	289,172	300,583	314,775	317,499	331,797	351,746	365,274	378,284	389,274	396,441	**399,044**	71.0
1919:														
Males	328,178	*269,921*	276,086	287,359	301,001	303,159	317,753	337,084	350,205	362,143	372,043	378,755	**382,627**	70.5
Females	14,937	13,570	*13,086*	13,224	13,774	14,340	14,044	14,662	15,069	16,141	17,231	**17,686**	16,417	74.0
1914	127,092	126,974	131,142	135,773	**137,954**	132,641	122,706	119,548	125,692	127,525	128,109	*117,990*	119,050	85.5
1909	75,721	*62,724*	66,806	71,142	73,752	75,481	76,176	76,549	78,468	77,445	77,280	82,956	**89,886**	69.8
California	3,008	*2,212*	2,529	2,659	2,825	3,089	3,133	3,080	3,051	3,231	3,355	**3,475**	3,457	63.7
Illinois	8,805	*7,315*	7,438	7,734	7,993	8,199	8,432	8,796	9,324	9,748	10,061	10,278	**10,342**	70.7
Indiana	25,773	21,864	*21,634*	23,087	24,291	25,315	26,109	26,652	26,953	27,296	27,056	26,230	**26,800**	72.6
Iowa	564	499	512	481	*408*	524	558	590	560	593	647	687	**649**	68.1
Massachusetts	4,530	4,261	4,359	4,363	*3,825*	4,183	4,222	4,361	4,683	4,780	5,024	4,983	**5,316**	72.0
Michigan	175,985	*136,212*	141,638	148,451	157,192	164,801	173,827	183,074	191,121	199,436	204,409	206,635	**205,021**	65.9
Missouri	3,240	*2,800*	2,828	2,919	3,071	3,180	3,312	3,352	3,390	3,382	3,503	3,555	**3,588**	78.0
New Jersey	5,519	5,269	4,935	4,873	*4,838*	4,982	5,086	5,685	5,847	6,025	6,125	6,190	**6,373**	75.9
New York	30,483	*27,845*	28,268	28,200	29,812	29,307	29,808	31,307	31,730	32,427	33,189	31,905	**31,998**	83.9
Ohio	45,882	42,261	41,334	42,819	43,779	*35,503*	38,058	44,863	47,484	49,440	52,559	55,074	**57,610**	61.3
Pennsylvania	14,708	*12,084*	12,719	12,713	13,135	14,024	14,402	14,635	15,319	15,828	16,422	17,324	**17,861**	67.7
Wisconsin	13,585	12,057	*11,735*	12,300	13,143	13,712	13,842	13,953	13,944	14,071	14,744	**14,793**	14,717	79.3

TABLE 6.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, BY STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States	1919	343,115	8,482	5,718	136,737	126,087	18,344	44,742	2,082	23
	1914	127,092	(2)	(2)	14,317	27,993	17,791	54,344	12,614	33
	1909	75,721	(2)	(2)	330	2,253	22,734	26,660	22,280	1,455
Automobiles	1919	210,559	3,074	2,057	91,880	82,747	9,911	15,807	58[illegible]	.....
	1914	79,307	(2)	(2)	13,053	19,993	10,782	28,573	6,936	20
Automobile bodies and parts	1919	132,556	4,808	2,761	41,857	43,340	8,433	28,9[illegible]5	2,309	23
	1914	47,785	(2)	(2)	1,284	8,030	7,009	25,771	5,678	13
California	1919	3,008	286	50	1,990	523	158	1	.....	.....
	1914	731	(2)	(2)	371	87	270	2	.....	1
Illinois	1919	8,805	959	168	1,709	3,734	955	1,204	76	.....
	1914	2,515	(2)	(2)	183	539	833	897	93	.....
Indiana	1919	25,773	24	481	7,609	5,367	1,727	10,345	220	.....
	1914	7,219	(2)	(2)	312	1,174	195	3,439	2,099	.....
Iowa [3]	1919	564	.....	.....	61	30	298	145	30	.....
Massachusetts	1919	4,530	254	415	1,415	2,316	107	3	.....	20
	1914	3,439	(2)	(2)	18	363	1,984	1,004	70	.....
Michigan	1919	175,985	724	1,909	78,290	79,479	9,848	5,372	363	.....
	1914	67,558	(2)	(2)	12,464	9,359	3,528	33,648	8,559	.....
Missouri	1919	3,240	971	15	873	850	358	142	31	.....
	1914	504	(2)	(2)	14	184	268	7	31	.....
New Jersey	1919	5,519	745	1,021	2,451	1,049	144	108	1	.....
	1914	2,520	(2)	(2)	18	1,037	774	677	14	.....
New York	1919	30,483	570	57	10,174	9,960	936	2,485	301	.....
	1914	12,122	(2)	(2)	128	3,037	6,189	1,151	715	2
Ohio	1919	45,882	3,077	1,191	18,258	14,011	1,472	7,277	596	.....
	1914	18,752	(2)	(2)	476	10,138	2,674	4,963	501	.....
Pennsylvania	1919	14,708	51	23	2,867	2,125	367	8,567	707	1
	1914	3,083	(2)	(2)	15	654	295	1,961	135	23
Wisconsin	1919	13,585	531	.....	305	4,882	43	7,712	112	.....
	1914	4,889	(2)	(2)	83	128	55	4,431	192	.....

[1] Includes 48 and under for 1914 and 1909.

[2] Corresponding figures not available.

[3] Not shown separately in 1914.

TABLE 7.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, BY STATES: 1919.

STATE.		TOTAL.		ESTABLISHMENTS EMPLOYING—																	
		Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
				Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States	1919	2,830	343,115	219	1,143	2,644	632	7,349	333	10,918	169	12,231	142	22,895	85	29,937	53	37,064	54	220,077
	1914	1,271	127,092	51	457	1,156	321	3,745	161	5,369	88	6,083	103	16,180	49	18,377	21	15,607	20	60,575
Automobiles	1919	315	210,559	5	27	84	37	487	58	2,077	42	2,926	50	8,155	44	15,215	19	12,900	33	168,715
	1914	300	79,307	.....	55	159	74	942	44	1,491	34	2,382	46	7,564	23	8,703	10	7,501	14	50,565
Automobile bodies and parts.	1919	2,515	132,556	214	1,116	2,560	595	6,862	275	8,841	127	9,305	92	14,740	41	14,722	34	24,164	21	51,362
	1914	971	47,785	51	402	997	247	2,803	117	3,878	54	3,701	57	8,616	26	9,674	11	8,106	6	10,010
California		265	3,008	25	161	361	51	551	20	684	4	266	2	353	2	793	.....	.....	.....	.....
Illinois		229	8,805	17	73	183	63	751	35	1,181	23	1,576	11	1,615	2	622	5	2,877	.....	.....
Indiana		172	25,773	10	55	104	32	415	18	628	13	933	18	3,017	17	6,234	5	3,427	4	11,015
Iowa		43	564	4	18	39	12	153	7	216	2	156	.....	.....	.....	.....	.....	.....	.....	.....
Massachusetts		96	4,530	3	34	77	28	354	12	380	7	496	7	1,079	4	1,221	1	923	.....	.....
Michigan		271	175,985	10	52	114	46	558	34	1,153	34	2,702	31	5,067	22	7,661	15	11,080	27	147,650
Missouri		86	3,240	5	34	77	30	377	8	284	2	138	3	546	2	649	2	1,169	.....	.....
New Jersey		116	5,519	7	60	128	25	254	13	450	4	354	2	342	2	819	1	858	2	2,314
New York		344	30,483	25	145	360	76	950	50	1,580	20	1,363	8	1,339	7	2,628	7	4,722	6	17,541
Ohio		281	45,882	20	73	180	62	719	40	1,312	26	1,848	25	3,790	15	5,238	13	8,945	7	23,850
Pennsylvania		202	14,708	15	80	201	53	603	19	635	10	699	13	1,852	7	2,296	1	859	4	7,563
Wisconsin		95	13,585	7	31	65	20	235	14	418	9	672	6	1,025	2	627	3	2,204	3	8,339

TABLE 8.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes	2,830	1,271	743	343,115	127,092	75,721	$3,080,073,979	$632,831,474	$249,202,075	$1,139,395,103	$276,623,544	$117,556,339
Less than $5,000	399	218	89	239	285	117	1,126,486	615,026	240,866	693,183	398,063	137,971
$5,000 to $20,000	859	356	170	2,286	1,641	841	9,287,644	3,814,757	1,937,965	5,669,720	2,351,440	1,098,508
$20,000 to $100,000	773	337	228	9,558	5,919	4,831	35,677,864	15,948,577	10,760,070	20,942,831	8,675,055	5,886,751
$100,000 to $500,000	433	231	200	21,139	26,735	24,340	95,597,621	66,279,738	65,875,412	46,627,401	39,059,028	32,057,814
$500,000 to $1,000,000	96	30		11,978			67,250,339	20,984,032		28,565,800		
$1,000,000 and over	270	99	56	297,915	92,512	45,592	2,871,134,025	525,189,344	170,386,862	1,036,896,168	226,139,958	78,375,295
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	14.1	17.2	12.0	0.1	0.2	0.2	(1)	0.1	0.1	0.1	0.1	0.1
$5,000 to $20,000	30.4	28.0	22.9	0.7	1.3	1.1	0.3	0.6	0.8	0.5	0.9	0.9
$20,000 to $100,000	27.3	26.5	30.7	2.8	4.7	6.4	1.2	2.5	4.3	1.8	3.1	5.0
$100,000 to $500,000	15.3	18.2	26.9	6.2	21.0	32.1	3.1	10.5	26.4	4.1	14.1	27.3
$500,000 to $1,000,000	3.4	2.4		3.5			2.2	3.3		2.5		
$1,000,000 and over	9.5	7.8	7.5	86.8	72.8	60.2	93.2	83.0	68.4	91.0	81.8	66.7

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

TABLE 9.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914.

STATE.	Census year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.						VALUE OF PRODUCTS.						
		Individuals.	Corporations	All others.	Total.	In establishments owned by— Individuals.	Corporations.	All others.	Per cent of total. Individuals.	Corporations	All others.	Total.	Of establishments owned by— Individuals.	Corporations.	All others.	Per cent of total. Individuals.	Corporations	All others.
United States	1919	1,115	1,248	467	343,115	6,307	333,866	2,942	1.8	97.3	0.9	$3,080,073,979	$28,681,496	$3,037,127,519	$14,264,964	0.9	98.6	0.5
	1914	357	736	178	127,092	1,851	123,759	1,482	1.5	97.4	1.2	632,831,474	5,730,714	622,299,324	4,801,436	0.9	98.3	0.8
	1909	162	478	103	75,721	1,641	71,568	2,512	2.2	94.5	3.3	249,202,075	4,184,686	235,802,964	9,214,425	1.7	94.6	3.7
Automobiles	1919	14	292	9	210,559	209	210,181	169	0.1	99.8	0.1	2,387,903,287	1,298,981	2,384,898,510	1,705,796	0.1	99.9	0.1
	1914	25	263	12	79,307	286	78,892	129	0.4	99.5	0.2	503,230,137	1,168,674	501,426,483	634,980	0.2	99.6	0.1
Automobile bodies and parts.	1919	1,101	956	458	132,556	6,098	123,685	2,773	4.6	93.3	2.1	692,170,692	27,382,515	652,229,009	12,559,168	4.0	94.2	1.8
	1914	332	473	166	47,785	1,565	44,867	1,353	3.3	93.9	2.8	129,601,337	4,502,040	120,872,841	4,166,456	3.5	93.3	3.2
California	1919	160	40	59	3,008	796	1,851	361	26.5	61.5	12.0	44,362,046	3,814,705	38,640,285	1,907,056	8.6	87.1	4.3
	1914	61	18	19	731	215	364	152	29.4	49.8	20.8	2,458,843	634,683	1,457,262	366,898	25.8	59.3	14.9
Illinois	1919	76	124	29	8,805	581	7,953	268	6.6	90.3	3.0	104,883,442	2,918,279	99,975,559	1,989,604	2.8	95.3	1.9
	1914	18	54	19	2,545	130	2,198	217	5.1	86.4	8.5	11,018,162	441,607	9,994,802	581,753	4.0	90.7	5.3
Indiana	1919	43	101	28	25,773	331	25,323	119	1.3	98.3	0.5	179,004,863	1,033,368	177,529,137	502,358	0.6	99.1	0.3
	1914	13	69	4	7,219	42	7,165	12	0.6	99.3	0.2	29,389,088	92,030	29,269,556	27,502	0.3	99.6	0.1
Iowa [1]	1919	18	16	9	564	71	442	51	12.6	78.4	9.0	3,297,013	312,796	2,761,749	222,468	9.5	83.8	6.7
Massachusetts	1919	40	43	13	4,530	259	4,071	200	5.7	89.9	4.4	27,031,604	926,740	25,416,410	688,454	3.4	94.0	2.5
	1914	19	35	12	3,439	206	3,019	214	6.0	87.8	6.2	11,198,790	657,088	9,942,047	599,655	5.9	88.8	5.4
Michigan	1919	46	203	22	175,985	653	175,217	115	0.4	99.6	0.1	1,620,383,356	3,802,539	1,616,065,035	515,782	0.2	99.7	(2)
	1914	32	166	7	67,538	151	67,252	135	0.2	99.6	0.2	398,289,022	520,618	397,394,128	374,276	0.1	99.8	0.1
Missouri	1919	32	40	14	3,240	161	3,000	79	5.0	92.6	2.4	71,939,495	617,125	71,066,564	255,807	0.9	98.8	0.4
	1914	5	15	5	504	22	462	20	4.4	91.7	4.0	2,182,911	50,414	2,087,688	44,809	2.3	95.6	2.1
New Jersey	1919	61	36	19	5,519	242	5,200	77	4.4	94.2	1.4	54,671,352	1,028,583	53,279,996	362,773	1.9	97.5	0.7
	1914	15	29	9	2,520	35	2,399	86	1.4	95.2	3.4	8,237,416	91,366	7,971,181	174,869	1.1	96.8	2.1
New York	1919	120	157	58	30,483	676	29,485	322	2.2	96.7	1.1	211,137,153	2,584,255	207,150,081	1,402,817	1.2	98.1	0.7
	1914	79	135	33	12,122	513	11,379	230	4.2	93.9	1.9	42,115,276	1,338,142	39,388,156	1,388,978	3.2	93.5	3.3
Ohio	1919	73	168	40	45,882	476	45,016	390	1.0	98.1	0.9	379,436,478	3,050,546	374,178,326	2,207,606	0.8	98.6	0.6
	1914	18	77	7	18,752	188	18,521	43	1.0	98.8	0.2	85,710,585	846,119	84,747,433	117,033	1.0	98.9	0.1
Pennsylvania	1919	85	82	35	14,708	592	13,921	195	4.0	94.6	1.3	113,820,134	2,196,432	110,830,568	793,134	1.9	97.4	0.7
	1914	20	87	17	3,083	125	2,804	154	4.1	91.0	5.0	10,084,083	298,423	9,352,988	432,672	3.0	92.7	4.3
Wisconsin	1919	23	59	13	13,585	97	13,465	23	0.7	99.1	0.2	119,380,641	400,623	118,854,283	125,735	0.3	99.6	0.1
	1914	16	31	2	4,889	[3] 39	4,850	.....	0.8	99.2	.....	18,478,196	[3] 118,750	18,359,446	.....	[3] 0.6	99.4	.....

[1] Not shown separately in 1914. [2] Less than one-tenth of 1 per cent. [3] Includes the group "All others."

TABLE 10.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	36,767	9,314	2,548	544,242	173,684	75,550	100.0	100.0	100.0
Owned	711	469	473	159,705	70,719	46,612	29.3	40.7	61.7
Steam	496	317	273	146,212	60,233	39,325	26.9	34.7	52.1
Engines	446	(1)	(1)	78,343	(1)	(1)	14.4	.....	.....
Turbines	50	(1)	(1)	67,869	(1)	(1)	12.5	.....	.....
Internal-combustion engines	200	146	192	12,927	10,075	7,000	2.4	5.8	9.3
Water wheels, turbines, and motors	15	6	8	566	411	287	0.1	0.2	0.4
Rented	36,056	8,845	2,075	384,537	102,965	28,938	70.7	59.3	38.3
Electric	36,056	8,845	2,075	379,388	102,156	27,641	69.7	58.8	36.6
Other	.....	.....	.....	5,149	809	1,297	0.9	0.5	1.7
Electric	49,122	11,218	2,032	490,560	135,818	41,829	100.0	100.0	100.0
Rented	36,056	8,845	2,075	379,388	102,156	27,641	77.3	75.2	66.1
Generated by establishments reporting	13,066	2,373	857	111,172	33,662	14,188	22.7	24.8	33.9

[1] Not shown separately.

TABLE 11.—FUEL CONSUMED, BY STATES: 1919 AND 1914.

STATE.	Census year.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
		Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States	1919	49,169	1,748,680	101,548	1,255,749	189,657	2,828,203
	1914	31,393	662,224	23,560	384,248	(1)	2,038,860
Automobiles	1919	17,133	1,120,585	81,867	853,998	161,286	2,114,482
	1914	13,697	464,534	15,850	270,115	(1)	1,650,784
Automobile bodies and parts	1919	32,036	628,095	19,681	401,751	28,371	713,721
	1914	17,696	197,690	7,710	114,133	(1)	388,076
California	1919	189	675	31	76,866	1,071	54,293
	1914	28	348	4	497	(1)	1,888
Illinois	1919	953	39,254	353	2,767	3,307	48,808
	1914	375	13,632	199	655	(1)	7,118
Indiana	1919	132	205,215	7,508	168,777	23,417	703,189
	1914	2	84,498	850	18,469	(1)	20,294
Iowa	1919	125	3,042	110	19	8	1,316
	1914	30	756	.....	64	(1)	13
Massachusetts	1919	1,894	14,578	15	510	658	1,844
	1914	1,814	7,751	1	1,339	(1)	2,895
Michigan	1919	1,843	887,579	79,958	629,095	78,519	1,073,701
	1914	3,188	304,003	16,297	245,415	(1)	1,322,789
Missouri	1919	97	10,172	174	1,118	130	4,937
	1914	68	1,823	69	.....	(1)	1,498
New Jersey	1919	3,801	24,888	30	24,875	4,402	10,924
	1914	3,264	7,367	25	866	(1)	5,711
New York	1919	11,949	113,343	860	65,643	8,542	281,701
	1914	11,241	58,634	2,604	13,351	(1)	47,233
Ohio	1919	579	267,653	5,443	127,111	32,160	414,700
	1914	7,640	97,177	1,411	71,411	(1)	522,727
Pennsylvania	1919	19,286	41,220	827	45,327	6,405	92,839
	1914	1,133	24,568	529	12,930	(1)	14,939
Wisconsin	1919	506	110,608	5,880	103,374	19,849	68,590
	1914	1,561	41,790	1,462	16,875	(1)	33,527
All other states	1919	7,815	30,453	359	10,267	11,189	71,361
	1914	1,049	19,877	109	2,376	(1)	58,228

[1] Included in figures for fuel oils.

SPECIAL STATISTICS.

Detailed statistics of number and value.—Table 12 shows, for 1919, the total number and value of all automobiles, chassis, and trailers, and the value of bodies and parts manufactured by establishments in which automobiles were the principal product and by those engaged primarily in the manufacture of other products. It also includes the value of all other products and receipts from repairs made by establishments in the automobile industry.

Of the total number of automobiles manufactured in 1919, 99.8 per cent were gasoline vehicles, which was practically the same (99.1 per cent) as in 1914, a slight increase (95.1 per cent) over 1909, and a considerably larger proportion than in 1904 (86.2 per cent).

TABLE 12.—DETAILED STATISTICS OF NUMBER AND VALUE: 1919.

	Number.			Value.
	Gasoline.	Electricity.	Steam.	
Total value				$3,105,411,047
Automobile industry				2,387,903,287
Automobile bodies and parts industry				692,170,692
Automobiles and automobile bodies and parts made as subsidiary products by other industries				25,337,068
Passenger vehicles	1,555,001	2,073	406	1,324,458,676
Roadsters	53,535			60,366,181
Runabouts	120,098			80,523,340
Touring cars	1,225,741		386	980,987,982
Closed cars	154,411	2,073	20	200,525,718
All other	1,216			2,055,455
Public conveyances, cabs, omnibuses, etc.	1,877			3,100,447
Government, municipal, etc.	2,778	8		$13,619,331
Ambulances	391			613,664
Fire department apparatus	751	8		6,938,822
All other, mail delivery, tanks, street sweepers, oilers, etc.	1,636			6,066,845
Business vehicles	120,671	1,102		213,703,042
Delivery wagons	17,272	850		16,570,473
Trucks	102,185	252		194,166,484
All other	1,214			2,966,085
Chassis	192,383	42	15	181,936,739
Trailers	15,686			6,633,668
All other products, including bodies and parts and repair work				[1] 1,361,959,144

[1] Includes 1,109 tractors valued at $1,953,753.

Automobiles made, classified according to use and type, by states.—In Table 13 is shown the total number of automobiles, classified by use and type, manufactured in the United States in 1919, 1914, and 1909, and for such states as can be shown separately without the possibility of disclosing the operations of individual establishments.

The manufacture of automobiles in establishments whose product of chief value was the complete vehicle, was reported by 315 establishments located in 33 different states. The great volume of the business, as shown by the table, was confined to a few states. The state of Michigan alone reported the manufacture of 689,056, or 40.9 per cent of all classes made in 1919, and also led all other states in each type of machine produced with 40.2 per cent and 49.3 per cent, respectively, of the total pleasure and business vehicles reported.

Of the various classes of automobiles shown in this table, the touring car is far the most important in point of number and of value, representing 72.8 per cent of the total number and 63.1 per cent of the total value of all machines reported in 1919.

The greatest percentage of increase for the five-year period was shown in the manufacture of business vehicles, there being a gain of 398.2 per cent in the number made and an increase of 410.9 per cent in the total value of products.

TABLE 13.—AUTOMOBILES MADE, CLASSIFIED ACCORDING TO USE AND TYPE, BY STATES: 1919, 1914, AND 1909.

CLASS AND STATE.	NUMBER.			VALUE.		
	1919	1914	1909	1919	1914	1909
All classes:[1]	1,683,916	569,054	126,593	$1,554,881,496	$458,957,843	$164,269,324
Passenger vehicles	1,557,480	543,679	121,868	1,324,458,676	413,859,379	155,821,331
Touring cars	1,226,127	451,267	76,114	980,987,982	346,134,147	113,403,188
Illinois	57,524	2,686	2,059	37,710,222	3,350,538	2,746,214
Indiana	49,740	13,034	6,838	60,976,271	16,574,132	10,710,289
Michigan	509,830	367,092	43,855	483,103,499	251,609,056	51,365,984
New York	76,971	5,945	5,440	56,003,880	9,499,111	12,296,292
Ohio	157,354	49,421	6,479	123,097,625	44,800.434	14,307,360
Wisconsin	54,098	8,825	(2)	48,234,757	10,831,327	(2)
Closed cars	156,504	10,809	4,002	290,525,718	21,832,536	10,182,029
Illinois	8,372	282	325	6,419,553	785,152	896,110
Indiana	6,325	503	439	9,728,908	1,071,392	772,401
Michigan	54,573	6,610	1,539	89,900,677	10,636,264	3,803,616
New York	13,805	792	296	21,510,692	2,811,947	1,174,335
Ohio	22,349	2,010	1,072	30,913,944	4,251,172	2,526,891
Wisconsin	7,213	(2)	.....	7,976,349	(2)	.....
Runabouts	120,098	81,603	36,204	80,523,340	45,892,696	28,030,479
Michigan	27,015	63,381	18,173	32,622,730	33,307,852	13,309,937
New York	6,017	1,037	1,097	3,256,166	1,434,925	1,539,639
Ohio	12,137	7,117	2,900	8,673,108	4,783,840	2,948,588
Roadsters	53,535	(3)	(3)	60,366,181	(3)	(3)
Indiana	2,926	.....	.....	5,285,021	.....	.....
Michigan	35,321	.....	.....	37,208,278	.....	.....
New York	1,917	.....	.....	2,556,512	.....	.....
Ohio	5,807	.....	.....	7,341,309	.....	.....
All other varieties	1,216	.....	[4] 5,548	2,055,455	.....	[4] 4,205,635
Business vehicles	126,436	25,375	4,725	230,422,820	45,098,464	8,447,993
Delivery wagons	18,122	4,391	1,862	16,570,473	4,749,889	1,918,856
Michigan	12,912	1,295	401	11,294,203	970,569	319,071
New York	1,320	511	139	1,604,263	846,639	282,989
Trucks	102,437	19,551	1,366	194,166,484	34,774,336	3,165,512
California	1,456	159	.....	3,380,927	410,417	.....
Illinois	5,011	1,072	28	8,814,354	1,810,824	46,955
Indiana	3,572	445	43	6,212,756	788,107	109,492
Iowa	421	(2)	(2)	847,152	(2)	(2)
Michigan	47,442	4,684	372	70,169,104	7,220,321	994,311
New York	9,016	2,250	475	24,738,980	4,670,608	889,724
Ohio	10,427	7,598	202	23,255,457	13,611,631	386,945
Pennsylvania	7,688	771	(2)	18,176,703	1,772,095	(2)
Wisconsin	8,910	677	(2)	20,565,491	1,168,096	(2)
All other varieties [5]	5,877	1,433	1,497	19,685,863	5,574,239	3,363,625
Illinois	731	37	(2)	1,802,847	77,103	(2)
Michigan	1,963	10	144	2,615,237	30,192	289,458
New York	632	521	406	5,270,760	2,495,887	1,020,183
Ohio	869	312	135	4,099,022	1,312,283	290,200

[1] Includes, in 1919, 4,660 automobiles valued at $7,794,495 made as subsidiary products by establishments classified in other industries, but does not include, in 1914, 3,985 automobiles valued at $6,099,631, and, in 1909, 694 automobiles valued at $830,080 made in establishments of this character.
[2] Excluded to avoid disclosure of individual operations.
[3] Included with "Runabouts" in 1914 and 1909.
[4] Includes 4,582 buggies valued at $2,391,250.
[5] Includes cabs, omnibuses, ambulances, fire department, mail delivery, tanks, patrol wagons, and other varieties.

Automobiles made, classified according to motive power and type.—Table 14 shows the number and value of the several kinds of automobiles, classified according to motive power, as reported for 1919, 1914, and 1909.

Large increases are shown for the five-year period 1914 to 1919 in the number of gasoline vehicles of all kinds manufactured, the total number reported being a gain of 197.9 per cent over the output for 1914. Electric machines showed a decrease in the total number reported of 31.8 per cent, the only increase noted being 272.8 per cent for delivery wagons. The output of steam vehicles was practically the same as for 1914, showing an increase of 1.2 per cent.

TABLE 14.—AUTOMOBILES MADE, CLASSIFIED ACCORDING TO MOTIVE POWER AND TYPE: 1919, 1914, AND 1909.

CLASS.	AUTOMOBILES.				CLASS.	AUTOMOBILES.			
	Number.			Value.		Number.			Value.
	Gasoline.	Electricity.	Steam.			Gasoline.	Electricity.	Steam.	
All classes: [1]					All other passenger vehicles:				
1919	1,680,327	3,183	406	$1,554,881,496	1919	1,216	.....	.....	$2,055,455
1914	563,984	4,669	401	458,957,843	1914 [3]	.....	.....	.....	.....
1909	120,393	3,826	2,374	164,269,324	1909	4,888	660	.....	4,205,636
Touring cars:					Delivery wagons:				
1919	1,225,741	.....	386	980,987,982	1919	17,272	850	.....	16,570,473
1914	451,008	3	256	346,134,147	1914	4,139	228	24	4,749,889
1909	73,883	243	1,988	113,403,188	1909	1,645	217	.....	1,918,850
Closed cars:					Trucks:				
1919	154,411	2,073	20	200,525,718	1919	102,185	252	.....	194,160,484
1914	7,707	3,102	.....	21,832,536	1914	18,428	1,121	2	34,774,336
1909	2,088	1,914	.....	10,182,029	1909	1,090	276	.....	3,165,512
Runabouts:					All other business vehicles: [4]				
1919	120,098	.....	.....	80,523,340	1919	5,869	8	.....	19,685,863
1914	81,388	143	72	45,892,696	1914	1,314	72	47	5,574,239
1909	35,347	496	361	28,030,479	1909	1,452	20	25	3,303,625
Roadsters:									
1919	53,535	.....	.....	60,366,181					
1914 [2]	.....	.....	.....	.....					
1909 [2]	.....	.....	.....	.....					

[1] Includes, in 1919, 4,660 automobiles valued at $7,794,495 made as subsidiary products by establishments classified in other industries, but does not include, in 1914, 3,985 automobiles valued at $6,039,631, and, in 1909, 694 automobiles, valued at $830,080 made in establishments of this character.
[2] Included with "Runabouts."
[3] Figures not available.
[4] Includes public conveyances, Government and municipal vehicles.

Automobiles made, classified according to horsepower rating.—Table 15 shows that 71.3 per cent of the total number of automobiles manufactured in 1919 were rated as having from 20 to 29 horsepower, while the groups from 10 to 49 horsepower represented 99.6 per cent of the total number reported for the United States. Only two-tenths of 1 per cent were rated at less than 10 horsepower, and only one-tenth of 1 per cent at more than 50 horsepower in 1919, as compared with nine-tenths of 1 per cent and 2.3 per cent, respectively, in 1914.

TABLE 15.—AUTOMOBILES MADE, CLASSIFIED ACCORDING TO HORSEPOWER RATING: 1919, 1914, AND 1909.

CLASS.	Total.	HORSEPOWER RATING.						CLASS.	Total.	HORSEPOWER RATING.					
		Less than 10 h. p.	10 but less than 20 h. p.	20 but less than 30 h. p.	30 but less than 50 h. p.	50 but less than 90 h. p.	90 h. p. or more.			Less than 10 h. p.	10 but less than 20 h. p.	20 but less than 30 h. p.	30 but less than 50 h. p.	50 but less than 90 h. p.	90 h. p. or more
All classes: [1]								All other passenger vehicles:							
1919	1,683,916	3,815	250,713	1,200,318	226,580	1,980	510	1919	1,216	.....	114	833	269	.....	.....
1914	569,054	4,952	45,022	344,336	161,722	12,843	179	1914 [3]	.....	.....	.....	.....	.....	.....	.....
1909	126,593	7,539	29,353	35,257	51,218	3,197	29	1909	5,548	907	3,712	365	550	14	.....
Touring cars:								Delivery wagons:							
1919	1,226,127	.....	216,395	879,771	129,026	865	70	1919	18,122	850	2,384	4,102	10,786	.....	.....
1914	451,267	3	29,584	276,565	133,323	11,661	131	1914	4,391	228	2,125	747	1,278	13	.....
1909	76,114	177	5,415	21,773	45,926	2,802	21	1909	1,862	263	878	624	97	.....	.....
Closed cars:								Trucks:							
1919	156,504	2,073	12,325	119,559	22,332	215	.....	1919	102,437	546	5,948	59,002	36,745	196	.....
1914	10,809	3,102	781	2,406	4,128	389	3	1914	19,551	1,122	2,502	6,802	8,959	166	.....
1909	4,002	1,589	847	729	774	62	1	1909	1,366	56	317	286	606	101	.....
Runabouts:								All other business vehicles: [4]							
1919	120,098	.....	10	116,234	3,784	70	.....	1919	5,877	.....	84	1,262	3,824	281	426
1914	81,603	430	9,851	57,610	13,519	180	13	1914	1,433	67	179	206	515	434	32
1909	36,204	4,532	17,548	10,931	3,029	157	7	1909	1,497	15	636	549	236	61	.....
Roadsters:															
1919	53,535	346	13,453	19,555	19,814	353	14								
1914 [2]	.....	.....	.....	.....	.....	.....	.....								
1909 [2]	.....	.....	.....	.....	.....	.....	.....								

[1] Includes, in 1919, 4,660 automobiles made as subsidiary products by establishments classified in other industries, but does not include, in 1914, 3,985 automobiles, and, in 1909, 694 automobiles made in establishments of this character.
[2] Included with "Runabouts."
[3] Figures not available.
[4] Includes public conveyances, Government and municipal vehicles.

GENERAL TABLES.

Table 16 gives, for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the automobile industry.

Table 17 presents, for 1919, statistics in detail for the industry as a whole, for automobiles and for automobile bodies and parts, showing each state that can be shown separately without the possibility of disclosing the operations of individual establishments.

TABLE 16.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	2,830	343,115	544,242	$491,121	$1,940,679	$3,080,074
	1914	1,271	127,092	173,684	101,927	356,208	632,831
	1909	743	75,721	75,550	48,694	131,646	249,202
California	1919	265	3,008	3,313	4,065	30,318	44,362
	1914	98	731	1,457	600	1,234	2,459
	1909	41	478	305	368	700	1,470
Illinois	1919	229	8,805	15,098	11,139	73,954	104,883
	1914	91	2,545	3,421	1,946	6,288	11,018
	1909	65	2,382	1,786	1,653	3,979	7,154
Indiana	1919	172	25,773	39,481	29,853	117,767	179,065
	1914	86	7,219	12,137	5,027	18,831	29,389
	1909	67	6,797	5,813	1,131	14,995	23,764
Massachusetts	1919	96	4,530	4,441	5,829	16,282	27,032
	1914	66	3,439	4,298	3,016	5,642	11,199
	1909	62	4,138	2,896	2,793	5,491	11,359
Michigan	1919	271	175,985	284,127	272,989	959,767	1,620,383
	1914	205	67,538	79,379	57,792	219,215	398,289
	1909	113	25,444	25,938	15,491	53,882	96,651
Missouri	1919	86	3,240	3,506	3,721	54,943	71,939
	1914	25	504	626	389	1,207	2,183
	1909	17	368	184	252	1,025	1,677
New Jersey	1919	116	5,519	9,185	$7,658	$37,085	$54,671
	1914	53	2,520	3,177	1,832	3,766	8,237
	1909	24	1,024	1,311	615	892	2,008
New York	1919	344	30,483	42,474	39,312	135,797	211,137
	1914	247	12,122	17,938	8,988	21,976	42,115
	1909	113	9,861	9,398	7,016	14,908	30,980
Ohio	1919	281	45,882	79,039	63,410	250,981	379,436
	1914	102	18,752	30,249	13,411	55,330	85,711
	1909	75	12,130	14,433	7,746	18,522	38,839
Oregon	1919	17	46	93	71	118	259
	1914	6	35	42	32	50	115
Pennsylvania	1919	202	14,708	23,363	18,849	76,129	113,820
	1914	80	3,083	5,130	2,137	5,558	10,084
	1909	44	3,199	2,746	1,808	4,051	6,532
Wisconsin	1919	95	13,585	22,892	19,634	75,176	119,381
	1914	43	4,889	9,827	3,908	10,465	18,478
	1909	30	4,298	3,153	2,733	5,340	11,440
All other states	1919	656	11,551	17,230	14,591	112,362	153,706
	1914	169	3,715	6,003	2,849	6,646	13,554
	1909	92	5,602	7,587	4,088	7,861	17,328

TABLE 17.—DETAILED STATEMENT FOR THE

	STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.
	AUTOMOBILES, INCLUDING BODIES AND PARTS.															
1	United States	2,830	396,104	2,165	12,206	24,354	14,264	343,115	De 399,044	Ja 283,491	403,209	386,504	15,986	651	68	*Dollars.* 1,780,948,952
2	Alabama	9	114	9	8	8	.....	89	Oc 97	Mh [3] 83	111	111	.....	.....	.....	226,415
3	California	265	3,841	290	180	229	134	3,008	No 3,475	Ja 2,212	3,492	3,394	94	4	.....	15,403,349
4	Delaware	5	22	8	3	.....	.....	11	Se [3] 12	Ja [3] 10	11	11	.....	.....	.....	75,006
5	Florida	8	58	11	1	1	1	44	Je [3] 46	Mh 38	44	44	.....	.....	.....	106,059
6	Idaho	5	17	5	3	1	1	7	(4) 7	(4) 7	8	8	.....	.....	.....	26,569
7	Illinois	229	10,964	141	631	829	558	8,805	De 10,342	Ja 7,315	10,338	9,827	484	22	5	43,584,352
8	Indiana	172	29,529	102	1,019	1,443	1,192	25,773	De 29,800	Fe 21,634	30,818	28,726	1,975	109	8	109,303,857
9	Iowa	43	720	38	53	34	31	564	No 687	Ap 468	653	582	59	12	.....	2,454,623
10	Maine	6	56	3	6	1	6	40	Au 48	Ja 28	45	45	.....	.....	.....	47,981
11	Massachusetts	96	5,293	69	241	217	236	4,530	De 5,316	Ap 3,825	5,637	5,383	203	50	1	16,932,750
12	Michigan	271	197,881	95	4,780	10,792	6,229	175,985	No 206,635	Ja 136,212	205,753	197,826	7,697	230	.....	992,513,968
13	Mississippi	4	75	2	9	7	1	56	De 83	Ja 35	82	78	4	.....	.....	126,176
14	Missouri	86	4,154	65	221	511	117	3,240	De 3,588	Ja 2,800	3,602	3,505	89	2	6	12,746,250
15	Montana	6	11	7	.....	.....	.....	4	Je [3] 6	Fe [3] 2	4	3	1	.....	.....	16,167
16	New Jersey	116	6,625	101	215	520	270	5,519	De 6,373	Ap 4,838	6,402	6,127	275	.....	.....	20,501,896
17	New York	344	36,486	267	1,632	2,526	1,578	30,483	Oc 33,189	Ja 27,845	32,794	31,554	1,216	18	6	122,510,513
18	North Dakota	5	18	4	2	.....	.....	12	Oc [3] 16	Ja [3] 10	15	15	.....	.....	.....	27,282
19	Ohio	281	53,321	163	1,442	3,651	2,183	45,882	De 57,610	My 35,303	58,604	55,857	2,662	81	4	256,466,662
20	Oregon	17	70	22	1	1	.....	46	Jy 55	Ja 31	50	48	1	1	.....	115,256
21	Pennsylvania	202	17,157	168	557	1,191	533	14,708	De 17,861	Ja 12,084	17,958	17,564	346	48	.....	65,547,945
22	Rhode Island	18	225	17	15	3	11	179	De 203	Fe 151	208	196	12	.....	.....	486,787
23	Utah	6	69	6	3	4	.....	56	Jy 71	Ja 46	39	39	.....	.....	.....	90,355
24	Wisconsin	95	16,353	54	560	1,458	696	13,585	No 14,793	Fe 11,735	14,609	14,047	550	9	3	62,754,863
25	All other states [5]	541	13,045	518	624	927	487	10,489	.....	.....	11,932	11,514	318	65	35	58,883,871
	AUTOMOBILES.															
1	United States	315	242,922	36	6,431	16,606	9,290	210,559	De 399,044	Ja 283,491	243,128	234,916	7,921	288	3	1,310,451,400
2	California	12	1,642	6	82	163	64	1,327	No 1,606	Ja 773	1,539	1,513	26	.....	.....	11,991,021
3	Illinois	25	4,455	5	234	477	232	3,507	No 4,040	Ja 3,017	3,985	3,898	79	8	.....	26,673,204
4	Indiana	27	12,162	3	368	737	510	10,544	De 13,247	Fe 8,769	13,126	12,178	894	54	.....	54,699,762
5	Iowa	6	151	1	19	15	12	104	Je 131	Au 64	100	100	.....	.....	.....	1,220,136
6	Massachusetts	8	1,267	2	94	106	76	989	De 1,460	Ja 521	1,466	1,430	24	6	.....	7,271,507
7	Michigan	68	142,976	4	3,084	8,120	4,831	126,937	De 145,241	Ja 99,563	145,578	140,810	4,590	178	.....	806,195,893
8	Missouri	8	2,383	.....	113	333	72	1,865	De 2,012	Ja 1,663	1,984	1,922	62	.....	.....	9,594,433
9	New Jersey	6	2,843	.....	91	299	94	2,359	Ja 2,793	Ap 2,035	2,656	2,595	61	.....	.....	11,578,691
10	New York	28	18,318	1	840	1,763	920	14,794	Oc 16,464	Mh 12,672	15,348	15,006	336	6	.....	71,718,920
11	Ohio	44	33,760	2	715	2,407	1,424	29,212	De 35,931	My 20,274	36,997	35,654	1,343	.....	.....	191,041,010
12	Pennsylvania	25	5,342	2	168	494	244	4,434	De 4,966	Ja 3,755	5,108	4,990	115	3	.....	28,172,033
13	Wisconsin	15	10,773	6	349	1,004	507	8,907	Oc 9,307	Fe 7,914	9,155	8,839	315	1	.....	46,883,931
14	All other states [6]	43	6,850	4	274	688	304	5,580	.....	.....	6,092	5,981	76	32	3	43,410,769

[1] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[2] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).
[3] Same number reported for one or more other months.
[4] Same number reported throughout the year.

AUTOMOBILE INDUSTRY, BY STATES: 1919.

Expenses.								Value of products.	Value added by manufacture.	Power.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.							Electric horsepower generated in establishments reporting.
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
AUTOMOBILES, INCLUDING BODIES AND PARTS.																	
Dollars. 54,509,015	*Dollars.* 47,675,129	*Dollars.* 491,121,373	*Dollars.* 1,758,343	*Dollars.* 4,165,823	*Dollars.* 146,030,139	*Dollars.* 1,918,993,810	*Dollars.* 21,685,066	*Dollars.* 3,080,073,979	*Dollars.* 1,139,395,103	544,242	78,343	67,869	12,927	566	384,537	111,172	1
9,439	7,489	86,440	.....	6,930	1,671	82,651	10,005	262,680	170,024	233	3	.....	.....	.....	233	.....	2
497,650	413,531	4,065,288	103,455	268,265	1,459,173	30,180,342	137,395	44,362,046	14,044,398	3,313	.....	.....	76	.....	3,237	.....	3
4,731	.....	16,691	500	980	327	14,835	969	64,013	48,209	51	.....	.....	12	.....	39	.....	4
1,717	1,380	59,751	.....	6,056	655	89,231	1,720	207,281	116,327	26	.....	.....	3	.....	23	.....	5
180	402	5,333	.....	926	389	7,959	129	22,026	13,928	11	.....	.....	5	.....	6	.....	6
2,220,698	1,834,213	11,138,805	133,379	466,799	3,663,358	73,476,977	476,831	104,883,442	30,929,634	15,098	1,065	670	248	.....	13,115	455	7
3,949,498	2,820,779	29,853,445	200,543	208,046	6,785,851	115,553,006	2,210,941	179,064,863	61,297,916	39,481	7,026	3,375	230	.....	28,850	5,450	8
127,840	93,646	595,433	24,694	25,614	30,366	1,937,923	31,031	3,297,013	1,328,059	713	150	.....	.....	.....	563	58	9
6,992	2,274	49,313	.....	3,242	251	22,539	1,598	86,879	62,742	64	.....	.....	.....	.....	64	.....	10
822,617	459,079	5,829,241	22,214	103,686	966,535	16,037,464	244,237	27,031,604	10,749,993	4,441	840	225	32	.....	3,344	310	11
28,046,185	22,278,738	272,989,442	389,057	927,729	92,224,827	948,815,835	10,951,593	1,620,383,356	660,615,925	284,127	37,539	59,177	8,567	18	178,826	84,259	12
15,512	6,527	48,987	.....	3,360	5,662	70,083	1,866	177,677	105,728	211	140	.....	.....	.....	71	.....	13
510,933	667,080	3,721,330	7,670	112,650	2,690,551	54,820,054	123,400	71,939,498	16,996,042	3,506	993	.....	40	.....	2,473	554	14
.....	.....	6,430	.....	2,080	175	14,892	592	33,893	18,409	18	.....	.....	.....	.....	18	.....	15
782,369	908,953	7,657,577	6,330	133,159	2,022,447	36,763,886	321,131	54,671,352	17,586,335	9,185	960	3,500	565	.....	4,160	2,720	16
5,499,093	4,280,828	39,311,532	127,799	695,547	5,749,817	134,262,538	1,534,363	211,137,153	75,340,252	42,474	8,212	332	493	540	32,897	6,326	17
900	.....	22,945	.....	1,570	246	26,054	1,689	62,928	35,185	26	.....	.....	.....	.....	26	.....	18
5,921,820	7,540,549	63,410,248	158,033	326,272	12,027,180	247,803,314	3,177,596	379,436,478	128,455,568	79,039	8,555	440	877	.....	69,167	3,723	19
1,650	360	71,358	.....	12,718	1,434	113,705	3,940	258,678	141,033	93	.....	.....	.....	.....	93	.....	20
1,714,960	2,290,889	18,849,194	26,518	333,739	4,115,507	75,274,855	854,037	113,820,134	37,691,242	23,363	3,540	150	729	5	18,939	1,323	21
39,806	13,061	192,727	2,332	13,496	14,413	194,396	9,463	684,605	480,746	280	.....	.....	5	.....	275	.....	22
7,200	5,500	61,430	.....	9,286	1,149	54,277	1,943	166,246	110,026	40	.....	.....	.....	.....	40	.....	23
2,422,526	2,202,765	19,631,048	9,290	90,947	7,245,194	74,145,532	1,030,626	119,380,641	44,204,483	22,892	5,710	.....	559	.....	16,623	4,198	24
1,904,789	1,847,086	13,453,354	546,529	412,726	7,022,951	109,228,449	557,967	148,639,495	38,853,079	15,554	3,610	.....	483	3	11,455	1,796	25
AUTOMOBILES.																	
34,591,682	32,624,122	312,165,870	198,142	1,262,023	126,893,916	1,565,694,602	12,956,972	2,387,903,287	809,251,713	287,323	45,423	59,109	861	.....	181,930	93,426	1
227,554	297,976	1,809,924	18,088	28,351	1,392,479	26,949,006	77,055	36,626,893	9,600,832	1,332	.....	.....	48	.....	1,284	.....	2
867,257	979,259	4,664,716	49,985	120,157	3,167,141	60,857,016	164,756	77,018,464	15,986,692	6,263	380	670	.....	.....	5,213	72	3
1,484,404	1,340,025	12,480,913	6,093	102,269	4,936,045	77,158,346	539,399	107,347,614	29,649,869	13,564	2,830	.....	.....	.....	10,734	626	4
48,196	32,989	126,342	15,690	3,485	7,834	1,141,106	11,407	1,584,005	431,492	161	.....	.....	.....	.....	161	.....	5
248,592	176,899	1,239,542	.....	1,200	708,358	9,506,827	62,979	12,548,222	2,978,416	1,160	125	.....	.....	.....	1,035	40	6
21,405,794	17,128,611	197,768,186	100	642,476	83,140,040	801,202,501	8,002,488	1,332,076,498	522,871,509	180,702	22,620	57,707	146	.....	100,229	79,625	7
205,794	480,445	2,303,753	.....	26,368	2,500,153	50,052,993	71,253	62,624,650	12,500,404	1,470	500	.....	.....	.....	970	554	8
285,923	567,091	3,506,642	.....	12,890	1,525,833	30,529,043	153,366	39,560,664	8,878,255	3,246	300	.....	.....	.....	2,946	379	9
3,004,010	2,645,172	20,005,599	.....	76,323	3,889,804	100,645,015	598,934	140,721,999	39,478,050	14,498	4,895	332	.....	.....	9,271	5,478	10
3,513,285	5,147,108	41,443,839	97,566	53,798	9,910,381	196,354,341	2,084,620	287,045,832	88,606,871	37,473	6,113	400	228	.....	30,732	3,061	11
608,533	1,075,566	5,703,126	1,432	121,747	2,632,401	51,220,062	200,847	68,490,911	17,070,002	5,413	628	.....	220	.....	4,565	140	12
1,708,090	1,391,040	13,257,349	1,762	8,190	6,324,586	61,074,320	683,930	95,030,129	33,271,879	14,864	5,025	.....	11	.....	9,828	1,663	13
984,250	1,351,941	7,855,029	7,426	64,769	6,758,861	98,994,026	305,938	127,227,406	27,927,442	7,177	2,007	.....	208	.....	4,962	1,788	14

[5] All other states embrace: Arizona, 2 establishments; Arkansas, 15; Colorado, 31; Connecticut, 55; District of Columbia, 6; Georgia, 29; Kansas, 30; Kentucky, 19; Louisiana, 12; Maryland, 36; Minnesota, 53; Nebraska, 22; Nevada, 2; New Hampshire, 5; New Mexico, 1; North Carolina, 9; Oklahoma, 21; South Carolina, 7; South Dakota, 5; Tennessee, 18; Texas, 77; Vermont, 1; Virginia, 21; Washington, 62; and West Virginia, 2.

[6] All other states embrace: Arkansas, 1 establishment; Colorado, 2; Connecticut, 2; District of Columbia, 1; Georgia, 2; Kansas, 2; Kentucky, 2; Louisiana, 2; Maryland, 1; Minnesota, 5; Nebraska, 2; New Hampshire, 1; North Carolina, 2; Oklahoma, 3; South Carolina, 1; South Dakota, 1; Tennessee, 1; Texas, 5; Virginia, 2; Washington, 4; and West Virginia, 1.

TABLE 17.—DETAILED STATEMENT FOR THE

	STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.		Wage earners. Number, 15th day of— Minimum month.		WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.
	AUTOMOBILE BODIES AND PARTS.																	
1	United States	2,515	153,182	2,129	5,775	7,748	4,974	132,556	De	8,127	Ja [3]	5,476	160,081	151,588	8,065	363	65	*Dollars.* 470,497,552
2	Alabama	9	114	9	8	8	.....	89	Oc	97	Mh [3]	83	111	111	.....	.....	.....	226,415
3	Arkansas	14	107	15	3	4	2	83	De [3]	111	Ap	61	111	100	10	1	.....	167,868
4	California	253	2,199	284	98	66	70	1,681	De	1,921	Ja	1,439	1,953	1,881	68	4	.....	3,412,328
5	Colorado	29	272	30	20	5	5	212	Jy	227	Ja	182	238	220	5	2	11	335,604
6	Connecticut	53	1,392	50	73	54	51	1,164	De	1,494	Ja	863	1,504	1,420	43	20	21	4,924,071
7	Delaware	5	22	8	3	.....	.....	11	Se [3]	12	Ja [3]	10	11	11	.....	.....	.....	75,006
8	District of Columbia	5	34	5	3	1	.....	25	De	30	Mh	21	30	28	2	.....	.....	102,002
9	Florida	8	58	11	1	1	1	44	Je [3]	46	Mh	38	44	44	.....	.....	.....	106,059
10	Georgia	27	279	29	23	13	8	209	De	240	Fe [3]	109	243	210	30	3	.....	430,471
11	Idaho	5	17	5	3	1	1	7	(4)	7	(4)	7	8	8	.....	.....	.....	26,569
12	Illinois	204	6,599	136	397	352	326	5,298	De	6,361	Ja	4,298	6,353	5,929	405	14	5	16,911,058
13	Indiana	145	17,367	99	651	705	682	15,229	No	16,587	Fe	12,865	17,692	16,548	1,081	55	8	54,604,095
14	Iowa	37	569	37	34	19	19	460	No	598	Ap	348	553	482	59	12	.....	1,234,487
15	Kansas	28	145	43	5	3	4	90	De	118	Fe	74	119	116	3	.....	.....	421,693
16	Kentucky	17	447	15	23	12	9	388	Je [3]	397	No	379	389	382	6	1	.....	1,045,283
17	Louisiana	10	206	10	7	12	3	174	Au	197	Fe	152	196	196	.....	.....	.....	321,854
18	Maine	6	56	3	6	1	6	40	Au	48	Ja	28	45	45	.....	.....	.....	47,981
19	Maryland	35	326	36	21	28	8	233	Se	249	Ja	216	251	246	5	.....	.....	701,289
20	Massachusetts	88	4,026	67	147	111	160	3,541	De	3,856	Je	3,152	4,177	3,953	179	44	1	9,661,243
21	Michigan	203	54,905	91	1,696	2,672	1,398	49,048	No	61,438	Ja	36,649	60,175	57,016	3,107	52	.....	186,318,075
22	Minnesota	48	537	44	43	26	19	405	De	454	Ja	328	481	467	14	.....	.....	979,377
23	Mississippi	4	75	2	9	7	1	56	De	83	Ja	35	82	78	4	.....	.....	126,176
24	Missouri	78	1,771	65	108	178	45	1,375	De	1,576	Ja	1,137	1,618	1,583	27	2	6	3,151,817
25	Montana	6	11	7	.....	.....	.....	4	Je [3]	6	Fe [3]	2	4	3	1	.....	.....	16,167
26	Nebraska	20	425	12	32	29	25	327	Oc	412	Mh	252	488	446	41	1	.....	2,755,430
27	New Hampshire	4	7	3	.....	.....	.....	4	(4)	4	(4)	4	4	4	.....	.....	.....	17,828
28	New Jersey	110	3,782	101	124	221	176	3,160	De	3,717	Fe	2,461	3,746	3,532	214	.....	.....	8,923,205
29	New York	316	18,168	266	792	763	658	15,689	Oc	16,725	Je	14,237	17,446	16,548	880	12	6	50,791,593
30	North Carolina	7	56	11	1	.....	.....	44	Je	49	Mh	40	42	42	.....	.....	.....	50,132
31	North Dakota	5	18	4	2	.....	.....	12	Oc [3]	16	Ja [3]	10	15	15	.....	.....	.....	27,282
32	Ohio	237	19,561	161	727	1,244	759	16,670	De	21,679	Fe	12,635	21,607	20,203	1,319	81	4	65,425,652
33	Oklahoma	18	142	17	9	5	6	105	Se	113	Ja	92	102	95	7	.....	.....	175,674
34	Oregon	17	70	22	1	1	.....	46	Jy	55	Ja	31	50	48	1	1	.....	115,256
35	Pennsylvania	177	11,815	166	389	697	289	10,274	De	12,895	Ja	8,329	12,850	12,574	231	45	.....	37,375,912
36	Rhode Island	18	225	17	15	3	11	179	De	203	Fe	151	208	196	12	.....	.....	486,787
37	South Carolina	6	48	8	2	1	3	34	De [3]	37	Je	30	36	35	.....	1	.....	57,469
38	South Dakota	4	10	5	.....	.....	.....	5	My [3]	6	Oc [3]	4	5	5	.....	.....	.....	5,100
39	Tennessee	17	547	15	19	18	9	486	Oc	631	Ja	377	561	536	25	.....	.....	843,259
40	Texas	72	620	85	30	12	13	480	De	573	Fe	412	581	560	17	4	.....	975,356
41	Utah	6	69	6	3	4	.....	56	Jy	71	Ja	46	39	39	.....	.....	.....	90,355
42	Virginia	19	168	14	16	7	5	126	Oc	141	Ja [3]	105	137	110	27	.....	.....	370,484
43	Washington	58	377	58	22	9	12	276	My [3]	292	Fe	247	275	270	5	.....	.....	731,895
44	Wisconsin	80	5,580	48	211	454	189	4,678	No	5,523	Fe	3,821	5,454	5,208	235	8	3	15,870,932
45	All other states [5]	7	50	9	1	.....	1	39	.....	.....	.....	.....	47	45	2	.....	.....	60,951

[1] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[2] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).
[3] Same number reported for one or more other months.

AUTOMOBILE INDUSTRY, BY STATES: 1919—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.							Electric horsepower generated in establishments reporting.
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines)	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
AUTOMOBILE BODIES AND PARTS.																	
Dollars. 19,917,333	*Dollars.* 15,051,007	*Dollars.* 178,955,503	*Dollars.* 1,560,201	*Dollars.* 2,903,800	*Dollars.* 19,136,223	*Dollars.* 353,299,208	*Dollars.* 8,728,094	*Dollars.* 692,170,692	*Dollars.* 330,143,390	256,919	32,920	8,760	12,066	566	202,607	17,746	1
9,439	7,480	80,440	.....	6,930	1,671	82,651	10,005	262,680	170,024	236	3	.....	.....	.....	233	.....	2
7,800	7,629	62,262	.....	6,980	530	139,678	2,918	253,654	111,058	236	.....	.....	.....	.....	236	.....	3
270,096	115,555	2,255,364	85,367	239,914	66,694	3,231,336	60,341	7,735,153	4,443,476	1,981	.....	.....	28	.....	1,953	.....	4
36,300	7,172	276,302	17,828	21,412	7,690	332,356	9,040	819,280	477,884	219	.....	.....	.....	.....	219	.....	5
278,908	147,142	1,465,134	3,000	58,721	88,933	3,026,007	65,995	6,197,757	3,105,755	1,745	370	.....	43	.....	1,332	8	6
4,731	.....	16,691	500	980	327	14,835	969	64,013	48,209	51	.....	.....	12	.....	39	.....	7
6,500	1,000	30,483	200	2,040	623	39,146	828	101,663	61,689	21	.....	.....	.....	.....	21	.....	8
1,717	1,380	59,751	.....	6,056	655	89,234	1,720	207,281	116,327	26	.....	.....	3	.....	23	.....	9
57,645	29,560	222,772	2,000	22,161	12,401	704,406	8,974	1,133,544	420,164	302	25	.....	37	.....	240	.....	10
180	402	5,333	.....	926	389	7,969	129	22,026	13,928	11	.....	.....	5	.....	6	.....	11
1,353,441	854,954	6,474,090	83,394	346,642	496,227	12,609,961	312,075	27,864,978	14,942,942	8,835	685	.....	248	.....	7,902	383	12
2,465,094	1,480,754	17,372,532	194,450	105,777	1,849,806	38,397,660	1,671,542	71,717,249	31,648,047	25,917	4,196	3,375	230	.....	18,116	4,824	13
79,644	60,657	469,091	9,004	22,129	22,532	796,817	19,624	1,713,008	896,567	552	150	.....	.....	.....	402	58	14
7,533	6,246	93,045	.....	6,680	6,910	172,612	5,891	415,962	237,459	176	25	.....	2	.....	149	.....	15
63,326	24,836	410,887	.....	4,180	17,978	660,253	23,889	1,365,882	681,740	816	.....	.....	73	.....	743	.....	16
22,540	16,595	184,114	.....	9,210	3,143	429,945	5,281	731,887	296,661	672	238	.....	25	.....	409	.....	17
6,902	2,274	40,313	.....	3,242	251	22,539	1,598	86,879	62,742	64	.....	.....	.....	.....	64	.....	18
49,102	55,992	278,635	2,871	16,355	10,998	425,208	12,515	1,034,364	596,641	422	.....	.....	69	.....	353	.....	19
574,025	282,180	4,589,699	22,214	102,486	258,177	6,530,637	181,258	14,483,382	7,771,487	3,281	715	225	32	.....	2,309	270	20
6,640,391	5,150,127	75,221,256	388,957	285,253	9,084,787	147,613,334	2,949,108	288,306,858	137,744,416	103,425	14,919	1,470	8,421	18	78,597	4,634	21
80,979	38,904	456,559	2,955	35,768	23,417	850,290	26,896	1,703,048	885,862	611	.....	.....	4	.....	607	.....	22
15,512	6,527	48,987	.....	3,360	5,662	70,083	1,866	177,677	105,728	211	140	.....	.....	.....	71	.....	23
305,139	186,635	1,417,607	7,670	86,282	190,398	4,767,061	52,147	9,314,846	4,495,638	2,036	493	.....	40	.....	1,503	.....	24
.....	.....	6,430	.....	2,080	175	14,892	592	33,893	18,409	18	.....	.....	.....	.....	18	.....	25
94,964	64,160	361,049	1,744	19,360	26,842	1,019,454	17,590	1,723,167	686,123	597	100	.....	15	.....	482	.....	26
.....	.....	3,131	.....	196	338	3,214	567	11,175	7,394	27	.....	.....	.....	.....	27	.....	27
496,446	341,862	4,150,935	6,330	120,269	496,614	6,234,843	167,765	15,110,688	8,708,080	5,939	660	3,500	565	.....	1,214	2,341	28
2,495,083	1,635,656	19,305,023	127,799	619,224	1,860,013	33,617,523	935,429	70,415,154	35,862,202	27,976	3,317	.....	493	540	23,626	848	29
750	.....	41,747	.....	3,927	288	36,220	2,020	114,538	76,298	82	.....	.....	.....	.....	82	.....	30
900	.....	22,945	.....	1,570	246	26,054	1,689	62,928	35,185	26	.....	.....	.....	.....	26	.....	31
2,408,535	2,393,441	21,966,409	60,467	272,474	2,116,799	51,448,973	1,092,976	92,390,646	39,848,697	41,566	2,442	40	649	.....	38,435	662	32
24,598	9,485	137,835	.....	14,060	6,306	164,489	5,274	428,072	258,309	105	.....	.....	.....	.....	105	.....	33
1,650	360	71,358	.....	12,718	1,434	113,705	3,940	258,678	141,033	93	.....	.....	.....	.....	93	.....	34
1,106,427	1,215,323	13,146,068	25,086	211,992	1,483,106	24,054,793	653,190	45,329,223	20,621,240	17,950	2,912	150	509	5	14,374	1,183	35
39,806	13,061	192,727	2,332	13,496	14,413	194,396	9,463	684,605	480,746	280	.....	.....	5	.....	275	.....	36
4,699	3,415	32,436	1,500	1,995	477	103,265	2,829	138,286	32,192	57	.....	.....	.....	.....	57	.....	37
.....	.....	6,395	.....	920	166	7,170	637	26,216	18,409	12	.....	.....	.....	.....	12	.....	38
51,769	23,150	417,187	3,862	15,530	21,187	558,651	20,503	1,351,979	772,825	1,020	845	.....	.....	.....	175	.....	39
51,817	25,741	557,163	600	60,706	18,695	736,417	16,433	1,881,349	1,128,499	626	.....	.....	2	.....	624	.....	40
7,200	5,500	61,430	.....	9,286	1,149	54,277	1,943	166,246	110,026	40	.....	.....	.....	.....	40	.....	41
24,677	7,118	113,483	374	8,248	2,080	303,679	4,714	527,053	218,660	124	.....	.....	8	3	113	.....	42
53,632	16,024	402,079	502,169	36,608	14,711	448,588	16,621	1,226,303	761,094	429	.....	.....	.....	.....	429	.....	43
714,436	811,725	6,376,699	7,528	82,757	920,608	13,071,212	346,696	24,350,512	10,932,604	8,028	685	.....	548	.....	6,795	2,535	44
3,000	976	45,627	.....	2,900	377	73,375	2,614	166,916	90,921	78	.....	.....	.....	.....	78	.....	45

[1] Same number reported throughout the year.
[2] All other states embrace: Arizona, 2 establishments; Nevada, 2; New Mexico, 1; Vermont, 1; and West Virginia, 1.

AUTOMOBILE REPAIRING.

Detailed statistics for the automobile-repairing industry.—At the census of 1919 reports were secured from establishments engaged in the repairing of automobiles and the vulcanizing of tires, detailed statistics for which are shown in Table 18. The statistics shown for this industry do not cover the repair of automobiles in establishments engaged chiefly in the manufacture of automobiles, bodies and parts, or the vulcanizing of tires in factories classified as in the rubber-goods industry.

TABLE 18.—DETAILED STATEMENT FOR THE

	STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.		Wage earners. Number, 15th day of— Minimum month.		WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.
	AUTOMOBILE REPAIRING.																	
1	United States	15,507	82,635	18,566	3,288	2,753	2,907	55,061	Au	59,004	Ja	48,702	58,085	57,454	393	238	.....	*Dollars.* 141,123,954
2	Alabama	132	692	157	22	22	11	480	De	510	Ja	418	511	509	.....	2	.....	835,049
3	Arizona	81	374	95	18	16	14	231	De	269	Fe [3]	211	279	279	.....	.....	.....	602,394
4	Arkansas	79	395	109	13	5	7	261	De [3]	270	Fe [3]	250	276	271	4	1	.....	452,326
5	California	1,648	8,827	2,168	186	214	267	5,992	De	6,426	Ja	5,483	6,491	6,426	38	27	.....	13,190,952
6	Colorado	401	2,164	455	90	64	60	1,495	Au	1,757	Ja	1,261	1,487	1,477	4	6	.....	3,536,680
7	Connecticut	301	1,590	294	102	39	82	1,073	Au	1,149	Ja	957	1,113	1,091	20	2	.....	2,706,780
8	Delaware	15	61	13	3	3	1	41	Je	46	De	39	37	37	.....	.....	.....	92,010
9	District of Columbia	27	285	26	18	14	13	214	Ja	229	Je [3]	209	209	209	.....	.....	.....	739,427
10	Florida	79	380	96	12	8	5	259	De	278	Fe	247	288	287	.....	1	.....	378,180
11	Georgia	195	1,216	243	54	36	20	863	De	916	Ja	785	921	904	13	4	.....	1,169,481
12	Idaho	119	546	151	28	14	11	342	Je	396	Ja	291	356	353	.....	3	.....	1,032,440
13	Illinois	785	4,627	963	194	160	190	3,120	Jy	3,282	Ja	2,918	3,231	3,191	37	3	.....	8,017,469
14	Indiana	358	1,454	439	64	16	50	885	Au	951	Ja	779	926	919	5	2	.....	1,954,600
15	Iowa	579	2,311	735	81	51	89	1,355	Au	1,532	Ja	1,119	1,430	1,409	19	2	.....	4,412,673
16	Kansas	325	1,392	424	33	33	32	870	Se	926	Ja	814	945	938	7	.....	.....	1,855,890
17	Kentucky	190	923	233	31	10	35	614	De	666	Ja	543	694	692	2	.....	.....	1,460,607
18	Louisiana	128	779	151	43	41	21	523	No	576	Mh	457	574	567	2	5	.....	1,146,748
19	Maine	161	665	180	29	19	37	400	Jy	510	Ja	286	425	421	4	.....	.....	1,005,94[illegible]
20	Maryland	212	1,617	233	101	117	65	1,101	De	1,201	Ja	995	1,207	1,201	3	3	.....	3,315,160
21	Massachusetts	279	2,057	247	60	85	83	1,582	Je	1,687	Ja	1,378	1,620	1,596	17	7	.....	2,707,250
22	Michigan	259	1,454	322	48	50	66	968	Au	1,064	Ja	774	1,047	1,032	11	4	.....	2,904,98[illegible]
23	Minnesota	592	2,935	799	128	72	94	1,842	Jy	1,131	Ja	1,453	1,921	1,911	8	2	.....	5,345,60[illegible]
24	Mississippi	76	289	100	3	3	6	177	Au [3]	196	Ap	157	195	188	1	6	.....	306,663
25	Missouri	417	2,014	523	95	54	59	1,283	Se	1,344	Ja	1,173	1,350	1,338	8	4	.....	3,202,785
26	Montana	255	908	309	32	21	26	520	Jy	623	Ja	413	524	524	.....	.....	.....	1,242,893
27	Nebraska	499	1,897	661	32	20	50	1,134	Se	1,319	Ja	989	1,170	1,164	4	2	.....	3,506,061
28	Nevada	17	74	18	4	3	4	45	Se	50	Ja	35	47	47	.....	.....	.....	88,734
29	New Hampshire	48	232	52	9	4	10	157	Au	19[illegible]	Ja	121	163	161	2	.....	.....	371,782
30	New Jersey	493	2,393	492	90	84	100	1,627	Jy	1,747	Ja	1,473	1,693	1,665	6	22	.....	4,328,592
31	New Mexico	51	212	56	3	6	.....	147	No	166	Ja	136	161	161	.....	.....	.....	322,988
32	New York	999	8,815	981	457	652	528	6,197	Au	6,528	Ja	5,552	6,449	6,413	34	2	.....	16,134,597
33	North Carolina	309	1,844	345	151	32	33	1,283	De	1,338	Ja	1,201	1,332	1,313	6	13	.....	3,116,635
34	North Dakota	139	500	159	20	10	8	303	Jy	392	Ja	203	293	291	2	.....	.....	1,723,901
35	Ohio	540	3,463	623	144	100	166	2,430	Oc	2,798	Ja	2,156	2,503	2,467	26	10	.....	5,811,464
36	Oklahoma	129	715	166	41	33	20	455	Se	498	Ja	403	497	490	.....	7	.....	1,066,264
37	Oregon	229	1,163	294	46	57	39	727	Se	810	Ja	608	813	797	12	4	.....	1,492,590
38	Pennsylvania	1,359	7,607	1,582	253	284	263	5,225	Au	5,505	Ja	4,797	5,473	5,385	39	49	.....	15,264,528
39	Rhode Island	99	493	104	14	7	19	349	Je	381	Ja	319	341	340	1	.....	.....	551,167
40	South Carolina	183	826	202	47	31	14	532	De	588	Fe	493	599	596	.....	3	.....	2,137,904
41	South Dakota	362	1,341	491	13	15	28	794	Au	936	Ja	625	820	814	3	3	.....	2,519,901
42	Tennessee	163	894	211	38	15	27	603	Jy	634	Fe	549	641	635	5	1	.....	1,640,910
43	Texas	334	1,856	448	86	42	26	1,254	Oc	1,340	Ja	1,133	1,373	1,353	8	12	.....	2,881,206
44	Utah	125	626	134	42	12	12	426	Au	506	Ja	304	462	458	2	2	.....	665,938
45	Vermont	88	430	98	11	5	19	297	Jy	345	Ja	233	306	303	2	1	.....	828,852
46	Virginia	116	582	146	23	20	17	376	Se	392	Ja	357	394	392	2	.....	.....	820,617
47	Washington	562	2,591	638	119	65	82	1,687	Se	1,840	Ja	1,456	1,844	1,829	13	2	.....	3,997,777
48	West Virginia	158	694	181	38	29	25	421	Au	481	Fe [3]	351	457	452	1	4	.....	1,377,855
49	Wisconsin	673	2,844	851	95	44	116	1,738	Au	1,909	Ja	1,485	1,821	1,784	22	15	.....	6,007,889
50	Wyoming	139	588	168	24	16	17	363	Au	451	Ja	277	376	374	.....	2	.....	850,829

[1] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[2] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

Reports were secured only from establishments which were equipped with power-driven machinery necessary for extensive repair work, and garages and establishments which made only minor repairs with hand tools were, therefore, not canvassed. Allowance must be made for the fact that many of the establishments from which reports were received included items covering the sale of accessories, etc., which could not be segregated because of the lack of necessary data.

AUTOMOBILE-REPAIRING INDUSTRY, BY STATES: 1919.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.						Electric horsepower generated in establishments reporting.	
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
AUTOMOBILE REPAIRING.																	
Dollars. 6,237,721	*Dollars.* 5,265,398	*Dollars.* 71,613,471	*Dollars.* 1,409,553	*Dollars.* 7,846,451	*Dollars.* 1,808,906	*Dollars.* 84,013,410	*Dollars.* 3,635,443	*Dollars.* 224,652,159	*Dollars.* 137,003,306	82,691	1,721	42	17,571	132	63,225	518	1
48,114	27,026	583,618	400	58,583	16,366	615,619	25,357	1,742,915	1,101,939	990	.....	.....	297	2	691	.....	2
21,459	24,340	356,575	.....	48,003	7,253	350,295	16,814	1,013,243	646,134	422	.....	.....	35	.....	387	.....	3
20,277	10,660	277,418	.....	31,744	3,927	275,734	15,860	838,886	547,292	605	.....	.....	183	.....	422	.....	4
353,012	462,364	8,299,952	348,266	1,048,230	162,642	8,963,093	303,485	24,893,910	15,627,332	8,424	8	.....	482	2	7,932	6	5
170,153	125,599	1,955,265	22,823	194,409	71,295	2,027,350	94,917	5,679,480	3,557,213	2,229	31	6	494	2	1,696	16	6
179,260	106,335	1,333,965	13,208	172,541	34,597	1,598,716	91,228	4,545,446	2,855,502	1,093	10	.....	135	.....	948	2	7
4,962	4,033	50,577	535	9,170	844	45,187	2,164	140,632	93,281	40	.....	.....	19	.....	21	.....	8
35,522	54,361	229,085	2,000	23,080	5,826	388,905	12,719	884,002	482,378	158	.....	.....	2	.....	156	.....	9
25,180	14,728	296,762	133	32,569	6,750	231,318	13,367	740,290	495,605	590	202	.....	97	4	287	5	10
95,448	54,159	1,033,516	8,280	99,001	25,755	1,047,855	41,524	2,738,649	1,649,270	1,181	46	.....	296	.....	839	2	11
50,500	27,333	533,594	.....	47,024	12,290	517,265	25,627	1,445,754	902,862	485	.....	.....	26	1	458	3	12
384,064	321,854	4,003,019	23,130	472,873	77,073	5,881,787	220,797	13,951,423	7,844,839	4,278	72	.....	608	.....	3,598	14	13
98,344	51,193	1,067,146	6,615	105,417	26,918	1,217,716	67,442	3,352,031	2,066,873	1,692	28	10	401	.....	1,253	7	14
134,473	124,874	1,736,347	8,811	187,961	39,918	2,187,167	144,938	5,806,835	3,474,730	3,232	10	.....	803	.....	2,419	4	15
56,503	46,487	1,171,665	18,980	99,809	22,131	1,211,941	63,480	3,288,214	2,012,793	2,129	10	.....	522	.....	1,597	6	16
56,015	36,676	773,127	386	74,053	22,965	902,584	39,355	2,389,396	1,447,457	1,261	19	.....	550	2	690	10	17
53,393	32,876	547,578	2,240	41,423	12,243	623,975	24,173	1,548,329	900,181	834	30	.....	295	.....	509	.....	18
32,421	28,548	464,292	.....	35,836	11,990	439,244	28,318	1,276,609	809,047	773	8	.....	186	.....	579	.....	19
208,767	150,606	1,288,909	37,201	100,753	48,750	2,316,773	52,524	4,874,344	2,505,047	1,094	4	.....	119	.....	971	.....	20
149,437	186,701	2,044,460	9,500	203,359	88,343	1,948,460	95,160	5,972,500	3,928,880	1,424	.....	.....	125	.....	1,299	.....	21
98,485	114,589	1,288,441	15,982	114,734	48,883	1,780,480	82,461	4,226,691	2,363,750	1,362	2	.....	182	.....	1,178	.....	22
207,516	119,309	2,295,942	44,932	247,594	63,755	1,993,318	170,650	9,282,481	7,118,513	2,830	22	.....	743	.....	2,065	23	23
2,100	6,472	215,637	3,273	23,360	7,062	163,014	13,111	686,164	510,039	472	.....	.....	248	.....	224	8	24
161,907	88,622	1,587,597	52,312	202,309	26,131	1,988,887	88,503	5,212,137	3,134,687	1,976	14	.....	598	.....	1,364	9	25
45,242	40,596	774,973	177	98,655	22,280	544,688	60,597	2,038,836	1,433,551	1,187	19	.....	291	5	872	1	26
60,064	56,962	1,553,812	7,630	126,059	37,883	1,820,985	107,309	4,549,978	2,621,684	2,822	18	.....	1,062	.....	1,742	17	27
10,060	6,470	79,432	.....	10,440	1,300	70,462	4,603	221,372	146,307	118	.....	.....	9	.....	109	.....	28
9,106	9,740	189,728	.....	20,801	3,863	323,414	11,515	682,679	347,750	220	.....	.....	20	35	165	.....	29
169,428	161,378	2,144,190	12,866	242,635	47,386	2,204,678	107,622	6,129,747	3,817,447	2,083	105	.....	388	.....	1,590	6	30
2,250	4,950	202,945	170	17,232	4,882	158,837	13,629	494,597	322,131	359	.....	.....	91	.....	268	.....	31
1,071,989	1,197,146	8,087,997	92,910	1,193,816	206,497	10,041,435	342,062	25,310,348	14,926,851	5,897	43	.....	759	5	5,090	2	32
307,808	82,830	1,702,371	16,240	128,784	35,445	1,743,369	64,252	5,002,291	3,194,670	1,748	16	.....	710	2	1,020	.....	33
27,156	15,524	367,920	1,173	23,907	18,161	505,501	40,420	1,231,981	686,060	767	.....	.....	323	.....	444	21	34
271,286	230,647	3,311,759	38,435	283,977	86,497	4,344,652	149,745	10,245,408	5,751,011	3,678	180	.....	735	.....	2,763	6	35
92,440	58,417	602,889	3,735	62,584	14,908	869,346	32,754	2,108,455	1,206,355	1,041	4	.....	452	.....	585	10	36
78,713	80,884	1,027,133	405,620	107,166	15,305	745,746	44,360	2,604,602	1,814,496	1,202	2	.....	196	11	993	3	37
527,491	523,794	6,864,510	146,049	698,728	110,659	8,068,450	295,523	20,682,253	12,318,280	7,109	621	.....	1,431	9	5,048	90	38
25,257	25,630	390,368	100	40,542	13,368	317,050	19,845	1,081,085	744,190	342	50	.....	31	.....	261	.....	39
75,109	35,191	631,369	976	65,580	36,223	788,879	29,972	1,984,432	1,165,581	851	16	.....	202	.....	633	113	40
18,867	36,287	1,154,245	2,592	82,312	27,922	1,146,865	85,173	3,346,613	2,114,575	2,082	14	.....	867	.....	1,201	19	41
70,261	23,128	668,462	583	64,235	16,064	1,013,503	30,774	2,329,353	1,285,076	1,025	10	.....	218	9	788	.....	42
147,831	61,704	1,468,665	2,569	200,953	41,465	2,111,978	73,444	5,301,804	3,116,382	1,693	34	.....	431	.....	1,228	21	43
66,120	20,817	524,001	300	64,867	8,090	563,591	25,791	1,537,194	947,812	596	10	.....	37	.....	549	1	44
17,270	16,365	326,221	.....	18,465	10,678	654,867	19,132	1,820,513	1,146,514	459	.....	.....	114	21	324	47	45
32,440	36,729	423,183	.....	55,142	13,502	781,738	18,928	1,640,891	840,225	409	.....	.....	87	.....	322	3	46
219,555	145,848	2,494,747	36,906	276,852	60,592	2,311,886	103,136	6,952,681	4,537,659	2,311	32	.....	225	.....	2,054	1	47
53,962	43,727	529,944	4,925	55,647	15,796	811,614	25,891	2,299,659	1,462,154	1,071	.....	4	459	.....	608	12	48
148,624	113,553	2,053,358	16,353	183,358	105,706	2,782,589	158,677	6,864,739	3,923,473	3,210	4	22	728	19	2,437	17	49
42,080	20,246	601,762	237	49,876	10,727	570,604	36,255	1,660,287	1,053,428	837	27	.....	259	3	548	13	50

[3] Same number reported for one or more other months.

DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES

MANUFACTURES: 1919

BRASS, BRONZE, AND COPPER PRODUCTS

Prepared under the supervision of EUGENE F. HARTLEY, Chief Statistician for Manufactures

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EXPLANATION OF TERMS.

Scope of census.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than $500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

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

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date did not portray such conditions, an earlier date was requested.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

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

In order to determine as nearly as possible the age distribution of the average number of wage earners for an industry, the per cent distribution by age of the wage earners for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year to determine the average numbers 16 years and over, and under 16, employed.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital (amount actually invested).—The instructions on the schedule for securing data relating to capital were as follows:

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

These instructions were identical with those employed at the censuses of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power equipment of the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuel is impracticable.

BRASS, BRONZE, AND COPPER PRODUCTS.

GENERAL STATISTICS.

General character of the industry.—This industry covers the manufacture of brass, bronze, copper, and other allied metal products. These products consist chiefly of castings and machinery fittings, plates and sheets, tubing, rods, hardware and trimmings, plain and insulated wire, ingots and bars, electrical supplies, and lamps, valued in the order named. In many establishments minor products are manufactured which can not properly be assigned to any of these groups, the value of which is necessarily included in the total value of the products of the factory reporting. In 1919 the total value of these minor products was $38,483,165, exclusive of repair work. The major portion of this amount was made up of munitions, and brass, copper, and other metal novelties.

Brass, bronze, and copper products were also made by establishments engaged primarily in the manufacture of other products to the value of $42,789,529 in 1919 and $69,063,735 in 1914.

Importance and growth of the industry.—Table 1 summarizes the statistics for each census since 1879, with percentages of increase for each five-year period. With few exceptions, increases are noticeable at each succeeding census. The large increases, however, from 1914 to 1919, in salaries and wages, cost of materials, and value of products, are due largely to a general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the increase of the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 will account for the increase in "Rent and taxes." "Contract work," or work performed by employees other than those in the plants reporting, has little significance, since it represents merely the methods of manufacture used by establishments, which vary from year to year.

Summary for the industry and its branches.—In Table 2 the more important data are summarized for establishments engaged primarily in the manufacture of brass, bronze, and copper products for 1919, and separate figures are given for (1) brass and bronze products, (2) copper products, and (3) products of other metals or alloys.

States, ranked by value of products.—Connecticut, as shown by Table 3, is preeminently the leading state in the manufacture of brass, bronze, and copper products. It has held this position for the past several censuses. In 1919 this state reported 35.2 per cent of the total value of products and 39.4 per cent of the total number of wage earners. New York, second in importance, contributed only 13.8 per cent and 14.3 per cent, respectively, of these two items. Although 37 states reported brass, bronze, and copper manufactures, the industry has become centralized in Connecicut, New York, Michigan, Pennsylvania, Ohio, Illinois, Wisconsin, Massachusetts, and New Jersey, named in the order of their rank by value of products. Combined, these 9 states produced 91.1 per cent of the total value of products for the industry in 1919, and employed 93.1 per cent of the total average number of wage earners.

Persons engaged in the industry.—The classification by sex for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. The age classification of the average number of wage earners in Table 4 is an estimate obtained by the method described in the "Explanation of terms." Figures in detail will be found in Table 16.

Wage earners, by months.—The statistics for wage earners in Table 5 show the regularity of employment, or the reverse, in accordance with the existing industrial conditions during the census year reported. The number employed in the industry during 1919, month by month, ranged from a maximum of 82,382 in November, to a minimum of 67,301 in June, the minimum number being equivalent to 81.7 per cent of the maximum. The figures for males and females are combined for the United States for 1914 and 1909, and for the principal states for 1919, but are shown separately for the United States for 1919.

Prevailing hours of labor.—Table 6 shows a marked shortening of the working-day for the industry since 1914. In that year only 21.2 per cent were reported as employed less than 54 hours per week, as against 55.2 per cent in 1919. In 1914, the "60" and "Over 60" groups constituted 16.9 per cent of the total wage earners, as compared with 2 per cent in 1919.

Size of establishments, by average number of wage earners.—Analysis of Table 7 discloses the significant fact that 418 establishments, or 38.3 per cent of the total number for the industry, employed fewer than 6 wage earners each, while only 979, or 1.3 per cent of the total number of wage earners, were employed therein, evidencing the predominance of the small establishments based upon the average number of wage earners. On the other hand, the classes "501 to 1,000" and "Over 1,000 wage earners," comprising 30 establishments, employed 42,770 wage earners, or 57 per cent of the total average number, illustrating the extent of manufacturing operations in a few large establishments.

Size of establishments, by value of products.—At the censuses of 1909 and 1914, establishments with products valued at "$100,000 to $1,000,000" constituted one group, but at the census of 1919 this group was subdivided into groups of "$100,000 to $500,000" and "$500,000 to $1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns of 1914. Table 8, therefore, gives combined figures for these two groups for all items for 1909, and for the average number of wage earners and value added by manufacture, for 1914. The statistics in the table show the degree of concentration of production in large establishments. In 1919 the groups "$500,000 to $1,000,000" and "$1,000,000 and over," included 132 establishments, or 12.1 per cent of the total number for the industry; employed 59,797 wage earners, or 79.6 per cent of the total average number; and reported products to the value of $401,233,699, or 83.2 per cent of the total value.

Character of ownership.—Table 9 emphasizes the predominance of the corporate form of ownership. Corporations owned 50.8 per cent of the total number of establishments for the industry in 1919, employed 93.5 per cent of the total average number of wage earners, and reported 93.9 per cent of the total value of products. During the five-year period 1914 to 1919 the average number of wage earners employed by corporations increased by 34,646, or 97.6 per cent, and the value of products $306,150,732, or 208.4 per cent.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 10, there was an increase in the total horsepower for the industry of 142,988 horsepower, or 116.5 per cent, due in a large measure to rented power which increased by 110,912 horsepower, or 342.3 per cent. Owned power during the period increased by 32,076 horsepower, or 35.5 per cent.

Fuel consumed.—Table 11 shows the principal kinds of fuel used for the industry in 1919 and 1914, and also gives separately the amounts consumed in states requiring considerable quantities of fuel for manufacturing purposes. Of the coal consumed, Connecticut reported 57.7 per cent of the total amount of anthracite and 46.2 per cent of the total for bituminous. This state also was the largest consumer of fuel oils, using 43.7 per cent of the total. Michigan was the largest consumer of coke, also of gas, followed by Pennsylvania in both instances.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE.[1]					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments	1,092	992	1,021	813	695	610	449	10.1	−2.8	25.6	17.0	13.9	35.9
Persons engaged	86,106	45,657	45,441	36,952	(2)	(2)	(2)	88.6	0.5	23.0	.....	.....	.....
Proprietors and firm members	751	791	828	784	(2)	(2)	(2)	−5.1	−4.5	5.6	.....	.....	.....
Salaried employees	10,304	4,560	3,995	3,000	1,813	(2)	(2)	126.0	14.1	33.2	65.5	.....	.....
Wage earners (average number)	75,051	40,306	40,618	33,168	27,166	21,849	12,614	86.2	−0.8	22.5	22.1	24.3	73.2
Primary horsepower	265,688	122,700	106,120	69,494	47,257	27,571	(2)	116.5	15.6	52.7	47.1	71.4	.....
Capital	$325,299,738	$116,092,882	$109,319,224	$77,438,177	$51,120,156	$39,489,689	$15,578,919	180.2	6.2	41.2	51.5	29.5	153.5
Salaries and wages	117,748,794	32,158,279	29,217,281	21,443,783	15,896,109	11,292,540	5,729,365	266.2	10.1	36.3	34.9	40.8	97.1
Salaries	23,616,676	7,073,998	5,539,898	3,777,697	2,296,668	(2)	(2)	233.9	27.7	46.6	64.5	.....	.....
Wages	94,132,118	25,084,281	23,677,383	17,666,086	13,599,441	(2)	(2)	275.3	5.9	34.0	29.9	.....	.....
Paid for contract work	419,868	111,021	123,001	73,820	(2)	(2)	(2)	278.2	−9.7	66.6	.....	.....	.....
Rent and taxes	14,647,115	1,381,624	956,864	[3] 729,768	(2)	(2)	(2)	960.1	44.4	.....	.....	.....	.....
Cost of materials	304,823,580	115,486,768	99,228,412	65,653,330	61,189,324	27,293,130	16,864,197	163.9	16.4	51.1	7.3	124.2	61.8
Value of products	482,312,790	162,199,019	149,989,058	102,407,104	88,653,987	50,056,101	27,332,483	197.4	8.1	46.5	15.5	77.1	83.1
Value added by manufacture [4]	177,489,210	46,712,251	50,760,646	36,753,774	27,464,663	22,762,971	10,468,286	280.0	−8.0	38.1	33.8	20.7	117.4

[1] A minus sign (−) denotes decrease. [2] Figures not available. [3] Exclusive of internal revenue. [4] Value of products less cost of materials.

TABLE 2.—SUMMARY FOR THE COMBINED INDUSTRY AND EACH BRANCH SEPARATELY: 1919.

	Total for the industry, 1919.	ESTABLISHMENTS MANUFACTURING PRINCIPALLY—		
		Brass and bronze products.	Copper products.	Other metal products.[1]
Number of establishments	1,092	1,007	47	38
Persons engaged	86,106	73,533	10,219	2,354
Proprietors and firm members	751	700	29	22
Salaried employees	10,304	9,038	966	300
Wage earners (average number)	75,051	63,795	9,224	2,032
Primary horsepower	265,688	201,494	53,157	11,037
Capital	$325,299,738	$270,637,860	$43,659,485	$11,002,393
Salaries and wages	$117,748,794	$100,279,325	$14,298,090	$3,171,379
Salaries	23,616,676	20,711,540	2,213,166	691,970
Wages	94,132,118	79,567,785	12,084,924	2,479,409
Paid for contract work	419,868	415,772	2,962	1,134
Rent and taxes	14,647,115	12,567,952	1,096,893	382,270
Cost of materials	304,823,580	234,945,137	60,192,325	9,686,118
Value of products	[2] 482,312,790	[2] 389,550,094	[2] 78,338,948	[2] 14,423,748
Value added by manufacture [3]	177,489,210	154,604,957	18,146,623	4,737,630

[1] Includes chiefly establishments manufacturing nickel products and white metal and aluminum castings.
[2] In addition, brass, bronze, and copper products, valued at $42,789,529, were manufactured by establishments engaged primarily in other industries in 1919. These additional products were distributed as follows: Brass and bronze, $35,129,533; copper, $7,398,538; and other metal products, $261,458.
[3] Value of products less cost of materials.

TABLE 3.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	1,092	75,051	100.0	....	$482,313	100.0	....	$177,489	100.0	...
Connecticut	75	29,580	39.4	1	169,550	35.2	1	59,312	33.4	1
New York	213	10,746	14.3	2	66,562	13.8	2	26,597	15.0	2
Michigan	80	10,306	13.7	3	62,708	13.0	3	23,859	13.4	3
Pennsylvania	125	4,053	5.4	5	33,496	6.9	4	12,069	6.8	4
Ohio	92	4,264	5.7	4	27,802	5.8	5	11,624	6.6	5
Illinois	90	3,174	4.2	6	25,107	5.2	6	9,417	5.3	6
Wisconsin	36	2,778	3.7	8	22,510	4.7	7	7,179	4.0	8
Massachusetts	72	2,832	3.8	7	16,943	3.5	8	7,576	4.3	7
New Jersey	67	2,185	2.9	9	14,412	3.0	9	5,943	3.3	9
Missouri	21	608	0.8	12	8,209	1.7	10	2,350	1.3	11
Indiana	31	1,271	1.7	10	5,638	1.2	12	2,404	1.4	10
Maryland	20	926	1.2	11	5,058	1.0	13	2,062	1.2	12
California	45	492	0.7	13	3,316	0.7	14	1,498	0.8	13
Rhode Island	18	426	0.6	14	$2,976	0.6	15	$1,123	0.6	14
Washington	16	163	0.2	16	1,608	0.3	16	603	0.3	16
Texas	7	122	0.2	18	1,467	0.3	18	450	0.3	18
Minnesota	10	213	0.3	15	1,018	0.2	19	467	0.3	17
Oregon	4	58	0.1	23	525	0.1	22	250	0.1	21
New Hampshire	6	106	0.1	20	478	0.1	23	289	0.2	20
Kentucky	9	104	0.1	21	460	0.1	24	228	0.1	23
Colorado	9	52	0.1	24	369	0.1	25	138	0.1	26
West Virginia	3	50	0.1	25	367	0.1	26	176	0.1	24
Louisiana	6	43	0.1	26	235	(1)	28	109	0.1	28
Iowa	5	25	(1)	29	225	(1)	29	72	(1)	29
Delaware	4	23	(1)	30	159	(1)	30	60	(1)	30
Maine	5	19	(1)	31	84	(1)	32	35	(1)	32
Nebraska	3	2	(1)	35	27	(1)	36	12	(1)	36
All other states	20	430	0.6	....	11,004	2.3	....	1,587	0.9	...

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

TABLE 4.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
All classes	1919	86,106	76,741	9,365	89.1	10.9
	1914	45,657	42,280	3,377	92.6	7.4
	1909	45,441	42,153	3,288	92.8	7.2
Proprietors and officials	1919	4,094	3,998	96	97.7	2.3
	1914	2,146	2,096	50	97.7	2.3
	1909	2,160	2,120	40	98.1	1.9
Proprietors and firm members	1919	751	727	24	96.8	3.2
	1914	791	766	25	96.8	3.2
	1909	828	799	29	96.5	3.5
Salaried officers of corporations	1919	1,099	1,059	40	96.4	3.6
	1914	642	622	20	96.9	3.1
	1909	584	575	9	98.5	1.5
Superintendents and managers	1919	2,244	2,212	32	98.6	1.4
	1914	713	708	5	99.3	0.7
	1909	748	746	2	99.7	0.3
Clerks and other subordinate salaried employees.	1919	6,961	4,470	2,491	64.2	35.8
	1914	3,205	2,443	762	76.2	23.8
	1909	2,663	1,972	691	74.1	25.9
Wage earners (average number)	1919	75,051	68,273	6,778	91.0	9.0
	1914	40,306	37,741	2,565	93.6	6.4
	1909	40,618	38,061	2,557	93.7	6.3
16 years of age and over	1919	74,817	68,100	6,717	91.0	9.0
	1914	40,043	37,532	2,511	93.7	6.3
	1909	40,136	37,681	2,455	93.9	6.1
Under 16 years of age	1919	234	173	61	73.9	26.1
	1914	263	209	54	79.5	20.5
	1909	482	380	102	78.8	21.2

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment is indicated by **bold-faced** figures and that of minimum by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Per cent minimum is of maximum.
United States:														
1919	75,051	81,783	75,650	70,232	68,457	68,345	*67,301*	69,524	75,628	78,048	80,999	**82,382**	82,263	81.7
Males	68,273	72,882	67,676	63,458	62,348	62,409	*61,358*	63,386	69,279	71,621	74,263	**75,433**	75,163	81.3
Females	6,778	**8,901**	7,974	6,774	6,109	*5,936*	5,943	6,138	6,349	6,427	6,736	6,949	7,100	66.7
1914	40,306	39,531	40,402	41,714	**41,971**	41,706	40,873	40,407	39,685	39,920	39,315	*38,789*	39,359	92.4
1909	40,618	*37,948*	38,496	38,657	38,348	38,565	38,957	39,808	40,930	42,081	43,541	44,431	**45,615**	83.2
Connecticut	29,580	**36,135**	31,857	27,878	*25,988*	26,062	26,143	27,910	29,240	29,995	30,909	31,147	31,695	71.9
Illinois	3,174	3,280	3,065	2,868	2,916	2,998	*2,765*	3,075	3,415	3,391	3,369	3,381	**3,565**	77.6
Indiana	1,271	1,175	*1,117*	1,166	1,198	*1,117*	1,172	1,225	1,306	1,429	1,438	**1,502**	1,407	74.4
Maryland	926	948	829	*828*	907	933	925	942	961	952	962	932	**993**	83.4
Massachusetts	2,832	2,929	2,872	2,790	2,681	*2,605*	2,688	2,756	2,825	2,872	2,936	2,998	**3,032**	85.9
Michigan	10,306	9,759	9,357	9,121	9,170	9,270	*8,922*	9,696	10,852	11,437	12,402	**12,454**	11,232	71.6
Missouri	608	609	595	565	576	*555*	584	600	615	626	628	647	**696**	79.7
New Jersey	2,185	**2,575**	2,451	2,106	2,018	2,020	*1,968*	2,091	2,226	2,007	2,056	2,300	2,402	76.4
New York	10,746	10,887	10,568	10,339	10,329	10,258	9,615	*8,245*	10,527	11,344	11,969	12,352	**12,519**	65.9
Ohio	4,264	3,716	*3,681*	3,744	3,843	3,840	3,968	4,338	4,594	4,632	4,843	**5,036**	4,933	73.1
Pennsylvania	4,053	4,420	4,220	3,982	3,853	3,667	*3,645*	3,812	3,983	4,102	4,169	4,301	**4,482**	81.3
Wisconsin	2,778	2,898	2,692	*2,502*	2,606	2,704	2,673	2,609	2,744	2,953	**3,016**	3,011	2,928	83.0

TABLE 6.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE— 44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States	1919	75,051	2,699	3,572	11,779	23,344	3,071	29,089	1,466	31
	1914	40,306	(2)	(2)	1,851	6,680	7,545	17,401	6,669	160
	1909	40,618	(2)	(2)	458	1,256	6,397	22,802	9,542	163
Connecticut	1919	29,580	52	1,722	300	8,300	255	18,942	9	.....
	1914	16,781	(2)	(2)	64	4,143	358	9,328	2,888	.....
Illinois	1919	3,174	228	32	1,301	849	373	302	89	.....
	1914	1,502	(2)	(2)	80	169	819	323	111	.....
Indiana	1919	1,271	108	648	18	154	16	311	16	.....
	1914	562	(2)	(2)	13	219	26	237	67	.....
Maryland	1919	926	8	10	9	830	10	28	.....	31
	1914	392	(2)	(2)	20	39	8	235	32	58
Massachusetts	1919	2,832	100	50	909	1,112	42	610	9	.....
	1914	1,620	(2)	(2)	3	111	453	470	583	.....
Michigan	1919	10,306	497	524	26	5,834	124	2,924	377	.....
	1914	4,731	(2)	(2)	14	143	1,360	1,977	1,237	.....
Missouri	1919	608	4	.....	129	75	400	.....	.....	.....
	1914	383	(2)	(2)	6	95	282	.....	.....	.....
New Jersey	1919	2,185	324	8	579	432	370	445	27	.....
	1914	1,236	(2)	(2)	22	113	270	800	25	.....
New York	1919	10,746	155	215	5,979	2,467	460	1,407	63	.....
	1914	6,627	(2)	(2)	743	865	2,180	1,365	1,474	.....
Ohio	1919	4,264	578	104	741	2,159	206	444	32	.....
	1914	2,277	(2)	(2)	484	422	543	651	75	102
Pennsylvania	1919	4,053	185	120	1,057	902	481	780	528	.....
	1914	1,940	(2)	(2)	52	159	721	944	64	.....
Wisconsin	1919	2,778	2	.....	7	107	66	2,419	177	.....
	1914	1,122	(2)	(2)	143	41	51	881	3	.....

[1] Includes 48 and under for 1914 and 1909.

[2] Corresponding figures not available.

TABLE 7.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL. Establishments.	TOTAL. Wage earners (average number).	ESTABLISHMENTS EMPLOYING— No wage earners. Establishments.	1 to 5 wage earners, inclusive. Establishments.	1 to 5 wage earners, inclusive. Wage earners.	6 to 20 wage earners, inclusive. Establishments.	6 to 20 wage earners, inclusive. Wage earners.	21 to 50 wage earners, inclusive. Establishments.	21 to 50 wage earners, inclusive. Wage earners.	51 to 100 wage earners, inclusive. Establishments.	51 to 100 wage earners, inclusive. Wage earners.	101 to 250 wage earners, inclusive. Establishments.	101 to 250 wage earners, inclusive. Wage earners.	251 to 500 wage earners, inclusive. Establishments.	251 to 500 wage earners, inclusive. Wage earners.	501 to 1,000 wage earners, inclusive. Establishments.	501 to 1,000 wage earners, inclusive. Wage earners.	Over 1,000 wage earners. Establishments.	Over 1,000 wage earners. Wage earners.
United States 1919	1,092	75,051	60	358	979	320	3,689	168	5,291	72	5,227	61	9,361	23	7,734	17	11,408	13	31,362
1914	992	40,306	82	397	1,030	278	3,159	114	3,664	55	3,891	39	6,693	14	4,633	4	2,870	9	14,366
Connecticut	75	29,580	3	14	29	18	199	10	268	6	436	8	1,236	3	1,123	6	4,368	7	21,921
Illinois	90	3,174	4	13	38	37	461	21	670	5	371	9	1,322	1	312	.....	.....	.....	.....
Indiana	31	1,271	1	10	26	11	120	3	68	4	262	1	147	.....	.....	1	648	.....	.....
Maryland	20	926	1	7	25	9	109	1	31	.....	.....	1	158	.....	.....	1	603	.....	.....
Massachusetts	72	2,832	2	29	83	23	264	11	342	2	170	1	151	2	600	2	1,222	.....	.....
Michigan	80	10,306	2	14	39	23	281	12	397	9	649	5	862	9	3,114	5	3,432	1	1,532
Missouri	21	608	2	9	25	3	30	2	62	4	298	1	193	.....	.....	.....	.....	.....	.....
New Jersey	67	2,185	3	24	61	18	189	10	298	5	406	7	1,231	.....	.....	.....	.....	.....	.....
New York	213	10,746	16	78	205	55	627	33	999	14	1,033	12	1,676	1	342	.....	.....	4	5,864
Ohio	92	4,264	4	24	68	30	344	17	526	6	387	6	925	4	1,471	1	543	.....	.....
Pennsylvania	125	4,053	5	47	133	36	389	19	732	7	514	8	1,178	2	515	1	592	.....	.....
Wisconsin	36	2,778	.....	12	29	13	155	6	182	3	222	1	145	.....	.....	.....	.....	1	2,045

TABLE 8.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS. 1919	1914	1909	AVERAGE NUMBER OF WAGE EARNERS. 1919	1914	1909	VALUE OF PRODUCTS. 1919	1914	1909	VALUE ADDED BY MANUFACTURE. 1919	1914	1909
All classes	1,092	992	1,021	75,051	40,306	40,618	$482,312,790	$162,199,019	$149,989,058	$177,489,210	$46,712,251	$50,760,646
Less than $5,000	97	214	196	53	200	238	276,470	562,539	537,452	170,937	326,043	291,426
$5,000 to $20,000	203	296	326	509	1,263	1,415	2,333,629	3,338,002	3,626,877	1,231,974	1,753,573	1,879,185
$20,000 to $100,000	396	309	327	3,787	4,839	5,450	19,504,055	14,058,956	14,569,088	9,435,516	6,539,196	7,133,540
$100,000 to $500,000	264	124	148	10,905	13,198	13,957	58,964,937	30,615,443	45,308,498	26,950,566	16,900,798	18,902,928
$500,000 to $1,000,000	51	21		5,653			34,905,365	14,162,344		13,868,477		
$1,000,000 and over	81	28	24	54,144	20,806	19,558	366,328,334	99,461,735	85,947,143	125,831,740	21,192,641	22,553,567
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	8.9	21.6	19.2	0.1	0.5	0.6	0.1	0.3	0.4	0.1	0.7	0.6
$5,000 to $20,000	18.6	29.8	31.9	0.7	3.1	3.5	0.5	2.1	2.4	0.7	3.8	3.7
$20,000 to $100,000	36.3	31.1	32.0	5.0	12.0	13.4	4.0	8.7	9.7	5.3	14.0	14.1
$100,000 to $500,000	24.2	12.5	14.5	14.5	32.7	34.4	12.2	18.9	30.2	15.2	36.2	37.2
$500,000 to $1,000,000	4.7	2.1		7.5			7.2	8.7		7.8		
$1,000,000 and over	7.4	2.8	2.4	72.1	51.6	48.2	76.0	61.3	57.3	70.9	45.4	44.4

TABLE 9.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914.

STATE.	Census year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.						VALUE OF PRODUCTS.						
					Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.		
		Individuals.	Corporations	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.
United States	1919	362	555	175	75,051	3,216	70,151	1,684	4.3	93.5	2.2	$482,312,790	$18,441,882	$453,075,796	$10,795,112	3.8	93.9	2.2
	1914	396	412	184	40,306	3,028	35,505	1,773	7.5	88.1	4.4	162,199,019	9,102,410	146,925,064	6,171,545	5.6	90.6	3.8
	1909	415	417	189	40,618	2,821	35,574	2,223	6.9	87.6	5.5	149,989,058	8,288,085	134,981,702	6,719,271	5.5	90.0	4.5
Connecticut	1919	20	48	7	29,580	353	29,170	57	1.2	98.6	0.2	169,550,248	1,778,516	166,575,164	1,196,568	1.0	98.2	0.7
	1914	18	42	7	16,781	341	16,385	55	2.0	97.6	0.3	69,353,103	952,446	68,258,140	142,517	1.4	98.4	0.2
Illinois	1919	19	59	12	3,174	166	2,737	271	5.2	86.2	8.5	25,106,507	1,160,854	22,975,289	970,364	4.6	91.5	3.9
	1914	23	39	13	1,502	117	1,265	120	7.8	84.2	8.0	7,570,456	354,258	6,795,359	420,839	4.7	89.8	5.6
Indiana	1919	11	17	3	1,271	129	1,117	25	10.1	87.9	2.0	5,638,482	475,246	4,873,585	289,651	8.4	86.4	5.1
	1914	6	12	3	562	[1] 46	516	.....	8.2	91.8	.....	1,560,897	[1] 124,456	1,436,441	.....	8.0	92.0	.....
Maryland	1919	5	12	3	926	14	866	46	1.5	93.5	5.0	5,057,684	112,341	4,568,872	376,471	2.2	90.3	7.4
	1914	4	9	2	392	[1] 45	347	.....	11.5	88.5	.....	1,173,364	[1] 104,944	1,068,420	.....	8.9	91.1	.....
Massachusetts	1919	29	29	14	2,832	165	2,399	268	5.8	84.7	9.5	16,943,199	897,410	14,924,843	1,120,946	5.3	88.1	6.6
	1914	36	23	14	1,620	179	1,321	120	11.0	81.5	7.4	5,958,863	493,440	5,102,825	362,598	8.3	85.6	6.1
Michigan	1919	16	55	9	10,306	94	10,129	83	0.9	98.3	0.8	62,708,335	596,193	61,421,195	690,947	1.0	97.9	1.1
	1914	14	40	10	4,731	187	4,492	52	4.0	94.9	1.1	16,868,725	607,450	15,928,399	332,876	3.6	94.4	2.0
Missouri	1919	7	8	6	608	109	482	17	17.9	79.3	2.8	8,208,474	778,012	7,322,670	107,792	9.5	89.2	1.3
	1914	8	7	3	383	33	342	8	8.6	89.3	2.1	3,047,306	99,514	2,913,929	33,863	3.3	95.6	1.1
New Jersey	1919	28	25	14	2,185	200	1,875	110	9.2	85.8	5.0	14,412,106	1,275,436	12,330,628	806,042	8.8	85.6	5.6
	1914	25	22	14	1,236	161	961	114	13.0	77.8	9.2	4,686,427	605,657	3,753,647	327,123	12.9	80.1	7.0
New York	1919	75	100	38	10,746	938	9,492	316	8.7	88.3	2.9	66,562,045	4,446,507	60,519,166	1,596,372	6.7	90.9	2.4
	1914	99	73	56	6,627	1,110	4,781	736	16.7	72.1	11.1	23,964,582	2,669,315	18,924,247	2,371,020	11.1	79.0	9.9
Ohio	1919	25	54	13	4,264	211	3,944	109	4.9	92.5	2.6	27,801,760	1,353,885	25,927,394	520,481	4.9	93.3	1.9
	1914	28	42	14	2,277	197	1,922	158	8.7	84.4	6.9	7,843,092	532,955	6,894,127	416,010	6.8	87.9	5.3
Pennsylvania	1919	44	61	20	4,053	480	3,432	141	11.8	84.7	3.5	33,496,320	3,558,592	28,573,724	1,364,004	10.6	85.3	4.1
	1914	53	37	17	1,940	451	1,285	204	23.2	66.2	10.5	9,779,626	1,876,018	6,885,836	1,017,772	19.2	70.4	10.4
Wisconsin	1919	12	22	2	2,778	[1] 75	2,703	.....	2.7	97.3	.....	22,509,723	[1] 534,551	21,975,172	.....	2.4	97.6	.....
	1914	9	17	4	1,122	18	1,080	24	1.6	96.3	2.1	5,409,260	94,261	5,186,590	128,409	1.7	95.9	2.4

[1] Includes the group "All others."

TABLE 10.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	9,117	2,959	1,962	265,688	122,700	106,120	100.0	100.0	100.0
Owned	358	498	597	122,377	90,301	86,365	46.1	73.6	81.4
Steam [1]	233	281	358	116,517	78,639	78,101	43.9	64.1	73.6
Engines	195	(2)	(2)	61,862	(2)	(2)	23.3	.....	.....
Turbines	38	(2)	(2)	54,655	(2)	(2)	20.6	.....	.....
Internal-combustion engines	104	186	198	3,540	8,371	4,890	1.3	6.8	4.6
Water wheels and turbines	21	31	41	2,320	3,291	3,374	0.9	2.7	3.2
Rented	8,759	2,461	1,365	143,311	32,399	19,755	53.9	26.4	18.6
Electric	8,759	2,461	1,365	142,996	31,673	18,399	53.8	25.8	17.3
Other	.....	.....	.....	315	726	1,356	0.1	0.6	1.3
Electric	11,227	4,709	2,601	183,594	64,868	33,462	100.0	100.0	100.0
Rented	8,759	2,461	1,365	142,996	31,673	18,399	77.9	48.8	55.0
Generated by establishments reporting	2,468	2,248	1,236	40,598	33,195	15,063	22.1	51.2	45.0

[1] Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.

[2] Figures not available.

TABLE 11.—FUEL CONSUMED, BY STATES: 1919 AND 1914.

STATE.	Census year.	COAL. Anthracite (tons, 2,240 pounds).	COAL. Bituminous (tons, 2,000 pounds).	Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
United States	1919	200,719	655,947	131,113	893,228	21,363	812,573
	1914	127,828	378,306	75,812	310,910	(1)	464,259
Connecticut	1919	115,871	303,022	15,299	390,023	3,658	25,850
	1914	79,797	187,671	3,249	.....	125,653	28,761
Illinois	1919	3,129	15,339	4,105	33,443	5,475	144,789
	1914	1,812	8,760	4,623	.....	20,410	5,937
Indiana	1919	27	2,954	3,272	3,469	3	30,632
	1914	6	839	1,656	.....	304	14,518
Maryland [2]	1919	3,358	3,673	1,256	15,528	70	4,752
Massachusetts	1919	12,211	20,904	2,719	30,216	29	6,470
	1914	8,338	14,008	493	.....	14,615	1,398
Michigan	1919	2,629	75,527	33,560	127,470	1,596	195,154
	1914	498	48,577	24,103	.....	33,615	14,752
Missouri [2]	1919	.....	597	1,923	24,336	60	4,027
New Jersey	1919	7,584	17,596	5,450	31,235	125	7,697
	1914	5,080	17,891	3,206	.....	16,900	10,869
New York	1919	33,774	75,279	10,144	87,569	2,328	60,300
	1914	21,572	32,695	8,244	.....	24,292	52,444
Ohio	1919	2,154	52,911	16,634	42,113	3,808	102,692
	1914	47	14,612	6,568	.....	6,018	207,507
Pennsylvania	1919	4,530	25,233	28,343	42,826	537	161,700
	1914	3,896	18,936	12,545	.....	6,234	108,991
Wisconsin	1919	13,727	59,380	3,633	2,066	156	22,536
	1914	5,194	26,418	1,209	.....	18,911	3,610

[1] Included in figures for fuel oils.

[2] Figures for 1914 not available.

SPECIAL STATISTICS.

Certain additional detailed information concerning the quantity and value of products for the industry is collected by means of supplemental schedules. In the foregoing tables statistics were presented for only those establishments engaged primarily in the manufacture of brass, bronze, and copper products. There is, however, a considerable production of manufactured articles made from these metals by establishments under different classifications, such as bells, hardware, plumbers' supplies, wire, etc. Statistics for these establishments will be found under the captions of the several industries named.

Detailed statistics of quantity and value.—The products of this industry can be divided generally into two major classes, viz: (1) Products that are available for remanufacture, such as castings, ingots, and bars, etc., and (2) finished products which reach the ultimate consumer in the same condition that they leave the factory. In this group are placed hardware and trimmings, electrical supplies, lamps, etc.

Table 12 shows in comparative form for 1919 and 1914 the various kinds of products manufactured. The weight in pounds is shown for the various items of group 1, or the crude products as they might be termed, divided into brass and bronze, copper, and other metals. Items of group 2 show values for each kind of metal as well as the total value. Group 1, as a whole, reached a value of $384,868,473, or 79.8 per cent of the total value of products for the industry. Castings and machinery fittings, the largest item in the group, formed 27.2 per cent of the total; plates and sheets, tubing, and wire reported 21.3 per cent, 8.7 per cent, and 7.8 per cent of the total, respectively.

Brass and bronze were the principal metals used in manufacture, 990,357,793 pounds, or 69 per cent of the total, being reported; 326,127,935 pounds was the contribution of copper, the balance being made up of nickel, aluminum, Babbitt metal, etc. The majority of the finished products in group 2 were made of brass and bronze also, being 88.8 per cent of the value reported.

TABLE 12.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919 AND 1914.

PRODUCT.	Census year.	WEIGHT IN POUNDS. Brass and bronze.	Copper.	Other metals or alloys.	Value.
Total[1]	1919	990,357,793	326,127,935	117,925,535	$482,312,790
	1914	289,157,974	144,241,556	16,094,285	162,199,019
Ingots and bars	1919	121,790,427	17,605,166	20,629,787	30,490,628
	1914	20,703,249	2,326,292	3,823	4,791,708
Plates and sheets	1919	283,109,614	85,319,088	45,336,816	102,898,118
	1914	157,332,392	50,982,631	14,408,852	41,655,037
Rods	1919	118,412,135	58,687,553	207,189	40,703,984
	1914	51,029,242	20,658,551	238,224	12,189,421
Tubing:					
Seamless	1919	66,076,897	39,820,839	467,672	37,530,485
	1914	15,123,534	12,234,161	689,069	10,268,980
Brazed	1919	11,859,631	269,202	.....	4,596,422
	1914	13,155,701	690,500	5,296	3,645,810
Wire:					
Plain	1919	43,607,653	98,718,301	2,429,350	33,932,222
	1914	31,813,856	51,965,246	749,021	13,486,703
Insulated	1919	41,340	14,509,737	.....	3,694,152
	1914	.....	5,384,175	.....	846,439
Castings and machinery fittings.	1919	345,460,096	11,198,049	48,854,721	$131,022,462
	1914	(2)	(2)	(2)	(2)
Lamps	1919	*Value.* $1,504,406	*Value.* (2)	*Value.* (2)	1,504,406
	1914	561,746	.....	.....	561,746
Electrical supplies	1919	7,876,682	$50,180	$115,269	8,042,131
	1914	1,091,253	35,668	.....	1,126,921
Hardware and trimmings.	1919	36,801,164	1,281,766	4,123,650	42,206,580
	1914	1,467,935	55,894	.....	1,523,829
Other manufactured articles.	1919	16,423,329	2,019,382	292,921	18,735,632
	1914	58,658,194	2,547,175	5,401,532	66,606,901
All other products	1919	.....	.....	.....	19,747,533
	1914	.....	.....	.....	5,495,524
Amount received for custom work and repairs.	1919	.....	.....	.....	7,208,035
	1914	.....	.....	.....	(2)

[1] In addition, brass, bronze, and copper products to the value of $42,789,529 in 1919 and $69,063,735 in 1914 were manufactured by establishments engaged primarily in the manufacture of other products.
[2] Not reported separately.
[3] Included with "Brass and bronze" to avoid disclosure of individual operations.

Products, by principal states.—Table 13 summarizes by states, ranked by their importance as shown by the value of products, the various groups presenting weight and value in 1919 and value only in 1914.

Connecticut is the predominating state in all groups in 1919, manufacturing 41.5 per cent of the ingots and bars, 57.4 per cent of plates and sheets, 47.7 per cent of rods, 41.7 per cent of seamless tubing, 47.4 per cent of brazed tubing, and 75 per cent of wire.

TABLE 13.—PRODUCTS, BY PRINCIPAL STATES: 1919 AND 1914.

CLASS AND STATE.	1919 Weight in pounds. Brass and bronze.	Copper.	Other metals or alloys.[1]	Value.	1914 Value.
Ingots and bars	121,790,427	17,605,166	20,629,787	$30,490,628	$4,791,708
Connecticut	82,286,972	80,919	4,061,168	12,652,643	120,809
Pennsylvania	5,021,642	8,628,859	14,941,503	6,628,361	2,296,828
Illinois	8,289,857	454,000	54,000	2,158,545	812,563
Ohio	6,486,488	48,000	10,000	1,360,119	209,220
New Jersey	2,971,248	30,450	1,160,406	689,119	20,192
Michigan	803,339	23,465	39,674	409,590	447,961
Massachusetts	646,762	83,426	4,000	215,625	32,414
Wisconsin	548,800	7,012	42,000	204,026	59,790
All other states[2]	14,735,319	8,249,035	317,036	6,172,600	791,931
Plates and sheets	283,109,614	85,319,088	45,336,816	102,898,118	41,655,037
Connecticut	173,440,123	33,892,481	44,382,979	59,067,535	25,534,754
Michigan	48,913,066	11,024,913	.....	14,915,514	(3)
New York	17,084,000	8,823,111	.....	6,835,102	4,821,676
Illinois	6,846,382	2,350,000	.....	3,122,685	(3)
Ohio	4,915,643	2,928,306	.....	2,538,401	(3)
Massachusetts	1,919,980	6,730,824	.....	2,499,704	1,506,144
New Jersey	2,120,494	267,875	358,901	1,202,665	557,086
All other states[2]	27,869,920	19,301,578	594,936	12,716,512	9,235,377
Rods	118,412,135	58,687,553	207,189	$40,703,984	$12,189,421
Connecticut	69,955,697	14,640,209	193,357	19,434,431	9,158,182
Michigan	13,550,045	4,342,016	43	4,320,418	(3)
New Jersey	3,006,821	845,154	.....	888,247	(3)
Pennsylvania	1,173,036	.....	.....	358,549	(3)
All other states[2]	30,726,536	38,860,174	13,789	15,702,339	3,031,239
Tubing, seamless	66,076,897	39,820,839	467,672	37,530,485	10,268,980
Connecticut	28,359,308	14,332,588	167,672	15,653,209	5,409,975
New York	11,713,990	7,102,540	.....	6,550,536	1,285,973
Michigan	2,023,317	3,564,464	.....	2,014,230	(3)
New Jersey	3,636,500	1,581,508	.....	1,079,317	(3)
All other states[2]	20,343,782	13,239,739	300,000	12,233,193	3,573,032
Tubing, brazed	11,859,631	269,202	.....	4,596,422	3,645,810
Connecticut	5,694,941	.....	.....	2,178,587	1,769,180
All other states	6,164,690	269,202	.....	2,417,835	1,876,630
Wire, plain and insulated	43,648,993	113,228,038	2,429,350	37,626,374	14,333,142
Connecticut	37,148,909	77,001,766	2,165,091	28,237,038	12,383,167
New York	4,144,309	14,514,534	.....	4,665,065	545,200
All other states	2,355,775	21,711,738	264,259	4,723,271	1,404,775

[1] Consists chiefly of Babbitt metal, aluminum, and German silver.
[2] In the group "Ingots and bars" the value of products is greater in New York and Washington than in some of the states shown. However, the data for these states can not be published without disclosing individual operations. The same condition prevails in Wisconsin and Pennsylvania in the group "Plates and sheets," in Wisconsin, New York, and Pennsylvania in the groups "Rods," and in Wisconsin, Massachusetts, Illinois, Maryland, and Rhode Island in the group "Seamless tubing."
[3] Included with "All other states" to avoid disclosing individual operations.

Products of establishments engaged in other industries.—Table 14 shows in detail for 1919 brass, bronze, and copper products that were manufactured in establishments engaged primarily in other industries.

TABLE 14.—PRODUCTS OF ESTABLISHMENTS ENGAGED PRIMARILY IN OTHER INDUSTRIES: 1919.

PRODUCT.	WEIGHT IN POUNDS.			Value.	PRODUCT.	WEIGHT IN POUNDS.			Value.
	Brass and bronze.	Copper.	Other metal.			Brass and bronze.	Copper.	Other metal.	
Total	80,734,979	29,349,889	3,269,447	$42,789,529	Wire, plain	78,750	200	.....	$26,326
					Castings and machinery fittings	16,911,809	90,787	1,256,883	6,237,036
Ingots and bars	58,748,830	15,849,099	1,987,746	13,759,437					
Plates and sheets	2,049,360	.....	.....	511,345		*Value.*	*Value.*	*Value.*	
Rods	2,430,395	9,796,739	.....	2,893,604	Hardware and trimmings	$9,709,535	$2,109,676	.....	11,819,211
Tubing, seamless	515,835	3,613,064	24,818	1,239,538	Other manufactured articles	1,917,694	4,219,618	$165,720	6,303,032

GENERAL TABLES.

Table 15 gives, for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the brass, bronze, and copper industry.

Table 16 presents, for 1919, statistics in detail for the brass, bronze, and copper industry as a whole, and for each state that can be shown separately without the possibility of disclosing the operations of individual establishments.

TABLE 15.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	1,092	75,051	265,688	$94,132	$304,824	$482,313
	1914	992	40,306	122,700	25,084	115,487	162,199
	1909	1,021	40,618	106,120	23,677	99,228	149,989
California	1919	45	492	840	754	1,818	3,316
	1914	36	247	400	230	487	951
	1909	29	195	261	181	295	679
Colorado	1919	9	52	109	68	231	369
	1914	7	36	75	26	54	101
	1909	5	42	52	36	75	145
Connecticut	1919	75	29,580	121,319	36,386	110,238	169,550
	1914	67	16,781	57,033	9,846	53,886	69,353
	1909	80	16,817	50,034	9,667	47,864	66,933
Illinois	1919	90	3,174	5,847	3,856	15,690	25,107
	1914	75	1,502	2,698	1,109	5,240	7,570
	1909	79	1,688	1,859	1,136	4,148	6,842
Indiana	1919	31	1,271	1,514	1,485	3,234	5,638
	1914	21	562	1,166	421	802	1,561
	1909	21	468	503	292	774	1,379
Kentucky	1919	9	104	183	115	232	460
	1914	9	59	166	39	73	137
	1909	7	25	99	12	32	61
Maine	1919	5	19	58	17	50	84
	1914	5	31	70	26	42	84
	1909	3	12	10	7	6	14
Maryland	1919	20	926	7,362	1,039	2,996	5,058
	1914	15	392	2,078	243	753	1,173
	1909	17	219	243	98	432	748
Massachusetts	1919	72	2,832	15,511	3,506	9,367	16,943
	1914	73	1,620	7,415	1,063	3,715	5,959
	1909	85	1,791	6,407	1,115	3,663	6,042
Michigan	1919	80	10,306	27,912	14,579	38,849	62,708
	1914	64	4,731	14,251	3,030	11,473	16,869
	1909	60	4,771	11,622	2,450	8,993	13,890
Minnesota	1919	10	213	393	241	550	1,018
	1914	9	99	154	68	242	359
	1909	7	33	37	22	91	139
Missouri	1919	21	608	887	670	5,859	8,208
	1914	18	383	523	264	2,438	3,047
	1909	18	297	448	196	1,654	2,221
New Hampshire	1919	6	106	134	$104	$189	$478
	1914	5	53	146	30	50	99
	1909	5	56	123	29	45	102
New Jersey	1919	67	2,185	11,656	2,595	8,469	14,412
	1914	61	1,236	5,798	760	3,175	4,686
	1909	66	1,265	4,431	719	3,355	5,131
New York	1919	213	10,746	32,352	12,245	39,965	66,562
	1914	228	6,627	13,667	4,051	15,215	23,965
	1909	247	6,651	13,397	3,951	13,139	22,184
Ohio	1919	92	4,264	10,915	5,894	16,178	27,802
	1914	84	2,277	4,393	1,557	4,190	7,843
	1909	82	2,232	4,214	1,372	3,533	6,572
Oregon	1919	4	58	250	96	275	525
	1914	6	35	138	34	59	140
	1909	4	42	66	49	41	122
Pennsylvania	1919	125	4,053	10,577	5,161	21,427	33,496
	1914	107	1,940	4,578	1,260	7,123	9,780
	1909	104	2,080	4,996	1,234	5,605	8,455
Rhode Island	1919	18	426	1,250	466	1,853	2,976
	1914	19	123	149	76	210	577
	1909	18	225	350	118	549	828
Texas	1919	7	122	249	139	1,016	1,467
	1914	7	91	189	63	351	495
	1909	8	112	146	61	309	518
Washington	1919	16	163	311	285	1,006	1,608
	1914	11	45	118	42	84	180
	1909	7	40	60	33	60	136
West Virginia	1919	3	50	110	65	190	367
	1914	4	49	125	25	103	192
	1909	3	41	140	21	101	193
Wisconsin	1919	36	2,778	13,096	3,748	15,331	22,510
	1914	30	1,122	7,053	674	4,395	5,409
	1909	33	1,289	6,102	751	3,514	5,367
All other states	1919	38	523	2,853	618	9,811	11,651
	1914	31	265	317	147	1,327	1,668
	1909	33	227	520	127	950	1,268

TABLE 16.—DETAILED STATEMENT, BY STATES: 1919.

INDUSTRY AND STATE.	Number of establishments.	Persons engaged in the industry. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	Wage earners Dec. 15, or nearest representative day. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.	Expenses. Salaries and wages. Officials.	Expenses. Salaries and wages. Clerks, etc.
															Dollars.	Dollars.	Dollars.
United States	1,092	86,106	751	3,343	4,470	2,491	75,051	No 82,382	Je 67,301	81,720	74,669	6,799	190	62	325,299,738	13,560,148	10,056,528
Brass and bronze	1,007	73,533	700	2,989	3,901	2,148	63,795	Ja 70,115	Je 57,260	68,951	62,522	6,205	168	56	270,637,860	12,008,636	8,702,904
Copper	47	10,219	29	260	435	271	9,224	De 10,911	Jy 7,321	10,689	10,229	457	3	.....	43,659,485	1,170,698	1,042,468
All other	38	2,354	22	94	134	72	2,032	Mh 2,096	Je 1,924	2080	1,918	137	19	6	11,002,393	380,814	311,156
California	45	614	48	41	24	9	492	Ja 537	No 450	496	492	2	2	.....	1,451,941	142,537	42,362
Colorado	9	67	7	5	1	2	52	No 66	Jy 45	64	59	1	4	.....	124,184	11,985	4,120
Connecticut	75	33,352	37	944	1,825	966	29,580	Ja 36,135	Ap 25,988	30,891	27,340	3,476	61	14	127,028,693	3,703,098	4,206,239
Delaware	4	32	3	4	1	1	23	Ja[1] 37	Se[1] 15	18	18	.....	.....	.....	116,105	14,300	5,779
Illinois	90	3,883	45	245	275	144	3,174	De 3,565	Je 2,765	3,558	3,303	237	17	1	14,381,095	1,007,981	513,688
Indiana	31	1,396	17	56	27	25	1,271	No 1,502	My[1] 1,117	1,425	1,351	70	4	.....	2,260,491	216,980	38,801
Iowa	5	39	6	5	2	1	25	Jy[1] 30	Ja 8	29	25	4	.....	.....	142,626	19,312	2,608
Kentucky	9	130	10	9	3	4	104	Au[1] 109	Mh 98	106	105	1	.....	.....	250,289	31,090	5,563
Louisiana	6	59	5	6	5	.....	43	Oc 47	Fe 34	46	46	.....	.....	.....	84,013	11,371	4,359
Maine	5	27	6	1	.....	1	19	De 24	Ja[1] 15	25	25	.....	.....	.....	88,933	1,820	810
Maryland	20	1,051	11	41	50	23	926	De 993	Mh 828	993	939	51	3	.....	4,539,936	147,034	106,342
Massachusetts	72	3,217	59	157	96	73	2,832	De 3,032	My 2,605	3,040	2,960	59	17	4	12,253,619	606,719	237,158
Michigan	80	11,630	36	392	582	314	10,306	No 12,454	Je 8,922	11,307	10,402	900	5	.....	40,284,256	1,814,957	1,405,332
Minnesota	10	252	5	20	6	8	213	De 249	Je 192	256	243	13	.....	.....	800,171	56,460	19,238
Missouri	21	722	21	40	46	7	608	De 696	My 555	688	668	13	6	1	2,395,835	177,515	121,823
Nebraska	3	6	4	.....	.....	.....	2	Je[1] 3	Oc[1] 1	3	3	.....	.....	.....	3,350	.....	.....
New Hampshire	6	122	4	10	1	1	106	De 117	Je 96	116	113	3	.....	.....	368,712	26,790	2,500
New Jersey	67	2,611	57	123	165	81	2,185	Ja 2,575	Je 1,968	2,388	2,305	71	10	2	12,542,950	506,241	276,725
New York	213	12,301	155	488	512	400	10,746	De 12,519	Jy 8,245	12,606	11,132	1,426	11	37	49,827,746	2,145,625	1,258,120
Ohio	92	5,019	57	230	318	150	4,264	No 5,036	Fe 3,681	4,983	4,773	203	7	.....	16,887,641	1,001,777	755,044
Oregon	4	72	1	10	1	2	58	Mh[1] 65	Oc[1] 49	52	52	.....	.....	.....	283,288	28,010	6,774
Pennsylvania	125	4,995	89	339	330	184	4,053	De 4,482	Je 3,645	4,479	4,341	132	6	.....	21,815,742	1,201,234	624,217
Rhode Island	18	481	18	15	11	11	426	Fe 500	Jy[1] 384	397	371	19	4	3	1,666,978	53,399	34,208
Texas	7	150	5	12	9	2	122	Oc 136	Je 110	125	111	.....	14	.....	259,090	46,020	16,980
Washington	16	212	12	20	10	7	163	Ja 195	Fe 70	171	168	2	1	.....	453,884	83,874	13,073
West Virginia	3	65	1	9	2	3	50	De 60	Mh[1] 47	60	55	5	.....	.....	262,563	24,730	10,142
Wisconsin	36	3,091	16	87	145	65	2,778	Oc 3,016	Mh 2,502	2,931	2,807	111	13	.....	10,722,111	377,984	299,297
All other states[2]	20	510	16	34	23	7	430	.....	.....	467	462	.....	5	.....	4,003,496	101,305	45,226

INDUSTRY AND STATE.	Expenses—continued. Salaries and wages—Contd. Wage earners.	For contract work.	Rent and taxes. Rent of factory.	Rent and taxes. Taxes, Federal, state, county, and local.	For materials. Principal materials.	For materials. Fuel and rent of power.	Value of products.	Value added by manufacture.	Power. Primary horsepower. Total.	Owned. Steam engines (not turbines).	Owned. Steam turbines.	Owned. Internal-combustion engines.	Owned. Water power.[3]	Rented.[4]	Electric horsepower generated in establishments reporting.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.							
United States	94,132,118	419,868	851,814	13,795,301	292,136,779	12,686,801	482,312,790	177,489,210	265,688	61,862	54,655	3,540	2,320	143,311	40,598
Brass and bronze	79,567,785	415,772	770,487	11,797,465	224,374,033	10,571,104	389,550,094	154,604,957	201,494	41,642	45,947	3,186	1,060	109,659	29,634
Copper	12,084,924	2,962	62,989	1,633,904	58,447,508	1,744,817	78,338,948	18,146,623	53,157	17,895	8,708	85	1,000	25,469	10,372
All other	2,479,409	1,134	18,338	363,932	9,315,238	370,880	14,423,748	4,737,630	11,037	2,325	.....	269	260	8,183	592
California	754,168	6,976	34,720	27,535	1,767,805	50,661	3,316,347	1,497,881	840	.....	.....	.....	.....	840	.....
Colorado	67,686	.....	6,310	2,098	219,539	11,083	368,643	138,021	109	.....	.....	.....	.....	109	.....
Connecticut	36,386,425	19,297	40,312	4,546,506	104,556,291	5,682,102	169,550,248	59,311,855	121,319	25,250	45,712	435	2,305	47,617	26,403
Delaware	21,726	.....	670	876	95,961	3,383	159,477	60,133	27	.....	.....	.....	.....	27	.....
Illinois	3,855,753	19,110	150,819	631,991	15,223,287	466,409	25,106,507	9,416,811	5,847	185	.....	20	.....	5,642	27
Indiana	1,485,221	1,647	11,970	153,084	3,130,452	103,603	5,638,482	2,404,427	1,514	.....	.....	.....	.....	1,514	3
Iowa	33,910	.....	280	551	144,998	8,072	224,916	71,846	51	.....	.....	.....	.....	51	.....
Kentucky	115,090	.....	1,290	3,026	222,995	8,961	460,385	228,429	183	.....	.....	15	.....	168	.....
Louisiana	50,949	.....	3,191	2,849	120,269	5,595	234,769	108,905	60	.....	.....	.....	.....	60	.....
Maine	17,064	.....	880	264	46,361	3,172	84,349	34,816	58	.....	.....	.....	.....	58	.....
Maryland	1,039,207	.....	17,365	73,533	2,816,346	179,767	5,057,684	2,061,571	7,362	200	.....	25	.....	7,137	.....
Massachusetts	3,506,249	17,372	38,662	904,082	8,859,585	507,180	16,943,199	7,576,434	15,511	3,610	200	47	15	11,639	60
Michigan	14,578,780	16,608	72,722	1,075,233	37,357,127	1,491,851	62,708,335	23,859,357	27,912	7,880	1,000	230	.....	18,802	671
Minnesota	240,771	.....	5,700	20,324	519,471	30,762	1,017,680	467,447	393	.....	.....	.....	.....	393	.....
Missouri	669,995	4,813	9,335	248,859	5,752,356	106,548	8,208,474	2,349,570	887	.....	.....	4	.....	883	.....
Nebraska	3,164	.....	576	27	14,417	762	27,158	11,979	7	.....	.....	.....	.....	7	.....
New Hampshire	104,307	.....	13,024	31,998	174,191	15,015	478,020	288,814	134	125	.....	.....	.....	9	.....
New Jersey	2,595,454	48,260	30,721	363,314	7,977,372	491,621	14,412,106	5,943,113	11,656	4,730	10	253	.....	6,663	497
New York	12,244,627	107,774	259,584	2,696,960	38,780,889	1,184,237	66,562,045	26,596,919	32,352	9,473	5,483	881	.....	16,515	5,597
Ohio	5,393,721	4,939	43,639	903,828	15,527,757	649,776	27,801,760	11,624,227	10,915	1,792	300	904	.....	7,919	835
Oregon	96,289	.....	5,770	50,024	263,834	11,525	525,105	249,746	250	.....	.....	.....	.....	250	.....
Pennsylvania	5,161,263	151,964	65,883	871,025	20,721,204	706,111	33,496,320	12,069,005	10,577	3,127	.....	606	.....	6,844	1,621
Rhode Island	465,957	.....	6,177	77,737	1,810,888	42,037	2,975,561	1,122,636	1,250	380	.....	120	.....	750	350
Texas	138,793	.....	8,035	13,579	992,341	24,096	1,466,867	450,430	249	.....	.....	.....	.....	249	.....
Washington	284,880	20,608	10,127	9,506	985,057	20,773	1,608,367	602,537	311	.....	.....	.....	.....	311	.....
West Virginia	64,828	.....	608	6,766	187,288	2,983	366,685	176,414	110	100	.....	.....	.....	10	.....
Wisconsin	3,747,872	.....	9,755	1,030,419	14,583,327	747,653	22,509,723	7,178,743	13,096	5,010	1,950	.....	.....	6,136	4,534
All other states[2]	507,969	500	3,689	49,307	9,285,371	131,063	11,003,578	1,587,144	2,708	.....	.....	.....	.....	2,708	.....

[1] Same number reported for one or more other months.
[2] All other states embrace: Alabama, 4 establishments; District of Columbia, 1; Florida, 1; Georgia, 4; Kansas, 1; Montana, 2; Tennessee, 2; Utah, 2; Vermont, 1; Virginia, 2.
[3] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[4] Chiefly electric motor operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES

MANUFACTURES: 1919

BUTTER, CHEESE, AND CONDENSED MILK

Prepared under the supervision of EUGENE F. HARTLEY, Chief Statistician for Manufactures

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EXPLANATION OF TERMS.

Scope of census.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than $500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

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

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date did not portray such conditions, an earlier date was requested.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

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

In order to determine as nearly as possible the age distribution of the average number of wage earners for an industry, the per cent distribution by age of the wage earners for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year to determine the average numbers 16 years and over, and under 16, employed.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital (amount actually invested).—The instructions on the schedule for securing data relating to capital were as follows:

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

These instructions were identical with those employed at the censuses of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power equipment of the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuel is impracticable.

BUTTER, CHEESE, AND CONDENSED MILK.

GENERAL STATISTICS.

Scope of the industry.—The manufacture of butter, cheese, and condensed milk is treated in this report as a single industry, although in some tables the more important data are given for the three branches separately. The general statistics reported for each branch represent the complete returns of those establishments reporting the designated commodity as their product of chief value. The value of products shown for the butter-making branch of the industry, for example, includes the value of cheese or condensed milk manufactured as a subsidiary product in factories engaged primarily in the manufacture of butter. Tables 14, 15, and 16, however, show the total production of butter, cheese, and condensed milk of all establishments in the industry.

Factories of considerable size are sometimes operated on farms, but such factories are considered a part of the farm equipment and are covered by the census of agriculture rather than by that of manufactures. The present report is, therefore, confined to establishments operated independently of farming activities. In Table 17, however, the combined production of butter and cheese on farms and in the factories covered by the census of manufactures is shown. This represents approximately the total output of butter and cheese for the United States.

Skimming or separating stations operated in connection with a butter factory are counted as a part of the factory. Independent separating stations, however, have not been included, nor have establishments engaged primarily in the buying and selling of milk and cream, but incidentally manufacturing small quantities of butter or cheese from surplus stock.

Importance and growth of the industry.—Table 1 summarizes the statistics of each census since 1879, with percentages of increase for each period. With few exceptions increases are noticeable at each succeeding census. The large increases, however, from 1914 to 1919, in salaries and wages, cost of materials, and value of products, are due largely to a general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 accounts for the large increase in "Rent and taxes."

Comparative summary for the three branches of the industry.—Table 2 presents a summary for the butter, cheese, and condensed-milk industry as a whole, and for the three branches separately, for 1919 and 1914.

Principal states, ranked by value of products.—Table 3 summarizes the more important statistics of the industry, by states, arranged according to the value of products for 1919.

Wisconsin, New York, and Minnesota, in the order named, continue to be the three leading states in the industry in 1919 as in 1914, the combined value of their products in 1919 representing 41.6 per cent of the total value of products for the industry for the United States. There were a number of changes in the relative rank of the states from 1914 to 1919, as measured by value of products. Thus Michigan, which ranked sixth in 1914, advanced to fourth place in 1919, displacing Iowa; and Ohio, which ranked eighth in 1914, advanced to fifth place in 1919. Iowa dropped from fourth to seventh place and Illinois from fifth to sixth place during the five-year period.

Persons engaged in the industry.—The classification by age of the average number of wage earners is an estimate obtained by the method described in the "Explanation of terms." The classification by sex for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the classification by age. Table 4 shows for the industry as a whole, and for each of its three branches, the classification of the persons employed, by sex and age, for 1919, 1914, and 1909. Figures for individual states will be found in Table 19.

Wage earners, by months.—As shown by Table 5, the number of wage earners employed in the industry ranged from a maximum of 40,989 in June to a minimum of 29,022 in January, the minimum number being equivalent to 70.8 per cent of the maximum. Figures are given for the states separately, while for 1919 the number of males and females is also shown. The number of females employed in the industry is also shown for 1919 in eight of the states reporting a large proportion of female wage earners.

Prevailing hours of labor.—Table 6 shows a shortening of the working day for the industry since 1914. In that year 8.4 per cent of the wage earners were reported as employed fewer than 54 hours per week, as against 15 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 73.6 per cent of the total number of wage earners, as compared with 59.3 per cent in 1919.

Size of establishments, by average number of wage earners.—As shown by Table 7, there were 867 establishments in 1919, or 11.3 per cent of the total number for the industry, which employed no wage earners. These were comparatively small establishments in

which the work was done by the proprietors and firm members. In some cases they employed a few wage earners for short periods, but the number was so small and the period of employment so short that in computing the average number, as described in the "Explanation of terms," no wage earners could be shown. Of the total number of establishments, 76.5 per cent employed 1 to 5 wage earners, and 7.4 per cent from 6 to 20. There were only 159 establishments that employed an average of more than 50 wage earners, and of these only 40 employed over 100.

Size of establishments, by value of products.—At the censuses of 1909 and 1914, establishments with products valued at "$100,000 to $1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "$100,000 to $500,000" and "$500,000 to $1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. Table 8, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. The statistics in this table show the degree of concentration of production in large establishments. In 1919 the three groups having products of $100,000 and over included 1,714 establishments, or 22.4 per cent of the total number for the industry; employed 28,218 wage earners, or 79.9 per cent of the total average number; and reported products to the value of $830,507,804, or 77.9 per cent of the total value of products.

Character of ownership.—Table 9 shows that in 1919, of the total number of establishments reported for the industry, 25.4 per cent were under corporate ownership. While corporations thus controlled only one-fourth of the total number of establishments, they employed 73.2 per cent of the total average number of wage earners and reported 65.8 per cent of the total value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 10, there was an increase in the total horsepower reported for the industry of 38,009 horsepower, or 29.1 per cent. This increase, however, was due almost entirely to the gain of 36,169 horsepower, or 205.2 per cent, in rented power, the increase in power owned being only 1,840 horsepower, or 1.6 per cent of the total.

Fuel consumed.—Table 11 shows, by states, the principal kinds of fuel used in the industry in 1919 and 1914. Of the total quantity of bituminous coal used in the industry in 1919, New York and Wisconsin reported 40.9 per cent, while California reported 74.6 per cent of the fuel oils, and Kansas and Ohio together 68.8 per cent of the gas.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE.[1]					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments	7,669	7,628	8,479	8,926	9,242	4,552	3,932	0.5	−10.0	−5.0	−3.4	103.0	15.8
Persons engaged	49,865	34,795	31,506	25,865	22,604	(2)	(2)	43.3	10.4	21.8	14.4	.....	.....
Proprietors and firm members	4,452	5,009	8,019	6,801	6,987	(2)	(2)	−11.1	−37.5	17.9	−2.7	.....	.....
Salaried employees	10,100	6,727	5,056	3,507	2,818	(2)	(2)	51.1	33.0	44.2	24.4	.....	.....
Wage earners (average number)	35,313	23,059	18,431	15,557	12,799	12,219	7,903	53.1	25.1	18.5	21.5	(2)	(2)
Primary horsepower	168,871	130,862	101,349	93,845	88,062	25,526	(2)	29.0	29.1	8.0	6.6	245.0	.....
Capital	$315,277,362	$105,812,304	$71,283,615	$47,255,556	$36,303,164	$16,016,573	$9,604,803	198.0	48.4	50.8	30.2	126.7	66.8
Salaries and wages	54,157,374	21,977,895	14,671,932	9,789,034	7,057,273	5,116,005	1,546,495	146.4	49.8	49.9	38.7	37.9	230.8
Salaries	16,217,698	6,130,814	3,590,624	1,376,097	911,712	(2)	(2)	164.5	70.7	160.9	50.9	.....	.....
Wages	37,939,676	15,847,081	11,081,308	8,412,937	6,145,561	(2)	(2)	139.4	43.0	31.7	36.9	.....	.....
Paid for contract work	711,975	712,651	301,658	39,024	28,604	(2)	(2)	−0.1	136.2	673.0	36.4	.....	.....
Rent and taxes	8,843,710	1,262,749	684,622	[4] 463,423	[4] 356,271	(2)	(2)	600.4	84.4	47.7	30.1	.....	.....
Cost of materials	926,366,296	315,025,635	235,546,064	142,920,277	108,841,200	49,819,301	18,363,579	194.1	33.7	64.8	31.3	118.5	171.3
Value of products	1,066,125,489	364,285,150	274,557,718	168,182,789	130,783,349	60,635,705	25,742,510	192.7	32.7	63.2	28.6	115.7	135.5
Value added by manufacture [5]	139,759,193	49,259,515	39,011,654	25,262,512	21,942,149	10,816,404	7,378,931	183.7	26.3	54.4	15.1	102.9	46.6

[1] A minus sign (—) denotes decrease.
[2] Figures not available.
[3] Figures not strictly comparable.
[4] Exclusive of internal revenue.
[5] Value of products less cost of materials.

TABLE 2.—COMPARATIVE SUMMARY FOR THE THREE BRANCHES OF THE INDUSTRY: 1919 AND 1914.

	TOTAL FOR INDUSTRY.			ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—								
				Butter.			Cheese.			Condensed milk.		
	1919	1914	Per cent of increase,[1] 1914–1919.	1919	1914	Per cent of increase,[1] 1914–1919.	1919	1914	Per cent of increase,[1] 1914–1919.	1919	1914	Per cent of increase, 1914–1919.
Number of establishments	7,669	7,628	0.5	3,738	4,356	−14.2	3,530	3,082	14.5	401	190	111.1
Persons engaged	49,865	34,795	43.3	26,339	21,516	22.4	6,993	5,654	23.7	16,533	7,625	116.8
Proprietors and firm members	4,452	5,009	−11.1	2,006	2,543	−21.1	2,400	2,420	−0.8	46	46	.....
Salaried employees	10,100	6,727	50.1	6,692	4,824	38.7	596	326	82.8	2,812	1,577	78.3
Wage earners (average number)	35,313	23,059	53.1	17,641	14,149	24.7	3,997	2,908	37.4	13,675	6,002	127.8
Primary horsepower	168,871	130,862	29.0	95,190	91,628	3.9	24,500	19,219	27.5	49,181	20,015	145.7
Capital	$315,277,362	$105,812,304	198.0	$162,302,108	$59,625,448	172.2	$26,022,734	$11,139,004	133.6	$126,952,520	$35,047,852	262.2
Salaries and wages	54,157,374	21,977,895	146.4	28,374,818	14,090,240	101.4	5,859,034	2,274,213	157.6	19,923,522	5,613,442	254.9
Salaries	16,217,698	6,130,814	164.5	9,522,089	3,970,762	139.8	1,050,043	208,529	403.5	5,645,566	1,951,523	189.3
Wages	37,939,676	15,847,081	139.4	18,852,729	10,119,478	86.3	4,808,991	2,065,684	132.8	14,277,956	3,661,919	289.9
Paid for contract work	711,975	712,651	−0.1	428,799	652,076	−34.2	42,567	26,917	58.1	240,609	33,658	614.9
Rent and taxes (including internal revenue)	8,843,710	1,262,749	600.4	3,414,781	860,609	296.8	407,874	121,969	234.4	5,021,055	280,171	1,692.1
Cost of materials	926,366,296	315,025,635	194.1	514,345,739	212,546,847	142.0	129,425,265	46,758,685	176.8	282,595,292	55,720,103	407.2
Value of products	1,066,125,489	364,285,150	192.7	583,163,011	243,379,371	139.6	143,455,704	51,744,779	177.2	339,506,774	69,161,000	390.9
Value added by manufacture	139,759,193	49,259,515	183.7	68,817,272	30,832,524	123.2	14,030,439	4,986,094	181.4	56,911,482	13,440,897	323.4

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

TABLE 3.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	7,669	35,313	100.0	....	$1,066,125	100.0	....	$139,759	100.0	....
Wisconsin	2,872	5,973	16.9	1	221,447	20.8	1	23,463	16.8	1
New York	821	5,082	14.4	2	129,008	12.1	2	18,292	13.1	2
Minnesota	903	2,135	6.0	4	93,586	8.8	3	7,566	5.4	7
Michigan	318	2,194	6.2	3	64,787	6.1	4	8,880	6.4	4
Ohio	267	2,132	6.0	5	60,013	5.6	5	9,597	6.9	3
Illinois	223	1,991	5.6	7	58,298	5.5	6	8,679	6.2	5
Iowa	434	1,663	4.7	9	57,800	5.4	7	7,319	5.2	8
California	180	2,022	5.7	6	56,420	5.3	8	6,749	4.8	9
Pennsylvania	273	1,900	5.4	8	44,564	4.2	9	8,215	5.9	6
Nebraska	57	1,111	3.1	12	38,245	3.6	10	5,914	4.2	11
Washington	130	1,228	3.5	11	33,128	3.1	11	6,280	4.5	10
Missouri	71	691	2.0	14	22,295	2.1	14	2,137	1.5	15
Vermont	137	608	1.7	15	18,539	1.7	15	1,883	1.3	17
Oregon	136	595	1.7	16	15,762	1.5	16	2,526	1.8	14
Colorado	78	495	1.4	17	11,906	1.1	17	1,959	1.4	16
North Dakota	60	215	0.6	22	11,170	1.0	18	1,139	0.8	20
Oklahoma	20	301	0.9	18	$7,718	0.7	20	$994	0.7	21
Texas	31	200	0.6	23	7,161	0.7	21	1,195	0.9	19
Montana	53	195	0.6	24	4,326	0.4	24	768	0.5	23
Kentucky	16	140	0.4	26	3,655	0.3	25	382	0.3	29
Arizona	9	155	0.4	25	3,159	0.3	26	732	0.5	25
New Jersey	19	90	0.3	30	2,475	0.2	27	429	0.3	28
Maine	11	117	0.3	28	2,260	0.2	28	521	0.4	27
Mississippi	19	106	0.3	29	2,248	0.2	29	353	0.3	32
Massachusetts	23	65	0.2	33	2,214	0.2	30	367	0.3	31
Virginia	23	125	0.4	27	1,784	0.2	33	534	0.4	26
Alabama	4	65	0.2	32	983	0.1	35	129	0.1	35
Connecticut	22	44	0.1	36	901	0.1	36	171	0.1	34
North Carolina	22	38	0.1	37	683	0.1	37	115	0.1	37
Nevada	5	17	0.1	40	662	0.1	38	62	(1)	39
West Virginia	6	20	0.1	39	299	(1)	41	56	(1)	41
All other states	426	3,600	(1)	....	88,629	(1)	....	12,358	(1)	....

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

TABLE 4.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

	Census year.	Total.	Male.	Female.	Per cent of total. Male.	Per cent of total. Female.
BUTTER, CHEESE, AND CONDENSED MILK.	1919	49,865	41,918	7,947	84.1	15.9
	1914	34,795	31,493	3,302	90.5	9.5
	1909	31,506	29,095	2,411	92.3	7.6
Proprietors and officials	1919	8,253	8,071	182	97.8	2.2
	1914	7,420	7,293	127	98.3	1.7
	1909	10,480	10,336	144	98.6	1.4
Proprietors and firm members	1919	4,452	4,346	106	97.6	2.4
	1914	5,009	4,906	103	97.9	2.1
	1909	8,019	7,901	118	98.5	1.5
Salaried officers of corporations	1919	1,112	1,078	34	96.9	3.1
	1914	635	614	21	96.7	3.3
	1909	1,032	1,014	18	98.3	1.7
Superintendents and managers	1919	2,689	2,647	42	98.4	1.6
	1914	1,776	1,773	3	99.8	0.2
	1909	1,429	1,421	8	99.4	0.6
Clerks and other subordinate salaried employees.	1919	6,299	3,089	3,210	49.0	51.0
	1914	4,316	3,006	1,310	69.6	30.4
	1909	2,595	1,748	847	67.4	32.6
Wage earners (average number)	1919	35,313	30,758	4,555	87.1	12.9
	1914	23,059	21,194	1,865	91.9	8.1
	1909	18,431	17,011	1,420	92.3	7.7
16 years of age and over	1919	35,216	30,672	4,544	87.1	12.9
	1914	22,972	21,122	1,850	91.9	8.1
	1909	18,324	16,924	1,400	92.4	7.6
Under 16 years of age	1919	97	86	11	88.7	11.3
	1914	87	72	15	82.8	17.2
	1909	107	87	20	81.3	18.7
BUTTER	1919	26,339	21,467	4,872	81.5	18.5
	1914	21,516	19,359	2,157	90.0	10.0
	1909	19,380	18,244	1,136	94.2	5.9
Proprietors and officials	1919	4,475	4,342	133	97.0	3.0
	1914	4,415	4,337	78	98.2	1.8
	1909	5,966	5,883	83	98.6	1.4
Proprietors and firm members	1919	2,006	1,934	72	96.4	3.6
	1914	2,543	2,486	57	97.8	2.2
	1909	3,855	3,796	59	98.5	1.5
Salaried officers of corporations	1919	746	721	25	96.6	3.4
	1914	496	478	18	96.4	3.6
	1909	905	889	16	98.2	1.8
Superintendents and managers	1919	1,723	1,687	36	97.9	2.1
	1914	1,376	1,373	3	99.8	0.2
	1909	1,206	1,198	8	99.3	0.7
Clerks and other subordinate salaried employees.	1919	4,223	2,000	2,223	47.4	52.6
	1914	2,952	1,836	1,116	62.2	37.8
	1909	1,851	1,172	679	63.3	36.7
Wage earners (average number)	1919	17,641	15,125	2,516	85.7	14.3
	1914	14,149	13,186	963	93.2	6.8
	1909	11,563	11,189	374	96.8	3.2
16 years of age and over	1919	17,594	15,084	2,510	85.7	14.3
	1914	14,113	13,153	960	93.2	6.8
	1909	11,523	11,154	369	96.8	3.2
Under 16 years of age	1919	47	41	6	87.2	12.8
	1914	36	33	3	91.7	8.3
	1909	40	35	5	87.5	12.5
CHEESE	1919	6,993	6,709	284	95.9	4.1
	1914	5,654	5,510	144	97.5	2.5
	1909	7,164	7,018	146	98.0	2.0
Proprietors and officials	1919	2,745	2,707	38	98.6	1.4
	1914	2,607	2,560	47	98.2	1.8
	1909	4,299	4,238	61	98.6	1.4
Proprietors and firm members	1919	2,400	2,367	33	98.6	1.4
	1914	2,420	2,375	45	98.1	1.9
	1909	4,148	4,089	59	98.6	1.4
Salaried officers of corporations	1919	157	153	4	97.5	2.5
	1914	37	35	2	94.6	5.4
	1909	64	62	2	96.9	3.1
Superintendents and managers	1919	188	187	1	99.5	0.5
	1914	150	150	.....	100.0	.....
	1909	87	87	.....	100.0	.....
Clerks and other subordinate salaried employees.	1919	251	159	92	63.3	36.7
	1914	139	111	28	79.9	20.1
	1909	161	135	26	83.8	16.1
Wage earners (average number)	1919	3,997	3,843	154	96.1	3.9
	1914	2,908	2,839	69	97.6	2.4
	1909	2,704	2,645	59	97.8	2.2
16 years of age and over	1919	3,975	3,821	154	96.1	3.9
	1914	2,894	2,825	69	97.6	2.4
	1909	2,686	2,627	59	97.8	2.2
Under 16 years of age	1919	22	22	.....	100.0	.....
	1914	14	14	.....	100.0	.....
	1909	18	18	.....	100.0	.....
CONDENSED MILK	1919	16,533	13,742	2,791	83.1	16.9
	1914	7,625	6,624	1,001	86.9	13.1
	1909	4,962	3,833	1,129	77.3	22.8
Proprietors and officials	1919	1,033	1,022	11	98.9	1.1
	1914	398	396	2	99.5	0.5
	1909	215	215	.....	100.0	.....
Proprietors and firm members	1919	46	45	1	97.8	2.2
	1914	46	45	1	97.8	2.2
	1909	16	16	.....	100.0	.....
Salaried officers of corporations	1919	209	204	5	97.6	2.4
	1914	102	101	1	99.0	1.0
	1909	63	63	.....	100.0	.....
Superintendents and managers	1919	778	773	5	99.4	0.6
	1914	250	250	.....	100.0	.....
	1909	136	136	.....	100.0	.....
Clerks and other subordinate salaried employees.	1919	1,825	930	895	51.0	49.0
	1914	1,225	1,059	166	86.4	13.6
	1909	583	441	142	75.6	24.4
Wage earners (average number)	1919	13,675	11,790	1,885	86.2	13.8
	1914	6,002	5,169	833	86.1	13.9
	1909	4,164	3,177	987	76.3	23.7
16 years of age and over	1919	13,647	11,767	1,880	86.2	13.8
	1914	5,965	5,144	821	86.2	13.8
	1909	4,115	3,143	972	76.4	23.6
Under 16 years of age	1919	28	23	5	82.1	17.7
	1914	37	25	12	67.6	32.4
	1909	49	34	15	69.4	30.6

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment is indicated by **bold-faced** figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919	35,313	*29,022*	30,050	31,375	34,871	38,069	**40,989**	40,584	39,017	37,182	35,616	34,122	32,859	70.8
Males	30,758	*25,502*	26,391	27,571	30,449	33,143	**35,614**	35,274	33,824	32,212	30,832	29,649	28,635	71.6
Females	4,555	*3,520*	3,659	3,804	4,422	4,926	**5,375**	5,310	5,193	4,970	4,784	4,473	4,224	61.8
1914	23,059	*19,707*	19,882	20,401	22,816	25,129	**26,548**	26,299	25,242	24,344	23,241	22,047	21,052	74.2
1909	18,431	*15,121*	15,239	15,978	18,059	20,262	21,313	**21,392**	20,934	20,065	18,902	17,571	16,343	70.7
California	2,022	*1,693*	1,726	1,834	2,001	2,048	2,095	2,211	**2,251**	2,188	2,128	2,099	1,990	75.2
Illinois	1,991	*1,751*	1,776	1,841	1,952	2,041	**2,228**	2,174	2,117	2,046	2,003	1,982	1,981	78.6
Indiana	1,660	*1,378*	1,384	1,390	1,538	1,694	**1,886**	1,882	1,860	1,817	1,731	1,704	1,656	73.1
Iowa	1,663	1,393	1,328	*1,315*	1,533	1,751	**1,952**	1,857	1,787	1,843	1,811	1,761	1,625	67.4
Kansas	927	*754*	*754*	793	942	1,080	**1,101**	1,022	1,031	967	897	920	863	68.5
Michigan	2,194	*1,941*	2,009	2,080	2,122	2,287	2,447	**2,454**	2,291	2,230	2,165	2,195	2,107	79.1
Minnesota	2,135	*1,825*	1,842	1,890	2,070	2,330	**2,501**	2,446	2,428	2,204	2,071	2,043	1,970	73.0
Missouri	691	*511*	521	547	633	760	814	**867**	829	801	693	668	648	58.9
Nebraska	1,111	*901*	926	878	1,135	1,276	**1,508**	1,448	1,312	1,161	986	889	912	59.7
New York	5,082	*3,611*	4,073	4,648	5,451	5,948	**6,282**	6,021	5,555	5,218	5,128	4,602	4,447	57.5
Ohio	2,132	*1,816*	1,871	1,913	2,028	2,205	**2,401**	2,388	2,332	2,288	2,178	2,114	2,050	75.6
Oregon	595	*485*	498	528	569	615	660	**706**	669	641	610	591	568	68.7
Pennsylvania	1,900	*1,562*	1,595	1,712	1,840	2,007	2,150	**2,188**	2,131	2,037	1,951	1,853	1,774	71.4
Vermont	608	*480*	550	567	636	711	**748**	718	670	606	583	521	506	64.2
Washington	1,228	*1,055*	1,084	1,096	1,146	1,329	**1,458**	1,429	1,388	1,267	1,216	1,156	1,112	72.4
Wisconsin	5,973	*5,033*	5,201	5,397	5,996	6,420	**6,920**	6,762	6,455	6,178	6,022	5,738	5,554	72.7
States showing large proportion of females.														Per ct. av. is of state.
Illinois	319	*242*	262	259	322	312	**368**	341	345	328	340	344	365	16.0
Indiana	327	*249*	253	250	280	329	**390**	374	388	368	359	332	352	19.7
Kansas	218	164	*160*	168	224	**268**	266	254	259	240	217	213	193	23.5
Missouri	177	*124*	129	125	159	186	196	218	225	**238**	189	174	161	25.6
Nebraska	220	147	141	*140*	244	272	**337**	307	276	236	208	161	171	19.8
Ohio	283	246	*244*	248	267	267	**310**	314	312	**335**	312	277	264	13.3
Oregon	89	*68*	85	88	82	85	100	**103**	98	95	87	92	85	15.0
Washington	214	178	*175*	185	188	238	264	**275**	240	227	216	203	179	17.4

TABLE 6.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States.	1919	35,313	452	76	3,844	919	5,053	4,037	11,872	9,060
	1914	23,059	(2)	(2)	1,600	338	2,527	1,615	9,934	7,045
	1909	18,431	(2)	(2)	1,793	228	1,020	1,254	6,379	7,757
California	1919	2,022	91	3	177	70	501	424	85	671
	1914	1,044	(2)	(2)	101	15	239	76	99	514
Illinois	1919	1,991	12	.....	61	116	349	70	713	670
	1914	1,755	(2)	(2)	64	2	79	87	1,196	327
Indiana	1919	1,660	1	.....	128	108	90	372	619	342
	1914	719	(2)	(2)	29	.....	50	60	386	194
Iowa	1919	1,663	44	5	455	14	236	134	715	60
	1914	1,333	(2)	(2)	160	38	132	16	782	205
Kansas	1919	927	.....	.....	116	5	116	35	323	332
	1914	761	(2)	(2)	25	.....	176	22	150	388
Michigan	1919	2,194	20	16	202	81	237	121	1,127	390
	1914	1,367	(2)	(2)	145	24	81	43	833	241
Minnesota	1919	2,135	72	10	515	15	371	103	862	187
	1914	1,458	(2)	(2)	235	20	309	10	809	75
Nebraska	1919	1,111	.....	.....	17	4	97	276	122	595
	1914	696	(2)	(2)	1	.....	80	11	426	178
New York	1919	5,082	40	.....	308	142	688	378	2,745	781
	1914	3,235	(2)	(2)	190	60	262	376	1,433	914
Ohio	1919	2,132	16	16	173	38	244	277	846	522
	1914	1,480	(2)	(2)	65	13	183	233	586	400
Pennsylvania	1919	1,900	28	1	128	26	238	114	823	542
	1914	1,309	(2)	(2)	153	38	123	132	472	391
Washington	1919	1,228	5	.....	278	15	610	164	60	96
	1914	860	(2)	(2)	31	.....	55	23	271	480
Wisconsin	1919	5,973	55	11	489	69	366	887	1,459	2,637
	1914	3,717	(2)	(2)	208	73	243	251	1,350	1,592

[1] Includes 48 and under for 1914 and 1909.

[2] Corresponding figures not available.

TABLE 7.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—												
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		50 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.	
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States 1919	7,669	35,313	867	5,868	8,943	566	6,196	209	6,961	119	8,244	40	4,069	.....	.....
1914	7,628	23,059	839	6,148	8,899	461	4,740	117	3,718	49	3,362	12	1,691	2	649
California	180	2,022	7	108	257	42	509	14	414	5	302	4	540	.....	.....
Illinois	223	1,991	21	145	262	29	311	19	671	8	617	1	130	.....	.....
Indiana	101	1,660	6	52	135	23	268	9	270	7	486	4	501	.....	.....
Iowa	434	1,663	29	360	650	36	413	5	164	1	78	3	358	.....	.....
Kansas	67	927	2	36	76	13	124	10	273	5	353	1	101	.....	.....
Michigan	318	2,194	13	246	569	35	427	18	714	5	365	1	119	.....	.....
Minnesota	903	2,135	40	819	1,265	32	327	10	341	1	76	1	126	.....	.....
Missouri	71	691	11	43	108	6	86	7	223	4	274	.....	.....	.....	.....
Nebraska	57	1,111	2	30	62	15	177	2	64	5	401	3	407	.....	.....
New York	821	5,082	103	589	749	65	670	34	1,220	23	1,597	7	846	.....	.....
Ohio	267	2,132	45	139	250	58	665	13	333	10	664	2	220	.....	.....
Oregon	136	595	12	105	202	16	185	1	32	1	62	1	114	.....	.....
Pennsylvania	273	1,900	25	195	337	31	343	11	378	9	616	2	226	.....	.....
Vermont	137	608	8	112	193	11	112	3	72	2	118	1	113	.....	.....
Washington	130	1,228	10	91	214	16	172	6	237	5	335	2	270	.....	.....
Wisconsin	2,872	5,973	463	2,310	2,673	55	488	15	566	24	1,579	5	667	.....	.....
All other states	679	3,401	70	488	941	83	919	32	989	4	321	2	231	.....	.....

TABLE 8.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes	7,669	7,628	8,479	35,313	23,059	18,431	$1,066,125,489	$364,285,150	$274,557,718	$139,759,193	$49,259,515	$39,011,654
Less than $5,000	225	547	833	76	261	365	620,244	1,725,785	2,610,549	126,579	268,768	455,171
$5,000 to $20,000	1,159	3,206	4,262	801	2,735	3,482	15,607,552	39,518,343	49,557,062	1,894,877	4,517,088	6,395,108
$20,000 to $100,000	4,571	3,242	3,004	6,218	6,950	6,633	219,389,889	130,094,135	116,551,144	21,432,453	14,710,825	13,159,519
$100,000 to $500,000	1,271	537	371	7,609	10,208	7,464	246,320,614	106,139,682	93,905,110	29,208,673	22,679,804	17,084,727
$500,000 to $1,000,000	208	72	9	5,366	2,905	487	149,856,053	47,334,087	11,933,853	21,124,049	7,082,430	1,917,129
$1,000,000 and over	235	24		15,243			434,331,137	39,473,118		65,882,562		
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	2.9	7.2	9.8	0.2	1.1	2.0	0.1	0.5	1.0	0.1	0.5	1.2
$5,000 to $20,000	15.1	42.0	50.3	2.3	11.9	18.9	1.5	10.8	18.0	1.4	9.2	16.4
$20,000 to $100,000	59.6	42.5	35.4	17.6	30.1	36.0	20.6	35.7	42.5	15.3	29.9	33.7
$100,000 to $500,000	16.6	7.0	4.4	21.5	44.3	40.5	23.1	29.1	34.2	21.0	46.1	43.8
$500,000 to $1,000,000	2.7	0.9	0.1	15.2	12.6	2.6	14.1	13.0	4.3	15.1	14.4	4.9
$1,000,000 and over	3.1	0.3		43.2			40.7	10.8		47.1		

TABLE 9.—CHARACTER OF OWNERSHIP, BY SELECTED STATES: 1919 AND 1914.

STATE.	Census year.	Number of establishments owned by—			Average number of wage earners.							Value of products.						
					Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.		
		Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.
United States	1919	2,544	1,948	3,177	35,313	3,216	25,838	6,259	9.1	73.2	17.7	$1,066,125,489	$124,157,044	$701,459,061	$240,509,384	11.6	65.9	22.6
	1914	2,819	1,675	3,134	23,059	3,340	14,369	5,350	14.5	62.3	23.2	364,285,150	62,025,960	199,846,135	102,413,055	17.0	54.9	28.1
	1909	3,370	1,313	3,796	18,431	3,418	9,299	5,714	18.6	50.7	30.6	274,557,718	61,432,341	113,493,555	99,631,822	22.4	41.3	36.3
California	1919	49	74	57	2,022	122	1,429	471	6.0	70.7	23.3	56,420,383	2,568,230	38,683,863	15,168,290	4.6	68.6	26.9
	1914	68	69	64	1,044	163	665	216	15.6	63.7	20.7	20,466,428	2,453,843	12,675,034	5,337,551	12.0	61.9	26.1
Illinois	1919	54	106	63	1,991	85	1,724	182	4.3	86.6	9.1	58,298,271	2,337,787	50,041,558	5,918,926	4.0	85.8	10.2
	1914	75	131	61	1,755	123	1,511	121	7.0	86.1	6.9	21,792,220	1,951,763	18,065,494	1,774,963	9.0	82.9	8.1
Iowa	1919	84	83	267	1,663	162	942	559	8.9	60.3	30.8	57,800,148	4,887,687	29,075,593	23,836,868	8.9	53.2	38.9
	1914	90	107	293	1,333	222	637	474	16.7	47.8	35.6	27,605,968	2,949,966	12,375,882	12,280,120	10.7	44.8	44.5
Michigan	1919	93	113	112	2,194	208	1,683	303	9.5	76.7	13.8	64,786,598	7,454,409	46,930,345	10,401,844	11.5	72.4	16.1
	1914	115	135	114	1,367	187	939	241	13.7	68.7	17.6	21,549,597	3,193,218	14,348,845	4,007,534	14.8	66.6	18.6
Minnesota	1919	117	87	699	2,135	149	823	1,163	7.0	38.5	54.5	93,585,605	6,827,645	30,198,879	56,559,081	7.3	32.3	60.4
	1914	126	48	633	1,458	157	356	945	10.8	24.4	64.8	33,746,396	3,269,926	8,453,162	22,023,308	9.7	25.0	65.3
Nebraska	1919	11	34	12	1,111	36	1,043	32	3.2	93.9	2.9	38,244,936	1,126,345	35,594,724	1,523,867	2.9	93.1	4.0
	1914	12	28	8	696	45	643	8	6.5	92.4	1.1	11,082,123	735,316	10,159,134	187,673	6.6	91.7	1.7
New York	1919	294	342	185	5,082	369	4,365	348	7.3	85.9	6.8	129,008,365	12,628,261	107,141,693	9,238,411	9.8	83.0	7.2
	1914	608	237	299	3,235	557	2,228	448	17.3	68.9	13.8	43,262,309	11,485,975	24,256,476	7,519,858	26.5	56.1	17.4
Ohio	1919	64	116	87	2,132	176	1,818	138	8.3	85.3	6.5	60,012,831	2,921,133	53,781,357	3,310,341	4.9	89.6	5.5
	1914	70	102	114	1,480	125	1,183	172	8.4	79.9	11.6	19,325,977	1,352,416	16,076,924	1,896,637	7.0	83.2	9.8
Pennsylvania	1919	102	93	78	1,900	203	1,457	240	10.7	76.7	12.6	44,564,261	5,879,804	31,815,914	6,868,543	13.2	71.4	15.4
	1914	191	85	111	1,309	254	789	266	19.4	60.3	20.3	15,687,299	3,341,218	8,905,756	3,440,325	21.3	56.8	21.9
Washington	1919	30	70	30	1,228	66	1,094	68	5.4	89.1	5.5	33,127,887	1,365,283	28,864,135	2,898,469	4.1	87.1	8.7
	1914	26	50	25	860	63	723	74	7.3	84.1	8.6	11,807,897	1,041,410	9,119,409	1,647,078	8.8	77.2	13.9
Wisconsin	1919	1,336	271	1,265	5,973	1,077	3,044	1,852	18.0	51.0	31.0	221,447,273	61,082,747	84,505,220	75,859,306	27.6	38.2	34.3
	1914	1,129	253	1,049	3,717	874	1,355	1,488	23.5	36.5	40.0	72,858,592	22,849,459	20,068,099	29,941,034	31.4	27.5	41.1

TABLE 10.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	Number of engines or motors.			Horsepower.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	13,811	9,604	7,775	168,871	130,862	101,349	100.0	100.0	100.0
Owned	6,391	7,252	7,133	115,072	113,232	95,771	68.1	86.5	94.5
Steam [1]	5,094	6,235	6,555	104,223	104,729	90,933	61.7	80.0	89.8
Engines	4,793	(2)	(2)	99,315	(2)	(2)	58.8	(2)	(2)
Turbines	301	(2)	(2)	4,908	(2)	(2)	2.9	(2)	(2)
Internal-combustion engines	1,234	949	509	9,294	7,229	3,373	5.5	5.5	3.3
Water wheels, turbines, and motors	63	68	69	1,555	1,274	1,465	0.9	1.0	1.4
Rented	7,420	2,352	642	53,799	17,630	5,578	31.9	13.5	5.5
Electric	7,420	2,352	642	53,479	17,027	5,366	31.7	13.0	5.3
Other	.....	.....	.....	320	603	212	0.2	0.5	0.2
Electric	10,647	3,558	1,246	70,562	23,061	8,276	100.0	100.0	100.0
Rented	7,420	2,352	642	53,479	17,027	5,366	75.8	73.8	64.8
Generated by establishments reporting	3,227	1,206	604	17,083	6,034	2,910	24.2	26.2	35.2

[1] Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.

[2] Not reported separately.

TABLE 11.—FUEL CONSUMED, BY STATES: 1919.

STATE.	Census year.	COAL. Anthracite (tons, 2,240 lbs.)	COAL. Bituminous (tons, 2,000 lbs.)	Coke (tons, 2,000 lbs).	Fuel oils (barrels)	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet.)
United States	1919	73,812	1,379,270	6,407	320,185	21,490	233,553
	1914	36,069	831,549	7,146	213,359	(1)	213,373
California	1919	36	353	18	239,004	2,614	17,886
	1914	27	622	25	108,780	(1)	816
Illinois	1919	893	105,168	.....	56	387	1,542
	1914	301	114,255	185	486	(1)	1,501
Indiana	1919	26	48,749	20	35	1,915	.....
	1914	.....	22,802	144	207	(1)	57
Iowa	1919	1,767	83,387	505	1,270	967	.....
	1914	264	65,752	322	2,181	(1)	.....
Kansas	1919	35	25,569	.....	3,053	194	96,994
	1914	.....	17,942	47	4,715	(1)	79,762
Michigan	1919	2,281	122,759	285	349	997	1,532
	1914	3,344	71,742	179	189	(1)	20
Minnesota	1919	3,607	56,334	955	403	646	.....
	1914	1,277	40,905	497	1,326	(1)	60
Nebraska	1919	.....	38,882	3	39,420	85	.....
	1914	20	28,223	1,800	21,266	(1)	.....
New York	1919	43,344	274,911	104	87	7,192	4,388
	1914	17,229	145,424	108	614	(1)	8,150
Ohio	1919	101	86,524	72	29	342	63,791
	1914	.....	58,470	.....	159	(1)	87,634
Pennsylvania	1919	13,227	99,816	3,150	15	286	10,934
	1914	9,058	54,016	100	189	(1)	17,010
Washington	1919	2	10,239	315	3,318	653	.....
	1914	.....	8,013	.....	50,599	(1)	252
Wisconsin	1919	5,487	288,632	756	1,011	6,836	94
	1914	801	124,989	182	2,335	(1)	33
All other states	1919	3,006	137,947	224	31,235	1,376	36,302
	1914	3,748	78,394	3,557	20,313	(1)	18,078

[1] Included in figures for fuel oils.

SPECIAL STATISTICS.

The special schedule used in collecting the statistics for the butter, cheese, and condensed-milk industry required details as to the quantity and cost of the milk and cream used during the year and the quantity and value of the various products.

Quantity and cost of principal materials used, by states.—Table 12 shows, by states, the quantity and cost of milk, cream, skimmed milk, and sugar used in the manufacture of butter, cheese, and condensed milk in 1919.

The figures given in the table for cream and skimmed milk represent the quantities of these materials delivered as such at the factories rather than the quantities actually used in the manufacture of butter, cheese, and other products. Large additional quantities of cream are separated from whole milk at the butter factories, and while much of the skimmed milk resulting from this separation is sold or returned to patrons, the quantities used in the manufacture of cheese and casein doubtless far exceed the quantities reported as purchased. In some instances considerable quantities of whole milk and cream are sold by the factories instead of being used for manufacturing purposes. It is evident, therefore, that the figures in the table do not represent the actual quantities used in the manufacture of the various products.

TABLE 12.—QUANTITY AND COST OF PRINCIPAL MATERIALS USED, BY STATES: 1919.

STATE.	MILK.		CREAM.		SKIMMED MILK.		SUGAR.	
	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.	Pounds.	Cost.
United States	10,244,874,792	$333,356,687	2,551,748,117	$437,267,198	1,361,188,373	$8,740,665	636,568,407	$30,198,824
Alabama	6,295,376	304,606	605,315	131,945			135,000	27,000
Arizona	63,362,671	1,538,370	1,295,198	227,728				
California	486,610,222	13,725,961	157,016,439	29,474,514	246,938,943	1,366,471	4,255,087	415,615
Colorado	53,458,757	1,594,245	46,719,824	6,569,127	10,051,629	31,969	241,496	24,522
Connecticut	4,633,105	158,108	3,639,923	500,317	255,000	1,420		
Delaware	11,000,284	332,648	731,745	98,374				
Idaho	56,843,953	1,659,803	17,011,329	2,598,887	40,028	1,168	94,736	11,011
Illinois	498,635,310	16,148,188	139,404,230	21,215,139	67,382,103	409,533	31,686,813	4,440,581
Indiana	124,967,079	4,142,831	123,575,483	18,994,039	436,748	3,494	5,692,831	288,108
Iowa	170,492,203	4,105,942	265,842,271	41,367,343	13,350,426	47,618	381,971	40,217
Kansas	64,104,488	2,161,438	122,799,903	17,326,273	17,085,660	11,136	1,328,779	133,009
Kentucky	1,021,013	65,253	19,948,948	2,875,936			19,840	1,986
Maine	17,471,361	554,263	4,457,462	626,582	605,785	4,554	3,111,607	279,541
Maryland	35,151,638	1,062,524	1,065,166	130,440			562,655	56,141
Massachusetts	7,702,912	278,822	9,728,918	1,380,197	6,360,972	15,119	73,600	6,554
Michigan	637,685,167	19,627,021	153,836,380	23,889,161	77,503,179	850,796	27,404,338	2,626,872
Minnesota	266,573,334	7,104,669	455,196,226	78,373,862	8,921,214	83,488	870,656	95,923
Mississippi	6,378,679	160,784	11,264,752	1,521,623			10,950	1,205
Missouri	9,081,734	304,969	15,449,963	17,550,276	12,269,373	58,388	243,407	26,813
Montana	7,917,033	248,454	20,220,380	2,998,573	107,000	1,525	173,637	20,140
Nebraska	30,797,431	933,593	60,517,171	27,430,952	26,249,196	46,186	579,926	61,976
Nevada			3,922,484	574,580				
New Hampshire	7,932,524	188,306	1,825,250	277,913			293,098	28,576
New Jersey	36,222,278	1,160,996	232,000	32,480	13,823,119	121,709	2,982,786	287,746
New York	2,187,467,476	69,177,406	46,245,416	6,759,102	366,565,556	2,060,522	477,265,374	13,496,268
North Carolina	2,245,411	60,367	3,040,154	414,537				
North Dakota	13,108,615	400,194	51,737,633	8,687,790	8,634,208	12,729	141,205	15,621
Ohio	455,792,602	13,772,147	202,179,020	30,544,827	137,709,546	453,183	7,094,204	699,848
Oklahoma	434,979	13,524	32,732,345	4,913,764			175,647	18,151
Oregon	163,821,524	5,122,022	33,459,682	6,669,546	157,816	1,884	395,067	32,901
Pennsylvania	773,831,196	23,981,827	19,563,418	3,081,985	90,175,243	771,587	32,503,307	2,964,551
Rhode Island	2,259,060	73,789	271,143	44,346				
South Dakota	3,654,547	116,484	49,246,774	8,365,754	4,322,612	8,292	141,205	15,621
Tennessee	343,037	10,266	11,651,444	1,637,737			18,538	1,956
Texas	11,226,947	348,191	38,647,167	5,642,504			206,779	19,076
Utah	58,350,631	1,692,977	14,173,075	2,134,140			576,143	57,371
Vermont	214,103,872	6,646,827	44,116,449	6,551,767	19,148,873	165,356	12,830,478	1,163,955
Virginia	12,121,114	358,047	5,799,107	748,910			337,878	35,785
Washington	386,438,995	12,019,179	55,723,590	9,126,423	460,771	24,051	885,639	88,316
West Virginia	508,011	15,136	1,270,619	185,632				
Wisconsin	3,340,251,639	121,640,164	300,770,999	44,918,645	232,631,673	2,179,443	23,739,658	2,704,058
Wyoming	14,634,392	319,916	4,496,042	632,135	1,700	44	73,930	7,796
All other states	842,192	26,430	308,280	41,393			40,142	4,014

Wisconsin and New York, the leading states in the quantity of milk used, reported 32.6 per cent and 21.4 per cent, respectively, of the total quantity of milk used as material in the manufacture of butter, cheese, and condensed milk in the United States.

Milk and cream used in leading states.—Table 13 shows, for 1919, 1914, 1909, and 1904, the quantities of milk and cream reported for the 14 states which led in 1919 with respect to value of products.

TABLE 13.—QUANTITY OF MILK AND CREAM USED, BY STATES: 1919, 1914, 1909, AND 1904.

STATE.	Census year.	Milk (pounds).	Cream (pounds).
United States	1919	10,244,874,792	2,551,748,117
	1914	8,431,426,426	2,384,192,766
	1909	9,888,727,303	1,406,143,908
	1904	12,147,304,550	588,186,471
Wisconsin	1919	3,340,251,639	300,770,999
	1914	2,691,720,696	346,307,960
	1909	2,366,154,761	246,838,822
	1904	2,665,903,141	80,032,094
New York	1919	2,187,467,476	46,245,416
	1914	2,049,532,238	53,454,943
	1909	2,422,727,788	17,842,320
	1904	2,716,366,410	6,176,069
Minnesota	1919	266,573,334	455,196,226
	1914	320,032,086	353,710,186
	1909	645,597,385	236,861,608
	1904	1,072,506,743	57,562,246
Michigan	1919	637,685,167	153,836,380
	1914	535,038,623	123,539,936
	1909	478,008,911	83,241,827
	1904	670,230,324	7,714,987
Ohio	1919	455,792,602	202,179,020
	1914	292,419,114	135,461,829
	1909	344,686,001	41,291,271
	1904	405,702,734	6,582,108
Illinois	1919	498,635,310	139,404,230
	1914	566,685,863	93,323,222
	1909	707,013,502	44,565,553
	1904	809,720,061	11,062,470
Iowa	1919	170,492,203	265,842,271
	1914	241,933,578	266,522,854
	1909	474,821,988	243,619,568
	1904	[1] 994,925,394	110,850,356
California	1919	486,610,222	157,016,439
	1914	220,399,848	274,301,608
	1909	206,222,329	101,128,644
	1904	481,091,233	29,504,300
Pennsylvania	1919	773,831,196	19,563,418
	1914	607,678,749	33,086,604
	1909	787,448,479	16,061,716
	1904	946,150,704	4,167,213
Nebraska	1919	30,797,431	60,517,171
	1914	9,473,066	112,155,855
	1909	167,861,401	56,010,365
	1904	157,978,290	32,312,868
Washington	1919	386,438,995	55,723,590
	1914	206,922,411	61,285,864
	1909	150,544,931	29,415,008
	1904	66,762,847	23,595,768
Indiana	1919	124,967,079	123,575,483
	1914	72,960,150	87,593,732
	1909	119,475,669	27,098,202
	1904	110,349,625	1,225,907
Kansas	1919	64,104,488	122,799,903
	1914	49,214,302	77,284,342
	1909	119,462,779	47,340,211
	1904	97,999,446	36,833,076
Missouri	1919	9,081,734	15,449,963
	1914	10,858,169	52,997,592
	1909	35,695,793	29,484,057
	1904	27,183,088	16,292,834

[1] Exclusive of 1 establishment engaged in the manufacture of condensed milk.

The total quantity of milk used in the industry in 1919 represented an increase of 21.5 per cent over the quantity reported for 1914, while for the earlier five-year period 1909 to 1914 there was a decrease of 14.7 per cent. From 1914 to 1919 the total quantity of cream used showed an increase of 7 per cent.

Minnesota, Illinois, Iowa, and Missouri show decreases in the quantity of milk used from 1914 to 1919, while for Wisconsin, New York, Iowa, Pennsylvania, Nebraska, Washington, and Missouri there were decreases shown in the quantity of cream used.

Quantities, by states.—Table 14 gives, by states, the quantities of butter, cheese, and condensed milk, as reported at the censuses of 1919, 1914, 1909, and 1904.

TABLE 14.—QUANTITY OF BUTTER, CHEESE, AND CONDENSED AND EVAPORATED MILK, BY STATES: 1919, 1914, 1909, AND 1904.

STATE.	Census year.	Butter (pounds).	Cheese (pounds).	Condensed and evaporated milk (pounds).
United States [1]	1919	920,550,066	473,569,199	2,093,646,405
	1914	769,809,781	370,278,599	873,410,504
	1909	624,764,653	311,126,317	494,796,544
	1904	531,478,141	317,144,872	308,485,182
Arizona	1919	1,040,437	547,645	(2)
	1914	1,851,981	(2)	(2)
	1909	1,053,869	421,643	(2)
	1904	799,433	161,796	162,000
California	1919	61,140,390	9,708,885	[3] 46,600,095
	1914	58,259,605	3,745,979	(2)
	1909	37,283,450	1,567,640	(2)
	1904	26,837,386	3,601,051	7,723,021
Colorado	1919	13,982,711	1,663,140	[3] 14,365,276
	1914	8,862,705	(2)	(2)
	1909	6,351,691	550,622	(2)
	1904	5,054,006	871,673	(2)
Connecticut	1919	1,018,699	188,922	.....
	1914	1,486,290	(2)	.....
	1909	1,959,035	.....	(2)
	1904	2,903,277	(2)	.....
Delaware	1919	294,713	(2)	.....
	1914	455,698	(2)	.....
	1909	627,300	(2)	.....
	1904	644,823	(2)	.....
Idaho	1919	5,272,857	2,623,440	(2)
	1914	2,813,761	(2)	(2)
	1909	2,357,386	(2)	.....
	1904	671,783	132,420	.....
Illinois	1919	44,527,933	4,851,054	177,702,214
	1914	27,332,293	6,377,947	167,425,094
	1909	24,570,976	4,799,235	114,500,748
	1904	27,339,925	5,361,211	93,425,052
Indiana	1919	42,186,894	269,094	32,470,141
	1914	25,637,452	354,792	14,107,675
	1909	11,712,450	424,597	6,674,660
	1904	4,742,632	978,903	[4] 317,721
Iowa	1919	90,070,758	1,015,790	[5] 8,039,785
	1914	92,405,806	855,198	6,574,527
	1909	88,582,187	990,559	4,984,333
	1904	71,181,766	2,829,745	(2)
Kansas	1919	36,567,263	35,436	21,831,821
	1914	29,278,717	(2)	(2)
	1909	18,712,568	(2)	(2)
	1904	16,488,131	1,120,863	.....
Kentucky	1919	5,949,761	(2)	.....
	1914	606,404	.....	(2)
	1909	549,929	.....	.....
	1904	239,061	.....	.....
Maine	1919	1,271,819	(2)	(2)
	1914	2,713,496	(2)	(2)
	1909	2,105,622	55,591	(2)
	1904	5,005,907	301,850	(2)
Maryland	1919	301,895	(2)	[5] 3,875,951
	1914	677,802	.....	3,901,004
	1909	1,118,530	.....	(2)
	1904	1,816,433	.....	.....
Massachusetts	1919	2,659,264	(2)	.....
	1914	2,172,813	(2)	(2)
	1909	1,888,307	.....	.....
	1904	3,470,323	(2)	.....
Michigan	1919	55,842,680	12,867,230	181,700,256
	1914	43,220,077	13,267,145	76,514,655
	1909	35,511,760	13,382,160	32,404,944
	1904	21,013,000	16,814,856	27,681,608
Minnesota	1919	146,295,141	10,116,048	(2)
	1914	111,165,208	4,016,570	(2)
	1909	88,842,846	2,735,883	.....
	1904	62,122,554	3,690,055	79,120
Missouri	1919	35,988,733	188,920	(2)
	1914	16,241,687	165,829	(2)
	1909	10,261,876	219,112	(2)
	1904	5,806,724	743,447	.....
Montana	1919	6,094,466	390,527	.....
	1914	3,450,315	(2)	.....
	1909	1,307,777	.....	.....
	1904	(2)	.....	.....

(See footnotes at end of table.)

TABLE 14.—QUANTITY OF BUTTER, CHEESE, AND CONDENSED AND EVAPORATED MILK, BY STATES: 1919, 1914, 1909, AND 1904—Continued.

STATE.	Census year.	Butter (pounds).	Cheese (pounds).	Condensed and evaporated milk (pounds).
Nebraska	1919	58,570,937	(2)	7,041,504
	1914	36,343,424	21,997	(2)
	1909	23,973,162	77,122	.....
	1904	16,035,468	158,470	.....
Nevada	1919	1,087,795	.....	.....
	1914	1,291,888	.....	.....
	1909	1,039,784	.....	.....
	1904	758,184	33,000	.....
New Hampshire	1919	517,498	(2)	(2)
	1914	1,320,103	144,137	.....
	1909	1,749,235	184,497	.....
	1904	3,098,889	207,149	(2)
New Jersey	1919	189,796	792,379	[5] 11,961,184
	1914	569,521	(2)	7,989,751
	1909	708,857	.....	7,688,412
	1904	1,178,846	6,700	(2)
New York	1919	15,727,774	88,957,860	479,735,984
	1914	35,385,557	97,614,024	131,574,633
	1909	45,897,216	105,194,898	120,601,999
	1904	58,256,504	132,836,482	102,480,355
North Carolina	1919	884,914	192,539	.....
	1914	187,986	.....	.....
	1909	.....	.....	.....
	1904	.....	.....	.....
North Dakota	1919	19,536,985	(2)	1,606,725
	1914	5,814,240	(2)	.....
	1909	3,683,679	(2)	.....
	1904	3,013,151	51,824	.....
Ohio	1919	63,882,101	5,220,545	119,183,708
	1914	43,064,562	8,717,996	50,599,848
	1909	17,491,251	11,860,601	37,655,347
	1904	11,591,981	17,351,773	1,947,218
Oklahoma	1919	19,836,549	.....	.....
	1914	2,851,538	.....	.....
	1909	4,110,978	.....	.....
	1904	416,100	.....	.....
Oregon	1919	13,984,185	9,424,399	[3] 34,084,196
	1914	11,182,937	6,314,757	23,157,414
	1909	8,472,660	4,218,953	21,788,937
	1904	5,089,590	2,255,592	(2)
Pennsylvania	1919	14,589,601	15,438,708	184,951,684
	1914	23,985,125	14,808,573	69,708,917
	1909	30,484,217	11,234,037	26,461,384
	1904	35,754,841	11,453,424	20,364,700
Rhode Island	1919	197,170	(2)	.....
	1914	54,000	102,517	.....
	1909	.....	.....	.....
	1904	.....	.....	.....
South Dakota	1919	17,612,674	.....	(2)
	1914	10,538,747	.....	.....
	1909	9,495,608	.....	.....
	1904	11,058,460	(2)	.....
Texas	1919	10,911,466	(2)	.....
	1914	7,247,074	.....	.....
	1909	2,133,590	(2)	(2)
	1904	266,806	.....	.....
Utah	1919	4,410,678	1,070,933	[3] 18,575,13
	1914	3,539,357	1,094,448	(2)
	1909	3,722,784	1,060,122	(2)
	1904	3,586,547	1,629,730	[3] 127,800
Vermont	1919	12,883,193	4,907,759	[5] 31,594,375
	1914	21,076,947	2,522,937	16,887,549
	1909	20,227,495	2,762,656	13,342,666
	1904	27,256,874	4,343,160	(2)
Virginia	1919	1,732,223	(2)	(2)
	1914	712,444	(2)	(2)
	1909	158,853	(2)	.....
	1904	81,803	(2)	.....
Washington	1919	20,237,682	2,291,428	141,887,777
	1914	16,813,044	1,355,423	85,167,152
	1909	11,302,591	422,290	53,614,242
	1904	7,722,911	921,383	13,841,905
West Virginia	1919	356,498	.....	(2)
	1914	153,338	.....	.....
	1909	(2)	(2)	.....
	1904	.....	.....	.....
Wisconsin	1919	93,081,754	298,705,911	480,201,900
	1914	116,149,284	205,920,915	149,682,530
	1909	103,884,684	148,065,648	30,573,886
	1904	89,155,975	109,423,856	11,514,222
Wyoming	1919	1,324,904	1,502,022	.....
	1914	1,536,299	(2)	.....
	1909	783,585	(2)	.....
	1904	500,515	84,690	.....
All other states	1919	7,508,275	1,108,585	96,236,699
	1914	1,755,520	2,979,932	70,218,755
	1909	603,965	890,051	24,504,986
	1904	526,523	379,789	28,820,459

[1] In addition, in 1919, 17,955,316 pounds of butter, valued at $11,055,867; 1,761,621 pounds of cheese, valued at $349,133; 3,326,847 pounds of condensed and evaporated milk, valued at $391,490; 108,739 pounds of casein, valued at $11,575; 1,770,000 pounds of powdered milk, valued at $264,218; in 1914, 10,533,686 pounds of butter, valued at $3,316,342; 933,445 pounds of cheese, valued at $156,357; 2,096,934 pounds of condensed milk, valued at $123,357; 227,356 pounds of casein, valued at $13,353; in 1909, 2,381,212 pounds of butter, 49,413 pounds of part-cream cheese, and 401,300 pounds of condensed milk; and in 1904, 1,971,120 pounds of butter, were reported by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

[2] Included with the quantity shown for "All other states" to avoid disclosure of individual operations.

[3] Exclusive of condensed milk.

[4] The products of 2 establishments in Indiana and 1 in Utah engaged in the manufacture of condensed milk in 1904 were included with that for "All other states" to avoid disclosure of individual operations.

[5] Exclusive of evaporated milk.

Attention is again called to the fact that in the tables showing separately the quantities of butter, cheese, and condensed milk manufactured, the figures represent the total quantity of each of the given products reported for the industry as a whole, whether made in establishments engaged primarily in the manufacture of that product or in establishments belonging to one of the other branches of the industry. The products made in establishments in other industries are not included in the totals, but the quantities, so far as available, are shown in a footnote.

The total quantity of butter manufactured in the factories of the industry increased 295,785,413 pounds, or 47.3 per cent, for the decade 1909 to 1919. For the five-year period 1914 to 1919 the increase was 150,740,285 pounds, or 19.6 per cent. The combined production of butter in 1919 for Minnesota, Wisconsin, and Iowa, the three leading states in this respect, amounted to 35.8 per cent of the total for the industry, although the quantities reported for Iowa and Wisconsin were decreases from those reported for 1914 of 2.5 per cent and 19.9 per cent, respectively.

The production of cheese shows an increase of 52.2 per cent from 1909 to 1919, and an increase for the five-year period 1914 to 1919 of 27.9 per cent. Wisconsin continues to be the leading state, the quantity reported for 1919 being an increase of 45.1 per cent over that reported for 1914, and representing 63.1 per cent of its total production for the United States. Of the states for which figures are given separately in the table, decreases were also shown for Illinois, Indiana, Michigan, New York, and Ohio.

The increase in the production of condensed and evaporated milk between 1909 and 1919 amounted to 1,598,849,861 pounds, or 323.1 per cent, while for the

five-year period 1914 to 1919 the increase was 1,220,235,901 pounds, or 139.7 per cent. New York was the most important state in this branch of the industry, the quantity reported for 1919 being an increase of 348,161,351 pounds, or 264.6 per cent, over that reported for 1914 and representing 22.9 per cent of the total quantity of condensed and evaporated milk reported for the United States.

Quantity and value of products, by states.—Table 15 shows in detail, by states, the quantities and values of the principal products for 1919.

TABLE 15.—DETAILED STATISTICS OF KIND, QUANTITY AND VALUE OF PRINCIPAL PRODUCTS, BY STATES: 1919.

STATE.	BUTTER.						CHEESE.							
	Total.		Packed solid.		Prints or rolls.		Total.		Full-cream.		Part-cream.		Skimmed and all other kinds	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
		Dollars.		*Dollars.*		*Dollars.*		*Dollars.*		*Dollars.*		*Dollars.*		*Dollars.*
United States [1]	920,550,066	522,274,315	551,121,133	309,229,371	369,428,933	213,044,944	473,569,199	136,940,464	411,778,381	123,731,763	9,157,736	2,216,545	52,633,082	10,992,166
Alabama	445,907	275,6[illegible]5	(2)	(2)	(2)	(2)								
Arizona	1,040,437	652,737	(2)	(2)	(2)	(2)	547,645	145,831	379,581	115,163	(2)	(2)	(2)	(2)
California	61,140,390	36,195,810	18,551,691	10,751,455	42,588,699	25,444,355	9,708,885	2,675,028	6,430,686	1,944,362	1,060,415	302,121	2,217,784	428,545
Colorado	13,982,711	7,979,413	4,681,219	2,497,395	9,301,492	5,482,018	1,163,140	653,369	58,768	17,003	532,812	144,255	571,560	492,611
Connecticut	1,018,699	650,866	407,197	262,272	611,502	388,594	188,922	49,062	61,450	28,872	(2)	(2)	(2)	(2)
Delaware	234,713	177,570	28,289	15,194	266,424	162,376	(2)	(2)	(2)	(2)			(2)	(2)
Idaho	5,272,857	3,070,896	1,057,899	562,575	4,214,958	2,508,231	2,623,440	792,872	(2)	(2)			(2)	(2)
Illinois	44,527,933	24,928,641	19,906,494	10,937,917	24,621,439	13,990,724	4,851,054	1,344,910	2,464,849	939,091	(2)	(2)	[3] 1,032,679	[3] 236,443
Indiana	42,186,894	23,675,474	24,567,204	13,584,345	17,619,690	10,091,129	269,094	63,108	(2)	(2)	(2)	(2)	[3] 90,727	[3] 16,170
Iowa	90,070,758	50,438,628	62,856,122	34,729,324	27,223,636	15,709,304	1,015,790	293,685	947,415	283,881			68,375	9,804
Kansas	36,567,263	20,369,842	21,051,042	11,483,817	15,516,221	8,886,025	35,436	7,911	(2)	(2)			(2)	(2)
Kentucky	5,949,761	3,471,872	3,352,138	1,855,320	2,597,623	1,616,552	(2)	(2)					(2)	(2)
Maine	1,271,819	753,157	70,540	43,867	1,201,279	709,290	(2)	(2)					(2)	(2)
Maryland	301,895	180,312	140,625	82,745	161,270	97,567	(2)	(2)	(2)	(2)			(2)	(2)
Massachusetts	2,659,264	1,552,777	803,905	399,844	1,855,359	1,152,933	(2)	(2)	(2)	(2)			(2)	(2)
Michigan	55,842,680	29,041,657	29,358,134	16,650,919	26,484,546	12,390,738	12,857,230	3,454,423	9,201,576	2,928,357	(2)	(2)	[3] 3,292,305	[3] 442,481
Minnesota	146,295,141	81,365,245	116,662,096	64,656,612	29,633,135	16,708,633	10,116,048	2,757,387	9,271,766	2,628,913	(2)	(2)	[3] 504,627	[3] 31,188
Mississippi	3,473,709	2,026,544	1,468,293	797,844	2,005,416	1,228,700								
Missouri	35,988,733	20,138,209	18,950,331	10,241,087	17,038,402	9,897,122	188,920	30,612	(2)	(2)			(2)	(2)
Montana	6,094,466	3,392,896	2,047,587	1,084,812	4,046,879	2,308,084	390,527	113,036	(2)	(2)			(2)	(2)
Nebraska	58,570,937	33,933,148	41,522,517	23,545,435	17,048,420	10,387,713	(2)	(2)					(2)	(2)
Nevada	1,087,795	653,990			1,087,795	653,990								
New Hampshire	517,498	313,255	101,180	62,858	416,318	250,397	(2)	(2)			(2)	(2)	(2)	(2)
New Jersey	189,796	119,350	(2)	(2)	(2)	(2)	792,379	152,721	131,704	52,412			(2)	(2)
New York	15,727,774	9,949,106	10,752,801	6,619,683	4,974,973	3,329,423	88,957,860	24,822,085	59,873,219	18,217,182	4,405,916	967,087	24,678,725	5,637,816
North Carolina	884,914	559,228	684,341	434,634	200,573	124,594	192,539	60,725	192,539	60,725				
North Dakota	19,536,985	10,206,398	17,069,098	8,807,596	2,467,887	1,398,802	(2)	(2)					(2)	(2)
Ohio	63,882,101	36,894,179	30,464,645	17,275,751	33,417,456	19,618,428	5,220,545	1,634,118	2,672,289	962,974	(2)	(2)	[3] 2,170,743	[3] 635,470
Oklahoma	10,806,549	5,841,607	7,071,756	3,759,752	3,734,793	2,081,855								
Oregon	13,984,185	8,061,141	6,594,846	3,647,179	7,389,339	4,413,962	9,424,399	2,956,032	9,411,668	2,953,242			(2)	(2)
Pennsylvania	14,589,601	9,546,875	4,225,249	2,588,716	10,364,352	6,958,159	15,438,708	3,727,997	5,616,896	1,771,166	375,988	61,128	9,445,824	1,895,703
Rhode Island	197,170	125,384	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
South Dakota	17,612,674	9,568,962	14,680,702	8,019,332	2,931,972	1,549,630								
Tennessee	3,479,817	1,931,999	2,159,448	1,161,293	1,320,369	770,706	(2)	(2)	(2)	(2)				
Texas	10,911,466	6,499,280	399,327	222,222	10,512,139	6,277,058	(2)	(2)					(2)	(2)
Utah	4,410,678	2,610,102	413,641	235,389	3,997,037	2,374,713	1,070,933	304,054	1,011,417	293,436	(2)	(2)	(2)	(2)
Vermont	12,883,193	7,703,565	7,752,857	4,629,236	5,130,336	3,074,329	4,907,759	1,369,933	3,584,615	1,166,763	461,857	105,200	861,287	97,970
Virginia	1,732,223	1,027,423	1,024,071	618,326	708,152	409,097	(2)	(2)	(2)	(2)				
Washington	20,237,682	11,896,567	6,537,278	3,788,104	13,700,404	8,108,463	2,291,428	697,819	1,996,833	634,376	(2)	(2)	[3] 172,277	[3] 34,223
West Virginia	356,498	217,989	291,582	174,297	64,916	43,692								
Wisconsin	93,081,754	53,380,697	72,673,292	42,540,113	20,408,462	10,840,584	298,705,911	88,084,130	293,508,902	87,234,046	1,472,400	307,073	3,724,609	452,411
Wyoming	1,324,904	826,099	(2)	(2)	(2)	(2)	1,502,022	448,865	1,502,022	448,865				
All other states	108,842	69,830	741,786	462,111	2,565,270	1,606,974	1,108,585	291,251	3,460,186	1,050,934	848,348	239,081	3,801,560	581,331

[1] In addition, 17,955,316 pounds of butter, valued at $11,055,867; 1,761,621 pounds of cheese, valued at $340,133; 3,326,847 pounds of condensed and evaporated milk, valued at $391,490; 103,739 pounds of casein, valued at $11,575; 1,770,000 pounds of powdered milk, valued at $264,218 were produced by establishments engaged in the manufacture of products other than those covered by the industry designation.

[2] Figures included with those for "All other states," to avoid disclosure of individual operations.

[3] Exclusive of "skimmed milk," to avoid disclosure of individual operations.

TABLE 15.—DETAILED STATISTICS OF KIND, QUANTITY, AND VALUE OF PRINCIPAL PRODUCTS, BY STATES: 1919—Continued.

STATE.	CONDENSED AND EVAPORATED MILK.								POWDERED MILK.		SUGAR OF MILK.		CASEIN SOLD.	
	Total.		Condensed.				Evaporated.							
			Sweetened.		Unsweetened.									
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
		Dollars.		*Dollars.*		*Dollars.*		*Dollars.*		*Dollars.*		*Dollars.*		*Dollars.*
United States	2,093,646,405	293,177,134	760,582,490	126,055,505	174,004,366	17,783,261	1,159,059,549	149,338,368	104,921,388	17,008,518	10,401,416	2,632,776	16,615,076	2,188,787
Alabama	(2)	(2)	(2)	(2)	(2)	(2)								
Arizona	(2)	(2)			(2)	(2)								
California	[3] 46,600,095	[3] 7,819,767	(2)	(2)	(2)	(2)	[3] 46,600,095	[3] 7,819,767	4,490,334	789,581	4,120,743	988,608	6,462,203	940,882
Colorado	[3] 14,365,276	[3] 2,058,644			(2)	(2)	[3] 14,365,276	[3] 2,058,644					(2)	(2)
Connecticut														
Delaware													134,241	17,966
Idaho	(2)	(2)					(2)	(2)					(2)	(2)
Illinois	177,792,214	27,667,488	70,370,033	13,562,542	7,615,164	1,093,047	99,807,017	13,011,899	(2)	(2)	(2)	(2)	1,733,370	219,074
Indiana	32,470,141	3,608,035	3,312,154	422,416	7,917,430	930,021	21,240,557	2,255,598						
Iowa	[4] 8,039,785	[4] 923,110			8,039,785	923,110	(2)	(2)					(2)	(2)
Kansas	21,831,821	2,750,970	2,388,071	425,174	2,745,306	189,507	16,698,444	2,139,289					(2)	(2)
Kentucky														
Maine	(2)	(2)	(2)	(2)									1,221,622	134,169
Maryland	[4] 3,875,951	[4] 282,789	1,146,877	122,657	2,729,074	160,132	(2)	(2)	(2)	(2)				
Massachusetts													374,926	43,239
Michigan	181,700,256	24,422,946	63,915,861	10,442,798	11,001,503	952,350	106,782,892	13,027,798	7,252,892	1,851,764	75,190	37,594		
Minnesota	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)			452,637	67,298
Mississippi														
Missouri	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)				
Montana														
Nebraska	7,041,504	524,703			4,149,580	173,283	2,891,924	351,420	2,350,102	264,890				
Nevada														
New Hampshire	(2)	(2)	(2)	(2)	(2)	(2)								
New Jersey	[4] 11,961,184	[4] 1,611,412	7,957,775	1,177,633	4,003,409	433,779	(2)	(2)					71,780	8,675
New York	479,735,984	77,094,614	363,422,890	61,857,503	35,365,071	3,756,912	80,948,023	11,480,199	21,529,412	6,129,070	5,373,108	1,390,673	3,001,220	350,076
North Carolina														
North Dakota	1,606,725	48,152			1,606,725	48,152								
Ohio	119,183,708	15,137,312	18,729,848	2,956,539	14,656,334	1,027,155	85,797,526	11,153,618	(2)	(2)	(2)	(2)	(2)	(2)
Oklahoma														
Oregon	[3] 34,084,196	[3] 4,038,583	(2)	(2)	(2)	(2)	34,084,196	4,038,583						
Pennsylvania	184,951,684	25,171,430	75,037,173	11,592,482	24,031,976	2,953,942	85,882,535	10,625,006	6,495,504	1,467,683			(2)	(2)
Rhode Island														
South Dakota	(2)	(2)			(2)	(2)								
Tennessee														
Texas														
Utah	[3] 18,575,130	[3] 2,250,739	(2)	(2)			18,575,130	2,250,739						
Vermont	[4] 31,504,375	[4] 4,769,619	30,259,093	4,659,951	1,245,282	109,668	(2)	(2)	(2)	(2)	(2)	(2)	378,605	50,588
Virginia	(2)	(2)	(2)	(2)	(2)	(2)			(2)	(2)				
Washington	141,887,777	16,250,911	821,074	93,466	407,444	34,270	140,659,259	16,123,175	(2)	(2)				
West Virginia														
Wisconsin	480,201,900	65,587,293	99,555,049	15,086,176	14,840,160	1,824,137	365,806,691	48,676,980	36,753,152	3,679,490			263,652	33,029
Wyoming														
All other states	96,236,699	11,158,617	23,666,592	3,656,168	33,650,123	3,176,796	38,919,984	4,325,653	26,049,992	2,826,040	832,375	215,901	2,521,420	323,791

[2] Figures included with those for "All other states," to avoid disclosure of individual operations.
[3] Exclusive of "condensed milk," to avoid disclosure of individual operations.
[4] Exclusive of "evaporated milk," to avoid disclosure of individual operations.

In 1919, in addition to the products shown in the table, 19,763,067 gallons of ice cream were reported, valued at $21,619,167. Whey to the value of $3,423,906 was also reported, and of this amount, $2,846,067, or 83.1 per cent, was reported for Wisconsin.

Quantity and value of products, United States as a whole.—Table 16 shows in detail, for the United States as a whole, the products of the industry for 1919, 1914, 1909, and 1904.

Of the total value of products for the United States in 1919, butter represented 49 per cent, cheese 12.8 per cent, and condensed and evaporated milk 27.5 per cent.

In 1919, of the total production of butter reported for the industry, 40.1 per cent was put up in prints or rolls, as compared with 38.1 per cent in 1914 and 34.3 per cent in 1909, the remainder in each case being packed solid. The increase from 1914 to 1919 in the quantity of butter put up in prints or rolls amounted to 76,514,944 pounds, or 26.1 per cent, and the increase in butter packed solid to 74,225,341 pounds, or 15.6 per cent.

Of the total quantity of cheese manufactured in 1919, 87 per cent represented full-cream, 1.9 per cent part-cream, 3.4 per cent skimmed, and 7.7 per cent "Other kinds." From 1914 to 1919 the production of full-cream cheese increased 79,087,490 pounds, or 23.8 per cent, that of skimmed-milk cheese, 2,203,363 pounds, or 15.9 per cent, while the production of "Other kinds" of cheese was nearly seven times greater, or 579.7 per cent. The only decrease is shown for part-cream cheese, for which there was a falling off in production for the five years of 9,160,701 pounds, or 50.1 per cent.

TABLE 16.—DETAILED STATISTICS OF KIND, QUANTITY, AND VALUE OF PRODUCTS: 1919, 1914, 1909, AND 1904.

	1919	1914	1909	1904
Products, total value	[1]$1,066,125,489	[2]$364,285,150	[3]$274,557,718	[4]$168,182,789
Butter:				
Pounds	920,550,066	769,809,781	624,764,653	531,478,141
Value	$522,274,315	$218,021,690	$179,510,619	$113,189,453
Packed solid—				
Pounds	551,121,133	476,895,792	410,692,616	364,432,906
Value	$309,229,371	$132,259,918	$115,098,056	$74,483,306
Prints or rolls—				
Pounds	369,428,933	292,913,989	214,072,037	167,045,145
Value	$213,044,944	$85,761,772	$64,412,563	$38,706,147
Cheese:				
Pounds	473,569,199	370,278,599	311,126,317	317,144,872
Value	$136,940,464	$59,377,018	$43,239,924	$28,611,760
Full-cream—				
Pounds	411,778,381	332,690,891	287,110,383	239,652,634
Value	$123,731,763	$47,432,597	$40,817,073	$22,024,853
Part-cream—				
Pounds	9,157,736	18,318,437	10,803,392	
Value	$2,216,515	$1,542,280	$1,188,000	
Skimmed—				
Pounds	16,097,055	13,893,692	7,770,812	3,459,582
Value	$2,185,539	$748,586	$429,519	$148,558
Other kinds—				
Pounds	36,536,027	5,375,579	5,441,730	74,032,656
Value	$8,806,617	$553,555	$805,332	$5,438,339
Condensed and evaporated milk:				
Pounds	2,093,646,405	873,410,504	491,796,544	308,485,182
Value	$293,177,134	$58,747,252	$33,563,129	$20,149,282
Condensed milk—				
Pounds	934,586,856	599,762,869	.....	.....
Value	$143,838,766	$41,513,153	.....	.....
Sweetened—				
Pounds	760,582,490	267,869,955	214,518,310	198,355,189
Value	$126,055,505	$21,585,139	$17,345,278	$13,478,376
Unsweetened—				
Pounds	174,004,366	331,892,914	280,278,234	110,129,993
Value	$17,783,261	$19,928,014	$16,217,851	$6,670,906
Evaporated milk—				
Pounds	1,159,059,549	273,647,635		
Value	$149,338,368	$17,234,099		
In sealed cans—				
Pounds	1,790,910,965	.....	.....	.....
Not in sealed cans—				
Pounds	302,735,440	.....	.....	.....
Cream sold:				
Pounds	120,304,163	123,511,348	81,211,374	28,131,914
Value	$26,173,920	$13,802,053	$9,828,972	$2,364,407
Skimmed milk sold:				
Value	$2,453,657	$786,050	$629,135	$1,368,738
Buttermilk sold:				
Value	$4,027,144	$1,278,700	.....	.....
Casein:				
Pounds	16,615,076	18,570,220	13,018,298	11,581,874
Value	$2,188,787	$977,770	$795,544	$554,099
Whey sold:				
Value	$3,423,905	$72,979	(5)	(5)
Powdered milk:				
Pounds	104,921,388	20,454,051	(5)	(5)
Value	$17,008,518	$1,968,259	(5)	(5)
Sugar of milk:				
Pounds	10,401,416	4,051,320	(5)	(5)
Value	$2,632,776	$400,613	(5)	(5)
All other products, value	$55,824,868	$17,852,756	$6,990,395	$1,945,050

[1] In addition, 17,955,316 pounds of butter valued at $11,055,867; 1,761,621 pounds of cheese, valued at $340,133; 3,326,847 pounds of condensed and evaporated milk, valued at $391,490; 108,739 pounds of casein, valued at $11,575; 1,770,000 pounds of powdered milk, valued at $264,218 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

[2] In addition, 10,533,068 pounds of butter, valued at $3,316,342; 933,445 pounds of cheese, valued at $156,357; 2,096,934 pounds of condensed milk, valued at $123,357; and 227,356 pounds of casein, valued at $13,353, were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

[3] In addition, 2,381,212 pounds of butter, valued at $664,171; 49,143 pounds of part-cream cheese, valued at $24,078; and other dairy products to the value of $25,388 were produced by establishments engaged primarily in the manufacture of products other than those covered by the industry designation.

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

[5] Not reported separately.

In 1919 the quantities reported for sweetened and unsweetened condensed milk represented 36.3 per cent and 8.3 per cent, respectively, of the total production of condensed and evaporated milk, while the proportion for evaporated milk was 55.4 per cent. For the five-year period 1914 to 1919 there was an increase of 492,712,535 pounds, or 183.9 per cent, in the quantity of sweetened condensed milk, and an increase of 885,411,914 pounds, or 323.6 per cent, in the production of evaporated milk, but there were decreases in both quantity and value of unsweetened condensed milk of 47.6 per cent and 10.8 per cent, respectively.

The production of powdered milk, which was first included with the butter, cheese, and condensed-milk industry at the census of 1914, showed an increase for the five-year period of 84,467,337 pounds, or 413 per cent.

Production of butter and cheese in factories and on farms.—Table 17 shows the total quantity of butter and cheese produced in the factories of the butter, cheese, and condensed-milk industry and on farms in 1919 and 1909.

TABLE 17.—BUTTER AND CHEESE PRODUCED IN FACTORIES AND ON FARMS: 1919 AND 1909.

PRODUCT.	PRODUCTION (POUNDS).			
	1919	1909	Per cent of total.	
			1919	1909
Butter	1,628,216,558	1,619,415,263	100.0	100.0
Factory product [1]	920,550,066	624,764,653	56.5	38.6
Farm product	707,666,492	994,650,610	43.5	61.4
Cheese	479,940,595	320,532,181	100.0	100.0
Factory product [2]	473,569,199	311,126,317	98.7	97.1
Farm product	6,371,396	9,405,864	1.3	2.9

[1] In addition, there were 17,955,316 pounds of butter in 1919, and 2,381,212 pounds in 1909, produced in establishments engaged primarily in the manufacture of products other than butter, cheese, or condensed milk.

[2] In addition, there were 1,761,621 pounds of cheese in 1919, and 49,413 pounds in 1909, produced in establishments engaged primarily in the manufacture of products other than butter, cheese, or condensed milk.

In 1919 the combined production of butter in the factories of the butter, cheese, and condensed-milk industry and on farms in the United States was an increase of only 8,801,295 pounds, or five-tenths of 1 per cent, over the production in 1909. During the decade the output of the factories increased 295,785,413 pounds, or 47.3 per cent, while the production on farms decreased 286,984,118 pounds, or 28.9 per cent. In 1909 the production of butter on farms exceeded the factory output, but the proportion which it formed of the combined total at that census decreased from 61.4 per cent to 43.5 per cent in 1919.

The quantity of cheese produced in the United States in the factories of the industry and on farms during 1919 was an increase of 159,408,414 pounds, or 49.7 per cent, over the production in 1909. The production in the factories engaged in the industry increased 162,442,882 pounds, or 52.2 per cent, between 1909 and 1919, and the production on farms decreased 3,034,468 pounds, or 32.3 per cent. At both censuses the quantity made in factories was many times greater than the quantity made on farms, and the proportion which it formed of the combined total increased from 97.1 per cent in 1909 to 98.7 per cent in 1919.

GENERAL TABLES.

Comparative summary, by states, 1919, 1914, and 1909.—Table 18 gives, for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the industry as a whole.

Detailed statement of the combined industry, by states, 1919.—Table 19 presents, for 1919, statistics in detail for the butter, cheese, and condensed-milk industry for the three branches separately.

TABLE 18.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	7,669	35,313	168,871	$37,940	$926,366	$1,066,125
	1914	7,628	23,059	130,862	15,847	315,026	364,285
	1909	8,479	18,431	101,349	11,081	235,546	274,558
Arizona	1919	9	155	1,111	253	2,427	3,159
	1914	7	86	315	88	776	1,072
	1909	11	58	350	51	388	538
California	1919	180	2,022	7,186	2,382	49,671	56,420
	1914	201	1,044	4,694	896	17,974	20,466
	1909	161	597	2,496	466	11,140	12,761
Colorado	1919	78	495	2,565	454	9,947	11,906
	1914	61	291	1,388	223	2,912	3,597
	1909	39	210	657	130	1,924	2,430
Connecticut	1919	22	44	408	43	730	901
	1914	24	63	197	43	527	624
	1909	30	105	231	52	623	745
Delaware	1919	[1] 6	32	186	29	516	570
	1914	[1] 10	45	257	28	183	242
	1909	10	32	204	14	211	264
Idaho	1919	[2] 48	225	1,341	285	4,800	5,669
	1914	28	88	857	76	1,165	1,396
	1909	18	118	260	77	681	884
Illinois	1919	223	1,991	8,467	2,104	49,619	58,298
	1914	267	1,755	6,184	1,079	18,236	21,792
	1909	295	1,732	6,753	942	14,267	17,798
Indiana	1919	[2] 101	1,660	3,914	1,466	27,993	32,541
	1914	120	719	3,007	452	7,431	8,824
	1909	132	488	1,858	262	3,196	3,959
Iowa	1919	434	1,663	10,135	1,756	50,481	57,800
	1914	490	1,333	9,048	1,013	24,075	27,606
	1909	512	1,231	8,911	855	22,842	25,850
Kansas	1919	[2] 67	927	3,475	911	23,406	27,258
	1914	61	761	2,752	407	8,710	10,220
	1909	60	348	2,544	211	4,951	6,071
Kentucky	1919	16	140	1,082	120	3,273	3,655
	1914	[1] 10	122	115	77	116	287
	1909	13	56	164	30	195	275
Maine	1919	[1] 10	75	254	74	697	1,060
	1914	[2] 17	90	450	55	1,239	1,426
	1909	29	96	523	48	1,098	1,301
Maryland	1919	[2] 17	90	435	85	1,515	1,893
	1914	32	61	452	34	463	583
	1909	44	69	522	39	524	654
Massachusetts	1919	23	65	313	69	1,847	2,214
	1914	17	33	158	21	697	814
	1909	24	56	318	29	548	664
Michigan	1919	318	2,194	9,136	2,483	55,906	64,787
	1914	364	1,367	6,659	863	18,463	21,550
	1909	435	1,073	4,776	554	12,377	14,287
Minnesota	1919	903	2,135	15,873	2,398	86,020	93,586
	1914	[1] 807	1,458	12,865	1,167	30,770	33,746
	1909	784	1,184	11,874	829	22,707	25,287
Missouri	1919	71	691	2,871	647	20,159	22,295
	1914	[2] 54	361	1,556	202	4,367	5,167
	1909	56	159	788	100	2,499	2,959
Montana	1919	53	195	1,227	261	3,559	4,326
	1914	[1] 32	71	509	69	1,011	1,218
	1909	20	29	235	24	354	419
Nebraska	1919	57	1,111	7,772	$1,250	$32,331	$38,245
	1914	[2] 48	696	11,787	486	9,791	11,082
	1909	37	383	1,032	256	6,435	7,681
Nevada	1919	5	17	158	22	600	662
	1914	11	21	173	21	373	447
	1909	9	16	94	15	289	326
New Hampshire	1919	[1] 16	16	254	19	522	643
	1914	23	44	310	27	547	657
	1909	29	50	492	31	709	807
New Jersey	1919	19	90	580	110	2,046	2,474
	1914	[1] 14	67	492	44	730	854
	1909	20	73	771	42	670	793
New York	1919	821	5,082	17,030	5,069	110,716	129,008
	1914	1,144	3,235	15,389	2,029	36,979	43,262
	1909	1,552	2,866	16,629	1,607	36,161	42,458
North Dakota	1919	60	215	1,894	247	10,031	11,170
	1914	58	115	669	93	1,464	1,740
	1909	68	62	854	46	891	1,029
Ohio	1919	267	2,132	10,401	2,290	50,415	60,013
	1914	286	1,480	6,677	1,049	15,968	19,326
	1909	325	1,067	3,386	557	7,685	9,690
Oklahoma	1919	20	301	835	291	6,725	7,718
	1914	14	46	282	28	673	809
	1909	19	62	427	36	928	1,150
Oregon	1919	136	595	3,333	707	13,237	15,762
	1914	118	434	1,827	325	5,502	6,568
	1909	95	420	1,935	290	3,952	4,920
Pennsylvania	1919	273	1,900	9,729	1,883	36,349	44,564
	1914	387	1,309	7,808	745	13,017	15,687
	1909	536	1,177	7,613	556	11,674	13,544
South Dakota	1919	[1] 87	225	1,802	299	9,455	10,830
	1914	62	134	988	105	2,577	2,920
	1909	95	139	1,456	112	2,308	2,686
Texas	1919	31	200	953	202	5,966	7,161
	1914	51	174	1,360	115	1,752	2,281
	1909	36	84	477	40	530	660
Utah	1919	[1] 37	298	1,418	302	4,740	5,502
	1914	37	264	1,312	144	1,891	2,298
	1909	37	214	635	116	1,613	1,971
Vermont	1919	137	608	2,814	600	16,656	18,539
	1914	173	471	2,701	314	7,976	8,696
	1909	186	519	2,944	292	7,056	8,112
Virginia	1919	23	125	565	109	1,249	1,784
	1914	[1] 13	90	245	48	476	608
	1909	11	16	141	6	54	67
Washington	1919	130	1,228	5,095	1,582	26,848	33,128
	1914	101	860	3,212	657	9,512	11,808
	1909	97	735	2,203	457	5,676	7,271
Wisconsin	1919	2,872	5,973	32,244	6,739	197,984	221,447
	1914	2,431	3,717	23,365	2,712	65,326	72,859
	1909	2,630	2,863	16,467	1,877	48,006	53,843
All other states	1919	97	355	1,918	351	6,887	7,930
	1914	55	154	802	112	1,357	1,753
	1909	24	44	329	32	384	494

[1] Excludes statistics for 1 establishment to avoid disclosure of individual operations.
[2] Excludes statistics for 2 establishments to avoid disclosure of individual operations.

TABLE 19.—DETAILED STATEMENT,

	STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.
	BUTTER.															
1	United States	3,738	26,339	2,006	2,469	2,000	2,223	17,641	Je 20,370	Ja 14,796	17,304	14,816	2,442	40	6	$162,302,108
2	Alabama	4	87	.....	14	7	1	65	Jy [3] 69	Ja [3] 59	68	63	5	.....	.....	440,570
3	California	121	1,798	155	100	131	144	1,268	Se 1,399	Ja 1,069	1,292	1,158	128	4	2	8,826,808
4	Colorado	65	505	30	62	31	44	338	Jy 417	Fe 283	342	233	106	2	1	2,709,790
5	Connecticut	17	47	5	5	1	1	35	Mh 38	Ja [3] 33	34	32	2	.....	.....	210,736
6	Delaware	6	45	.....	8	1	4	32	Au [3] 37	Ja 27	30	29	1	.....	.....	190,112
7	Idaho	32	217	8	24	12	28	145	Jy 174	Ja 119	146	133	13	.....	.....	958,650
8	Illinois	129	1,288	108	131	93	143	813	Je 940	Mh 683	789	629	158	2	.....	10,521,565
9	Indiana	92	2,001	60	160	129	199	1,453	Au 1,645	Ja 1,198	1,434	1,142	292	.....	.....	5,061,815
10	Iowa	411	2,386	234	273	162	122	1,595	Je 1,881	Mh 1,243	1,637	1,378	250	9	.....	9,292,240
11	Kansas	59	1,049	46	77	101	85	740	Je 885	Fe 575	666	482	184	.....	.....	4,099,106
12	Kentucky	16	203	7	16	23	17	140	Oc 195	Fe 94	192	124	68	.....	.....	1,251,297
13	Maine	10	97	7	5	3	7	75	Jy 79	Ja [3] 72	73	72	1	.....	.....	407,458
14	Maryland	10	18	7	2	.....	.....	9	Je [3] 11	Mh 8	10	9	1	.....	.....	72,400
15	Massachusetts	20	81	7	14	2	7	51	Au 60	Fe 44	52	50	2	.....	.....	275,310
16	Michigan	231	1,509	135	144	114	132	984	Jy 1,161	Fe 826	954	815	138	1	.....	9,147,141
17	Minnesota	832	2,734	217	234	142	179	1,962	Je 2,278	Ja 1,702	1,905	1,750	149	6	.....	42,854,461
18	Mississippi	19	152	13	16	9	8	106	Au 139	Ja 68	113	103	9	.....	1	395,850
19	Missouri	66	974	57	103	24	104	686	Jy 862	Ja 506	666	495	169	1	1	3,392,826
20	Montana	47	301	24	28	36	23	190	Jy 238	Ja 134	187	165	22	.....	.....	1,900,458
21	Nebraska	51	1,778	16	140	371	198	1,053	Je 1,439	Mh 817	912	743	168	1	.....	11,012,072
22	Nevada	5	25	2	2	4	.....	17	Je 21	Ja 15	15	13	2	.....	.....	186,742
23	New Hampshire	14	28	15	1	.....	.....	12	Mh [3] 13	My [3] 11	12	12	.....	.....	.....	70,867
24	New Jersey	5	10	4	1	.....	.....	5	([4]) 5	([4]) 5	6	6	.....	.....	.....	53,282
25	New York	123	569	73	79	29	38	350	Je 423	De 271	374	353	20	1	.....	2,420,164
26	North Carolina	7	52	2	9	4	6	31	Jy 45	Ja 22	30	29	1	.....	.....	186,907
27	North Dakota	57	346	31	31	37	35	212	Jy 326	Ja 131	184	166	17	1	.....	1,621,167
28	Ohio	141	2,029	77	167	134	289	1,362	Jy 1,531	Ja 1,148	1,361	1,160	196	5	.....	8,018,205
29	Oklahoma	20	408	12	29	43	23	301	Au 357	Mh 257	258	195	63	.....	.....	1,097,181
30	Oregon	76	570	44	61	58	58	349	Je 414	De 284	328	280	47	1	.....	2,086,548
31	Pennsylvania	160	589	167	33	9	23	357	Jy 397	Ja 316	349	337	11	1	.....	2,593,020
32	Rhode Island	7	11	4	1	.....	1	5	My [3] 6	Ap 3	5	4	1	.....	.....	124,247
33	South Dakota	86	376	50	34	24	45	223	Jy 309	Ja 158	207	185	21	1	.....	1,360,363
34	Tennessee	10	78	.....	18	5	5	50	Se 63	Mh 25	61	41	20	.....	.....	207,637
35	Texas	31	326	26	25	46	29	200	Au 229	Ja 164	210	178	31	1	.....	1,815,106
36	Utah	17	189	13	19	25	16	116	Jy 124	Oc 109	112	87	25	.....	.....	852,360
37	Vermont	92	449	49	61	18	28	293	Jy 343	Fe 252	282	271	11	.....	.....	1,098,158
38	Virginia	20	130	6	17	7	6	94	Au 101	Fe 87	92	91	1	.....	.....	408,063
39	Washington	101	798	40	146	67	70	475	Jy 559	Fe 410	482	431	50	.....	1	3,052,981
40	West Virginia	6	27	2	3	1	1	20	Se 22	De 18	20	19	1	.....	.....	122,924
41	Wisconsin	498	1,836	185	158	83	93	1,317	Jy 1,433	Fe 1,216	1,305	1,251	51	3	.....	10,011,200
42	Wyoming	13	66	7	9	9	6	35	Jy 40	Fe [3] 31	38	31	7	.....	.....	287,925
43	All other states [5]	11	157	51	9	5	5	77	.....	.....	71	71	.....	.....	.....	451,745
	CHEESE.															
1	United States	3,530	6,993	2,400	345	159	92	3,997	Je 5,026	Ja 2,843	4,723	4,523	174	26	.....	$26,022,734
2	California	48	307	60	14	13	10	210	Oc [3] 231	Fe 167	235	225	8	2	.....	2,063,335
3	Colorado	8	76	4	6	12	5	49	Je [3] 52	Ja 43	49	31	18	.....	.....	566,164
4	Connecticut	5	16	4	2	.....	1	9	Ja 29	Jy [3] 3	25	25	.....	.....	.....	48,915
5	Idaho	14	35	3	7	1	.....	24	Je [3] 28	Ja 18	29	28	1	.....	.....	147,650
6	Illinois	56	99	16	10	3	3	67	Je [3] 80	Ja 50	76	73	3	.....	.....	320,678
7	Iowa	20	37	19	.....	1	.....	17	Mh [3] 19	De 12	20	19	1	.....	.....	96,375
8	Michigan	55	212	31	13	12	10	146	No 158	Ja 125	161	146	15	.....	.....	760,562
9	Minnesota	66	123	25	6	1	2	89	Je 121	De 59	95	95	.....	.....	.....	255,982
10	Montana	6	10	5	.....	.....	.....	5	Fe 8	Ja [3] 3	6	5	1	.....	.....	42,550
11	New Jersey	8	15	7	.....	.....	.....	8	Au 11	Ja [3] 7	6	6	.....	.....	.....	162,832
12	New York	598	1,676	459	124	61	30	1,002	Je 1,424	Ja 659	1,313	1,245	65	3	.....	6,258,937
13	North Carolina	15	26	17	2	.....	.....	7	Je 12	Fe [3] 3	10	9	.....	1	.....	20,026
14	Ohio	96	112	52	1	.....	.....	59	My 93	Ja [3] 21	86	86	.....	.....	.....	270,850
15	Oregon	52	96	25	2	2	1	66	Jy 91	Ja 34	87	85	1	1	.....	409,726
16	Pennsylvania	64	297	52	27	21	9	188	Jy 232	Fe 153	196	188	7	1	.....	1,243,006
17	Utah	17	37	6	2	1	.....	28	Ja [3] 31	De [3] 24	30	30	.....	.....	.....	93,399
18	Vermont	38	99	32	10	2	7	48	Je 70	Ja 31	62	58	4	.....	.....	240,033
19	Washington	15	36	9	6	1	1	19	Jy 27	Ja [3] 12	24	21	3	.....	.....	135,149
20	Wisconsin	2,323	3,608	1,555	107	26	8	1,912	Je 2,328	Ja 1,333	2,164	2,099	47	18	.....	12,566,530
21	All other states [5]	26	76	19	6	2	5	44	.....	.....	49	49	.....	.....	.....	330,035

[1] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[2] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).
[3] Same number reported for one or more otherr months.
[4] Same number reported throughout the year.

BY STATES: 1919.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.						Electric horsepower generated in establishments reporting.	
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines).	Steam turbines.	Internal combustion engines.	Water power.[1]	Rented.[2]		
BUTTER.																	
$5,247,090	$4,274,999	$18,852,729	$428,799	$628,124	$2,786,657	$509,928,330	$4,417,409	$583,163,011	$68,817,272	95,190	46,340	1,165	5,522	748	41,415	5,347	1
27,905	9,394	42,358	.....	929	4,963	818,431	35,637	982,943	128,875	637	400	.....	50	.....	187	.....	2
261,158	352,972	1,542,380	26,617	56,723	222,408	35,969,721	376,300	40,659,853	4,313,832	4,630	818	42	232	59	3,479	.....	3
203,710	87,904	281,539	9,445	34,990	65,981	7,293,808	69,694	8,768,394	1,404,892	1,728	1,030	1	8	.....	689	240	4
4,146	1,085	31,970	51	420	1,849	618,370	12,232	783,664	153,062	346	125	.....	.....	.....	221	.....	5
8,180	4,321	29,490	.....	460	1,406	503,768	12,285	570,402	54,349	186	185	.....	.....	.....	1	.....	6
52,363	41,508	187,048	600	7,585	10,603	3,094,590	35,623	3,664,496	534,283	764	165	12	18	.....	569	5	7
345,489	221,359	790,255	3,745	25,801	111,354	23,588,871	149,635	26,376,027	2,637,521	4,015	1,086	41	303	.....	2,585	1	8
369,701	285,357	1,260,268	19,364	15,887	159,787	23,833,038	214,789	27,900,732	3,852,905	3,112	953	140	32	.....	1,987	86	9
450,718	310,443	1,678,637	61,371	35,728	276,080	48,946,955	492,526	56,422,287	6,982,806	9,681	5,422	117	781	47	3,314	568	10
261,501	211,266	728,286	51,988	14,307	209,150	21,007,748	148,204	24,443,667	3,287,715	2,955	1,475	.....	275	.....	1,205	267	11
31,099	32,438	120,428	9,050	8,634	10,294	3,235,391	37,556	3,655,208	382,261	1,082	486	.....	82	.....	514	.....	12
7,191	9,480	74,222	.....	733	3,889	682,365	14,931	1,059,652	362,356	254	49	46	7	.....	152	.....	13
2,040	.....	10,548	55	321	1,355	166,855	4,377	205,745	34,513	122	115	.....	6	.....	1	.....	14
16,343	8,983	61,513	.....	8,798	4,088	1,786,161	22,393	2,148,354	339,800	304	80	.....	.....	.....	224	.....	15
287,013	276,978	1,173,610	19,667	31,978	143,126	29,346,329	234,563	33,385,420	3,804,528	4,943	1,883	192	167	.....	2,701	60	16
376,192	312,057	2,237,868	45,738	46,769	248,379	81,360,264	570,887	88,882,271	6,951,120	14,644	9,716	179	776	71	3,902	965	17
27,826	16,012	99,825	.....	5,524	4,158	1,865,970	28,645	2,248,099	353,484	501	187	1	12	.....	301	.....	18
234,291	253,997	640,842	.....	45,388	131,888	19,913,865	121,830	22,147,691	2,111,996	2,751	691	22	99	5	1,934	35	19
60,900	70,495	254,197	8,647	10,094	19,641	3,416,583	46,868	4,219,316	755,865	1,200	260	1	14	.....	925	42	20
553,915	443,814	1,183,230	.....	19,157	341,005	31,332,785	353,723	37,240,778	5,554,270	6,832	4,188	1	99	.....	2,544	985	21
5,597	7,330	22,409	.....	.....	988	592,138	7,510	662,023	62,375	158	40	.....	18	.....	100	.....	22
2,961	169	12,940	198	350	912	317,403	3,317	391,297	70,577	91	62	.....	10	1	18	.....	23
900	.....	5,620	.....	488	276	115,028	3,687	150,395	31,680	103	88	.....	.....	.....	15	.....	24
72,814	59,294	405,251	4,487	8,515	67,969	8,811,528	91,568	10,558,321	1,655,225	2,010	1,166	10	139	222	473	1	25
14,995	11,610	22,347	1,374	556	1,904	513,618	6,482	622,288	102,188	86	9	.....	.....	.....	77	.....	26
92,620	87,543	241,340	15,189	7,567	58,691	9,936,669	60,001	11,121,687	1,125,017	1,264	347	30	95	.....	792	5	27
451,478	387,817	1,456,165	4,984	81,648	255,889	34,455,248	271,955	41,061,993	6,334,790	7,405	3,486	3	1,124	.....	2,792	748	28
111,379	74,471	290,526	.....	17,757	29,908	6,670,716	53,786	7,718,428	993,926	835	190	.....	76	.....	569	5	29
116,231	111,387	395,827	861	31,270	21,155	7,369,497	69,161	8,727,869	1,289,211	1,714	289	.....	25	.....	1,400	39	30
48,527	24,218	334,822	4,548	4,726	20,658	8,212,597	120,403	9,718,065	1,385,065	3,314	2,037	73	106	10	1,088	10	31
1,500	600	5,036	.....	1,589	404	115,320	811	130,223	14,092	40	23	.....	.....	.....	17	.....	32
67,027	72,349	295,668	1,289	10,793	84,661	9,364,078	74,379	10,805,783	1,367,326	1,502	632	.....	100	.....	770	.....	33
27,201	8,988	49,269	1,080	1,459	5,092	1,885,777	5,806	1,971,699	80,116	165	56	10	.....	.....	99	300	34
55,008	90,732	201,822	.....	7,349	64,369	5,904,093	61,955	7,161,208	1,195,160	953	275	.....	60	.....	618	.....	35
46,622	63,278	126,025	67	9,479	7,029	2,335,030	21,759	2,698,795	342,006	397	139	50	9	.....	199	100	36
56,526	24,144	276,856	7,739	1,940	16,397	8,821,345	69,500	10,194,160	1,303,315	1,729	800	22	71	263	573	102	37
24,669	11,329	78,916	50	4,570	5,333	1,082,030	23,266	1,535,290	429,994	440	85	.....	.....	.....	355	10	38
180,859	138,376	588,555	3,321	35,498	60,432	10,611,350	119,131	12,990,885	2,260,404	2,877	1,127	.....	18	70	1,662	57	39
2,675	955	15,441	2,737	.....	750	241,446	2,225	299,234	55,563	171	104	.....	54	.....	13	.....	40
237,237	121,566	1,448,874	124,537	26,934	95,526	52,009,980	336,649	56,642,327	4,295,698	8,675	5,748	172	582	.....	2,173	712	41
20,017	15,522	53,823	.....	2,340	9,749	777,446	11,990	949,249	159,813	234	110	.....	.....	.....	124	.....	42
28,566	13,458	96,683	.....	3,070	7,161	1,004,125	19,370	1,286,793	263,318	340	213	.....	74	.....	53	4	43
CHEESE.																	
$389,924	$660,119	$4,808,991	$42,567	$129,213	$278,661	$127,988,010	$1,437,255	$143,455,704	$14,030,439	24,500	17,760	1,749	3,000	112	1,879	142	1
34,740	25,307	269,183	.....	11,428	15,459	3,186,203	67,758	3,792,388	538,427	772	155	10	36	2	569	93	2
23,158	26,977	46,413	5,497	2,526	10,146	526,270	5,837	732,260	200,153	110	34	.....	6	.....	70	.....	3
2,110	264	11,387	.....	1,886	126	97,465	1,500	116,884	17,919	62	50	12	.....	.....	.....	.....	4
7,558	600	30,627	.....	733	1,028	656,210	9,902	727,759	61,647	117	14	.....	.....	.....	103	.....	5
14,725	8,426	109,395	.....	3,326	1,824	1,185,183	18,515	1,484,399	280,701	432	343	24	52	.....	13	.....	6
.....	200	17,342	.....	825	145	243,972	4,794	284,145	35,379	100	93	.....	2	.....	5	.....	7
21,946	32,643	171,563	200	3,227	6,256	3,161,993	56,288	3,663,131	444,850	668	530	21	35	.....	82	5	8
3,029	403,426	89,729	.....	4,706	1,826	2,481,755	24,125	2,838,135	332,255	505	429	9	14	.....	53	.....	9
.....	.....	6,617	.....	.....	227	93,455	1,655	107,110	12,000	27	12	.....	12	.....	3	.....	10
.....	.....	6,172	.....	715	154	105,280	517	127,968	22,171	54	54	.....	.....	.....	.....	.....	11
159,687	87,349	997,633	5,828	17,713	96,934	23,096,164	262,968	26,539,612	3,180,480	5,236	4,516	97	207	60	356	11	12
270	.....	3,778	413	.....	430	47,643	407	60,725	12,675	1	.....	.....	.....	.....	1	.....	13
1,097	.....	125,422	2,698	3,879	3,991	1,514,248	11,064	1,753,274	227,962	510	435	72	3	.....	.....	.....	14
2,800	997	89,667	3,714	1,578	35,953	2,524,379	20,394	2,854,282	309,509	498	397	.....	12	10	79	.....	15
46,678	45,430	216,481	1,382	2,791	13,400	2,992,964	42,759	3,817,471	781,748	1,625	1,367	16	77	12	153	.....	16
2,100	440	29,028	335	570	651	190,419	5,285	235,184	39,480	65	56	.....	.....	.....	9	.....	17
13,907	7,695	50,407	.....	2,496	2,776	1,328,804	10,645	1,482,936	143,487	262	175	13	6	.....	68	10	18
5,300	630	26,879	965	1,350	1,007	463,552	6,561	550,266	80,153	146	89	.....	17	15	25	.....	19
38,957	14,240	2,445,629	20,290	67,780	85,195	83,480,320	869,478	91,462,678	7,112,880	13,180	8,882	1,475	2,521	13	289	23	20
11,862	5,495	65,639	1,245	1,684	1,133	611,731	16,803	825,097	196,563	130	129	.....	.....	.....	1	.....	21

[5] All other states embrace: Arizona, 6 establishments; Arkansas, 2; Louisiana, 2; New Mexico, 1.
[6] All other states embrace: Arizona, 2 establishments; Delaware, 1; Georgia, 1; Indiana, 2; Kansas, 2; Maryland, 2; Massachusetts, 1; Missouri, 2; New Hampshire, 1; Rhode Island, 2; Tennessee 2; Virginia, 2; Wyoming, 6.

TABLE 19.—DETAILED STATEMENT,

	STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.
	CONDENSED MILK.															
1	United States	401	16,533	46	987	930	895	13,675	Je 15,593	Ja 11,383	13,183	11,420	1,736	22	5	$126,952,520
2	California	11	648	.....	25	40	39	544	Jy [3] 638	Ja 451	471	395	76	.....	.....	5,744,307
3	Colorado	5	124	.....	7	4	5	108	Ap 114	Oc 98	109	94	15	.....	.....	894,387
4	Illinois	38	1,377	6	88	90	82	1,111	Je 1,208	Ja 1,016	1,060	921	125	10	4	14,636,102
5	Indiana	7	254	.....	20	7	22	205	Je 246	Mh 159	193	163	30	.....	.....	1,363,855
6	Iowa	3	58	.....	3	2	2	51	Ja 57	Ap [3] 45	45	38	7	.....	.....	541,469
7	Kansas	6	217	6	11	7	6	187	My 220	Ja 159	180	160	20	.....	.....	1,280,233
8	Maryland	5	93	.....	6	2	6	79	Jy 89	Mh 55	82	81	1	.....	.....	502,779
9	Michigan	32	1,270	3	81	56	66	1,064	Je 1,143	Ja 972	1,035	914	119	2	.....	11,224,584
10	Minnesota	5	117	2	11	9	11	84	Je 102	Ja 63	91	66	25	.....	.....	1,223,556
11	Nebraska	6	87	.....	11	3	15	58	My 72	De 36	36	36	.....	.....	.....	964,710
12	New Jersey	6	95	2	7	4	5	77	Jy [3] 84	Ja [3] 70	78	77	1	.....	.....	684,669
13	New York	100	4,421	2	240	213	236	3,730	Je 4,435	Ja 2,635	3,618	3,152	465	1	.....	29,998,636
14	North Dakota	3	8	.....	2	1	2	3	Se [3] 6	Ja [3] 1	6	6	.....	.....	.....	96,071
15	Ohio	30	806	3	41	24	27	711	Je 783	Ja 647	703	639	64	.....	.....	4,493,877
16	Oregon	8	247	.....	21	29	17	180	De 241	Ap 138	249	207	42	.....	.....	2,494,314
17	Pennsylvania	49	1,602	9	89	75	74	1,355	Jy 1,559	Ja 1,086	1,317	1,155	157	5	.....	9,600,179
18	Vermont	7	317	4	12	17	17	267	My [3] 344	De 190	200	190	10	.....	.....	2,532,466
19	Washington	14	964	.....	41	125	64	734	Je 887	Ja 631	674	545	129	.....	.....	8,778,228
20	Wisconsin	51	3,331	5	237	182	163	2,744	Je 3,181	Ja 2,477	2,706	2,305	397	3	1	25,787,449
21	All other states [4]	15	497	4	34	40	36	383	.....	.....	330	276	53	1	.....	4,101,589

[1] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[2] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

BY STATES: 1919—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.						Electric horsepower generated in establishments reporting.	
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
CONDENSED MILK.																	
$3,223,142	$2,422,424	$14,277,956	$240,609	$159,842	$4,861,213	$277,324,307	$5,270,985	$339,506,774	$56,911,482	49,181	35,206	2,003	772	695	10,505	11,594	1
108,662	121,743	570,327	5,000	1,375	189,215	9,815,993	254,971	11,968,142	1,897,178	1,784	753	.....	200	.....	831	345	2
31,593	28,980	126,248	30,896	6,337	27,203	1,995,188	56,402	2,405,286	353,696	727	352	80	3	.....	292	16	3
255,254	229,860	1,204,682	24,437	14,350	501,919	24,272,797	404,022	30,437,845	5,761,026	4,020	3,434	219	10	.....	357	1,345	4
72,250	35,490	204,137	.....	.....	46,540	3,833,437	92,351	4,617,448	691,660	792	455	.....	.....	.....	337	213	5
35,999	6,953	60,237	.....	5,644	4,140	755,035	37,559	1,093,716	301,122	354	340	.....	.....	.....	14	.....	6
53,028	18,776	183,330	.....	835	60,269	2,185,018	62,254	2,810,144	562,872	508	327	156	.....	.....	25	213	7
13,965	14,352	71,977	.....	.....	13,336	1,246,251	35,313	1,584,148	302,584	272	270	.....	.....	.....	2	72	8
259,256	167,739	1,138,158	148	4,472	394,068	22,673,469	433,699	27,738,047	4,630,879	3,525	2,987	.....	20	.....	518	968	9
23,378	19,781	70,539	500	7,950	7,878	1,541,176	41,812	1,865,199	282,211	724	352	.....	.....	.....	372	.....	10
49,182	11,500	67,327	.....	10,853	16,137	593,540	50,747	1,004,158	359,871	940	921	2	.....	.....	17	.....	11
15,137	10,448	98,525	.....	50	10,337	1,793,091	28,429	2,196,550	375,030	423	224	.....	.....	.....	199	5	12
903,153	576,138	3,666,567	19,835	84,860	1,089,497	77,092,915	1,361,169	91,910,432	13,456,348	9,784	7,001	225	231	510	1,817	2,173	13
2,240	2,296	5,398	.....	2,112	273	33,206	1,126	48,152	13,820	630	.....	.....	.....	.....	630	.....	14
127,316	58,740	708,177	12,577	5,293	119,206	13,925,447	237,503	17,197,564	3,034,614	2,486	1,826	3	292	.....	365	891	15
49,805	57,999	221,469	2,040	250	169,367	3,182,839	70,413	4,180,061	926,809	1,121	618	.....	.....	.....	503	16	16
255,712	185,322	1,331,790	27,005	4,865	348,246	24,532,318	448,183	31,028,725	6,048,224	4,790	4,153	.....	16	5	616	1,297	17
28,976	46,485	273,036	7,717	.....	42,467	6,300,880	124,849	6,861,556	435,827	823	587	.....	.....	.....	236	96	18
199,096	291,813	966,545	.....	2,440	756,038	15,395,573	251,418	19,586,736	3,939,745	2,072	1,124	255	.....	.....	693	476	19
666,283	442,983	2,844,596	110,454	6,971	957,874	60,162,599	1,125,296	73,342,268	12,054,373	10,389	7,277	863	.....	180	2,069	2,963	20
72,857	95,026	464,891	.....	1,185	107,203	5,993,535	153,469	7,630,597	483,593	3,017	2,205	202	.....	.....	603	505	21

[1] Same number reported for one or more other months.
[2] All other states embrace: Arizona, 1 establishment; Idaho, 2; Maine, 1; Massachusetts, 2; Missouri, 3; New Hampshire, 1; South Dakota, 1; Utah, 3; and Virginia, 1.

DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES

MANUFACTURES: 1919

BUTTONS

Prepared under the supervision of EUGENE F. HARTLEY, Chief Statistician for Manufactures

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EXPLANATION OF TERMS.

Scope of census.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than $500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

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

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date did not portray such conditions, an earlier date was requested.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

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

In order to determine as nearly as possible the age distribution of the average number of wage earners for an industry, the per cent distribution by age of the wage earners for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year to determine the average numbers 16 years and over, and under 16, employed.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital (amount actually invested).—The instructions on the schedule for securing data relating to capital were as follows:

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

These instructions were identical with those employed at the censuses of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power equipment of the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuel is impracticable.

BUTTONS.

GENERAL STATISTICS.

General charater of the industry.—This report presents statistics for establishments engaged primarily in the manufacture of buttons, including those making button blanks or molds from the raw materials and those making finished buttons from either the raw materials or blanks. These establishments manufacture bone, shell, metal, celluloid, plastic, cloth-covered, porcelain, pearl, glass, horn, composition, vegetable ivory, and wood buttons, and shell button blanks. Snap fasteners are also made by some of the establishments.

Importance and growth of the industry.—Table 1 summarizes the statistics of each census since 1879, with percentages of increase for each period. With few exceptions increases are noticeable at each succeeding census. The large increases, however, from 1914 to 1919, in salaries and wages, cost of materials, and value of products, are due largely to a general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of industrial conditions is found in the increases in the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 will account for the increase in "Rent and taxes."

The value of products includes considerable duplication, due to the fact that most of the button blanks, backs, and parts, made by establishments engaged primarily in their manufacture, were utilized as materials by establishments manufacturing the finished button.

The actual value of products of the button industry is most nearly represented by the value of the complete buttons manufactured, which amounted to $34,556,797 in 1919.

States ranked by value of products.—New York, as shown by Table 2, was, preeminently, the leading state in 1919, as it has been for a number of preceding censuses. In 1919 this state reported 42.2 per cent of the total number of wage earners and 44.7 per cent of the total value of products. New Jersey, second in importance, contributed only 16.5 per cent and 16.8 per cent, respectively, of these two items. The industry is strongly centralized in the four adjoining states of Connecticut, New York, New Jersey, and Pennsylvania, with a total value of products of $29,993,696, or 71.7 per cent of the total for the the industry.

Some of the states (Arkansas, Kansas, Michigan, New Hampshire, West Virginia, and Wisconsin), for which data can not be given without disclosing the operations of individual establishments, ranked higher than a number of those presented in the table.

Persons engaged in the industry.—The classification, by sex, for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. The age classification of the average number of wage earners in Table 3 is an estimate obtained by the method described in the "Explanation of terms." Figures by states will be found in Table 13.

Wage earners, by months.—As shown by Table 4, the number of wage earners employed in the industry month by month ranged from a maximum of 16,876 in November to a minimum of 14,594 in April, the minimum number being equivalent to 86.5 per cent of the maximum. Figures are given separately for all states reporting over 350 wage earners while for the United States the number of males and females are also shown. The table shows a number of states which employed a large proportion of female wage earners.

Prevailing hours of labor.—Table 5 shows a marked shortening of the working day for the industry since 1914. In that year only 19.9 per cent were reported as employed fewer than 54 hours per week as against 68 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 10.4 per cent of the total wage earners, as compared with 6.5 per cent in 1919.

Size of establishments, by average number of wage earners.—Analysis of Table 6 discloses the significant fact that 255 establishments, or 45.8 per cent of the total, employed fewer than six wage earners each, while only 499, or 3.2 per cent of the total number of wage earners, were employed therein. On the other hand, the establishments employing an average of more than 100 wage earners comprised only 6.5 per cent of the total number of establishments but employed 50.6 per cent of the total number of wage earners.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "$100,000 to $1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "$100,000 to $500,000" and "$500,000 to $1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns of 1914. The table, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. The statistics in Table 7 show the degree of concentration

of production in large establishments. In 1919 the groups "$500,000 to $1,000,000" and "$1,000,000 and over" included 19 establishments, or 3.4 per cent of the total number for the industry; employed 5,422 wage earners, or 34.8 per cent of the total average number; and reported products to the value of $16,729,971, or 40 per cent of the total value of products.

Character of ownership.—Table 8 emphasizes the predominance of the corporate form of ownership. Though corporations owned only 30 per cent of the total number of establishments of the industry in 1919, they employed 75.5 per cent of the total average number of wage earners, and reported 74.3 per cent of the value of products. During the five-year period the average number of wage earners in corporations increased 1,739, or 17.4 per cent, and the value of products $16,583,316, or 114.2 per cent.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 9, there was an increase in the total horsepower for the industry of 1,803 horsepower, or 12.5 per cent. This increase was wholly due to rented power, which shows an increase of 4,272 horsepower, or 98.4 per cent, while owned power decreased 2,469 horsepower, or 32.5 per cent, during the five-year period.

Fuel consumed.—Table 10 shows the principal kinds of fuel used by the industry in 1919 and 1914. In 1914 gasoline and other volatile oils were included in the total for fuel oils.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE.[1] 1914–1919	1909–1914	1904–1909	1899–1904	1889–1899	1879–1889
Number of establishments	557	517	444	275	238	106	124	7.7	16.4	61.5	15.5	124.5	−14.5
Persons engaged	17,758	16,296	18,004	11,637	9,291	(2)	(2)	9.0	−9.5	54.7	25.3	.....	.....
Proprietors and firm members	575	536	519	302	267	(2)	(2)	7.3	3.3	71.9	13.1	.....	.....
Salaried employees	1,606	1,249	1,058	768	339	(2)	(2)	28.6	18.1	37.8	126.5	.....	.....
Wage earners (average number)	15,577	14,511	16,427	10,567	8,685	3,831	5,825	7.3	−11.7	55.5	21.7	126.7	−34.2
Primary horsepower	16,201	14,398	12,831	6,982	4,165	1,680	(2)	12.5	12.2	83.8	67.6	147.9	.....
Capital	$29,977,973	$19,075,374	$15,640,152	$7,783,900	$4,212,568	$3,089,265	$2,013,350	57.2	22.0	100.9	84.8	36.4	53.4
Salaries and wages	17,121,927	8,075,236	8,088,394	4,391,669	3,122,596	1,673,876	1,645,130	112.0	−0.2	84.2	40.6	86.5	1.7
Salaries	3,349,328	1,650,837	1,299,217	711,473	296,358	(2)	(2)	102.9	27.1	82.6	140.1	.....	.....
Wages	13,772,599	6,424,399	6,789,177	3,680,196	2,826,238	(2)	(2)	114.4	−5.4	84.5	30.2	.....	.....
Paid for contract work	338,209	83,933	266,984	30,638	88,040	(2)	(2)	303.0	−68.6	771.4	−65.2	.....	.....
Rent and taxes	1,188,560	427,198	270,374	[3] 149,887	[3] 98,715	(2)	(2)	178.2	58.0	.....	.....	.....	.....
Cost of materials	16,745,357	8,702,200	9,541,291	4,144,446	2,803,246	1,551,603	1,792,891	92.4	−8.8	130.2	47.8	80.7	−13.5
Value of products	41,840,459	20,711,970	22,708,065	11,133,769	7,695,910	4,216,795	4,449,542	102.0	−8.8	104.0	44.7	82.5	− 5.2
Value added by manufacture [4]	25,095,102	12,009,779	13,166,774	6,989,323	4,892,664	2,665,192	2,656,651	109.0	−8.8	88.4	42.9	83.6	0.3

[1] A minus sign (−) denotes decrease. [2] Figures not available. [3] Exclusive of internal revenue. [4] Value of products less cost of materials.

TABLE 2.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	557	15,577	100.0	....	$41,840	100.0	....	$25,095	100.0	....
New York	243	6,568	42.2	1	18,698	44.7	1	11,216	44.7	1
New Jersey	70	2,570	16.5	2	7,021	16.8	2	4,022	16.0	2
Iowa	77	2,091	13.4	3	5,615	13.4	3	3,139	12.5	3
Pennsylvania	24	807	5.2	4	2,319	5.5	4	1,356	5.4	4
Connecticut	16	763	4.9	5	1,956	4.7	5	1,291	5.2	5
Illinois	33	452	2.9	6	1,030	2.5	6	634	2.5	7
Massachusetts	17	385	2.5	7	1,018	2.4	7	756	3.0	6
Indiana	14	261	1.7	9	408	1.0	11	237	0.9	11
Missouri	9	235	1.5	11	395	0.9	12	232	0.9	12
Kentucky	5	99	0.6	15	196	0.5	14	113	0.5	15
Ohio	6	114	0.7	14	192	0.5	15	117	0.5	14
Rhode Island	3	33	0.2	20	104	0.2	16	56	0.2	17
Minnesota	5	54	0.3	17	88	0.2	18	51	0.2	18
California	7	34	0.2	19	66	0.2	20	50	0.2	19
Washington	3	5	(1)	22	15	(1)	21	11	(1)	21
All other states	25	1,101	7.1	....	2,719	6.5	....	1,814	7.2	...

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

TABLE 3.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
All classes	1919	17,758	11,020	6,738	62.1	37.9
	1914	16,296	10,584	5,712	64.9	35.1
	1909	18,004	11,301	6,703	62.8	37.2
Proprietors and officials	1919	1,217	1,147	70	94.2	5.8
	1914	948	911	37	96.1	3.9
	1909	849	814	35	95.9	4.1
Proprietors and firm members	1919	575	549	26	95.5	4.5
	1914	536	511	25	95.3	4.7
	1909	519	498	21	96.0	4.0
Salaried officers of corporations	1919	269	254	15	94.4	5.6
	1914	192	185	7	96.4	3.6
	1909	130	125	5	96.2	3.8
Superintendents and managers	1919	373	344	29	92.2	7.8
	1914	220	215	5	97.7	2.3
	1909	200	191	9	95.5	4.5
Clerks and other subordinate salaried employees.	1919	964	471	493	48.9	51.1
	1914	837	527	310	63.0	37.0
	1909	728	449	279	61.7	38.3
Wage earners (average number)	1919	15,577	9,402	6,175	60.4	39.6
	1914	14,511	9,146	5,365	63.0	37.0
	1909	16,427	10,038	6,389	61.1	38.9
16 years of age and over	1919	15,298	9,308	5,990	60.8	39.2
	1914	14,243	9,029	5,214	63.4	36.6
	1909	15,855	9,853	6,002	62.1	37.9
Under 16 years of age	1919	279	94	185	33.7	66.3
	1914	268	117	151	43.7	56.3
	1909	572	185	387	32.3	67.7

TABLE 4.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment is indicated by **bold-faced** figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY. January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Per cent minimum is of maximum.
United States:														
1919	15,577	14,839	15,051	14,878	*14,594*	14,659	15,049	15,663	16,238	15,886	16,333	**16,876**	16,858	86.5
Males	9,402	9,029	9,092	8,975	8,723	*8,692*	8,966	9,248	9,761	9,612	9,927	10,297	**10,502**	82.8
Females	6,175	*5,810*	5,959	5,903	5,871	5,967	6,083	6,415	6,477	6,274	6,406	**6,579**	6,356	88.3
1914	14,511	16,451	16,832	16,689	15,874	14,733	13,960	12,482	*12,424*	13,181	13,799	13,801	13,915	73.8
1909	16,427	*15,362*	16,042	16,356	16,281	16,329	16,400	15,965	16,022	16,478	17,108	17,149	**17,641**	87.1
Connecticut	768	741	*725*	741	756	766	755	770	785	**805**	794	799	779	90.1
Illinois	452	462	*404*	406	448	447	434	418	445	455	468	491	**546**	74.0
Iowa	2,091	2,040	2,070	2,145	1,976	*1,939*	1,959	1,983	2,030	2,005	2,164	2,284	**2,497**	77.7
Massachusetts	385	*320*	329	349	362	377	389	422	408	404	417	**425**	418	75.3
New Jersey	2,570	*2,340*	2,345	2,399	2,436	2,497	2,567	2,639	2,712	2,689	2,700	**2,764**	2,752	84.7
New York	6,568	*6,037*	6,301	6,319	6,304	6,367	6,463	6,758	7,000	6,774	6,860	**7,016**	6,617	86.0
Pennsylvania	807	813	852	748	*744*	765	803	819	845	754	833	**855**	853	87.0
States showing a large proportion of females.														Per ct. av. is of state.
Connecticut	355	338	*333*	347	361	366	357	361	370	**374**	356	356	341	46.2
Iowa	768	733	776	783	758	759	742	766	730	*711*	783	818	**857**	36.7
New Jersey	824	735	*722*	760	758	817	833	852	870	876	878	**896**	891	32.1
New York	3,104	*2,896*	3,015	3,012	2,990	3,022	3,100	3,262	3,249	3,144	3,182	3,295	3,081	47.3
Pennsylvania	292	331	349	*262*	267	267	285	300	309	271	296	294	273	36.2

TABLE 5.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE— 44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States	1919	15,577	1,901	152	4,719	3,880	1,475	2,442	1,004	4
	1914	14,511	(2)	(2)	388	2,506	5,130	4,978	1,508	1
	1909	16,427	(2)	(2)	211	934	1,736	10,306	2,960	280
Connecticut	1919	768	32	.....	71	72	.....	593	.....	.....
	1914	1,063	.....	.....	.....	170	59	834	.....	.....
Illinois	1919	452	45	36	106	55	74	91	45	.....
	1914	696	(2)	(2)	67	182	89	77	281	.....
Iowa	1919	2,091	45	2	1	615	333	989	102	4
	1914	2,406	(2)	(2)	3	362	664	824	553	.....
Massachusetts	1919	385	68	.....	90	199	28	.....	.....	.....
	1914	485	.....	.....	.....	40	380	65	.....	.....
New Jersey	1919	2,570	40	.....	974	1,057	361	138	.....	.....
	1914	1,773	(2)	(2)	74	59	165	1,472	3	.....
New York	1919	6,568	1,587	109	2,421	1,632	168	301	350	.....
	1914	5,223	(2)	(2)	194	852	3,273	902	2	.....
Pennsylvania	1919	807	27	4	275	60	391	19	31	.....
	1914	1,154	(2)	(2)	2	587	149	279	137	.....

[1] Includes 48 and under for 1914 and 1909

[2] Corresponding figures not available.

TABLE 6.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—														
			No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.	
	Establishments.	Wage earners (average number).	Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States:																	
1919	557	15,577	43	212	499	147	1,879	80	2,552	39	2,766	28	4,311	6	1,956	2	1,614
1914	517	14,511	18	213	528	117	1,304	93	2,970	45	3,238	23	3,539	7	2,355	1	577
Connecticut	16	768	1	6	15	1	19	5	174	1	80	1	194	1	286	.....	.....
Illinois	33	452	4	10	17	12	159	4	105	3	171	.....	.....	.....	.....	.....	.....
Iowa	77	2,091	4	28	70	24	294	9	282	5	367	7	1,078	.....	.....	.....	.....
Massachusetts	17	385	.....	7	20	4	42	3	103	3	220	.....	.....	.....	.....	.....	.....
New Jersey	70	2,570	2	19	41	21	333	13	381	9	704	5	756	1	355	.....	.....
New York	243	6,568	27	115	261	49	580	26	848	11	771	10	1,518	3	976	2	1,614
Pennsylvania	24	807	.....	7	20	8	113	4	134	2	149	3	391	.....	.....	.....	.....

TABLE 7.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes	557	517	444	15,577	14,511	16,427	$41,840,459	$20,711,979	$22,708,065	$25,095,102	$12,009,779	$13,166,774
Less than $5,000	122	169	120	138	294	250	327,207	412,654	299,831	244,624	290,533	211,923
$5,000 to $20,000	162	162	145	684	1,488	1,312	1,674,282	1,736,146	1,537,671	1,109,907	1,119,357	993,337
$20,000 to $100,000	181	144	121	3,650	5,133	4,801	8,298,406	6,196,609	5,653,390	5,069,497	3,613,081	3,430,368
$100,000 to $500,000	73	38	58	5,683	7,596	10,064	11,810,593	9,350,072	15,217,173	9,053,610	6,986,808	8,531,146
$500,000 to $1,000,000	16	4		3,514			11,802,287	3,016,498		6,796,152		
$1,000,000 and over	3	.....	.....	1,908	.....	.....	4,927,681	.....	.....	2,821,312	.....	.....
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	21.9	32.7	27.0	0.9	2.0	1.5	0.8	2.0	1.3	1.0	2.4	1.6
$5,000 to $20,000	29.1	31.3	32.7	4.4	10.3	8.0	4.0	8.4	6.8	4.4	9.3	7.6
$20,000 to $100,000	32.5	27.9	27.3	23.4	35.4	29.2	19.8	29.9	24.9	20.2	30.1	26.0
$100,000 to $500,000	13.1	7.3	13.0	36.5	52.3	61.3	35.4	45.1	67.0	36.1	58.2	64.8
$500,000 to $1,000,000	2.9	0.8		22.6			28.2	14.6		27.1		
$1,000,000 and over	0.5	.....	.....	12.2	.....	.....	11.8	.....	.....	11.2	.....	.....

TABLE 8.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Census year.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
All classes	1919	557	15,577	$41,840,459	$25,095,102
	1914	517	14,511	20,711,979	12,009,779
Individual	1919	255	2,130	5,849,799	3,430,573
	1914	235	2,308	3,011,907	1,887,155
Corporation	1919	167	11,760	31,108,265	18,779,195
	1914	145	10,021	14,524,949	8,412,066
All other	1919	135	1,687	4,882,395	2,885,334
	1914	137	2,182	3,175,123	1,710,558
Per cent of total:					
Individual	1919	45.8	13.7	14.0	13.7
	1914	45.5	15.9	14.5	15.7
Corporation	1919	30.0	75.5	74.3	74.8
	1914	28.0	69.1	70.1	70.0
All other	1919	24.2	10.8	11.7	11.5
	1914	26.5	15.0	15.3	14.2

TABLE 9.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	1,104	734	505	16,201	14,398	12,831	100.0	100.0	100.0
Owned	142	200	216	7,589	10,058	9,235	46.8	69.8	72.0
Steam [1]	65	97	110	6,275	8,838	7,602	38.7	61.4	59.2
Engines	64	(2)	(2)	5,975	(2)	(2)	36.9	.....	.....
Turbines	1	(2)	(2)	300	(2)	(2)	1.9	.....	.....
Internal-combustion engines	71	93	92	1,047	826	783	6.5	5.7	6.1
Water wheels and turbines	6	10	14	267	394	850	1.6	2.7	6.6
Rented	962	534	289	8,612	4,340	3,596	53.2	30.1	28.0
Electric	962	534	289	8,117	3,951	2,833	50.1	27.4	22.1
Other	.....	.....	.....	495	389	763	3.1	2.7	5.9
Electric	999	650	362	8,715	5,016	3,416	100.0	100.0	100.0
Rented	962	534	289	8,117	3,951	2,833	93.1	78.8	82.9
Generated by establishments reporting	37	116	73	598	1,065	583	6.9	21.2	17.1

[1] Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power. [2] Not reported separately.

TABLE 10.—FUEL CONSUMED: 1919 AND 1914.

KIND.	QUANTITY.	
	1919	1914
Coal	54,961	50,445
Anthracite (tons, 2,240 pounds)	7,094	9,763
Bituminous (tons, 2,000 pounds)	47,867	40,682
Coke (tons, 2,000 pounds)	188	53
Fuel oils (barrels)	625	7,005
Gasoline and other volatile oils (barrels)	795	(1)
Gas (1,000 cubic feet)	29,576	31,402

[1] Included in figures for fuel oils.

SPECIAL STATISTICS.

Products classified according to kind and to materials used.—Certain additional detailed information concerning the quantity and value of products for the industry was collected by means of supplemental schedules, data for which are presented in Table 11.

Plain and fancy buttons for fastenings and for ornamentation are manufactured in all sizes and styles and from many kinds of materials. In 1919, as in 1914, buttons made from "pearl or shell" were first in importance, measured by value of products and quantity produced, representing 42.7 per cent and 43.3 per cent, respectively, of the total for the industry. During the five-year period there was an increase of 10.7 per cent in the total quantity, while the value of all buttons manufactured increased 114.3 per cent.

TABLE 11.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919 AND 1914.

	1919		1914	
	Quantity (gross).	Value.	Quantity (gross).	Value.
Products, total value [1]	.....	$41,840,459	.....	$20,711,979
Buttons	68,981,823	34,556,797	62,318,824	16,121,873
Bone	2,170,800	509,165	2,198,946	329,934
Celluloid, plastic	2,210,181	3,323,148	623,169	724,354
Collar and cuff	974,140	80,114	1,771,053	56,251
Glass	570,949	260,948	217,224	100,201
Horn	2,574,822	1,110,957	537,096	299,487
Metal (not including trouser, or collar and cuff)—				
Press or uniform	338,026	433,888	257,823	283,352
All other	433,341	183,093	614,740	172,133
Pearl or shell—				
Fresh-water	23,969,125	8,199,639	21,664,436	4,879,844
Ocean	5,892,344	6,564,105	4,516,969	2,439,364
Shoe	5,295,169	632,217	15,520,037	610,796
Covered	2,871,986	1,769,162	3,017,436	1,600,178
Trouser	8,113,327	2,811,991	6,694,795	2,337,059
Ivory or vegetable ivory (not including trouser)	7,835,296	7,676,455	3,221,163	1,842,760
Others, not specified	5,732,317	1,001,915	1,463,937	396,160
Parts of buttons	3,554,122	1,069,705	388,201	111,325
Blanks or molds	13,092,734	3,091,971	14,304,148	2,349,406
Snap fasteners and clasps [2]	3,399,986	193,054	1,159,046	411,385
All other products	.....	2,928,932	.....	1,717,990

[1] In addition, in 1919, buttons to the value of $1,147,693 were manufactured by establishments engaged primarily in other industries; and, in 1914, to the value of $482,061.

[2] In 1919 approximately 2,122,000 great gross of snap fasteners were reported by manufacturers of needles, pins, and hooks and eyes, and, in 1914, 260,000 great gross.

GENERAL TABLES.

Table 12 gives, for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the button industry.

Table 13 presents, for 1919, statistics in detail for the industry as a whole, and for each state that can be shown separately without the possibility of disclosing the operations of individual establishments.

TABLE 12.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	557	15,577	16,201	$13,773	$16,745	$41,840
	1914	517	14,511	14,398	6,424	8,702	20,712
	1909	444	16,427	12,831	6,789	9,541	22,708
California	1919	7	34	23	27	16	66
	1914	9	32	33	13	14	49
Connecticut	1919	16	768	1,154	654	664	1,956
	1914	18	1,063	882	492	613	1,498
	1909	20	1,057	1,673	465	735	1,635
Illinois	1919	33	452	393	357	397	1,030
	1914	31	696	476	324	305	765
	1909	28	548	275	247	237	676
Indiana	1919	14	261	267	170	172	408
	1914	12	284	164	106	95	234
	1909	5	170	88	61	28	117
Iowa	1919	77	2,091	2,340	1,519	2,477	5,615
	1914	81	2,406	3,086	1,009	1,473	3,255
	1909	70	3,172	2,809	1,412	1,414	4,035
Massachusetts	1919	17	385	482	311	262	1,018
	1914	14	485	614	230	276	728
	1909	12	659	898	301	409	978
Missouri	1919	9	235	287	$176	$163	$395
	1914	9	282	295	87	108	257
	1909	10	362	232	108	87	266
New Jersey	1919	70	2,570	2,528	2,402	3,000	7,021
	1914	60	1,773	1,912	856	1,077	2,509
	1909	64	2,261	1,232	913	1,183	2,750
New York	1919	243	6,568	6,262	5,349	7,482	18,698
	1914	224	5,223	4,449	2,251	3,224	7,821
	1909	165	6,126	3,911	2,462	4,168	9,373
Ohio	1919	6	114	93	83	75	192
	1914	9	157	107	64	68	156
	1909	5	151	73	55	30	114
Pennsylvania	1919	24	807	789	1,613	962	2,319
	1914	21	1,154	1,318	477	867	1,741
	1909	24	1 123	858	404	746	1,565
All other states	1919	41	1,292	1,583	1,112	1,075	3,122
	1914	29	956	1,062	515	582	1,699
	1909	41	798	782	361	504	1,199

TABLE 13.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.	EXPENSES. Salaries and wages. Officials.	EXPENSES. Salaries and wages. Clerks, etc.
United States	557	17,758	575	642	471	493	15,577	No 16,876	Ap 14,594	17,398	10,615	6,475	110	198	$29,977,973	$1,993,965	$1,355,363
California	7	45	7	3	.....	1	34	Ap [1] 35	No [1] 32	35	9	26	.....	.....	81,272	3,600	720
Connecticut	16	898	17	48	31	34	768	Se 805	Fe 725	786	417	306	29	34	2,128,349	140,821	85,969
Illinois	33	524	35	25	6	6	452	De 546	Fe 404	551	387	159	2	3	604,965	56,058	26,865
Indiana	14	306	27	15	2	1	261	De 318	My 209	313	294	19	.....	.....	256,676	16,608	1,300
Iowa	77	2,347	77	83	62	34	2,091	De 2,497	My 1,939	2,575	1,686	801	23	65	4,795,360	239,687	159,925
Kentucky	5	112	4	5	2	2	99	No 131	Ja 68	128	110	18	.....	.....	135,329	14,833	10,115
Massachusetts	17	438	17	18	5	13	385	No 425	Ja 320	420	204	201	7	8	786,188	47,263	15,614
Minnesota	5	63	6	2	1	.....	54	De 82	Ap 31	83	78	5	.....	.....	70,798	2,598	.....
Missouri	9	265	5	14	8	3	235	Ja 317	My 179	309	274	34	1	.....	309,397	20,370	4,346
New Jersey	70	2,789	60	94	43	22	2,570	No 2,764	Ja 2,340	2,725	1,823	865	16	21	3,933,849	346,212	89,340
New York	243	7,667	272	243	250	334	6,568	No 7,016	Ja 6,037	6,994	3,686	3,239	26	43	11,487,051	775,578	795,054
Ohio	6	125	3	5	1	2	114	Ja 139	My 65	145	127	18	.....	.....	182,125	7,094	3,679
Pennsylvania	24	904	24	36	26	11	807	No 855	Ap 744	927	557	347	6	17	1,553,839	202,657	52,548
Rhode Island	3	40	3	2	2	.....	33	My 39	No 28	29	18	10	.....	1	89,363	4,160	2,850
Washington	3	10	5	.....	.....	.....	5	(2) 5	(2) 5	5	.....	5	.....	.....	4,610	.....	.....
All other states [3]	25	1,225	13	49	32	30	1,101	.....	.....	1,373	945	422	.....	6	3,558,802	116,426	107,038

STATE.	EXPENSES—continued. Salaries and wages—Con. Wage earners.	For contract work.	Rent and taxes. Rent of factory.	Rent and taxes. Taxes, Federal, state, county, and local.	For materials. Principal materials.	For materials. Fuel and rent of power.	Value of products.	Value added by manufacture.	POWER. Primary horsepower. Total.	Owned. Steam engines (not turbines).	Owned. Steam turbines.	Owned. Internal-combustion engines.	Owned. Water power.[4]	Rented.[5]	Electric horsepower generated in establishments reporting.
United States	$13,772,599	$338,209	$452,104	$736,456	$16,062,931	$682,426	$41,840,459	$25,095,102	16,201	5,975	300	1,047	267	8,612	598
California	26,969	.....	5,820	232	14,785	1,227	66,102	50,090	23	.....	.....	.....	.....	23	.....
Connecticut	654,295	10,051	7,549	95,879	624,228	40,254	1,955,701	1,291,219	1,154	390	.....	63	267	434	12
Illinois	357,257	3,320	14,430	4,899	384,297	12,603	1,030,452	633,552	393	195	.....	53	.....	145	.....
Indiana	170,192	3,640	617	1,042	160,868	11,069	408,457	236,520	267	110	.....	36	.....	121	29
Iowa	1,519,448	131,538	16,153	63,696	2,411,221	65,567	5,615,465	3,138,677	2,340	1,595	.....	137	.....	608	7
Kentucky	59,629	1,041	850	1,935	79,145	4,480	196,284	112,659	91	63	.....	.....	.....	28	4
Massachusetts	310,997	2,277	9,402	7,145	239,540	22,701	1,017,929	755,688	482	250	.....	.....	.....	232	135
Minnesota	43,505	.....	250	799	35,588	1,336	88,261	51,337	48	.....	.....	.....	.....	48	.....
Missouri	175,833	356	2,125	2,841	154,896	7,954	395,263	232,413	287	215	.....	30	.....	42	.....
New Jersey	2,402,061	16,059	87,466	123,853	2,898,651	100,888	7,021,472	4,021,933	2,528	1,260	.....	225	.....	1,043	55
New York	5,349,264	154,125	264,172	280,190	7,196,092	285,588	18,697,967	11,216,287	6,262	1,505	.....	294	.....	4,463	.....
Ohio	82,693	.....	1,445	967	72,503	2,257	191,614	116,854	93	25	.....	25	.....	43	.....
Pennsylvania	1,612,661	4,757	32,205	84,624	935,110	27,071	2,318,556	1,356,375	789	250	300	29	.....	210	356
Rhode Island	16,855	773	4,816	566	42,760	5,548	103,876	55,568	32	.....	.....	.....	.....	32	.....
Washington	3,972	96	510	3	3,531	36	14,953	11,386	1	.....	.....	.....	.....	1	.....
All other states [3]	986,968	10,176	4,294	67,785	809,716	93,847	2,718,107	1,814,544	1,411	117	.....	155	.....	1,139	.....

[1] Same number reported for one or more other months.
[2] Same number reported throughout the year.
[3] All other states embrace: Arkansas, 6 establishments; Kansas, 2; Louisiana, 1; Maine, 2; Michigan, 5; New Hampshire, 1; Oklahoma, 1; Tennessee, 1; Texas, 2; West Virginia, 1; Wisconsin, 3.
[4] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[5] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES

MANUFACTURES: 1919

CANNING AND PRESERVING

Prepared under the supervision of EUGENE F. HARTLEY, Chief Statistician for Manufactures

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1922

EXPLANATION OF TERMS.

Scope of census.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than $500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

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

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date did not portray such conditions, an earlier date was requested.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

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

In order to determine as nearly as possible the age distribution of the average number of wage earners for an industry, the per cent distribution by age of the wage earners for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year to determine the average numbers 16 years and over, and under 16, employed.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital (amount actually invested).—The instructions on the schedule for securing data relating to capital were as follows:

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

These instructions were identical with those employed at the censuses of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power equipment of the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuel is impracticable.

CANNING AND PRESERVING.

GENERAL STATISTICS.

General character of the industry.—The canning and preserving industry includes four classes of establishments: (1) Establishments whose chief products are canned and preserved fruits and vegetables, including dried and packed fruits, put up by packing houses; (2) establishments whose products are canned and cured fish, including pickled, smoked, and dried fish; (3) establishments whose chief products are canned oysters and clams; and (4) establishments whose chief products are pickles, preserves, jellies, sauces, etc.

A subclassification has been made for the canned fruit and vegetable branch of the industry for 1919 in which the establishments have been grouped according to the products of chief value under "canned vegetables," "canned fruits," "dried fruits," and "dried vegetables"; while the "pickles, preserves, and sauces" branch of the industry has been subdivided into two groups, including under "preserves" those establishments manufacturing as their products of chief value, jam, jellies, preserved fruits, fruit butters, etc., and under "pickles and sauces" those establishments whose products of chief value were pickles, olives, sauces, salad dressings, catsup, etc.

The general statistics for the industry do not cover the canning of meats, soup, or other products by meat-packing establishments, statistics for which are included in the slaughtering and meat-packing industry. The industry being seasonal in character the report relates to the season of 1919—that is, to the canning and preserving from the crop of that year. Some of the establishments are engaged in the canning of fruits and vegetables in the summer and fall months, and in the canning and curing of fish and oysters at other times.

There is considerable overlapping in the canning and preserving of fruits and vegetables and pickles, preserves, and sauces. Establishments engaged primarily in canning vegetables and fruits report also preserves, jellies, jams, sauces, and pickles. This is also the case with the fish and oyster industry. Large establishments engaged in the canning and curing of fish also can oysters and clams. The shucking and wholesale shipment of fresh oysters in unsealed containers is not included.

The process of manufacture is comparatively simple and inexpensive and the industry is well distributed throughout the United States, Nevada and Wyoming being the only states not represented by one or more establishments.

Importance and growth of the industry.—Table 1 summarizes the statistics of each census since 1889, with percentages of increase for each period. Increases are noticeable at each succeeding census. The large increases, however, from 1914 to 1919, in salaries and wages, cost of materials, and value of products are due largely to a general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. A truer index of the conditions is found in the increases in the average number of wage earners and primary horsepower. The addition of the Federal income tax since 1914 accounts for the large increase in "Rent and taxes."

Summary for the four branches, 1919.—Table 2 presents for 1919 a summary of the statistics for the canning and preserving industry as a whole and for its four leading branches separately.

The overlapping among the four branches of the industry to which reference has been made comprises products valued at $22,224,258, distributed as follows: Canned and preserved fruits and vegetables to the value of $1,385,623, reported by establishments engaged in the canning and preserving of fish and oysters; canned fruits, vegetables, fish, and oysters to the value of $8,451,522, put up by establishments whose principal products were pickles, preserves, and sauces; canned and preserved fish and oysters to the value of $1,495,258, reported by establishments engaged primarily in the canning and preserving of fruits and vegetables, and pickles, preserves, and sauces to the value of $10,891,855 were reported by establishments engaged primarily in the canning and preserving of fruits and vegetables.

In addition, canned and preserved products to the value of $11,483,158 were reported by establishments engaged primarily in industries other than canning and preserving. The total value of canned and preserved goods reported as by-products by establishments classified either in other branches of the industry than the one to which the products belonged, or in entirely separate industries, was thus $33,707,416.

Comparative summary for the four branches.—Table 3 shows, for the four branches of the industry separately, the most important items for 1919 and 1914, and the per cent of increase. With few exceptions, there were substantial increases for all four branches of the industry.

Principal states, ranked by value of products.—Table 4 shows that California was the leading state in

the industry in 1919 as it has been since the census of 1899. New York ranked second in importance in value of products, and third in average number of wage earners, while Maryland ranked second in average number of wage earners; and third in value of products. In 1914 Pennsylvania ranked fourth in importance in value of products but dropped to fifth place in 1919, being displaced by New Jersey. The ranking of the industry by value of products is not always satisfactory as indicating its importance from a manufacturing standpoint. In many instances this ranking would change materially if based upon the average number of wage earners or value added by manufacture.

Persons engaged in the industry.—The classification by age of the average number of wage earners in Table 5 is an estimate obtained by the method described in the "Explanation of terms." The classification by sex for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the classification by age. Figures are shown for the industry as a whole and for the four branches separately. Figures for the individual states will be found in Table 23.

Wage earners, by months.—Because of the seasonal character of the industry, the fluctuation of employment is very great. As shown by Table 6, the number of wages earners employed in the industry ranged from a maximum of 198,047 in September to a minimum of 35,692 in March, the minimum number being equivalent to 18 per cent of the maximum. Figures are given separately for all states showing over 550 wage earners, and for a number of states showing a large proportion of females, while for the United States for 1919 the number of males and females is also shown.

Prevailing hours of labor.—Table 7 shows a marked shortening of the working day for the industry since 1914. In that year only 14.4 per cent of the wage earners were reported as being employed fewer than 54 hours per week, as against 39.5 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 51.2 per cent of the total number of wage earners, as compared with 35.7 per cent in 1919.

Size of establishments, by average number of wage earners.—It should be borne in mind in considering Table 8 that because of the seasonal character of the industry, the average number of wage earners for the entire year for any given establishment is usually much smaller than the maximum or even the average for the active period. (See "Explanation of terms.") Moreover, the fact that some establishments operate during a much longer period than others affects the significance of the distribution according to the average number employed for the year. Of the 4,280 establishments reported for 1919, there were 314, or 7.3 per cent, which employed no wage earners. These were small establishments in which the work was done by the proprietors or firm members, sometimes assisted by members of their families or by persons classed as salaried employees. In some cases they employed a few wage earners for short periods, but the numbers were so small and the periods so short that the averages for the year computed in the manner described in the "Explanation of terms" were nearer zero than one, and therefore no wage earners could be shown. Of the total number of establishments, 39.8 per cent employed 1 to 5 wage earners, and 29.3 per cent from 6 to 20. There were only 393 establishments that employed an average of more than 50 wage earners, and of these only 165 employed over 100. For the United States as a whole the average number of wage earners per establishment for 1919 was 21, as compared with 18 for 1914.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "$100,000 to $1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "$100,000 to $500,000" and "$500,000 to $1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. Table 9, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. The statistics in this table show the degree of concentration of production in large establishments. In 1919 the three groups having products of $100,000 and over included 1,058 establishments, or 24.7 per cent of the total number for the industry, but employed 68,243 wage earners, or 75.9 per cent of the total average number, and reported products to the value of $190,686,510, or 88.5 per cent of the total value of products.

Character of ownership.—Table 10 shows that in 1919, of the total number of establishments for the industry, 37.6 per cent were under corporate ownership. While corporations thus controlled slightly more than one-third of the total number of establishments, they employed 72.9 per cent of the total average number of wage earners and reported 79.4 per cent of the total value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 11, there was an increase in the total horsepower for the industry of 60,808 horsepower, or 50.7 per cent. This increase, however, is largely due to the gain of 37,494 horsepower, or 200.2 per cent, in rented electric power, although there was an increase in owned power of 23,619 horsepower, or 23.5 per cent.

Fuel consumed.—Table 12 shows, by states, the principal kinds of fuel used in the industry in 1919 and 1914. Of the total quantity of bituminous coal used in the industry in 1919, Illinois, Indiana, New York, and Pennsylvania together reported 41.9 per cent, while California reported 89.9 per cent of the fuel oils consumed and 55.1 per cent of the gas.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, AND 1889.

	1919	1914	1909	1904	1899	1889	PER CENT OF INCREASE.[1] 1914–1919	1909–1914	1904–1909	1899–1904	1889–1899
Number of establishments	4,280	4,220	3,767	3,168	2,570	1,328	1.4	12.0	18.9	23.3	93.5
Persons engaged	108,261	88,669	71,972	66,022	(2)	(2)	22.9	22.4	9.0	.....	.....
Proprietors and firm members	4,159	4,409	4,244	3,450	(2)	(2)	−5.7	3.9	23.0	.....	.....
Salaried employees	14,179	9,589	7,760	5,628	4,199	2,037	47.9	23.6	37.9	34.0	106.1
Wage earners (average number)	89,923	74,071	59,968	56,944	57,012	61,812	21.4	23.5	5.3	−0.1	−7.8
Primary horsepower	180,812	120,004	81,179	60,831	38,624	7,000	50.7	47.8	33.4	57.5	451.8
Capital	$378,416,813	$172,474,945	$119,207,127	$79,245,880	$55,480,983	$21,288,166	119.4	44.7	50.4	42.8	160.6
Salaries and wages	91,212,687	38,668,278	26,945,466	21,567,056	17,183,832	8,971,923	135.9	43.5	24.9	25.5	91.5
Salaries	24,768,664	11,471,254	7,863,623	5,230,704	3,478,727	1,300,961	115.9	45.9	50.3	50.4	150.1
Wages	66,444,023	27,197,024	19,081,843	16,336,352	13,705,105	7,580,962	144.3	42.5	16.8	19.2	80.8
Paid for contract work	877,683	840,419	501,173	359,079	(2)	(2)	4.4	67.7	39.6	.....	.....
Rent and taxes	17,377,705	1,899,046	1,074,279	[3] 775,703	(2)	(2)	815.1	76.8	.....	.....	.....
Cost of materials	412,659,747	159,657,909	101,823,059	83,147,336	63,667,568	30,793,280	158.5	56.8	22.5	30.6	106.8
Value of products	628,287,925	243,439,859	157,101,201	130,465,976	99,335,464	49,886,305	158.1	55.0	20.4	31.3	99.1
Value added by manufacture[4]	215,628,178	83,781,950	55,278,142	47,318,640	35,667,896	19,093,025	157.4	51.6	16.8	32.7	86.8

[1] A minus sign (−) denotes decrease. [2] Figures not available. [3] Exculsive of internal revenue. [4] Value of products less cost of materials.

TABLE 2.—SUMMARY FOR THE INDUSTRY AND EACH OF THE FOUR BRANCHES: 1919.

	Total for the industry.	ESTABLISHMENTS ENGAGED PRIMARILY IN CANNING AND PRESERVING— Canned vegetables.	Canned fruits.	Dried fruits.	Dried vegetables.	Fish.	Oysters.	Pickles, preserves, and sauces. Preserves.	Pickles and sauces.
Number of establishments	4,280	1,989	446	629	18	410	65	195	528
Persons engaged	108,261	39,854	24,418	7,844	628	12,797	1,339	8,546	12,835
Proprietors and firm members	4,159	2,178	374	729	3	275	51	112	437
Salaried employees	14,179	5,118	2,309	1,062	106	1,274	99	1,395	2,816
Wage earners (average number)	89,923	32,558	21,735	6,053	519	11,248	1,189	7,039	9,582
Primary horsepower	180,812	95,352	26,214	9,447	1,409	24,865	1,025	7,715	14,785
Capital	$378,416,813	$134,442,080	$68,006,910	$19,300,168	$1,943,076	$63,049,038	$2,971,876	$35,951,096	$52,752,569
Salaries and wages	91,212,687	27,240,226	23,200,989	5,902,973	599,449	11,938,634	618,013	8,763,431	12,948,972
Salaries	24,768,664	7,471,942	4,637,978	1,109,204	131,976	2,902,545	149,083	3,196,541	5,169,395
Wages	66,444,023	19,768,284	18,563,011	4,793,769	467,473	9,036,089	468,930	5,566,890	7,779,577
Paid for contract work	877,683	198,598	89,991	39,991	.....	445,746	56,053	18,483	28,821
Rent and taxes (including internal revenue)	17,377,705	4,889,217	5,443,829	1,486,069	53,061	1,578,999	43,354	1,940,483	1,942,693
Cost of materials	412,659,747	101,836,478	89,299,975	72,952,712	1,539,360	52,410,951	1,582,838	45,537,295	47,500,138
Value of products	628,287,925	162,097,699	150,474,213	87,252,343	2,418,717	77,284,412	2,976,011	65,122,667	80,661,863
Value added by manufacture[1]	215,628,178	60,261,221	61,174,238	14,299,631	879,357	24,873,461	1,393,173	19,585,372	33,161,725

[1] Value of products less cost of materials.

TABLE 3.—COMPARATIVE SUMMARY FOR THE INDUSTRY AND EACH OF THE FOUR BRANCHES: 1919 AND 1914.

	ESTABLISHMENTS ENGAGED PRIMARILY IN CANNING AND PRESERVING— Fruits and vegetables. 1919	1914	Per cent of increase.[1]	Fish. 1919	1914	Per cent of increase.	Oysters. 1919	1914	Per cent of increase.[1]	Pickles, preserves, and sauces. 1919	1914	Per cent of increase.[1]
Number of establishments	3,082	3,153	−2.3	410	330	24.2	65	65	.....	723	672	7.6
Persons engaged	72,744	58,329	24.7	12,797	10,306	24.2	1,339	2,296	−41.7	21,381	17,138	24.8
Proprietors and firm members	3,284	3,520	−6.7	275	263	4.6	51	60	−15.0	549	566	−3.0
Salaried employees	8,595	4,484	91.7	1,274	974	30.8	99	149	−33.6	4,211	3,982	5.8
Wage earners (average number)	60,865	50,325	20.9	11,248	9,069	24.0	1,189	2,087	−43.0	16,621	12,590	32.0
Primary horsepower	132,422	88,303	50.0	24,865	10,966	126.7	1,025	1,895	−45.9	22,500	18,840	19.4
Capital	$223,692,234	$98,738,219	126.6	$63,049,038	$28,463,738	121.5	$2,971,876	$2,076,607	43.1	$88,703,665	$43,196,381	105.5
Salaries and wages	56,943,637	22,412,290	154.1	11,938,634	4,948,991	141.2	618,013	552,063	11.9	21,712,403	10,754,934	101.9
Salaries	13,351,100	5,106,787	161.4	2,902,545	1,269,992	128.5	149,083	128,366	16.1	8,365,936	4,966,109	68.5
Wages	43,592,537	17,305,503	151.9	9,036,089	3,678,999	145.6	468,930	423,697	10.7	13,346,467	5,788,825	130.6
Paid for contract work	328,580	422,514	−22.2	445,746	322,347	38.3	56,053	8,669	546.6	47,304	86,889	−45.6
Rent and taxes (including internal revenue)	11,872,176	878,158	35.2	1,578,999	375,964	320.0	43,354	18,726	131.5	3,883,176	626,198	520.1
Cost of materials	265,628,525	103,293,044	157.2	52,410,951	19,467,153	169.2	1,582,838	1,225,206	29.2	93,037,433	35,672,506	160.8
Value of products	402,242,972	149,175,865	169.6	77,284,412	31,111,409	148.4	2,976,011	2,238,053	33.0	145,784,530	60,914,532	139.3
Value added by manufacture[2]	136,614,447	45,882,821	197.7	24,873,461	11,644,256	113.6	1,393,173	1,012,847	37.6	52,747,097	25,242,026	109.0

[1] A minus sign (−) denotes decrease. [2] Value of products less cost of materials.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, AND 1889.

	1919	1914	1909	1904	1899	1889	PER CENT OF INCREASE.[1] 1914–1919	1909–1914	1904–1909	1899–1904	1889–1899
Number of establishments	4,280	4,220	3,767	3,168	2,570	1,328	1.4	12.0	18.9	23.3	93.5
Persons engaged	108,261	88,069	71,972	66,022	(2)	(2)	22.9	22.4	9.0	.....	.....
Proprietors and firm members	4,159	4,409	4,244	3,450	(2)	(2)	−5.7	3.9	23.0	.....	.....
Salaried employees	14,179	9,589	7,760	5,628	4,199	2,037	47.9	23.6	37.9	34.0	106.1
Wage earners (average number)	89,923	74,071	59,968	56,944	57,012	61,812	21.4	23.5	5.3	−0.1	−7.8
Primary horsepower	180,812	120,004	81,179	60,831	38,624	7,000	50.7	47.8	33.4	57.5	451.8
Capital	$378,416,813	$172,474,945	$119,207,127	$79,245,880	$55,480,983	$21,288,166	119.4	44.7	50.4	42.8	160.6
Salaries and wages	91,212,687	38,668,278	26,945,466	21,567,056	17,183,832	8,971,923	135.9	43.5	24.9	25.5	91.5
Salaries	24,768,664	11,471,254	7,863,623	5,230,704	3,478,727	1,390,961	115.9	45.9	50.3	50.4	150.1
Wages	66,444,023	27,197,024	19,081,843	16,336,352	13,705,105	7,580,962	144.3	42.5	16.8	19.2	80.8
Paid for contract work	877,683	840,419	501,173	359,079	(2)	(2)	4.4	67.7	39.6	.....	.....
Rent and taxes	17,377,705	1,899,046	1,074,279	[3] 775,703	(2)	(2)	815.1	76.8	.....	.....	.....
Cost of materials	412,659,747	159,657,909	101,823,059	83,147,336	63,667,568	30,793,280	158.5	56.8	22.5	30.6	106.8
Value of products	628,287,925	243,439,859	157,101,201	130,465,976	99,335,464	49,886,305	158.1	55.0	20.4	31.3	99.1
Value added by manufacture [4]	215,628,178	83,781,950	55,278,142	47,318,640	35,667,896	19,093,025	157.4	51.6	16.8	32.7	86.8

[1] A minus sign (−) denotes decrease. [2] Figures not available. [3] Exculsive of internal revenue. [4] Value of products less cost of materials.

TABLE 2.—SUMMARY FOR THE INDUSTRY AND EACH OF THE FOUR BRANCHES: 1919.

	Total for the industry.	ESTABLISHMENTS ENGAGED PRIMARILY IN CANNING AND PRESERVING— Canned vegetables.	Canned fruits.	Dried fruits.	Dried vegetables.	Fish.	Oysters.	Pickles, preserves, and sauces. Preserves.	Pickles and sauces.
Number of establishments	4,280	1,989	446	629	18	410	65	195	528
Persons engaged	108,261	39,854	24,418	7,844	628	12,797	1,339	8,546	12,835
Proprietors and firm members	4,159	2,178	374	729	3	275	51	112	437
Salaried employees	14,179	5,118	2,309	1,062	106	1,274	99	1,395	2,816
Wage earners (average number)	89,923	32,558	21,735	6,053	519	11,248	1,189	7,039	9,582
Primary horsepower	180,812	95,352	26,214	9,447	1,409	24,865	1,025	7,715	14,785
Capital	$378,416,813	$134,442,080	$68,006,910	$19,300,168	$1,943,076	$63,049,038	$2,971,876	$35,951,096	$52,752,569
Salaries and wages	91,212,687	27,240,226	23,200,989	5,902,973	599,449	11,938,634	618,013	8,763,431	12,948,972
Salaries	24,768,664	7,471,942	4,637,978	1,109,204	131,976	2,902,545	149,083	3,196,541	5,169,395
Wages	66,444,023	19,768,284	18,563,011	4,793,769	467,473	9,036,089	468,930	5,566,890	7,779,577
Paid for contract work	877,683	198,598	89,991	39,991	.....	445,746	56,053	18,483	28,821
Rent and taxes (including internal revenue)	17,377,705	4,889,217	5,443,829	1,486,069	53,061	1,578,999	43,354	1,940,483	1,942,693
Cost of materials	412,659,747	101,836,478	89,299,975	72,952,712	1,539,360	52,410,951	1,582,838	45,537,295	47,500,138
Value of products	628,287,925	162,097,699	150,474,213	87,252,343	2,418,717	77,284,412	2,976,011	65,122,667	80,661,863
Value added by manufacture [1]	215,628,178	60,261,221	61,174,238	14,299,631	879,357	24,873,461	1,393,173	19,585,372	33,161,725

[1] Value of products less cost of materials.

TABLE 3.—COMPARATIVE SUMMARY FOR THE INDUSTRY AND EACH OF THE FOUR BRANCHES: 1919 AND 1914.

	ESTABLISHMENTS ENGAGED PRIMARILY IN CANNING AND PRESERVING— Fruits and vegetables. 1919	1914	Per cent of increase.[1]	Fish. 1919	1914	Per cent of increase.	Oysters. 1919	1914	Per cent of increase.[1]	Pickles, preserves, and sauces. 1919	1914	Per cent of increase.[1]
Number of establishments	3,082	3,153	−2.3	410	330	24.2	65	65	.....	723	672	7.6
Persons engaged	72,744	58,329	24.7	12,797	10,306	24.2	1,339	2,296	−41.7	21,381	17,138	24.8
Proprietors and firm members	3,284	3,520	−6.7	275	263	4.6	51	60	−15.0	549	566	−3.0
Salaried employees	8,595	4,484	91.7	1,274	974	30.8	99	149	−33.6	4,211	3,982	5.8
Wage earners (average number)	60,865	50,325	20.9	11,248	9,069	24.0	1,189	2,087	−43.0	16,621	12,590	32.0
Primary horsepower	132,422	88,303	50.0	24,865	10,966	126.7	1,025	1,895	−45.9	22,500	18,840	19.4
Capital	$223,692,234	$98,738,219	126.6	$63,049,038	$28,463,738	121.5	$2,971,876	$2,076,607	43.1	$88,703,665	$43,196,381	105.5
Salaries and wages	56,943,637	22,412,290	154.1	11,938,634	4,948,991	141.2	618,013	552,063	11.9	21,712,403	10,754,934	101.9
Salaries	13,351,100	5,106,787	161.4	2,902,545	1,269,992	128.5	149,083	128,366	16.1	8,365,936	4,966,109	68.5
Wages	43,592,537	17,305,503	151.9	9,036,089	3,678,999	145.6	468,930	423,697	10.7	13,346,467	5,788,825	130.6
Paid for contract work	328,580	422,514	−22.2	445,746	322,347	38.3	56,053	8,669	546.6	47,304	86,889	−45.6
Rent and taxes (including internal revenue)	11,872,176	878,158	35.2	1,578,999	375,964	320.0	43,354	18,726	131.5	3,883,176	626,198	520.1
Cost of materials	265,628,525	103,293,044	157.2	52,410,951	19,467,153	169.2	1,582,838	1,225,206	29.2	93,037,433	35,672,506	160.8
Value of products	402,242,972	149,175,865	169.6	77,284,412	31,111,409	148.4	2,976,011	2,238,053	33.0	145,784,530	60,914,532	139.3
Value added by manufacture [2]	136,614,447	45,882,821	197.7	24,873,461	11,644,256	113.6	1,393,173	1,012,847	37.6	52,747,097	25,242,026	109.0

[1] A minus sign (−) denotes decrease. [2] Value of products less cost of materials.

TABLE 4.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments	WAGE EARNERS. Average number.	WAGE EARNERS. Per cent distribution.	WAGE EARNERS. Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	VALUE OF PRODUCTS. Per cent distribution.	VALUE OF PRODUCTS. Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	VALUE ADDED BY MANUFACTURE. Per cent distribution.	VALUE ADDED BY MANUFACTURE. Rank.
United States	4,280	89,923	100.0	....	$628,288	100.0	....	$215,628	100.0	...
California	444	24,283	27.0	1	219,279	34.9	1	72,919	33.8	1
New York	637	7,656	8.5	3	54,558	8.7	2	19,429	9.0	2
Maryland	460	8,023	8.9	2	30,566	4.9	3	8,579	4.0	8
New Jersey	97	3,232	3.6	8	29,822	4.7	4	11,614	5.4	4
Pennsylvania	94	3,010	3.3	9	29,489	4.7	5	12,142	5.6	3
Illinois	132	3,680	4.1	6	28,341	4.5	6	10,508	4.9	5
Indiana	166	4,170	4.6	4	27,823	4.4	7	10,295	4.8	6
Washington	127	3,394	3.8	7	27,516	4.4	8	9,903	4.6	7
Maine	217	3,846	4.3	5	24,551	3.9	9	7,571	3.5	9
Oregon	103	2,344	2.6	13	20,591	3.3	10	6,225	2.9	11
Massachusetts	55	1,944	2.2	15	19,017	3.0	11	5,584	2.6	13
Wisconsin	129	2,909	3.2	11	18,067	2.9	12	7,416	3.4	10
Ohio	124	2,951	3.3	10	17,289	2.8	13	5,775	2.7	12
Michigan	96	2,592	2.9	12	$16,009	2.5	14	5,028	2.3	14
Iowa	76	1,582	1.8	16	10,223	1.6	15	3,488	1.6	15
Kentucky	28	1,147	1.3	19	8,496	1.4	16	2,774	1.3	18
Missouri	158	1,256	1.4	18	6,377	1.0	17	1,446	0.7	20
Delaware	78	1,459	1.6	17	5,584	0.9	18	1,962	0.9	17
Virginia	498	2,123	2.4	14	5,505	0.9	19	1,692	0.8	11
Utah	37	1,099	1.2	20	4,558	0.7	20	$1,823	0.8	18
Minnesota	38	683	0.8	24	3,500	0.6	21	1,171	0.5	22
Colorado	24	689	0.8	23	3,190	0.5	22	1,360	0.6	21
Arkansas	107	804	0.9	22	2,421	0.4	23	930	0.4	23
Mississippi	28	1,094	1.2	21	2,303	0.4	24	786	0.4	25
Louisiana	38	653	0.7	25	2,146	0.3	25	798	0.4	24
Texas	27	354	0.4	27	1,913	0.3	26	784	0.4	26
Tennessee	62	593	0.6	26	1,513	0.2	27	601	0.3	27
All other states	200	2,353	2.6	....	7,641	1.2	....	3,025	1.4	..

TABLE 5.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

INDUSTRY AND CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
CANNING AND PRESERVING	1919	108,261	61,219	47,042	56.5	43.5
	1914	88,069	48,180	39,889	54.7	45.3
	1909	71,972	38,437	33,535	53.4	46.6
Proprietors and officials	1919	11,002	10,631	371	96.6	3.4
	1914	7,540	7,368	172	97.7	2.3
	1909	6,920	6,759	161	97.7	2.3
Proprietors and firm members	1919	4,159	4,029	130	96.9	3.1
	1914	4,409	4,285	124	97.2	2.8
	1909	4,244	4,116	128	97.0	3.0
Salaried officers of corporations	1919	2,110	2,026	84	96.0	4.0
	1914	1,207	1,182	25	97.9	2.1
	1909	968	951	17	98.2	1.8
Superintendents and managers	1919	4,733	4,576	157	96.7	3.3
	1914	1,924	1,901	23	98.8	1.2
	1909	1,708	1,692	16	99.1	0.9
Clerks and other subordinate salaried employees.	1919	7,336	4,486	2,850	61.2	38.8
	1914	6,458	5,096	1,362	78.9	21.1
	1909	5,084	4,028	1,056	79.2	20.8
Wage earners (average number)	1919	89,923	46,102	43,821	51.3	48.7
	1914	74,071	35,716	38,355	48.2	51.8
	1909	59,968	27,650	32,318	46.1	53.9
16 years of age and over	1919	87,881	45,321	42,560	51.6	48.4
	1914	71,128	34,577	36,551	48.6	51.4
	1909	55,722	25,865	29,857	46.4	53.6
Under 16 years of age	1919	2,042	781	1,261	38.2	61.8
	1914	2,943	1,139	1,804	38.7	61.3
	1909	4,246	1,785	2,461	42.0	58.0
FISH	1919	12,797	8,106	4,691	63.3	36.7
	1914	10,306	6,753	3,553	65.5	34.5
	1909	8,341	5,314	3,027	63.7	36.3
Proprietors and officials	1919	932	909	23	97.5	2.5
	1914	651	644	7	98.9	1.1
	1909	651	642	9	98.6	1.4
Proprietors and firm members	1919	275	267	8	97.1	2.9
	1914	263	258	5	98.1	1.9
	1909	338	331	7	97.9	2.1
Salaried officers of corporations	1919	283	275	8	97.2	2.8
	1914	163	162	1	99.4	0.6
	1909	127	125	2	98.4	1.6
Superintendents and managers	1919	374	367	7	98.1	1.9
	1914	225	224	1	99.6	0.4
	1909	186	186	.....	100.0	.....
Clerks and other subordinate salaried employees.	1919	617	353	264	57.2	42.8
	1914	586	434	152	74.1	25.9
	1909	430	299	131	69.5	30.5
Wage earners (average number)	1919	11,248	6,844	4,404	60.8	39.2
	1914	9,069	5,675	3,394	62.6	37.4
	1909	7,260	4,373	2,887	60.2	39.8
16 years of age and over	1919	11,145	6,795	4,350	61.0	39.0
	1914	8,902	5,574	3,328	62.6	37.4
	1909	7,085	4,277	2,808	60.4	39.6
Under 16 years of age	1919	103	49	54	47.6	52.4
	1914	167	101	66	60.5	39.5
	1909	175	96	79	54.9	45.1
OYSTERS	1919	1,339	582	757	43.5	56.5
	1914	2,296	1,299	997	56.6	43.4
	1909	2,873	1,449	1,424	50.4	49.6
Proprietors and officials	1919	120	117	3	97.5	2.5
	1914	122	118	4	96.7	3.3
	1909	130	129	1	99.2	0.8
Proprietors and firm members	1919	51	51	.....	100.0	.....
	1914	60	58	2	96.7	3.3
	1909	49	48	1	98.0	2.0
Salaried officers of corporations	1919	24	23	1	95.8	4.2
	1914	23	22	1	95.7	4.3
	1909	34	34	.....	100.0	.....
Superintendents and managers	1919	45	43	2	95.6	4.4
	1914	39	38	1	97.4	2.6
	1909	47	47	.....	100.0	.....
Clerks and other subordinate salaried employees.	1919	30	19	11	63.3	36.7
	1914	87	66	21	75.9	24.1
	1909	77	69	8	89.6	10.4
Wage earners (avera e number)	1919	1,189	446	743	37.5	62.5
	1914	2,087	1,115	972	53.4	46.6
	1909	2,666	1,251	1,415	46.9	53.1
16 years of age and over	1919	1,185	445	740	37.6	62.4
	1914	2,008	1,085	923	54.0	46.0
	1909	2,325	1,108	1,217	47.7	52.3
Under 16 years of age	1919	4	1	3	25.0	75.0
	1914	79	30	49	38.0	62.0
	1909	341	143	198	41.9	58.1
FRUITS AND VEGETABLES	1919	72,744	40,641	32,103	55.9	44.1
	1914	58,329	29,836	28,493	51.2	48.8
	1909	47,448	23,496	23,952	49.5	50.5
Proprietors and officials	1919	8,176	7,944	232	97.2	2.8
	1914	5,527	5,450	77	98.6	1.4
	1909	5,110	5,014	96	98.1	1.9
Proprietors and firm members	1919	3,284	3,206	78	97.6	2.4
	1914	3,520	3,468	52	98.5	1.5
	1909	3,316	3,239	77	97.7	2.3
Salaried officers of corporations	1919	1,354	1,304	50	96.3	3.7
	1914	700	688	12	98.3	1.7
	1909	607	599	8	98.7	1.3
Superintendents and managers	1919	3,538	3,434	104	97.1	2.9
	1914	1,307	1,294	13	99.0	1.0
	1909	1,187	1,176	11	99.1	0.9
Clerks and other subordinate salaried employees.	1919	3,703	2,124	1,579	57.4	42.6
	1914	2,477	1,903	574	76.8	23.2
	1909	1,846	1,434	412	77.7	22.3
Wage earners (average number)	1919	60,865	30,573	30,292	50.2	49.8
	1914	50,325	22,483	27,842	44.7	55.3
	1909	40,492	17,048	23,444	42.1	57.9
16 years of age and over	1919	59,399	29,989	29,410	50.5	49.5
	1914	47,839	21,533	26,306	45.0	55.0
	1909	36,908	15,565	21,343	42.2	57.8
Under 16 years of age	1919	1,466	584	882	39.8	60.2
	1914	2,486	950	1,536	38.2	61.8
	1909	3,584	1,483	2,101	41.4	58.6

TABLE 5.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909—Continued.

INDUSTRY AND CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
PICKLES, PRESERVES, AND SAUCES.	1919	21,381	11,890	9,491	55.6	44.4
	1914	17,138	10,292	6,846	60.1	39.9
	1909	13,310	8,178	5,132	61.4	38.6
Proprietors and officials	1919	1,774	1,661	113	93.6	6.4
	1914	1,240	1,156	84	93.2	6.8
	1909	1,029	974	55	94.7	5.3
Proprietors and firm members	1919	549	505	44	92.0	8.0
	1914	566	501	65	88.5	11.5
	1909	541	498	43	92.1	7.9
Salaried officers of corporations	1919	449	424	25	94.4	5.6
	1914	321	310	11	96.6	3.4
	1909	200	193	7	96.5	3.5
Superintendents and managers	1919	776	732	44	94.3	5.7
	1914	353	345	8	97.7	2.3
	1909	288	283	5	98.3	1.7
PICKLES, PRESERVES, AND SAUCES—continued.						
Clerks and other subordinate salaried employees.	1919	2,986	1,990	996	66.6	33.4
	1914	3,308	2,693	615	81.4	18.6
	1909	2,731	2,226	505	81.5	18.5
Wage earners (average number)	1919	16,621	8,239	8,382	49.6	50.4
	1914	12,590	6,443	6,147	51.2	48.8
	1909	9,550	4,978	4,572	52.1	47.9
16 years of age and over	1919	16,152	8,092	8,060	50.1	49.9
	1914	12,379	6,385	5,994	51.6	48.4
	1909	9,404	4,915	4,489	52.3	47.7
Under 16 years of age	1919	469	147	322	31.3	68.7
	1914	211	58	153	27.5	72.5
	1909	146	63	83	43.2	56.8

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment is indicated by **bold-faced** figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Per cent minimum is of maximum.
United States:														
1919	89,923	44,407	37,044	*35,692*	41,508	46,581	77,462	122,414	169,455	**198,047**	161,452	87,333	57,681	18.0
Males	46,102	26,640	22,731	*21,890*	25,353	28,599	43,058	58,973	80,709	**91,746**	72,354	47,298	33,873	23.9
Females	43,821	17,767	14,313	*13,802*	16,155	17,982	34,404	63,441	88,746	**106,301**	89,098	40,035	23,808	13.0
1914	74,071	*27,917*	28,944	29,926	34,047	38,458	58,869	89,183	143,042	185,724	141,670	69,626	41,446	15.0
1909	59,968	*19,998*	21,268	23,015	28,390	31,139	45,270	68,516	127,741	**154,800**	105,257	59,727	34,536	12.9
Arkansas	804	5	*2*	11	20	49	26	492	2,526	**2,865**	2,522	874	256	0.1
California	24,283	13,618	9,222	*7,747*	10,320	10,779	19,719	44,967	51,317	45,039	37,335	24,667	16,666	15.1
Colorado	689	203	*166*	166	282	309	527	1,233	1,222	2,079	1,237	514	330	8.0
Delaware	1,459	455	340	*278*	327	494	2,074	579	4,065	**4,740**	3,110	695	351	5.9
Illinois	3,680	2,552	*2,357*	2,427	2,671	2,993	3,724	3,483	4,927	7,688	4,787	3,507	3,044	30.7
Indiana	4,170	2,263	1,695	*1,569*	1,578	1,740	3,219	3,273	7,920	**11,828**	9,037	3,621	2,297	13.3
Iowa	1,582	616	*554*	637	595	767	769	812	4,794	**5,777**	1,903	1,083	677	9.6
Kentucky	1,147	965	943	894	*875*	*783*	1,020	1,102	1,630	1,771	1,636	1,175	970	44.2
Louisiana	653	*241*	350	342	937	886	767	634	850	862	**918**	672	377	26.3
Maine	3,846	1,086	*981*	1,068	1,368	2,117	3,494	4,345	7,409	**10,799**	7,597	3,859	2,029	9.1
Maryland	8,023	*1,638*	1,674	1,881	2,566	3,333	6,126	5,637	13,715	**27,225**	25,966	4,202	2,313	6.0
Massachusetts	1,944	2,065	1,959	1,858	1,764	1,874	1,978	1,957	*1,740*	1,921	1,959	2,082	**2,171**	80.1
Michigan	2,592	1,188	763	*762*	885	1,189	3,968	5,641	4,860	4,912	3,752	2,097	1,087	13.6
Minnesota	683	199	*184*	206	255	298	480	837	**2,244**	1,994	712	469	318	8.2
Mississippi	1,094	1,380	1,192	1,148	1,101	590	*179*	202	1,059	1,190	1,714	1,728	1,645	10.4
Missouri	1,256	310	*305*	311	327	449	439	449	3,855	**4,144**	3,488	631	364	7.4
New Jersey	3,232	2,328	2,312	2,017	*1,608*	1,802	2,784	3,293	4,999	5,710	5,390	3,671	2,870	28.2
New York	7,656	3,664	3,382	*3,337*	3,542	4,018	6,121	11,230	11,227	**14,264**	14,260	10,805	6,022	23.4
Ohio	2,951	1,474	*1,458*	1,497	1,630	2,054	4,426	3,056	4,882	6,773	4,033	2,422	1,707	21.5
Oregon	2,344	1,029	631	*571*	691	1,180	2,576	3,848	4,116	4,876	3,798	3,097	1,915	12.2
Pennsylvania	3,010	2,363	2,345	2,282	2,362	*2,167*	2,627	3,148	4,265	4,851	4,302	2,994	2,424	44.5
Tennessee	593	*23*	30	40	40	332	314	1,296	1,965	1,626	881	457	112	1.7
Utah	1,099	276	235	*225*	275	348	863	2,400	2,256	2,994	2,214	742	360	7.5
Virginia	2,124	*145*	148	147	532	459	407	846	7,307	7,594	6,341	1,283	279	1.9
Washington	3,394	1,367	*1,239*	1,555	1,971	2,676	2,908	4,397	5,525	6,161	5,647	4,524	2,758	20.1
Wisconsin	2,909	999	901	*861*	1,051	1,386	3,760	11,153	5,468	3,999	2,440	1,844	1,046	7.7
States showing large proportion of females.														Per ct. av. is of state.
California	12,331	5,166	3,229	*2,837*	4,228	4,103	10,069	28,254	31,621	25,132	17,719	9,854	5,760	50.8
Illinois	1,550	1,142	*1,045*	1,089	1,136	1,334	1,408	1,245	1,976	3,235	2,170	1,483	1,337	42.1
Indiana	1,782	837	587	574	*456*	532	1,045	1,050	3,684	6,105	4,417	1,365	732	42.7
Maine	1,812	497	*353*	396	471	879	1,675	2,123	3,688	4,967	3,778	1,972	945	47.1
Maryland	4,710	*659*	755	855	1,137	1,808	3,196	3,431	4,499	16,536	20,036	2,484	1,124	58.7
Massachusetts	423	399	382	*374*	407	461	453	445	428	427	437	433	430	21.7
Michigan	1,283	485	244	*219*	252	354	2,173	3,024	2,652	2,651	2,114	908	320	49.3
New Jersey	1,283	897	887	715	*503*	585	1,095	1,193	2,066	2,556	2,521	1,470	908	39.7
New York	3,736	1,530	1,346	1,250	*1,230*	1,463	2,754	5,308	5,667	7,631	7,880	5,830	2,943	48.8
Ohio	1,377	*690*	700	714	739	992	1,592	1,522	2,238	3,109	2,060	1,266	902	46.7
Oregon	1,147	422	141	*94*	119	246	1,380	2,180	2,350	2,599	1,951	1,443	839	48.9
Pennsylvania	1,438	1,098	1,101	1,043	1,105	*996*	1,224	1,630	2,198	2,350	2,038	1,391	1,082	47.8
Virginia	1,270	76	75	*71*	225	185	115	401	4,508	4,743	3,994	728	119	59.8
Washington	1,369	425	*291*	357	413	655	1,026	1,891	2,478	2,901	2,533	2,093	1,365	40.3
Wisconsin	851	212	173	129	*125*	159	931	3,707	1,999	1,357	777	475	168	29.3

TABLE 7.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States	1919	89,923	5,367	1,278	19,635	9,265	11,168	11,115	28,508	3,587
	1914	74,071	(2)	(2)	7,854	2,844	14,984	10,467	35,141	2,781
	1909	59,968	(2)	(2)	2,632	1,311	3,077	4,641	42,908	5,399
Arkansas	1919	804	37	32	232	23	123	.....	348	9
	1914	454	(2)	(2)	44	18	50	44	298	.....
California	1919	24,283	2,043	209	10,310	190	2,358	289	6,642	1,642
	1914	12,756	(2)	(2)	1,336	307	3,094	206	7,144	669
Colorado	1919	689	16	2	159	6	259	70	176	1
	1914	684	(2)	(2)	84	79	389	9	79	44
Delaware	1919	1,459	114	12	55	26	24	428	800	.....
	1914	1,803	(2)	(2)	166	91	256	268	993	29
Illinois	1919	3,680	65	123	374	1,524	162	355	1,072	5
	1914	2,560	(2)	(2)	21	111	205	980	1,238	5
Indiana	1919	4,170	80	11	327	917	439	682	1,643	71
	1914	4,422	(2)	(2)	262	188	302	1,685	1,576	409
Iowa	1919	1,582	15	.....	32	85	154	202	868	226
	1914	1,209	(2)	(2)	79	38	18	22	858	194
Kentucky	1919	1,147	31	.....	8	2	521	456	129	.....
	1914	594	(2)	(2)	74	7	175	185	148	5
Louisiana	1919	653	9	21	230	58	79	.....	202	54
	1914	991	(2)	(2)	795	.....	3	.....	186	7
Maine	1919	3,846	49	.....	216	161	1,565	139	1,618	98
	1914	3,913	(2)	(2)	150	65	499	56	3,142	1
Maryland	1919	8,023	1,089	115	769	743	446	1,605	3,090	166
	1914	8,640	(2)	(2)	1,385	272	142	568	5,668	605
Massachusetts	1919	1,944	5	10	313	1,563	17	.....	36	.....
	1914	1,903	(2)	(2)	56	200	1,513	115	19	.....
Michigan	1919	2,592	128	.....	210	29	256	492	979	498
	1914	2,507	(2)	(2)	395	11	607	384	1,081	29
Minnesota	1919	683	15	20	46	146	22	.....	420	14
	1914	436	(2)	(2)	115	13	30	99	133	46
Mississippi	1919	1,094	18	.....	485	18	221	91	261	.....
	1914	1,052	(2)	(2)	496	.....	88	45	423	.....
Missouri	1919	1,256	189	25	264	83	258	17	420	.....
	1914	850	(2)	(2)	396	22	78	12	337	5
New Jersey	1919	3,232	93	19	37	444	226	1,936	462	15
	1914	3,154	(2)	(2)	221	177	203	1,485	1,064	4
New York	1919	7,656	100	385	339	1,371	1,802	404	3,243	12
	1914	8,757	(2)	(2)	249	261	3,669	931	3,611	36
Ohio	1919	2,951	38	24	379	518	211	690	1,027	64
	1914	2,509	(2)	(2)	92	86	870	345	1,094	22
Oregon	1919	2,344	14	3	1,069	21	458	30	735	14
	1914	799	(2)	(2)	59	32	477	23	141	67
Pennsylvania	1919	3,010	67	81	94	583	75	1,781	281	48
	1914	3,096	(2)	(2)	114	86	613	1,841	351	91
Tennessee	1919	593	26	.....	54	9	30	239	232	3
	1914	390	(2)	(2)	58	95	30	9	197	1
Utah	1919	1,099	8	.....	578	182	148	35	15	133
	1914	677	(2)	(2)	72	21	156	35	393	.....
Virginia	1919	2,123	206	194	175	101	187	279	981	.....
	1914	2,076	(2)	(2)	445	126	65	418	989	33
Washington	1919	3,394	28	1,916	248	235	.....	906	61	.....
	1914	2,352	(2)	(2)	150	21	630	.....	1,311	240
Wisconsin	1919	2,909	27	6	189	124	422	648	1,094	399
	1914	2,687	(2)	(2)	109	207	421	442	1,311	197

[1] Includes 48 and under for 1914 and 1909.

[2] Corresponding figures not available.

TABLE 8.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States...1919..	4,280	89,923	314	1,702	4,418	1,253	11,748	618	19,861	228	16,263	133	19,882	25	8,017	3	1,845	4	4,889
1914..	4,220	74,071	118	2,135	5,119	1,160	13,163	504	15,969	183	12,827	95	14,966	18	5,787	5	3,510	2	2,730
Arkansas	107	804	3	73	204	22	261	7	214	2	125	.....	.....	.....	.....	.....	.....	.....	.....
California	444	24,283	18	101	270	101	1,274	83	2,809	68	4,991	57	8,742	13	3,899	2	1,263	1	1,035
Colorado	24	689	1	5	13	8	80	5	200	4	275	1	121	.....	.....	.....	.....	.....	.....
Delaware	78	1,459	1	22	77	42	546	7	187	3	217	3	432	.....	.....	.....	.....	.....	.....
Illinois	132	3,680	8	49	128	35	442	20	693	11	839	7	907	2	671	.....	.....	.....	.....
Indiana	166	4,170	5	39	128	78	967	27	832	9	640	6	857	2	746	.....	.....	.....	.....
Iowa	76	1,582	4	13	39	30	369	26	776	1	56	2	342	.....	.....	.....	.....	.....	.....
Kentucky	28	1,147	5	9	31	5	58	4	159	1	60	2	254	2	585	.....	.....	.....	.....
Louisiana	38	653	.....	14	34	13	144	7	203	2	125	2	147	.....	.....	.....	.....	.....	.....
Maine	217	3,846	6	77	236	73	785	48	1,549	10	733	3	543	.....	.....	.....	.....	.....	.....
Maryland	460	8,023	11	152	519	199	2,226	66	2,090	22	1,474	9	1,427	1	287	.....	.....	.....	.....
Massachusetts	55	1,944	3	22	63	17	214	6	172	5	346	1	148	.....	.....	.....	.....	1	1,001
Michigan	96	2,592	7	33	67	22	274	20	658	7	559	7	1,034	.....	.....	.....	.....	.....	.....
Minnesota	38	683	1	10	14	18	241	7	203	1	82	1	143	.....	.....	.....	.....	.....	.....
Mississippi	28	1,094	.....	1	4	11	164	10	317	3	219	3	390	.....	.....	.....	.....	.....	.....
Missouri	158	1,256	8	94	308	48	523	7	186	.....	.....	1	230	.....	.....	.....	.....	.....	.....
New Jersey	97	3,232	9	31	92	36	447	11	404	6	407	3	438	.....	.....	.....	.....	1	1,444
New York	637	7,656	116	332	612	91	1,049	63	2,074	23	1,524	10	1,365	1	450	1	582	.....	.....
Ohio	124	2,951	4	41	127	50	587	18	593	4	292	5	770	2	582	.....	.....	.....	.....
Oregon	103	2,344	2	36	89	33	412	22	729	6	519	4	595	.....	.....	.....	.....	.....	.....
Pennsylvania	94	3,010	5	33	83	37	444	11	364	4	288	3	422	.....	.....	.....	.....	1	1,409
Tennessee	62	593	10	25	73	22	280	3	92	2	148	.....	.....	.....	.....	.....	.....	.....	.....
Utah	37	1,099	2	5	14	11	136	10	322	9	627	.....	.....	.....	.....	.....	.....	.....	.....
Virginia	498	2,123	57	349	884	79	759	11	330	2	150	.....	.....	.....	.....	.....	.....	.....	.....
Washington	127	3,394	3	35	77	46	570	30	1,007	9	599	2	344	2	797	.....	.....	.....	.....
Wisconsin	129	2,909	4	18	34	45	569	53	1,591	7	493	2	222	.....	.....	.....	.....	.....	.....

TABLE 9.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes	4,280	4,220	3,767	89,923	74,071	59,968	$628,287,925	$243,439,859	$157,101,201	$215,628,178	$83,781,950	$55,278,142
Less than $5,000	933	1,626	1,394	1,233	3,255	3,185	2,217,181	3,195,667	3,105,206	900,115	1,435,493	1,232,832
$5,000 to $20,000	1,080	1,142	1,176	5,092	8,090	8,986	11,871,579	12,391,999	12,221,763	4,228,851	4,661,692	4,488,480
$20,000 to $100,000	1,209	937	840	15,355	18,345	17,700	58,224,225	42,783,417	36,858,716	19,812,702	14,843,174	13,364,834
$100,000 to $500,000	803	435	344	29,213	33,272	24,575	173,751,360	92,018,266	81,447,022	61,547,170	41,795,058	26,910,548
$500,000 to $1,000,000	138	51		12,656			95,675,902	35,166,652		34,815,741		
$1,000,000 and over	117	20	13	26,374	11,109	5,522	286,547,678	57,883,858	23,468,494	94,323,599	21,046,533	9,281,448
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	21.8	38.5	37.0	1.4	4.4	5.3	0.4	1.3	2.0	0.4	1.7	2.2
$5,000 to $20,000	25.2	27.1	31.2	5.7	10.9	15.0	1.9	5.1	7.8	2.0	5.6	8.1
$20,000 to $100,000	28.2	22.2	22.3	17.1	24.8	29.5	9.3	17.6	23.5	9.2	17.7	24.2
$100,000 to $500,000	18.8	10.3	9.1	32.5	44.9	41.0	27.7	37.8	51.8	28.5	49.9	48.7
$500,000 to $1,000,000	3.2	1.2		14.1			15.2	14.4		16.1		
$1,000,000 and over	2.7	0.7	0.3	29.3	15.0	9.2	45.6	23.8	14.9	43.7	25.1	16.8

TABLE 10.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914.

STATE.	Census year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.						VALUE OF PRODUCTS.					
					Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.		
		Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.
United States	1919	1,634	1,611	1,035	89,923	10,919	65,556	13,448	12.1	72.9	15.0	$628,287,925	$50,391,371	$499,137,982	$78,758,572	8.0	79.4	12.5
	1914	1,905	1,322	993	74,071	11,549	53,473	9,049	15.6	72.2	12.2	243,439,859	26,390,525	195,088,337	21,930,997	10.9	80.1	9.0
	1909	1,636	1,167	964	59,968	10,571	39,847	9,550	17.6	66.4	15.9	157,101,201	21,321,533	116,496,603	19,283,065	13.6	74.2	12.2
Arkansas	1919	39	6	62	804	156	152	496	19.4	18.9	61.7	2,420,922	502,531	439,163	1,479,228	20.8	18.1	61.1
	1914	23	10	30	454	97	159	198	21.4	35.0	43.6	579,209	93,021	273,154	213,034	16.1	47.2	36.8
California	1919	117	229	98	24,283	1,958	17,711	4,614	8.1	72.9	19.0	219,278,576	12,811,710	161,581,385	44,885,481	5.8	73.7	20.5
	1914	66	165	58	12,756	712	11,211	833	5.6	87.9	6.5	61,162,849	2,594,241	54,168,399	4,400,209	4.2	88.6	7.2
Colorado	1919	3	18	3	689	25	659	5	3.6	95.6	0.7	3,190,048	68,987	3,045,944	75,117	2.2	95.5	2.4
	1914	5	18	3	684	125	552	7	18.3	80.7	1.0	1,798,129	256,057	1,522,872	19,200	14.2	84.7	1.1
Delaware	1919	30	24	24	1,459	399	756	304	27.4	51.7	20.8	5,584,357	1,268,245	3,423,210	892,902	22.9	61.1	15.9
	1914	37	27	33	1,803	380	1,010	413	21.1	56.0	22.9	3,174,821	643,434	1,825,402	705,985	20.3	57.5	22.2
Illinois	1919	38	68	26	3,680	271	3,240	169	7.4	88.0	4.6	28,340,663	1,598,576	25,698,569	1,043,518	5.6	90.7	3.7
	1914	39	61	17	2,560	356	2,146	58	13.9	83.8	2.3	10,121,497	893,819	9,035,273	192,405	8.8	89.3	1.9
Indiana	1919	40	100	26	4,170	545	3,155	470	13.1	75.7	11.3	27,823,348	3,043,913	22,762,823	2,016,612	10.9	81.8	7.2
	1914	34	85	22	4,422	531	3,540	351	12.0	80.1	7.9	13,866,383	2,232,592	10,854,527	779,264	16.1	78.3	5.6
Iowa	1919	9	58	9	1,582	34	1,487	61	2.1	94.0	3.9	10,223,227	93,195	9,752,014	378,018	0.9	95.4	3.7
	1914	10	43	11	1,209	10	1,090	109	0.8	90.2	9.0	3,919,955	21,650	3,683,137	215,168	0.5	94.0	5.5
Kentucky	1919	11	16	1	1,147	[1] 41	1,106	.....	3.6	96.4	.....	8,496,486	[1] 88,246	8,408,240	.....	1.0	99.0	.....
	1914	11	16	6	594	63	502	29	10.6	84.5	4.9	2,265,958	50,395	2,195,539	20,024	2.2	96.9	0.9
Louisiana	1919	12	18	8	653	86	506	61	13.2	77.5	9.3	2,146,385	409,176	1,525,865	211,344	19.1	71.1	9.8
	1914	8	14	6	991	50	834	107	5.0	84.2	10.8	1,365,267	79,867	1,206,376	79,024	5.8	88.4	5.8
Maine	1919	54	118	45	3,846	370	3,076	400	9.6	80.0	10.4	24,550,574	2,501,450	19,753,482	2,295,642	10.2	80.5	9.4
	1914	66	70	58	3,913	468	2,985	459	12.0	76.3	11.7	10,742,738	1,098,537	8,505,480	1,138,721	10.2	79.2	10.6
Maryland	1919	217	66	177	8,023	2,140	2,953	2,930	26.7	36.8	36.5	30,566,097	6,276,454	15,188,224	9,101,419	20.5	49.7	29.8
	1914	259	61	145	8,640	2,400	3,852	2,388	27.8	44.6	27.6	18,028,779	4,299,967	9,269,890	4,458,922	23.9	51.4	24.7
Massachusetts	1919	24	30	1	1,944	[1] 127	1,817	.....	6.6	93.4	.....	19,017,084	[1] 1,351,303	17,665,781	.....	7.1	92.9	.....
	1914	27	27	11	1,903	211	1,537	155	11.1	80.8	8.1	8,169,014	803,401	6,702,116	663,497	9.8	82.1	8.1
Michigan	1919	24	58	14	2,592	274	2,092	226	10.5	80.8	8.7	16,008,622	1,427,228	13,206,350	1,375,044	8.8	82.5	8.6
	1914	33	43	15	2,507	312	2,070	125	12.4	82.6	5.0	8,194,225	814,978	7,074,230	305,017	10.0	86.3	3.7
Mississippi	1919	5	18	5	1,004	106	895	93	9.8	81.7	8.5	2,303,364	191,083	1,941,690	170,591	8.7	83.9	7.4
	1914	1	15	2	1,052	.....	[2] 1,052	.....	.....	100.0	.....	1,654,772	.....	[2] 1,654,772	.....	.....	100.0	.....
Missouri	1919	86	20	52	1,256	531	440	285	42.3	35.0	22.7	6,376,889	1,134,345	4,811,515	431,029	17.8	75.5	6.8
	1914	76	27	50	850	391	251	208	46.0	29.5	24.5	1,081,590	405,614	530,568	144,408	37.6	49.0	13.4
New Jersey	1919	37	45	15	3,232	302	2,788	142	9.3	86.3	4.4	29,821,737	2,408,796	26,967,955	444,986	8.1	90.4	1.5
	1914	42	39	15	3,154	492	2,482	180	15.6	78.7	5.7	13,764,955	1,449,832	11,949,676	365,447	10.5	86.8	2.7
New York	1919	385	164	88	7,656	921	6,237	498	12.0	81.5	6.5	54,557,674	5,115,633	46,283,885	3,158,156	9.4	84.8	5.8
	1914	677	129	181	8,757	1,796	5,992	969	20.5	68.4	11.1	25,944,634	4,284,482	19,120,521	2,539,631	16.5	73.7	9.8
Ohio	1919	35	73	16	2,951	203	2,556	192	6.9	86.6	6.5	17,289,782	1,137,306	15,289,491	862,985	6.6	88.4	5.0
	1914	37	71	28	2,509	537	1,587	385	21.4	63.3	15.3	8,957,883	1,981,969	5,924,414	1,051,503	22.1	66.1	11.7

[1] Includes the group "All others."

[2] Includes the groups "Individuals" and "All others."

TABLE 10.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914—Continued.

STATE.	Census year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.							VALUE OF PRODUCTS.						
					Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.		
		Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.
Oregon	1919	14	70	19	2,344	84	2,147	113	3.6	91.6	4.8	20,591,135	613,021	18,184,178	1,793,936	3.0	88.3	8.7
	1914	18	42	11	799	70	652	77	8.8	81.6	9.6	4,738,067	168,466	4,083,334	486,267	3.5	86.2	10.3
Pennsylvania	1919	40	27	27	3,010	426	2,329	255	14.2	77.4	8.5	29,489,000	2,146,452	25,871,944	1,470,604	7.3	87.7	5.0
	1914	41	20	23	3,096	381	2,409	306	12.3	77.8	9.9	14,949,551	1,086,427	12,607,172	1,255,952	7.3	84.3	8.4
Tennessee	1919	26	9	27	593	143	213	237	24.1	35.9	40.0	1,513,347	418,399	544,444	550,504	27.6	36.0	36.4
	1914	36	8	19	390	124	97	169	31.8	24.9	43.3	540,225	143,850	131,970	264,405	26.6	24.4	48.9
Utah	1919	4	31	2	1,099	[1] 26	1,073	.....	2.4	97.6	.....	4,557,638	[1] 100,257	4,457,381	.....	2.2	97.8	.....
	1914	4	32	1	677	[1] 5	672	.....	0.7	99.3	.....	2,429,804	[1] 8,108	2,421,696	.....	0.3	99.7	.....
Virginia	1919	254	44	200	2,123	855	488	780	40.3	23.0	36.7	5,505,351	2,111,861	1,494,772	1,898,718	38.4	27.1	34.5
	1914	222	40	179	2,074	835	494	745	40.3	23.8	35.9	2,234,408	806,957	630,208	797,243	36.1	28.2	35.7
Washington	1919	27	81	19	3,394	110	3,049	235	3.2	89.8	6.9	27,515,650	1,115,900	24,530,593	1,869,157	4.1	89.2	6.8
	1914	16	60	10	2,352	89	1,923	340	3.8	81.8	14.4	9,449,549	471,829	8,021,768	955,952	5.0	84.9	10.1
Wisconsin	1919	10	109	10	2,909	150	2,712	47	5.2	93.2	1.6	18,066,890	794,144	16,956,394	316,352	4.4	93.9	1.8
	1914	10	89	13	2,687	77	2,586	24	2.9	96.2	0.9	7,335,338	359,236	6,830,781	145,321	4.9	93.1	2.0

[1] Includes the group "All others."

TABLE 11.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	13,538	7,175	4,087	180,812	120,004	81,179	100.0	100.0	100.0
Owned	4,464	4,379	3,203	124,241	100,622	75,309	68.7	83.8	92.8
Steam [1]	3,406	3,201	2,587	114,140	90,778	70,392	63.1	75.6	86.7
Engines	3,318	(2)	(2)	111,395	(2)	(2)	61.6	.....	.....
Turbines	88	(2)	(2)	2,745	(2)	(2)	1.5	.....	.....
Internal-combustion engines	1,050	1,137	595	9,961	8,967	4,519	5.5	7.5	5.6
Water wheels, turbines, and motors	8	41	21	140	877	398	0.1	0.7	0.5
Rented	9,074	2,796	884	56,571	19,382	5,870	31.3	16.2	7.2
Electric	9,074	2,796	884	56,220	18,726	5,469	31.1	15.6	6.7
Other	.....	.....	.....	351	656	401	0.2	0.5	0.5
Electric	12,000	4,349	1,410	72,674	28,438	8,728	100.0	100.0	100.0
Rented	9,074	2,796	884	56,220	18,726	5,469	77.4	65.8	62.7
Generated by establishments reporting	2,926	1,553	526	16,454	9,712	3,259	22.6	34.2	37.3

[1] Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.

[2] Not reported separately.

TABLE 12.—FUEL CONSUMED, BY STATES: 1919.

STATE.	Census year.	COAL. Anthracite (tons, 2,240 lbs.).	COAL. Bituminous (tons, 2,000 lbs.).	Coke (tons, 2,000 lbs.).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
United States	1919	33,431	538,868	6,207	716,246	23,676	287,538
	1914	48,705	415,732	2,992	344,764	(1)	224,543
Arkansas [2]	1919	.....	2,726	.....	47	106	6,136
California	1919	.....	565	1,431	644,061	4,459	158,418
	1914	140	389	.....	264,988	(1)	10,005
Colorado	1919	.....	8,604	1,350	1	111	.....
	1914	.....	5,926	.....	56	(1)	382
Delaware	1919	1,366	8,219	.....	.....	77	.....
	1914	517	7,382	150	83	(1)	150
Illinois	1919	1,021	47,206	93	111	1,148	3,074
	1914	156	26,854	66	315	(1)	1,848
Indiana	1919	102	64,744	40	8	49	433
	1914	3	56,344	10	185	.....	323
Iowa	1919	219	19,394	.....	3	31	3,600
	1914	215	11,625	.....	110	(1)	1,370
Kentucky	1919	.....	15,312	69	3	166	160
	1914	.....	9,382	.....	15	(1)	2,292
Louisiana	1919	31	8,627	38	3,146	125	32,662
	1914	.....	4,196	.....	1,582	(1)	457
Maine	1919	1,326	25,691	5	2,910	3,650	8
	1914	1,080	19,611	165	817	(1)	354
Maryland	1919	1,311	38,967	.....	297	2,313	338
	1914	1,157	36,932	20	324	(1)	9,525
Massachusetts	1919	4,127	4,829	105	7,355	15	1,864
	1914	1,268	6,018	30	28	(1)	1,501
Michigan	1919	39	26,110	.....	5	69	34
	1914	416	22,597	238	432	(1)	229
Minnesota [2]	1919	194	3,132	.....	59	20	25
Mississippi	1919	35	6,557	13	.....	4	.....
	1914	.....	6,568	2	4	(1)	416
Missouri	1919	4	4,352	.....	6	69	.....
	1914	3	1,486	49	66	(1)	11
New Jersey	1919	1,158	31,698	1,433	1,979	44	2,797
	1914	2,528	24,332	.....	337	(1)	2,111
New York	1919	17,563	66,763	280	271	2,592	13,556
	1914	37,267	48,367	1,091	2,190	(1)	34,374
Ohio	1919	.....	35,776	8	63	330	27,733
	1914	548	26,747	.....	98	(1)	88,399
Oregon	1919	312	7,198	30	26,526	1,061	1,859
	1914	.....	60	.....	16,208	(1)	327
Pennsylvania	1919	2,297	46,812	60	56	144	21,820
	1914	1,940	40,902	.....	62	(1)	54,465
Tennessee [2]	1919	55	2,413	.....	1	13	.....
Utah	1919	1	8,105	776	.....	104	.....
	1914	.....	6,667	.....	21	(1)	.....
Virginia	1919	868	10,995	.....	11	210	.....
	1914	365	5,966	57	137	(1)	.....
Washington	1919	38	9,913	.....	27,778	5,252	1,304
	1914	541	9,712	.....	54,975	(1)	2,013
Wisconsin	1919	215	23,328	32	54	1,217	.....
	1914	113	18,073	628	1,032	(1)	151
All other states	1919	1,149	10,832	444	1,495	297	11,717
	1914	448	19,596	486	699	(1)	13,840

[1] Included in figures for fuel oils.

[2] Not reported separately in 1914.

SPECIAL STATISTICS.

The special schedules used in collecting statistics for the canning and preserving industries called for a detailed report of the quantity and value of the various products, with the exception of pickles, preserves, and sauces. Since, as already stated, there is a considerable overlapping among the four branches of the industry, it has been deemed best in presenting data as to specific products not to segregate the branches, but to show the total quantity and value of each product made by all establishments which produce that product, to whatever industries they may be assigned.

Sizes of cans and cases.—Table 13 shows the dimension and approximate capacity of the principal sizes of cans in use. These dimensions and capacities were obtained from the National Canners' Association and are those agreed upon by the conference committee of that association and the National Wholesale Grocers' Association as complying with the state and national pure-food laws. The volume and weight of contents given allow for "reasonable tolerances"—that is to say, they represent not the maximum capacity of the cans, but what they actually contain when filled in the usual manner. The figures relate to the "sanitary" (open-top) cans, which in some cases differ slightly in size from the "hole-and-cap" variety.

In Tables 14, 15, 16, 17, 19, and 20, the quantities of the several classes of canned products are given in standard cases of the capacities indicated in footnote 1, Table 13.

TABLE 13.—SIZE, NUMBER, DIMENSION, AND APPROXIMATE CAPACITY OF CANS.

SIZE, NO.[1]	Outside diameter or length and breadth.	Outside height.	CONTENTS. Kind.	Approximate volume.	Approximate weight.	
	Inches.	*Inches.*		*Cu. in.*	*Lbs.*	*Oz.*
¼	3⅛ by 4 5/16	1 5/16	Sardines	7	..	3½
½	3⅜	2	Tuna fish	14½	..	7
¾	3 7/16 by 4¾	1¾	Sardines	21	..	11
1	2 11/16	4	Oysters and clams	19	..	[2] 5
1	2 11/16	4	Shrimp	19	..	4¼
1-lb.—flat	4	2⅜	Tuna fish	25	..	13
1-lb.—salmon	3	4⅝	Salmon	27	..	15½
1	2 11/16	4	Soups	19	..	10½
1	2 11/16	4	Fruits and vegetables	19	..	10
2	3⅜	4 11/16	Fruits and vegetables	37	1	4
2½	4	4 11/16	Fruits and vegetables	[3] 52	1	14
3 (4⅞")	4¼	4⅞	Fruits and vegetables	61	2	1
3 (5")	4¼	5	Fruits and vegetables	63	2	2
3 (5½")	4¼	5½	Fruits and vegetables	69	2	6
10	6 3/16	7	Fruits and vegetables	[3] 189	6	10

[1] In the compilation of Tables 14 to 20, inclusive, the quantities of the several classes of products have been reduced to standard cases of the following capacities, Sardines, No. ¼ cans, 100 to the case; tuna fish, No. ½ cans, 48 to the case; salmon, shrimp, and oysters and clams, No. 1 cans, 48 to the case; soups, No. 1 cans, 48 to the case; clam chowder, No. 3 cans, 24 to the case; tomato pulp, No. 10 cans, 12 to the case; and all other fruits and vegetables, No. 2 or 3 cans, 24 to the case, as indicated in Table 16.

[2] Not including weight of liquid.

[3] The fruits usually packed in the No. 2½ cans and the tomato and other pulps usually packed in the No. 10 cans are slightly heavier in proportion to their volume than the average of the contents of the other sizes of cans.

Quantity and value of products: 1919 and 1914.—Table 14 presents a summary, by broad classes, of the quantity and value of products for the canning and preserving industry as reported at the censuses of 1919 and 1914.

TABLE 14.—QUANTITY AND VALUE OF PRODUCTS: 1919 AND 1914.

CLASS OF PRODUCT.	QUANTITY. 1919	QUANTITY. 1914	VALUE. 1919	VALUE. 1914	Per cent of total. 1919	Per cent of total. 1914	PER CENT OF INCREASE,[1] 1914–1919. Quantity.	Value.
Total value	.....	.....	$639,771,083	$249,791,129	100.0	100.0	.....	156.0
Canned vegetables (cases)[2]	[3] 63,316,116	55,144,772	176,431,307	92,290,724	27.6	36.9	14.8	91.2
Canned fruits (cases)[2]	21,432,393	9,449,182	127,949,357	24,897,174	20.0	10.0	293.3	413.9
Dried fruits (pounds)	615,408,528	568,587,364	85,401,265	34,771,912	13.3	13.9	8.2	145.6
Canned fish and oysters (cases)[2]	10,345,206	8,788,104	53,186,286	22,401,004	8.3	9.0	17.7	137.4
Smoked fish (pounds)	32,243,591	28,713,806	5,371,833	2,759,341	0.8	1.1	12.3	94.7
Salted fish (pounds)	111,655,326	131,149,037	18,203,800	8,172,477	2.9	3.3	−14.9	122.7
All other products, including pickles, preserves, and sauces	.....	.....	173,227,235	64,498,497	27.1	25.8	.....	.....

[1] A minus sign (−) denotes decrease. [2] See Tables 13 and 18. [3] Includes canned soup.

Increases in value appear for all classes of products covered by the table; and, with the exception of salted fish, all products for which comparative figures are given also show increases in quantity. The greatest percentage of increase shown in both quantity and value is that for canned fruits—126.8 per cent and 413.9 per cent, respectively.

Detailed statistics of kind, quantity, and value.—Table 15 shows the kind, quantity, and value of each specified product of the canning and preserving industry as returned at the censuses of 1919, 1914, and 1909.

TABLE 15.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919, 1914, AND 1909.

KIND.	1919	1914	1909
Total value	$639,771,083	$249,791,129	$165,272,412
The canning and preserving industry.	$628,287,925	$243,439,859	$157,101,201
Subsidiary products, other industries.	$11,483,158	$6,351,270	$8,171,211
FRUITS AND VEGETABLES.			
Total	$392,424,584	$151,959,810	$92,641,367
The canning and preserving industry.	$389,153,687	$149,633,706	$90,796,335
Other industries	$3,270,897	$2,326,104	$1,845,032
Canned vegetables:			
Cases [1]	57,471,295	50,258,674	34,656,179
Value	$164,573,590	[2] $84,413,667	$55,068,941
The canning and preserving industry—			
Cases	57,036,272	49,339,694	33,887,162
Value	$163,268,521	$82,397,458	$53,354,032
Other industries—			
Cases	435,023	918,980	769,017
Value	$1,305,069	$2,016,209	$1,714,909
Beans—			
Cases [3]	14,824,232	8,994,302	4,415,303
Value	$39,408,603	$16,565,021	$7,931,737
Tomatoes—			
Cases [4]	11,836,476	16,200,302	12,909,986
Value	$38,067,999	$25,532,217	$18,747,941
Corn—			
Cases [3]	14,402,725	9,919,950	7,451,265
Value	$35,532,007	$13,923,057	$10,332,136
Peas—			
Cases [3]	9,325,727	8,826,284	5,901,703
Value	$25,073,220	$15,089,047	$10,247,363
Asparagus—			
Cases [5]	1,006,604	637,601	342,838
Value	$6,571,629	$2,790,817	$1,975,775
Tomato pulp—			
Cases [7]	759,055	752,151	(6)
Value	$3,819,101	$1,454,051	(6)
Kraut—			
Cases [4]	1,041,932	1,184,219	(6)
Value	$2,845,340	$1,567,717	(6)
Sweet potatoes—			
Cases	745,861	454,415	347,286
Value	$2,477,719	$736,759	$531,651
Spinach—			
Cases [4]	676,388	391,790	149,255
Value	$2,338,497	$736,686	$294,414
Beets—			
Cases [4]	584,309	251,632	126,422
Value	$1,951,344	$511,900	$261,398
Hominy—			
Cases [4]	587,298	686,100	(6)
Value	$1,346,044	$712,991	.....
Tomato paste—			
Cases	234,691	(6)	(6)
Value	$1,300,680	(6)	(6)
Succotash—			
Cases [3]	373,977	270,077	254,365
Value	$1,142,236	$455,956	$320,141
Pumpkin—			
Cases [4]	383,211	789,368	440,303
Value	$861,436	$1,023,008	$576,043
Squash—			
Cases	54,589	(6)	(6)
Value	$165,217	(6)	(6)
All other canned vegetables—			
Cases [4]	634,220	900,483	2,317,453
Value	$1,672,518	$3,314,440	$3,850,342
Canned soups:			
Cases [8]	5,844,821	4,886,098	853,840
Value	$11,857,717	$7,877,057	$2,588,834
The canning and preserving industry—			
Cases	5,844,821	4,876,451	853,840
Value	$11,857,717	$7,862,436	$2,588,834
Other industries—			
Cases	.....	9,647	.....
Value	.....	$14,621	.....
Canned fruits:			
Cases [1]	21,432,393	9,449,182	5,528,878
Value	$127,949,357	$24,897,174	$13,015,438
The canning and preserving industry—			
Cases	21,207,071	9,363,636	5,501,404
Value	$125,999,988	$24,765,530	$12,938,474
Other industries—			
Cases	225,322	85,546	27,474
Value	$949,369	$131,644	$76,964
Peaches—			
Cases [5]	7,706,855	3,407,906	1,467,213
Value	$46,516,225	$9,585,773	$3,753,698
Apricots—			
Cases [5]	3,939,768	1,051,816	630,185
Value	$25,167,772	$3,060,626	$1,825,311
Pears—			
Cases [5]	2,021,610	1,062,672	637,782
Value	$14,202,963	$3,853,700	$1,833,214

KIND.	1919	1914	1909
FRUITS AND VEGETABLES—contd.			
Canned fruits—Continued.			
Apples—			
Cases [4]	2,447,927	1,514,939	1,205,742
Value	$9,081,598	$2,392,289	$1,898,720
Cherries—			
Cases [3]	1,362,832	543,213	390,351
Value	$8,451,029	$1,628,975	$1,019,013
Blackberries—			
Cases	910,657	(6)	(6)
Value	$5,080,397	(6)	(6)
Raspberries—			
Cases	551,419	(6)	(6)
Value	$4,278,939	(6)	(6)
Strawberries—			
Cases	374,097	(6)	(6)
Value	$3,693,648	(6)	(6)
Plums—			
Cases [3]	571,521	288,326	220,057
Value	$2,228,183	$438,238	$346,953
Loganberries—			
Cases	273,664	(6)	(6)
Value	$2,138,817	(6)	(6)
Pineapple—			
Cases [5]	156,755	94,140	78,557
Value	$1,365,484	$364,250	$313,647
Prunes—			
Cases	273,710	(6)	(6)
Value	$1,271,410	(6)	(6)
Blueberries—			
Cases	150,350	(6)	(6)
Value	$913,821	(6)	(6)
Grapes—			
Cases	87,644	(6)	(6)
Value	$514,219	(6)	(6)
Gooseberries—			
Cases	87,026	(6)	(6)
Value	$343,504	(6)	(6)
Other canned fruits—			
Cases	516,558	1,486,077	898,991
Value	$2,701,348	$3,573,323	$2,024,882
Dried fruits:			
Pounds	615,408,528	568,587,364	485,335,800
Value	$85,401,265	$34,771,912	$21,968,154
The canning and preserving industry—			
Pounds	612,823,741	566,769,879	484,328,767
Value	$85,135,256	$34,608,282	$21,914,995
Other industries—			
Pounds	2,584,787	1,817,485	1,007,033
Value	$266,009	$163,630	$53,159
Raisins—			
Pounds	293,300,581	226,043,959	195,774,767
Value	$35,544,262	$13,938,645	$6,912,533
Prunes—			
Pounds	136,377,066	139,091,887	138,498,490
Value	$18,253,691	$9,004,348	$5,130,412
Peaches—			
Pounds	73,379,193	61,907,251	46,843,391
Value	$12,109,624	$2,915,595	$2,423,083
Apples—			
Pounds	46,623,499	54,957,003	44,568,244
Value	$6,772,080	$2,889,406	$3,098,095
Apricots—			
Pounds	24,192,628	39,397,294	29,205,569
Value	$6,034,697	$3,615,857	$2,277,177
Apple chops—			
Pounds	3,686,103	(9)	(6)
Value	$308,977	(9)	(6)
All other dried fruits—			
Pounds	37,849,458	47,189,970	30,445,339
Value	$5,377,934	$2,408,061	$2,126,854
Dried vegetables:			
Pounds	10,345,821	(6)	(6)
Value	$2,642,655	(6)	(6)
The canning and preserving industry—			
Pounds	7,344,021	(6)	(6)
Value	$1,892,205	(6)	(6)
Other industries—			
Pounds	3,001,800	(6)	(6)
Value	$750,450	(6)	(6)
Potatoes—			
Pounds	7,253,230	(6)	(6)
Value	$1,840,399	(6)	(6)
Carrots—			
Pounds	432,959	(6)	(6)
Value	$117,487	(6)	(6)
Beans—			
Pounds	917,134	(6)	(6)
Value	$116,091	(6)	(6)
Spinach—			
Pounds	40,989	(6)	(6)
Value	$41,352	(6)	(6)
Cabbage—			
Pounds	19,901	(6)	(6)
Value	$13,684	(6)	(6)

[1] See Tables 13 and 16.
[2] Includes meat products, in 1914, valued at $781,291.
[3] Standard case contains 24 No. 2 cans. See Table 16.
[4] Standard case contains 24 No. 3 cans. Table 16.
[5] Standard case contains 24 No. 2½ cans. See Table 16.
[6] Not reported separately.
[7] Standard case contains 12 No. 10 cans. See Table 16.
[8] Standard case contains 48 No. 1 cans. See Table 16.
[9] Included in apples.

TABLE 15.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919, 1914, AND 1909—Continued.

KIND.	1919	1914	1909
FRUITS AND VEGETABLES—contd.			
Dried vegetables—Continued.			
Celery—			
Pounds	17,587	(1)	(1)
Value	$11,100	(1)	(1)
Turnips—			
Pounds	10,396	(1)	(1)
Value	$8,264	(1)	(1)
Soup mixture—			
Pounds	655,228	(1)	(1)
Value	$222,351	(1)	(1)
All other dried vegetables—			
Pounds	989,397	(1)	(1)
Value	$271,917	(1)	(1)
FISH AND OYSTERS.			
Value	$76,761,919	$33,332,822	$27,850,319
The fish and oyster industry	$76,285,796	$32,806,841	$27,648,289
Other industries	$476,123	$525,981	$202,030
Canned fish and oysters:			
Cases[2]	10,345,206	8,788,104	(3)
Value	$53,186,286	$22,401,004	$17,592,960
The fish and oyster industry—			
Cases	10,279,785	8,771,860	.....
Value	$52,859,180	$22,303,854	$17,573,311
Other industries—			
Cases	65,421	16,244	.....
Value	$327,106	$97,150	$19,649
Salmon—			
Cases[4]	2,186,004	1,513,300	(3)
Value	$19,113,204	$8,712,695	$8,723,565
Sardines—			
Cases[5]	5,777,959	5,012,199	(3)
Value	$20,258,565	$6,238,933	$4,931,831
Oysters—			
Cases[4]	717,636	944,639	(3)
Value	$3,510,119	$2,676,951	$2,443,101
Shrimp—			
Cases[4]	322,076	459,877	(3)
Value	$1,864,793	$1,725,621	$690,021
Tuna—			
Cases[6]	874,380	437,090	(1)
Value	$5,710,188	$1,638,675	(1)
Clams—			
Cases[4]	157,843	185,186	(3)
Value	$772,870	$670,363	$402,466
All other canned fish—			
Cases[2]	309,308	235,813	(3)
Value	$1,956,547	$737,766	$401,976
Smoked fish:			
Pounds	32,243,591	28,713,806	40,739,774
Value	$5,371,833	$2,759,341	$2,939,258
The fish and oyster industry—			
Pounds	31,397,919	27,426,726	39,814,989
Value	$5,287,599	$2,642,131	$2,900,417
Other industries—			
Pounds	845,672	1,287,080	924,785
Value	$84,234	$117,210	$38,841
FISH AND OYSTERS—continued.			
Smoked fish—Continued.			
Herring—			
Pounds	14,639,391	11,504,126	21,369,856
Value	$1,350,745	$719,640	$931,611
Salmon—			
Pounds	5,574,273	4,248,896	6,836,099
Value	$1,681,982	$638,975	$950,540
Finnan haddie—			
Pounds	5,696,883	4,095,693	4,513,222
Value	$495,404	$327,877	$304,620
Sturgeon—			
Pounds	570,031	511,196	620,437
Value	$435,959	$150,614	$182,786
All other smoked fish—			
Pounds	5,763,013	8,353,895	7,400,160
Value	$1,407,743	$922,235	$569,701
Salted and pickled fish:			
Pounds	111,655,326	131,149,037	133,169,621
Value	$18,203,800	$8,172,477	$7,318,101
The fish and oyster industry—			
Pounds	110,359,666	128,333,485	128,539,299
Value	$18,139,017	$7,860,856	$7,174,561
Other industries—			
Pounds	1,295,660	2,815,552	4,630,322
Value	$64,783	$311,621	$143,540
Cod—			
Pounds	62,902,037	68,456,917	54,302,338
Value	$12,643,357	$5,123,562	$3,248,669
Herring—			
Pounds	14,135,579	21,133,974	21,718,467
Value	$845,629	$641,603	$461,287
Mackerel—			
Pounds	5,098,700	6,224,313	9,045,469
Value	$1,000,593	$519,727	$740,513
Haddock—			
Pounds	7,691,146	4,947,286	3,065,156
Value	$815,180	$218,359	$148,191
All other salted fish—			
Pounds	21,827,864	30,386,547	45,038,191
Value	$2,899,041	$1,669,226	$2,719,441
PICKLES, PRESERVES, AND SAUCES.			
Preserves	$74,851,134	$14,833,288	[7] $44,780,826
Pickles and sauces	$81,109,837	$45,303,671	
The canning and preserving industry:			
Preserves	$69,655,403	$13,261,576	[7] $41,404,689
Pickles and sauces	$78,569,430	$43,376,198	
Other industries:			
Preserves	$5,195,731	$1,571,712	[7] $3,376,137
Pickles and sauces	$2,540,407	$1,927,473	
All other products of the canning and preserving industry	$14,623,609	$4,361,538	(7)

[1] Not reported separately.
[2] See Table 13.
[3] Reported in pounds in 1909.
[4] Standard case contains 48 No. 1 cans. See Table 13.
[5] Standard case contains 100 No. ¼ cans. See Table 13.
[6] Standard case contains 48 No. ½ cans. See Table 13.
[7] Pickles, preserves, and sauces include "All other products."

Canned vegetables.—From 1914 to 1919 the total output of canned vegetables increased by 7,212,621 cases, or 14.3 per cent, in quantity and $80,159,923, or 95 per cent, in value. General increases are shown for the five-year period in both quantity and value for each variety of canned vegetables for which comparative figures are given with the exception of tomatoes and kraut, for which there were decreases in the number of cases reported of 26.9 per cent and 12 per cent, respectively, and for canned pumpkin, which shows a decrease of 51.5 per cent in quantity and 15.8 per cent in value.

Canned fruits.—The output of canned fruits increased from 1914 to 1919 by 11,983,211 cases, or 126.8 per cent, in quantity and by $103,052,183, or 413.9 per cent, in value. Every kind of canned fruit for which comparative figures are given in the table shows increases in both quantity and value for the five-year period 1914 to 1919. For canned peaches, the leading product in all three years, the increase from 1914 to 1919 amounted to 4,298,949 cases, or 126.1 per cent, in quantity and $36,930,452, or 385.2 per cent, in value.

Dried fruits.—The increase in the output of dried fruits during the five-year period 1914 to 1919 amounted to 46,821,164 pounds, or 8.2 per cent, in quantity and $50,629,353, or 145.6 per cent, in value. Every class of dried fruit shown separately in the table showed increases in value, but there were decreases in the quantity reported for prunes, apples, and apricots. For raisins, the leading product, the increase between 1914 and 1919 was 67,256,622 pounds, or 29.8 per cent, in quantity and $21,605,617, or 155 per cent, in value.

Dried vegetables.—The drying of vegetables was first reported at the census of 1919. The most

important product shown is dried potatoes, the quantity and value reported representing over 70 per cent of both the total quantity and value shown for all dried vegetables.

Canned fish and oysters.—For the five-year period 1914 to 1919 the increase in the total output of canned fish and oysters amounted to 1,557,102 cases, or 17.7 per cent, in quantity and $30,785,282, or 137.4 per cent, in value. For canned sardines, the most important product of the group in 1919, there was an increase of 765,760 cases, or 15.3 per cent, in quantity and $14,019,632, or 224.7 per cent, in value. For canned salmon, the next most important product, the quantity increased 44.5 per cent and the value 119.4 per cent. Canned oysters, shrimp, and clams show decreases in the number of cases reported but increases in value, while for canned tuna there was an increase in the quantity of 437,290 cases, or 100 per cent, and of $4,071,513 in value, or 248.5 per cent.

Smoked fish.—The output of smoked fish increased by 3,529,785 pounds, or 12.3 per cent, in quantity and $2,612,492, or 94.7 per cent, in value from 1914 to 1919. At each of the three censuses smoked herring and salmon were the leading products of the group, the quantity reported for the former increasing 27.3 per cent and the value 87.7 per cent during the five-year period, while the increases for the latter were 31.2 per cent and 163.2 per cent, respectively.

Salted and pickled fish.—For the five-year period 1914 to 1919 the total quantity of salted and pickled fish decreased 14.8 per cent, while the value increased 122.7 per cent. With the exception of haddock, for which there was an increase in quantity of 55.5 per cent, there were decreases in quantities shown for each of the different kinds of salted fish, although the values show substantial increases.

Number of cases packed.—Table 16 shows, for 1919, for each class of canned vegetables and fruits, the number of cases of each size of cans as reported, together with the corresponding equivalent in standard cases.

TABLE 16.—NUMBER OF CASES PACKED, STANDARD SIZE, 24 CANS TO CASE: 1919.

PRODUCT.	Standard size of cans.	Total number of cases reduced to standard size, 24 cans to the case.	NUMBER OF CASES OF—					
			No. 1 cans.	No. 2 cans.	No. 2½ cans.	No. 3 cans.	No. 10 cans.	Special size.
Canned vegetables		57,471,295	3,802,597	38,987,667	5,748,387	6,682,855	2,630,525	2,271,794
Asparagus	2½	1,006,604	322,178	45,733	419,097	126,185	20,630	223,111
Beans—								
Baked	2	11,142,331	1,332,580	6,787,276	251,492	1,022,969	79,205	983,193
String	2	2,199,825	109,073	1,822,665	5,342	27,947	161,367	19,677
Lima	2	468,569	29,683	411,608	7,928	21	12,874	
All other beans	2	1,013,507	170,582	921,534	124,136	35,363	24,948	2,890
Beets	3	584,309	1,980	222,528	43,560	296,919	69,504	11,692
Corn	2	14,402,725	122,760	14,066,160	28,095	30,831	78,726	10,744
Hominy	3	587,298	5,351	118,685	125,315	385,279	5,007	4,097
Kraut	3	1,041,932		172,309	180,011	685,610	56,834	10,909
Succotash	2	373,977	1,500	368,887			2,105	959
Peas	2	9,325,727	264,545	8,853,843	663	16,740	128,384	72,369
Pumpkin	3	383,211	3,867	33,761	47,130	256,592	73,140	1,503
Sweet potatoes	3	745,861	14,336	36,685	371,147	363,018	18,952	
Spinach	3	676,388	20,160	108,988	190,232	196,211	163,542	16,431
Squash	3	54,589		1,940	1,667	22,707	22,217	234
Tomatoes	3	11,836,476	1,247,374	4,711,336	3,903,786	3,171,496	1,022,374	276,435
Tomato pulp	10	[1] 759,055	108,651	12,053	11,606	27,737	470,122	269,147
All other canned vegetables	3	868,911	47,977	291,676	37,180	17,230	220,594	368,403
Canned soups	1	[2] 5,844,821	4,981,041	167,751	127,388	35,687	7,963	130,886
Canned fruits		21,432,393	1,540,564	2,966,400	9,592,215	674,968	5,501,250	338,348
Apples	3	2,447,927	6,926	27,701	25,260	155,661	1,751,798	6,022
Apricot	2½	3,939,768	377,645	187,120	2,660,476	15,394	865,098	44,145
Berries—								
Blackberries	2	910,657	18,193	378,581	11,023	22,547	365,257	4,212
Blueberries	2	150,350	247	50,360	319	461	78,916	
Gooseberries	2	87,026	306	32,888	140		42,306	235
Raspberries	2	551,419	17,752	366,652	796	2,000	121,984	13,201
Strawberries	2	374,097	33,966	176,975	2,802	73	60,996	25,469
Loganberries	2	273,664	1,335	152,284	10,136		105,653	16,024
Cherries	2	1,362,832	87,758	240,224	517,767	10,371	231,542	11,169
Currants	2	2,562	211	1,842			381	59
Figs	3	11,918	1,154	159	91	2,555	924	712
Grapes	3	87,644	8,025	7,849	69,136	285	14,594	12
Peaches	2½	7,706,855	689,937	553,107	4,822,648	214,995	1,368,909	54,553
Pears	2½	2,021,610	151,398	479,877	1,074,450	227,857	177,754	6,404
Pineapples	2½	156,755	64,944	111,207		10,794	19,750	662
Plums	2	571,521	16,945	93,195	245,470	7,135	88,645	1,989
Quinces	2	4,789	1	230		3	3,635	6
All other canned fruit	2	770,999	63,821	106,149	151,701	4,837	203,108	153,474

[1] 12 cans to the case.

[2] 48 cans to the case.

Number of cases, by size of cans.—Table 17 gives, for 1919, the total number of cases of each class of canned vegetables and fruits, as reported, distributed according to size of cans.

TABLE 17.—NUMBER OF CASES PACKED, BY SIZE OF CANS: 1919.

PRODUCT.	NUMBER OF CASES PACKED IN 1919.							
	Total.	No. 1 size cans.	No. 2 size cans.	No. 2½ size cans.	No. 3 size 4⅞-inch cans.	No. 3 size, 5-inch cans.	No. 3 size, 5½-inch cans.	No 10 size cans.[1]
Aggregate number of cans	86,188,286	10,324,202	42,121,818	15,467,990	6,674,181	573,102	146,227	10,880,766
Canned vegetables	60,123,825	3,802,597	38,987,667	5,748,387	6,075,447	478,870	128,538	4,902,319
Asparagus	1,156,934	322,178	45,733	419,097	51,976	34,567	39,642	243,741
Beans—								
Baked	10,456,715	1,332,580	6,787,276	251,492	929,489	93,308	172	1,062,398
String	2,146,071	109,073	1,822,665	5,342	18,217	190	9,540	181,044
Lima	462,114	29,683	411,608	7,928	21	.....	.....	12,874
All other	1,279,453	170,582	921,534	124,136	28,651	6,495	217	27,838
Beets	646,183	1,980	222,528	43,560	284,392	12,527	.....	81,196
Corn	14,337,316	122,760	14,066,160	28,095	2,993	8,863	18,975	89,470
Hominy	643,734	5,351	118,685	125,315	383,902	1,377	.....	9,104
Kraut	1,105,673	.....	172,309	180,011	668,362	16,978	270	67,743
Succotash	373,451	1,500	368,887	.....	.....	.....	.....	3,064
Peas	9,336,544	264,545	8,853,843	663	8,133	2,340	6,267	200,753
Pumpkin	415,993	3,867	33,761	47,130	252,904	3,688	.....	74,643
Sweet potatoes	804,138	14,336	36,685	371,147	351,684	4,823	6,511	18,952
Spinach	695,564	20,160	108,988	190,232	191,050	5,161	.....	179,973
Squash	48,765	.....	1,940	1,667	17,281	3,264	2,162	22,451
Tomatoes	14,332,801	1,247,374	4,711,336	3,903,786	2,870,625	258,311	42,560	1,298,809
Tomato pulp	899,316	108,651	12,053	11,606	1,650	24,515	1,572	739,269
All other canned vegetables	983,060	47,977	291,676	37,180	14,117	2,463	650	588,997
Canned soup	5,450,716	4,981,041	167,751	127,388	35,687	.....	.....	138,849
Canned fruits	20,613,745	1,540,564	2,966,400	9,592,215	563,047	94,232	17,689	5,839,598
Apples	1,973,368	6,926	27,701	25,260	144,013	3,794	7,854	1,757,820
Apricots	4,149,878	377,645	187,120	2,660,476	7,617	7,341	436	909,243
Berries—								
Blackberries	799,813	18,193	378,581	11,023	20,792	1,755	.....	369,469
Blueberries	129,842	247	50,360	319	.....	.....	.....	78,916
Gooseberries	76,336	306	32,888	140	461	.....	.....	42,541
Raspberries	522,385	17,752	366,652	796	2,000	.....	.....	135,185
Strawberries	300,281	33,966	176,975	2,802	27	46	.....	86,465
Loganberries	285,432	1,335	152,284	10,136	.....	.....	.....	121,677
Cherries	1,098,831	87,758	240,224	517,767	6,186	4,185	.....	242,711
Currants	2,493	211	1,842	.....	.....	.....	.....	440
Figs	5,595	1,154	159	91	102	923	1,530	1,636
Grapes	99,901	8,025	7,849	69,136	239	46	.....	14,606
Peaches	7,704,149	689,937	553,107	4,822,648	174,713	36,937	3,345	1,423,462
Pears	2,117,740	151,398	479,877	1,074,450	191,386	34,628	1,843	184,158
Pineapples	207,357	64,944	111,207	.....	9,935	859	.....	20,412
Plums	453,379	16,945	93,195	245,470	4,172	2,804	159	90,634
Quinces	3,875	1	230	.....	3	.....	.....	3,641
All other canned fruits	683,090	63,821	106,149	151,701	1,401	914	2,522	356,582

[1] Includes special size cans as shown in Table 16.

Products, by states.—Table 18 shows the values of the principal products for the leading states producing each, as reported at the censuses of 1919, 1914, 1909, and 1904.

TABLE 18.—VALUE OF PRODUCTS, BY PRINCIPAL STATES: 1919, 1914, 1909, AND 1904.

PRODUCT AND STATE.	VALUE.			
	1919	1914	1909	1904
CANNED VEGETABLES.				
Beans	$39,408,603	$16,565,021	$7,931,737	$4,133,810
California	1,490,602	275,807	87,059	133,494
Illinois	1,015,945	1,062,842	562,249	321,458
Indiana	7,277,045	2,306,309	2,116,648	491,233
Maine	1,131,073	443,652	151,476	92,231
Maryland	1,953,714	947,047	778,732	1,031,025
Michigan	1,821,703	1,261,899	154,697	(1)
New Jersey	13,011,072	2,764,529	537,458	272,755
New York	3,279,534	1,819,186	1,024,065	1,055,253
Ohio	575,361	1,051,187	264,005	241,125
Pennsylvania	4,517,008	3,583,881	1,730,212	91,416
Utah	285,365	144,791	33,084	8,220
Wisconsin	975 343	294,070	101,763	55,968
All other states	2,074,838	609,821	390,289	339,632
Corn	35,532,007	13,923,057	10,332,136	15,952,386
Illinois	5,843,773	2,173,480	2,170,082	2,403,720
Indiana	1,526,103	943,641	679,446	958,455
Iowa	5,763,458	1,868,963	1,241,460	2,616,178
Maine	4,723,397	2,038,716	1,320,223	1,525,089
Maryland	5,448,073	1,939,295	1,039,905	2,021,627
New York	2,906,990	1,252.038	1,197,999	2,272,682
Ohio	3,327,725	1,441,272	1,156,509	1,736,503
All other states	5,992,488	2,265,652	1,526,512	2,418,132
Peas	25,073,220	15,089 047	10,247,363	7,928,791
Illinois	1,221,443	696,975	227,068	35,309
Indiana	994,535	620,357	753 527	644,439
Maryland	1 718,500	894,929	619,981	1,019,131
Michigan	1,267,356	976,005	796,840	471,613
New York	3,440,696	3,899,570	2,681,366	2,598,291
Wisconsin	12,132,849	5,549,499	3,410,628	2,011,226
All other states	4,297,841	2,451,712	1,757,953	1,148,782

[1] Comparable figures can not be given.

TABLE 18.—VALUE OF PRODUCTS, BY PRINCIPAL STATES: 1919, 1914, 1909, AND 1904—Continued.

PRODUCT AND STATE.	VALUE.			
	1919	1914	1909	1904
CANNED VEGETABLES—con.				
Tomatoes	$38,067,999	$25,532,217	$18,747,941	$14,020,846
California	10,452,851	3,122,532	1,120,632	845,805
Delaware	1,011,064	1,965,958	1,605,069	1,007,595
Indiana	2,482,729	1,809,912	1,469,219	1,820,876
Maryland	10,295,386	9,851,727	7,674,960	4,976,098
New Jersey	284,432	1,249,875	1,502,398	1,273,426
New York	1,748,626	1,055,020	657,375	389,036
Ohio	588,366	822,862	707,682	535,751
Utah	1,992,088	1,250,280	603,898	560,578
Virginia	3,396,908	1,401,303	1,269,209	747,838
All other states	5,815,549	3,001,848	2,137,499	1,857,843
CANNED FRUITS.				
Apples	9,081,598	2,392,289	1,898,720	738,013
California	502,906	214,021	136,855	67,591
Maine	921,577	77,603	122,791	6,794
Maryland	358,620	131,417	168,458	70,980
Michigan	574,020	227,710	275,437	103,419
New York	2,048,171	1,269,372	753,231	354,817
Pennsylvania	875,519	144,958	100,759	23,463
All other	3,800,785	327,208	341,189	110,949
Apricots	25,167,767	3,060,626	1,825,311	1,641,919
California	25,033,625	2,963,672	1,819,558	1,619,757
All other states	134,142	96,954	5,753	22,162
Cherries	8,451,029	1,628,975	1,019,013	825,522
California	3,753,993	459,005	491,575	457,169
Michigan	1,422,863	142,951	72,710	44,801
New York	248,517	629,345	323,803	133,814
Oregon	925,007	125,925	49,203	72,465
All other states	2,100,649	271,749	81,722	117,273
Peaches	46,516,225	9,585,773	3,753,698	3,902,441
California	42,347,718	8,685,831	3,013,203	2,640,524
Georgia	446,507	124,971	156,282	.....
Maryland	1,425,079	334,070	158,839	753,003
Michigan	881,443	233,051	175,386	179,838
New York	285,134	40,338	141,142	39,399
All other states	1,130,344	167,512	108,846	289,677

TABLE 18.—VALUE OF PRODUCTS, BY PRINCIPAL STATES: 1919, 1914, 1909, AND 1904—Continued.

PRODUCT AND STATE.	VALUE.			
	1919	1914	1909	1904
CANNED FRUITS—contd.				
Pears	$14,202,963	$3,853,700	$1,833,214	$2,192,910
California	8,249,308	2,796,356	1,316,022	1,577,823
Maryland	915,547	301,398	111,949	199,802
New Jersey	547,863	153,990	82,082	97,202
New York	1,363,984	375,300	216,858	172,944
Oregon	1,161,462	78,404	42,842	43,464
Washington	1,069,390	71,969	.....	.....
All other states	895,409	76,283	63,461	101,675
Berries	16,449,126	3,102,245	1,754,927	1,058,659
California	1,077,626	345,322	171,995	168,640
Maine	667,246	246,504	105,434	(1)
Maryland	1,271,867	319,587	375,319	(1)
Michigan	2,392,724	320,375	150,082	(1)
New York	2,070,607	716,577	596,130	372,171
Oregon	3,253,930	[2] 286,424	46,273	39,343
Washington	3,421,809	[3] 542,866	72,832	.....
All other states	2,293,317	324,590	236,862	478,505
DRIED FRUITS.				
Apples	6,772,100	2,889,406	3,098,095	1,758,610
Arkansas	805,157	194,727	112,091	129,094
California	2,630,300	663,673	481,173	40,659
Michigan	39,633	22,669	141,656	177,343
New York	2,234,128	1,893,015	2,333,137	1,331,895
All other states	1,062,882	115,322	30,038	79,619
Apricots	6,034,697	3,615,857	2,277,177	1,410,838
California	5,994,309	3,602,690	2,277,177	1,410,838
All other states	40,388	13,167	.....	.....
Peaches	12,109,624	2,915,595	2,423,083	1,702,205
California	12,074,246	2,888,962	2,422,043	1,701,105
All other states	35,378	26,633	1,040	1,100
Prunes	18,253,691	9,004,348	5,130,412	3,299,628
California	15,211,293	7,956,549	4,394,922	3,169,878
Oregon	2,785,373	822,837	470,911	28,000
Washington	16,997	112,932	258,909	.....
All other states	240,028	112,030	5,670	101,750
Raisins	35,544,262	13,938,645	6,912,533	6,349,381
California	35,544,262	13,681,048	6,912,533	6,349,381
All other states	.....	257,597	.....	.....
CANNED FISH AND OYSTERS.				
Salmon	19,113,204	8,712,695	8,723,565	4,251,387
California	159,564	241,335	27,515	125,020
Oregon	5,447,491	2,314,771	1,341,481	1,694,762
Washington	13,506,149	6,156,558	7,354,569	2,431,605
All other states	.....	31	.....	.....
Sardines	20,258,565	6,238,933	4,931,831	4,380,498
California	7,604,328	368,420	238,607	78,000
Maine	12,627,862	5,780,857	4,609,224	4,291,324
All other states	26,375	89,656	84,000	11,174
Oysters	3,510,119	2,676,951	2,443,101	3,812,312
Georgia	55,389	79,193	105,740	256,750
Louisiana	170,274	237,425	383,436	507,373
Maryland	1,854,880	1,177,091	761,198	548,646
Mississippi	747,369	526,106	311,161	1,340,942
South Carolina	416,509	324,405	268,438	529,511
All other states	265,698	332,731	613,128	629,090
Shrimp	1,864,793	1,725,621	690,021	(1)
Georgia	191,768	109,494	.....	(1)
Louisiana	533,594	644,132	253,184	(1)
Mississippi	844,606	954,535	433,693	(1)
All other states	294,765	17,460	3,144	(1)
Tuna—California	5,710,188	(1)	(1)	(1)
SMOKED FISH.				
Herring	1,350,745	719,640	931,611	631,352
Maine	455,489	237,703	255,498	206,879
Massachusetts	354,859	210,404	457,485	155,814
All other states	540,397	271,533	218,628	268,659
Salmon	1,681,982	638,975	950,540	831,184
New York	1,173,400	442,243	486,910	319,620
Washington	282,112	123,217	389,620	405,026
All other states	226,470	73,515	74,010	106,538
SALTED FISH.				
Cod	12,643,357	5,123,562	3,248,669	3,013,320
Maine	1,334,989	348,741	333,621	141,345
Massachusetts	9,450,460	3,870,529	2,542,873	2,511,159
Washington	500,862	247,230	201,118	49,366
All other states	1,357,046	657,062	171,057	311,450
Mackerel	1,000,593	519,727	740,513	678,326
Massachusetts	899,956	499,484	729,828	668,326
All other states	100,637	20,243	10,685	10,000

[1] Comparable figures can not be given.
[2] Includes loganberries to the value of $127,888, tabulated as "All other canned fruits."
[3] Includes loganberries to the value of $27,633, tabulated as "All other canned fruits."

Canned vegetables.—Canned beans, which include canned baked beans, string beans, lima beans, etc., were the most important of the canned vegetables in 1919. New Jersey was the leading state, the value reported for 1919 being an increase over that for 1914 of 370.6 per cent, and representing about one-third (33 per cent) of the total value of canned beans for the United States.

In the production of canned tomatoes, California and Maryland led all other states, the value of the output for each state exceeding $10,000,000 in value, their combined output for 1919 constituting 54.5 per cent of the total value of this product. Maryland was the leading state in the canning of tomatoes at the censuses of 1914, 1909, and 1904, but the large increase from 1914 to 1919 in the value of products reported for California, 234.8 per cent, puts that state in the lead in 1919.

In the production of canned corn, four states, Illinois, Iowa, Maryland, and Maine, ranking in importance in the order named, reported 61.3 per cent of the total value for 1919, while in the production of canned peas, Wisconsin led all other states at each of the four censuses, and in 1919 reported nearly one-half (48.4 per cent) of the total value of canned peas for the United States.

Canned fruits.—Of the total value of canned peaches, the most important of this class of products, California contributed 91 per cent in 1919. Nearly all of the canned apricots (99.6 per cent) and 58.1 per cent of the canned pears were reported from California.

Dried fruits.—California was the leading state in the production of each of the dried fruits specified. In 1919 the state produced 38.8 per cent of the dried apples, 99.3 per cent of the apricots, 99.7 per cent of the peaches, 83.3 per cent of the prunes, and all of the raisins.

Canned fish and oysters.—Of the total value of canned salmon, the state of Washington reported 70.7 per cent in 1919, Maine reported nearly two-thirds (62.3 per cent) of the total value of sardines, while Maryland reported 52.8 per cent of the total value of canned oysters.

Smoked fish.—Of the total value of smoked herring, Maine and Massachusetts reported 60 per cent in 1919, while of the total value of smoked salmon, New York reported 69.8 per cent.

Salted fish.—Massachusetts reported 74.7 per cent of the total value of salted cod for 1919. The state also produced nearly the entire output of salt mackerel—89.9 per cent.

Detailed statistics of products, by states.—Table 19 gives detailed statistics of quantities and values of the various classes of products of the canning and preserving industry, by states, for 1919.

TABLE 19.—QUANTITY AND VALUE OF PRODUCTS, BY PRINCIPAL STATES: 1919.

PRODUCT AND STATE.	Quantity.	Value.
CANNED VEGETABLES.		
	Cases.	
Asparagus	[1] 1,006,604	$6,571,629
California	994,669	6,482,299
New York	4,109	39,651
All other states	7,826	49,679
Beans, baked	[2] 11,142,331	28,551,342
California	503,806	929,742
Illinois	162,632	345,390
Indiana	2,500,975	6,720,466
Iowa	128,384	209,274
Maryland	304,043	729,346
Michigan	592,874	1,041,692
New York	158,324	462,779
Ohio	187,306	356,272
All other states	6,603,987	17,756,381
Beans, string	[2] 2,199,825	6,607,080
California	173,490	518,762
Colorado	100,309	252,661
Indiana	11,088	27,830
Louisiana	10,821	32,219
Maine	89,241	232,217
Maryland	395,649	929,602
Michigan	88,445	306,115
New York	722,535	2,600,177
North Carolina	4,630	9,518
Ohio	20,314	65,808
Oregon	27,902	84,019
Pennsylvania	86,900	216,717
Tennessee	17,079	34,020
Utah	51,028	123,250
Virginia	14,286	28,689
Washington	25,975	82,687
Wisconsin	305,142	899,998
All other states	54,991	162,791
Beans, kidney	[2] 429,104	1,429,680
Indiana	60,641	171,215
Michigan	62,354	216,192
New York	16,704	69,434
Ohio	17,324	73,998
All other states	272,081	898,841
Beans, lima	[2] 468,569	1,457,719
Maine	36,648	78,210
Maryland	91,778	206,394
Michigan	43,690	157,533
New Jersey	169,168	623,312
New York	24,056	97,184
Ohio	21,616	79,283
All other states	81,613	215,803
Beans, all other	[2] 584,403	1,362,782
Indiana	180,826	357,534
Maine	9,378	29,518
Maryland	28,210	84,382
Michigan	38,265	100,171
New York	10,850	49,960
Oregon	3,335	10,783
All other states	313,539	730,434
Beets	[3] 584,309	1,951,344
California	80,533	344,352
Maryland	12,220	40,635
Michigan	7,575	26,008
New Jersey	59,204	189,035
New York	151,717	472,103
Ohio	20,458	67,916
Oregon	5,740	19,664
Wisconsin	196,587	619,868
All other states	50,275	171,763
Corn	[2] 14,402,725	35,532,007
Delaware	198,728	479,594
Illinois	2,291,948	5,813,773
Indiana	608,515	1,526,103
Iowa	2,888,706	5,763,458
Maine	1,548,120	4,723,397
Maryland	2,342,359	5,448,073
Michigan	139,520	421,384
Minnesota	516,347	1,402,307
Nebraska	177,915	409,587
New Hampshire	42,671	140,601
New York	901,368	2,906,990
Ohio	1,400,793	3,327,725
Pennsylvania	387,664	788,658
Vermont	146,372	437,683
Virginia	970	2,284
Washington	1,779	5,727
Wisconsin	745,296	1,743,435
All other states	63,654	161,228
Hominy	[3] 587,298	1,346,044
Illinois	93,173	177,836
Indiana	379,929	828,073
All other states	114,196	340,135
Kraut	[3] 1,041,932	2,845,340
Illinois	18,894	65,423
Indiana	87,719	202,361
CANNED VEGETABLES—con.		
Kraut—Continued.	*Cases.*	
Michigan	158,289	$363,508
New York	276,657	929,817
Ohio	178,276	439,254
Tennessee	7,152	23,796
Wisconsin	159,893	406,277
All other states	155,052	414,904
Peas	[2] 9,325,727	25,073,220
California	213,857	564,904
Colorado	85,714	254,694
Delaware	222,832	564,208
Illinois	446,908	1,221,443
Indiana	387,387	994,535
Maryland	623,527	1,718,500
Michigan	406,980	1,267,356
Minnesota	68,513	176,911
New Jersey	57,960	179,638
New York	919,612	3,440,696
Ohio	337,887	952,463
Pennsylvania	71,161	182,045
Utah	409,834	1,262,198
Wisconsin	5,022,630	12,132,849
All other states	50,925	150,780
Pumpkin	[3] 383,211	861,436
California	38,493	119,018
Illinois	42,093	91,613
Indiana	116,310	247,755
Iowa	64,501	122,068
Michigan	5,282	11,667
New York	30,412	87,812
Ohio	49,547	92,800
All other states	36,573	88,703
Sweet potatoes	[3] 745,861	2,477,719
Arkansas	15,649	55,069
California	52,077	249,180
Delaware	74,954	258,790
Georgia	25,503	72,724
Louisiana	26,915	82,023
Maryland	167,274	544,394
Mississippi	158,642	544,606
New Jersey	6,115	20,842
Tennessee	14,487	46,517
Texas	14,371	50,635
Virginia	155,038	453,979
All other states	34,836	98,960
Spinach	[3] 676,388	2,338,497
California	370,075	1,308,724
Maryland	256,627	834,032
New York	20,961	88,599
Ohio	13,010	45,300
All other states	15,715	61,842
Squash	[3] 54,589	165,217
Connecticut	1,391	3,899
Maine	13,242	42,128
Michigan	9,296	27,313
New Jersey	9,619	22,612
New York	6,500	24,978
All other states	14,541	44,287
Succotash	[2] 373,977	1,142,236
Maine	53,458	179,968
Maryland	47,260	109,635
Michigan	63,117	201,201
New York	149,082	478,368
Ohio	19,494	55,409
Vermont	5,166	17,712
All other states	36,400	99,943
Tomatoes	[3] 11,836,476	38,067,999
Arkansas	140,054	443,186
California	3,627,473	10,452,851
Colorado	292,140	994,057
Connecticut	20,066	90,186
Delaware	285,127	1,011,064
Illinois	67,668	227,704
Indiana	917,235	2,482,729
Iowa	83,434	222,126
Kentucky	31,623	102,658
Maryland	3,055,516	10,295,386
Michigan	120,781	441,644
Missouri	459,520	1,383,667
New Jersey	79,413	284,432
New Mexico	13,289	53,483
New York	437,341	1,748,626
North Carolina	8,083	26,291
Ohio	189,403	588,366
Oregon	10,736	29,871
Pennsylvania	170,492	532,769
Tennessee	239,005	805,720
Utah	578,323	1,992,088
Virginia	860,800	3,396,908
West Virginia	82,821	238,963
Wisconsin	23,083	72,660
All other states	43,050	147,564
CANNED VEGETABLES—con.		
	Cases.	
Tomato paste	[4] 234,691	$1,300,680
California	122,804	689,085
Indiana	50,284	358,592
Maryland	33,928	123,394
New Jersey	6,417	33,222
New York	3,508	25,442
All other states	17,750	70,945
Tomato pulp	[5] 759,055	3,819,101
California	158,972	654,949
Colorado	4,128	20,165
Delaware	31,933	99,830
Indiana	258,949	1,676,059
Iowa	3,677	26,804
Kentucky	30,674	125,544
Maryland	40,310	214,417
Michigan	31,283	158,257
New Jersey	62,296	232,419
New York	44,859	190,311
Ohio	30,995	124,173
Tennessee	7,943	42,184
Utah	43,959	215,020
All other states	9,077	38,969
All other vegetables	[3] 634,220	1,672,518
California	389,760	770,060
Illinois	1,566	8,342
Indiana	31,391	105,201
Louisiana	36,197	100,158
Maine	8,104	33,351
Maryland	69,485	247,172
New Jersey	16,056	74,942
New York	13,198	57,259
Ohio	21,757	91,421
Oregon	10,400	42,597
Washington	7,916	21,872
All other states	28,390	120,148
Canned soup	[4] 5,844,821	11,857,717
CANNED FRUITS.		
Apples	[3] 2,447,927	9,081,598
Arkansas	213,230	755,506
California	146,458	502,906
Colorado	38,377	138,022
Connecticut	2,676	10,942
Delaware	53,263	203,178
Maine	253,993	921,577
Maryland	109,504	358,620
Michigan	191,755	574,020
Missouri	4,054	15,596
New Jersey	5,384	17,169
New York	482,140	2,048,171
North Carolina	5,943	16,676
Oregon	230,555	863,595
Pennsylvania	183,827	875,519
Utah	43,252	133,295
Virginia	94,075	300,364
Washington	313,034	1,069,356
All other states	76,407	277,086
Apricots	[1] 3,939,768	25,167,772
California	3,912,404	25,033,625
Utah	23,320	116,717
All other states	4,044	17,430
Blackberries	[2] 910,657	5,080,397
California	118,832	743,891
Indiana	16,687	43,482
Maryland	48,589	250,017
Michigan	81,022	479,330
New Jersey	15,963	109,432
New York	9,309	73,073
North Carolina	32,645	101,257
Ohio	7,958	40,351
Oregon	230,205	1,242,572
Tennessee	26,449	82,269
Texas	52,490	245,749
Virginia	2,931	9,218
Washington	255,620	1,615,323
All other states	11,927	44,433
Blueberries	[2] 150,350	913,821
Maine	100,409	667,246
Michigan	25,738	111,144
Washington	15,199	71,117
All other states	9,004	64,314
Cherries	1,362,832	8,451,029
California	618,210	3,753,993
Colorado	51,929	305,552
Maryland	6,757	51,359
Michigan	184,472	1,422,863
New York	30,636	248,517
Ohio	10,676	73,839
Oregon	149,203	925,007
Utah	33,079	160,670
Virginia	1,812	7,768
Washington	146,782	828,030
All other states	129,276	673,901

[1] Standard case contains 24 No. 2½ cans. See Table 16.
[2] Standard case contains 24 No. 2 cans. See Table 16.
[3] Standard case contains 24 No. 3 cans. See Table 16.
[4] Standard case contains 48 No. 1 cans. See Table 16.
[5] Standard case contains 12 No. 10 cans. See Table 16.

TABLE 19.—QUANTITY AND VALUE OF PRODUCTS, BY PRINCIPAL STATES: 1919—Continued.

PRODUCT AND STATE.	Quantity.	Value.
CANNED FRUITS—contd.		
	Cases.	
Gooseberries	[1] 87,026	$343,504
Colorado	25,118	80,103
Maryland	9,175	36,402
Michigan	33,730	149,115
New York	1,391	7,428
Oregon	12,324	50,658
Washington	4,479	14,988
All other states	809	4,810
Grapes	[2] 87,644	514,219
California	86,851	509,234
All other states	793	4,985
Loganberries	[1] 273,664	2,138,817
Oregon	195,535	1,458,019
Washington	64,857	578,735
All other states	13,272	102,063
Peaches	[3] 7,706,855	46,516,225
Arkansas	46,402	179,433
California	6,869,152	42,347,718
Delaware	68,411	320,469
Georgia	144,609	446,507
Maryland	239,790	1,425,079
Michigan	170,758	881,443
New Jersey	20,700	136,202
New York	48,053	285,134
Oregon	22,303	119,868
Utah	16,633	83,325
Virginia	12,121	56,930
Washington	26,352	127,337
All other states	21,571	106,780
Pears	[3] 2,021,610	14,202,963
California	1,049,922	8,249,308
Delaware	95,275	506,875
Maryland	185,610	915,547
Michigan	39,774	248,963
New Jersey	105,090	547,863
New York	171,187	1,363,984
Oregon	164,733	1,161,462
Virginia	12,077	43,991
Washington	179,878	1,069,390
All other states	18,064	95,580
Pineapples	[3] 156,755	1,365,484
Maryland	155,400	1,347,972
All other states	1,355	17,512
Plums	[1] 571,521	2,228,183
California	363,024	1,551,251
Michigan	75,980	224,714
New York	88,320	307,670
Oregon	16,666	57,867
Washington	10,830	30,638
All other states	16,701	56,043
Prunes	[1] 273,710	1,271,410
California	87,653	558,757
New York	1,954	11,803
Oregon	114,683	387,985
Washington	52,623	227,224
All other states	16,797	85,641
Raspberries	[1] 551,419	4,278,939
Maryland	27,385	218,602
Michigan	131,223	959,621
New Jersey	19,478	118,127
New York	213,096	1,663,789
Oregon	37,416	285,028
Washington	103,986	918,812
All other states	18,835	114,960
Strawberries	[1] 374,097	3,693,648
California	21,414	231,693
Louisiana	43,063	500,296
Maryland	75,215	760,936
Michigan	87,892	693,514
New Jersey	19,717	187,575
New York	32,089	324,209
Oregon	21,107	217,253
Washington	25,426	222,834
All other states	48,174	555,338
Other canned fruits	[1] 516,558	2,701,348
California	360,722	1,928,526
New York	83,053	496,552
All other states	72,783	276,270
Other canned foods, not including fish and oysters	[2] 1,285,611	2,923,184

PRODUCT AND STATE	Quantity.	Value.
DRIED FRUITS.		
	Pounds.	
Apples	46,623,599	$6,772,100
Arkansas	6,720,070	805,157
California	15,477,039	2,630,300
Illinois	274,354	33,051
New York	13,524,019	2,234,128
Oregon	1,577,441	191,490
Virginia	1,274,125	122,425
Washington	4,044,090	466,214
West Virginia	203,000	34,821
All other states	3,529,461	254,514
Apple chops	3,686,103	308,977
New York	3,010,278	256,070
All other states	675,825	52,907
Apricots	24,192,628	6,034,697
California	23,944,612	5,994,309
All other states	248,016	40,388
Peaches	73,379,193	12,109,624
California	73,268,010	12,074,246
All other states	111,183	35,378
Prunes	136,377,066	18,253,691
California	114,324,446	15,211,293
Oregon	19,930,935	2,785,373
All other states	2,121,685	257,025
Raisins—California	293,300,581	35,544,262
All other dried fruits	37,852,258	6,384,934
California	33,235,543	5,659,138
Oregon	3,177,585	436,935
All other states	1,439,130	288,861
DRIED VEGETABLES.		
Potatoes	7,253,230	1,840,399
California	3,189,328	838,521
Oregon	774,087	176,806
All other states	3,289,815	825,072
Beans	917,134	116,091
California	134,689	8,097
All other states	782,445	107,994
Carrots	432,959	117,487
California	312,207	88,568
All other states	120,752	28,919
Turnips—All states	19,396	8,264
Spinach—All states	40,989	41,352
Cabbage—All states	19,901	13,684
Celery—All states	17,587	11,100
Soup mixture—All states	655,228	222,361
Other dried vegetables—All states.	989,397	271,917
CANNED FISH AND OYSTERS.		
	Cases.	
Clams	[5] 157,843	772,870
Maine	74,397	356,878
Washington	70,964	359,192
All other states	12,482	56,800
Oysters	[6] 717,636	3,510,119
Florida	6,972	35,663
Georgia	9,452	55,389
Louisiana	28,508	170,274
Maryland	410,294	1,854,880
Mississippi	133,446	747,369
North Carolina	31,219	115,117
South Carolina	83,920	416,509
All other states	13,825	114,918
Roe	26,768	174,268
Virginia	14,080	73,519
Maryland	2,518	15,166
All other states	10,170	85,583
Salmon	[6] 2,186,004	19,113,204
Oregon	511,325	5,447,491
Washington	1,661,490	13,506,149
All other states	13,189	159,564
Sardines	[4] 5,777,959	20,258,565
California	2,110,604	7,604,328
Maine	3,660,935	12,627,862
All other states	6,420	26,375

PRODUCT AND STATE.	Quantity.	Value.
CANNED FISH AND OYSTERS—continued.		
	Cases.	
Shad	11,877	$68,428
Oregon	5,942	30,414
Washington	1,990	14,844
All other states	3,945	23,170
Shrimp	[6] 322,076	1,864,793
Florida	36,246	207,365
Georgia	37,212	191,768
Louisiana	91,818	533,594
Mississippi	144,800	844,666
All other states	12,000	87,400
Tuna—California	[5] 874,380	5,710,188
All other canned fish	272,378	1,744,192
SMOKED AND DRIED FISH.		
	Pounds.	
Finnan haddie	5,696,883	495,404
Maine	1,063,492	136,440
Massachusetts	3,910,134	278,213
All other states	723,257	80,751
Herring	14,639,391	1,359,745
Maine	5,278,935	455,489
Maryland	75,800	17,234
Massachusetts	3,284,016	354,859
New Jersey	25,191	4,622
New York	500,725	83,829
Washington	111,698	9,711
Wisconsin	3,264,036	197,334
All other states	2,098,990	227,667
Salmon	5,574,273	1,681,982
New York	3,346,000	1,173,400
Washington	1,471,093	282,112
All other states	757,180	226,470
Sturgeon	570,031	435,959
New York	556,171	424,378
All other states	13,860	11,581
All other smoked and dried fish	5,803,013	1,411,453
Illinois	1,589,264	397,316
Louisiana	413,935	112,193
Maryland	54,200	14,190
Massachusetts	173,297	42,818
New Jersey	610,410	209,267
New York	2,394,636	560,184
All other states	567,271	75,485
SALTED AND PICKLED FISH.		
Cod	62,902,037	12,643,357
Maine	9,964,117	1,334,989
Massachusetts	39,847,584	9,450,460
Washington	5,297,113	500,862
All other states	7,793,223	1,357,046
Haddock	7,691,146	815,540
Massachusetts	5,957,012	623,583
All other states	1,734,134	191,957
Herring	14,135,579	845,629
Maine	768,425	47,333
Maryland	1,875,163	95,135
Massachusetts	2,910,953	204,247
New York	775,500	144,507
Virginia	3,623,103	117,724
Wisconsin	1,493,300	37,238
All other states	2,689,135	199,445
Mackerel	5,098,700	1,000,593
Maine	49,153	7,071
Massachusetts	4,728,643	899,956
New York	282,641	87,486
All other states	38,263	6,080
All other salted and pickled fish	24,883,864	2,904,641
California	6,640,836	1,274,264
Florida	442,820	41,599
Maine	5,734,735	303,503
Maryland	1,204,620	191,106
Massachusetts	2,404,822	247,409
Oregon	2,086,628	591,082
Washington	584,050	72,225
All other states	2,785,353	183,453

[1] Standard case contains 24 No. 2 cans. See Table 16.
[2] Standard case contains 24 No. 3 cans. See Table 16.
[3] Standard case contains 24 No. 2½ cans. See Table 16.
[4] Standard case contains 100 No. ¼ cans. See Table 13.
[5] Standard case contains 48 No. ½ cans. See Table 13.
[6] Standard case contains 48 No. 1 cans. See Table 13.

Products, by geographic divisions.—Table 20 shows, for 1919, the value of the several major groups of products and the quantity of most of them; by geographic divisions and states, with the per cent distribution of the total value.

TABLE 20.—KIND, QUANTITY, AND VALUE OF PRODUCTS, BY GEOGRAPHIC DIVISIONS AND STATES: 1919.

DIVISION AND STATE.	Total value.	Per cent distribution.	CANNED VEGETABLES AND SOUPS.		CANNED FRUITS.		DRIED FRUITS.		CANNED FISH AND OYSTERS.		CURED FISH.		PICKLES, PRESERVES, AND SAUCES.	ALL OTHER PRODUCTS.
			Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Value.	Value.
	Dollars.		*Cases.*	*Dollars.*	*Cases.*	*Dollars.*	*Pounds.*	*Dollars.*	*Cases.*	*Dollars.*	*Pounds.*	*Dollars.*	*Dollars.*	*Dollars.*
UNITED STATES	639,771,083	100.0	63,316,116	176,431,307	21,432,393	127,949,357	615,408,528	85,401,265	10,345,206	53,186,286	143,898,917	23,575,633	155,960,971	17,266,264
NEW ENGLAND	45,899,817	7.2	2,327,508	6,931,254	433,016	1,839,900	21,360	12,816	3,894,579	13,881,574	87,536,552	14,567,987	7,004,567	1,661,719
Maine	25,323,674	4.0	2,074,553	6,125,876	408,357	1,737,893			3,865,289	13,686,760	24,301,591	2,437,032	120,301	1,215,812
New Hampshire	247,485		51,056	168,846	18,687	70,739							7,200	700
Vermont	537,661	0.1	175,030	521,879									15,782	
Massachusetts	19,164,406	3.0	730	2,840	2,842	17,581	21,360	12,816	29,290	194,814	63,234,961	12,130,955	6,367,903	437,497
Connecticut and Rhode Island	626,591	0.1	26,139	111,813	3,130	13,687							493,381	7,710
MIDDLE ATLANTIC	116,540,464	18.1	16,130,739	43,915,450	1,561,084	9,042,460	17,393,195	2,602,163			12,008,362	3,140,500	54,172,368	3,667,523
New York	56,510,333	8.8	3,893,079	13,773,670	1,162,834	6,849,969	16,896,724	2,557,160			8,508,788	2,580,008	27,658,229	3,091,297
New Jersey	30,229,315	4.7	9,080,036	23,105,108	190,966	1,157,469					1,825,128	375,143	5,250,212	341,383
Pennsylvania	29,800,816	4.7	3,157,624	7,036,672	207,284	1,035,022	496,471	45,003			1,674,446	185,349	21,263,927	234,843
EAST NORTH CENTRAL	111,120,210	17.4	20,417,015	52,975,416	1,205,877	6,593,058	2,064,777	360,696			8,486,460	846,944	47,567,158	2,776,938
Ohio	18,174,597	2.8	2,513,679	6,388,369	31,707	176,543	890,572	211,792					11,132,302	265,591
Indiana	28,462,473	4.4	6,284,691	17,086,308	34,544	126,588							9,613,093	1,636,484
Illinois	30,002,101	4.7	3,345,317	8,744,470	9,825	55,204	475,254	67,073			1,845,264	448,316	20,628,975	58,063
Michigan	16,238,728	2.5	1,769,448	4,750,531	1,025,707	5,763,049	600,000	39,633			1,671,860	128,976	5,076,460	480,079
Wisconsin	18,242,311	2.9	6,503,880	16,005,738	104,094	471,674	98,951	42,198			4,969,336	269,652	1,116,328	336,721
WEST NORTH CENTRAL	22,765,695	3.6	4,977,462	11,184,121	22,104	81,409					1,049,275	41,971	10,825,843	632,351
Minnesota	4,151,545	0.6	664,577	1,750,857	1,022	5,559					1,049,275	41,971	2,322,794	30,364
Iowa	10,242,721	1.6	3,510,971	7,200,975	8,615	28,794							2,439,172	573,780
Missouri	7,017,934	1.1	494,069	1,522,470	5,111	20,182							5,458,075	17,207
North Dakota, South Dakota, and Kansas	435,747	0.1	26,054	76,769	638	2,200							356,778	
Nebraska	917,748	0.1	281,791	633,050	6,718	24,674							249,024	11,000
SOUTH ATLANTIC	46,688,554	7.3	9,675,366	28,720,813	1,412,201	7,605,149	3,135,284	199,077	680,624	3,303,042	8,730,256	603,594	4,822,492	1,434,387
Delaware	5,598,315	0.9	972,245	2,753,772	233,008	1,224,616					107,500	13,958	1,054,165	551,804
Maryland and District of Columbia	32,103,143	5.0	7,491,326	21,574,563	860,292	5,374,572	1,535,209	35,000	415,610	1,884,493	3,786,833	388,813	2,489,536	356,166
Virginia	5,646,255	0.9	1,059,958	3,959,344	123,301	419,961	1,336,575	126,839	25,163	184,203	3,623,103	117,724	474,301	363,883
West Virginia	461,923	0.1	83,068	239,613	10,907	17,351	263,500	37,238					158,250	9,471
North Carolina	389,706	0.1	16,025	46,429	39,409	119,892			38,819	157,817	770,000	41,500	10,600	13,468
South Carolina	429,308	0.1	777	3,010					83,920	416,509			5,759	4,030
Georgia	872,270	0.1	28,186	80,694	145,281	448,757			46,664	247,157			65,112	30,550
Florida	1,187,634	0.2	24,381	63,388					70,448	412,863	442,820	41,599	564,769	105,015
EAST SOUTH CENTRAL	12,870,419	2.0	695,432	2,252,452	62,679	473,446			283,246	1,639,035			8,447,382	58,104
Kentucky	8,644,190	1.4	96,984	312,002	10,999	120,124							8,212,014	50
Tennessee	1,572,021	0.2	393,048	1,233,786	42,608	284,205							29,848	24,182
Alabama and Mississippi	2,654,208	0.4	205,400	706,664	9,072	69,117			283,246	1,639,035			205,520	33,872
WEST SOUTH CENTRAL	6,764,795	1.0	309,342	971,559	372,395	1,748,001	6,990,070	823,757	120,326	703,868	413,935	112,193	2,142,154	263,263
Arkansas	2,420,922	0.4	162,593	515,652	263,358	949,568	6,990,070	823,757						131,945
Louisiana	2,166,571	0.3	76,024	228,662	45,645	511,751			120,326	703,868	413,935	112,193	522,176	87,918
Oklahoma and Texas	2,177,302	0.3	70,725	227,245	63,392	286,679							1,619,978	43,400
MOUNTAIN	8,734,368	1.4	1,728,763	5,577,420	313,199	1,472,405	2,888,740	325,282					1,193,092	166,169
Idaho, New Mexico, Arizona, and Montana	956,698	0.1	45,567	154,449	70,946	393,414	2,888,740	325,282					76,480	7,073
Colorado	3,190,048	0.5	521,169	1,624,607	122,731	569,547							842,126	153,768
Utah	4,587,622	0.7	1,162,027	3,798,364	119,522	509,444							274,486	5,328
PACIFIC	268,386,761	42.0	7,053,889	23,902,822	16,049,838	99,093,529	582,915,102	81,077,474	5,366,431	33,658,767	25,674,077	4,262,444	19,785,915	6,605,810
Washington	27,717,980	4.3	69,279	230,258	1,201,810	6,784,899	4,621,485	520,856	1,736,205	13,891,865	8,890,332	973,886	3,481,927	1,884,289
Oregon	20,600,721	3.2	86,998	262,181	1,196,014	6,775,601	24,743,386	3,443,070	522,299	5,505,849	2,213,187	626,811	2,874,514	1,112,692
California	220,068,030	34.4	6,897,612	23,410,383	13,652,014	85,533,026	553,550,231	77,113,548	3,107,927	14,261,053	14,570,558	2,661,747	13,429,474	3,658,829

Among the geographic divisions, the Pacific states led, in 1919, with 42 per cent of the total value of products; the Middle Atlantic group ranked second, with 18.1 per cent; and the East North Central occupied third place, with 17.4 per cent. These three geographic divisions together thus reported 77.5 per cent of the total value of products for the United States as a whole.

Canned goods—quantity and value.—Table 21 shows the quantity and value of all classes of canned goods, including dried fruits and vegetables, produced in the canning and preserving industry, the slaughtering and meat-packing industry, and other industries.

TABLE 21.—CANNED GOODS—QUANTITY AND VALUE: 1919 AND 1914

INDUSTRY.	1919		1914	
	Quantity.	Value.	Quantity.	Value.
Total, value		$1,099,475,395		$353,773,234
	Cases.		*Cases.*	
Canning and preserving		625,147,474		245,429,591
Canned vegetables	57,471,295	164,573,590	50,258,674	84,413,667
Canned soups	5,844,821	11,857,717	4,886,098	7,877,057
Canned fruits	21,432,393	127,949,357	9,449,182	24,897,174
Canned fish	9,627,570	49,676,167	7,843,465	19,724,053
Canned oysters	717,636	3,510,119	944,639	2,676,951
Pickles, preserves, and sauces		155,960,971		60,136,959
	Pounds.		*Pounds.*	
Dried fruits	615,408,528	85,401,265	568,587,364	34,771,912
Dried vegetables	10,345,821	2,642,655	(1)	(1)
Cured fish	143,898,917	23,575,633	159,862,843	10,931,818
Slaughtering and meat packing		124,869,496		36,263,293
Canned sausage	160,908,986	27,965,155	74,004,380	9,845,669
All other canned goods	305,955,406	96,904,341	160,798,955	26,417,624
Other industries		349,458,425		72,080,350
Condensed and evaporated milk	2,093,646,405	293,177,134	873,410,504	58,747,252
Sweetening sirups, other than cane		50,430,585		13,333,098
Peanut butter		5,859,706	(1)	(1)

[1] Figures not available.

GENERAL TABLES.

Comparative summary, by states.—Table 22 shows for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products as reported for the canning and preserving industry.

Detailed statement, by states.—Table 23 presents for 1919, by states, the more detailed statistics for each of the four branches separately.

TABLE 22.—COMPARATIVE SUMMARY FOR 1919, 1914, AND 1909.

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	4,280	89,923	180,812	$66,444	$412,660	$628,287
	1914	4,220	74,071	120,004	27,197	159,658	243,440
	1909	3,767	59,968	81,179	19,082	101,823	157,101
Arkansas	1919	107	804	676	390	1,490	2,421
	1914	63	454	587	116	347	579
	1909	44	292	428	54	181	279
California	1919	[1] 444	24,283	28,930	22,060	146,300	219,279
	1914	289	12,756	10,592	5,486	45,695	61,163
	1909	196	7,757	7,453	3,454	24,009	32,915
Colorado	1919	24	689	1,896	486	1,831	3,190
	1914	26	684	1,453	287	1,090	1,798
	1909	30	518	1,349	250	672	1,528
Connecticut	1919	12	95	142	57	206	471
	1914	15	147	360	53	203	359
	1909	12	128	199	45	175	346
Delaware	1919	[1] 78	1,459	2,967	823	3,622	5,584
	1914	[2] 97	1,803	2,993	460	2,252	3,175
	1909	77	1,369	1,725	273	1,553	2,106
Florida	1919	[2] 28	424	391	152	625	1,041
	1914	21	194	268	58	239	418
	1909	18	188	70	51	80	213
Georgia	1919	[1] 19	248	528	126	473	795
	1914	17	447	576	69	261	446
	1909	26	428	318	56	198	321
Illinois	1919	132	3,680	8,299	3,178	17,833	28,341
	1914	117	2,560	7,078	1,108	6,680	10,121
	1909	118	2,383	4,305	904	4,813	7,620
Indiana	1919	166	4,170	9,660	2,795	17,528	27,823
	1914	141	4,422	7,208	1,574	8,818	13,865
	1909	134	3,406	6,398	879	5,945	8,758
Iowa	1919	76	1,582	6,949	1,099	6,735	10,223
	1914	64	1,209	4,400	438	2,122	3,920
	1909	71	1,247	2,989	299	1,568	2,549
Kentucky	1919	28	1,147	1,075	656	5,723	8,496
	1914	33	594	843	190	1,367	2,266
	1909	36	653	907	177	1,093	1,857
Louisiana	1919	38	653	750	297	1,348	2,146
	1914	28	991	710	177	663	1,365
	1909	26	974	659	183	573	978
Maine	1919	217	3,846	10,619	2,875	16,980	24,551
	1914	194	3,913	6,257	1,263	7,404	10,743
	1909	245	3,850	4,355	1,138	5,125	7,689
Maryland	1919	460	8,023	16,093	3,932	21,988	30,566
	1914	465	8,640	10,698	2,402	12,958	18,029
	1909	468	8,613	7,007	1,926	10,090	13,709
Massachusetts	1919	[3] 55	1,944	1,677	1,838	13,433	19,017
	1914	65	1,903	996	866	5,606	8,169
	1909	71	1,449	1,043	642	4,583	6,840
Michigan	1919	[3] 96	2,592	4,846	1,539	10,980	16,009
	1914	91	2,507	4,791	944	4,893	8,194
	1909	104	2,073	3,374	665	3,074	4,971
Minnesota	1919	38	683	1,635	431	2,329	3,500
	1914	35	436	1,055	140	806	1,284
	1909	32	415	692	135	895	1,343
Mississippi	1919	[1] 28	1,094	846	375	1,517	2,303
	1914	18	1,052	600	229	877	1,655
	1909	11	847	378	97	508	824
Missouri	1919	158	1,256	2,805	$511	$4,931	$6,377
	1914	153	850	1,012	142	740	1,082
	1909	222	952	974	186	1,005	1,574
Nebraska	1919	[2] 9	147	902	93	519	669
	1914	17	244	1,329	73	392	590
	1909	12	215	569	63	269	481
New Jersey	1919	97	3,232	5,136	2,654	18,208	29,822
	1914	96	3,154	3,783	1,252	8,035	13,765
	1909	84	1,818	2,098	546	2,208	3,664
New York	1919	637	7,656	19,768	5,846	35,128	54,558
	1914	987	8,757	16,630	3,801	15,957	25,945
	1909	790	7,075	12,469	2,563	11,669	19,040
North Carolina	1919	22	152	75	58	211	390
	1914	27	351	292	65	175	347
	1909	21	188	230	25	75	144
Ohio	1919	[1] 124	2,951	7,105	2,065	11,515	17,289
	1914	136	2,509	7,079	947	5,902	8,958
	1909	107	2,009	4,244	532	3,102	4,660
Oregon	1919	103	2,344	4,397	2,018	14,366	20,591
	1914	71	799	1,655	339	3,090	4,738
	1909	71	661	1,318	315	2,187	3,207
Pennsylvania	1919	94	3,010	6,555	2,261	17,347	29,489
	1914	[3] 84	3,096	4,476	1,264	7,539	14,950
	1909	83	2,753	3,474	947	4,665	9,484
South Carolina	1919	12	377	297	119	206	429
	1914	18	485	407	78	209	364
	1909	15	467	95	64	159	318
Tennessee	1919	62	593	1,438	178	912	1,513
	1914	[1] 62	381	738	62	361	496
	1909	37	303	450	39	131	206
Texas	1919	27	354	550	155	1,129	1,913
	1914	22	213	423	79	630	1,211
	1909	19	158	243	45	201	498
Utah	1919	37	1,099	3,151	657	2,735	4,558
	1914	37	677	1,930	297	1,669	2,430
	1909	24	396	847	123	716	1,059
Vermont	1919	[1] 9	173	665	64	360	522
	1914	[3] 6	95	296	33	228	402
	1909	8	118	240	46	214	330
Virginia	1919	[1] 498	2,123	7,853	836	3,813	5,505
	1914	[3] 441	2,074	3,861	330	1,573	2,234
	1909	325	1,860	1,382	277	1,208	1,854
Washington	1919	127	3,394	8,244	3,154	17,613	27,516
	1914	86	2,352	4,565	1,322	5,279	9,450
	1909	80	2,029	2,433	1,272	5,046	9,595
West Virginia	1919	[2] 25	134	815	47	189	308
	1914	29	216	552	44	264	351
	1909	30	271	484	58	430	605
Wisconsin	1919	129	2,909	11,930	2,220	10,650	18,067
	1914	112	2,687	8,730	1,064	4,570	7,335
	1909	83	1,776	4,915	639	2,967	4,807
All other states	1919	64	603	1,147	399	1,827	3,015
	1914	57	419	781	145	764	1,242
	1909	37	329	465	114	436	729

[1] Excludes statistics for 1 establishment to avoid disclosure of individual operations.
[2] Excludes statistics for 3 establishments to avoid disclosure of individual operations.
[3] Excludes statistics for 2 establishments to avoid disclosure of individual operations.

TABLE 23.—DETAILED STATEMENT FOR CAN-

	STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.
	CANNING AND PRESERVING, FRUITS AND VEGETABLES.															
1	United States	3,082	72,744	3,284	4,892	2,124	1,579	60,865	Se 157,032	Mh 14,005	163,346	69,847	89,306	1,534	2,659	$223,692,234
2	Arkansas	107	1,044	201	30	6	3	804	Se 2,865	Fe 2	2,918	943	1,938	10	27	842,279
3	California	303	22,406	203	939	1,048	641	19,575	Au 44,571	Mh 4,862	49,228	20,555	27,037	463	1,173	63,649,112
4	Colorado	18	752	4	52	21	12	663	Se 2,043	Fe 145	906	304	602	.....	.....	3,068,331
5	Connecticut	5	63	5	6	1	2	49	Se 215	Mh 1	144	57	87	.....	.....	105,452
6	Delaware	70	1,487	83	68	15	11	1,310	Se 4,324	Ap 262	5,244	2,137	3,100	5	2	4,692,668
7	Florida	5	43	2	4	.....	1	36	De 94	Ap[3] 0	164	51	111	2	.....	76,085
8	Georgia	12	149	18	14	.....	2	115	Je 493	Mh[3] 0	485	143	342	.....	.....	214,000
9	Idaho	8	184	3	16	6	4	155	Se 342	Fe 8	295	195	100	.....	.....	385,422
10	Illinois	59	1,652	40	153	27	27	1,405	Se 4,768	Fe 480	1,689	1,055	605	19	10	7,562,036
11	Indiana	136	3,510	118	246	98	99	2,949	Se 9,239	Mh 801	7,564	3,715	3,714	49	86	11,527,447
12	Iowa	62	1,540	32	157	48	32	1,271	Se 5,365	Fe 326	3,514	1,862	1,637	11	4	7,826,193
13	Kentucky	10	118	7	4	5	1	101	Se 377	Fe 8	301	85	216	.....	.....	223,614
14	Louisiana	11	197	12	23	11	2	149	My 299	Fe 31	471	191	251	13	16	465,770
15	Maine	97	1,352	85	150	24	45	1,048	Se 5,146	Mh 80	4,371	2,706	1,592	47	26	4,202,879
16	Maryland	406	8,785	597	310	147	86	7,645	Se 26,827	Ja 1,360	25,002	9,261	15,310	227	204	20,760,946
17	Michigan	52	2,366	32	149	34	42	2,109	Jy 5,019	Mh 410	3,462	1,392	1,879	62	129	6,010,871
18	Minnesota	25	558	3	81	8	10	456	Au 1,630	Fe 66	1,346	673	673	.....	.....	1,741,480
19	Mississippi	10	276	2	17	4	4	249	No 624	My 65	635	249	381	5	.....	417,136
20	Missouri	147	1,178	196	58	9	5	910	Se 3,765	Ja 10	3,751	1,111	2,409	79	152	1,001,979
21	Nebraska	9	182	9	21	3	2	147	Se 754	Fe[4] 12	681	334	344	3	.....	778,587
22	New Hampshire	4	75	.....	8	3	4	60	Se 179	Fe[4] 2	169	107	62	.....	.....	85,183
23	New Jersey	53	3,307	42	168	243	169	2,685	Se 4,358	Ap 1,240	4,751	2,504	2,246	.....	1	21,088,371
24	New Mexico	3	19	.....	4	.....	.....	15	Se 83	Ja[3] 0	85	35	50	.....	.....	30,716
25	New York	515	5,955	499	355	114	152	4,835	Oc 10,668	Fe 958	11,015	4,900	5,974	65	76	23,707,470
26	North Carolina	13	54	19	6	1	.....	28	Jy 108	Ja[3] 0	105	51	44	4	6	73,172
27	Ohio	87	1,868	52	157	38	45	1,576	Se 4,699	De 359	3,911	2,211	1,651	18	31	6,744,352
28	Oregon	59	1,937	37	92	39	49	1,720	Se 3,676	Mh 266	3,759	1,384	2,300	15	60	5,027,763
29	Pennsylvania	42	829	57	40	14	7	711	Se 2,353	Mh 64	2,098	971	1,032	47	48	2,100,567
30	Tennessee	62	745	101	34	12	5	593	Au 1,965	Ja 23	1,615	529	1,069	4	13	764,005
31	Texas	9	164	8	16	16	4	120	Je 238	Fe 53	198	75	123	.....	.....	530,757
32	Utah	31	1,172	4	81	16	20	1,051	Se 2,888	Mh 203	2,761	1,079	1,601	22	59	4,448,953
33	Vermont	9	206	12	15	3	3	173	Se 684	Ja[4] 4	640	450	110	57	23	334,290
34	Virginia	473	3,491	716	919	13	7	1,836	Se 7,188	Ja 2	9,026	3,003	5,596	177	250	2,319,063
35	Washington	30	1,518	29	69	47	25	1,348	Se 2,718	Mh 1,287	2,871	782	1,979	30	80	4,326,371
36	West Virginia	25	182	44	4	.....	.....	134	Se 594	Ja[3] 0	658	153	382	31	92	134,937
37	Wisconsin	103	3,258	5	417	46	53	2,737	Jy 10,976	Mh 736	7,140	4,516	2,489	58	77	15,739,718
38	All other states [5]	12	122	7	9	4	5	97	.....	.....	373	79	269	11	14	684,259
	CANNING AND PRESERVING, FISH.															
1	United States	410	12,797	275	657	353	264	11,248	Au 17,329	Mh 6,749	18,252	10,541	7,578	68	65	63,049,038
2	California	57	3,312	14	168	78	63	2,989	Jy 4,718	My 976	3,643	1,703	1,937	2	1	10,517,677
3	Florida	10	306	18	14	6	4	264	Oc[4] 504	Jy[4] 78	502	250	252	.....	.....	284,884
4	Georgia	4	84	4	7	1	1	71	De 223	Ja[4] 11	223	91	132	.....	.....	215,627
5	Illinois	5	32	8	2	1	1	20	Fe[4] 22	Je[4] 17	23	20	3	.....	.....	123,377
6	Louisiana	16	437	17	27	6	4	383	Se 615	Ja 68	742	184	558	.....	.....	797,786
7	Maine	102	3,066	65	165	50	65	2,721	Se 5,592	Fe 859	4,973	2,178	2,740	25	30	17,199,422
8	Maryland	23	251	42	.....	1	.....	208	Ap 466	Jy 102	554	448	96	4	6	136,325
9	Massachusetts	22	1,623	8	39	53	59	1,464	De 1,651	Ap 1,310	1,693	1,488	183	10	12	7,104,155
10	Mississippi	11	516	13	13	7	2	481	Oc 671	Je 74	673	176	484	10	3	710,787
11	New Jersey	3	19	3	1	1	1	13	No 17	Je[4] 9	15	15	.....	.....	.....	267,996
12	New York	15	178	11	17	36	7	107	Ja 122	Au 92	116	84	12	11	9	930,238
13	Oregon	36	578	8	51	28	15	476	Au 940	Ja 115	1,034	849	185	.....	.....	7,302,838
14	Pennsylvania	4	36	3	6	13	3	11	De 16	Ap[4] 7	16	14	2	.....	.....	84,141
15	Virginia	18	238	25	8	3	1	201	Ap 370	Mh 48	624	472	152	.....	.....	430,574
16	Washington	66	1,930	15	133	65	34	1,683	Au 3,041	Ja 610	3,122	2,434	679	5	4	16,603,445
17	Wisconsin	9	45	8	5	3	3	26	Ja 35	Oc 16	39	36	2	1	.....	150,936
18	All other states [6]	9	146	13	1	1	1	130	.....	.....	260	99	161	.....	.....	188,830

[1] Includes water wheels and turbines (irrespective of ownership of water supply) and water motors (operated by water from city mains.)
[2] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).
[3] None reported for one or more other months.
[4] Same number reported for one or more other months.

NING AND PRESERVING, BY STATES: 1919.

EXPENSES.										POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.		Value of products.	Value added by manufacture.	Primary horsepower.						Electric horsepower generated in establishments reporting.	
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
CANNING AND PRESERVING, FRUITS AND VEGETABLES.																	
$9,312,121	$4,038,979	$13,592,537	$328,580	$1,445,342	$10,426,834	$261,910,079	$3,718,446	$402,242,972	$136,614,447	132,422	84,321	2,263	6,162	81	39,595	6,663	1
37,070	10,640	389,942	20,534	10,590	4,187	1,438,903	51,486	2,420,922	930,533	676	511	.....	90	.....	75	.....	2
2,393,127	1,952,143	18,470,036	51,687	926,390	5,379,586	127,314,326	1,325,513	189,955,631	61,315,792	21,992	4,102	.....	739	.....	17,151	249	3
145,765	32,393	462,226	300	19,144	80,687	1,687,940	38,556	2,970,113	1,243,617	1,845	1,328	50	8	.....	459	15	4
13,350	1,500	22,298	287	1,100	1,275	62,372	1,699	124,012	59,941	107	95	.....	12	.....	.....	.....	5
162,952	25,977	722,654	60	3,278	87,046	3,182,883	54,316	4,705,378	1,468,179	2,723	2,610	25	70	.....	18	.....	6
2,827	150	12,310	.....	200	249	42,295	2,250	68,382	23,837	95	93	.....	2	.....	.....	.....	7
5,055	350	60,623	.....	2,075	879	327,617	3,393	514,038	183,028	330	330	.....	.....	.....	.....	.....	8
19,180	5,108	120,547	340	350	22,659	353,573	21,832	781,258	405,853	181	25	.....	.....	.....	156	.....	9
446,277	62,496	1,237,489	1,951	121,795	456,377	5,333,348	97,026	8,846,119	3,415,745	5,137	3,136	100	293	.....	1,608	797	10
474,340	167,065	1,902,309	6,511	22,655	231,905	11,507,574	216,853	18,898,767	7,174,340	8,058	5,761	220	86	.....	1,991	873	11
305,228	103,942	875,294	100,000	10,364	252,839	5,147,037	119,315	8,014,770	2,748,418	6,611	4,280	165	40	.....	2,126	495	12
10,280	3,095	34,715	.....	1,150	327	199,897	2,495	273,055	70,663	195	148	.....	3	.....	44	10	13
27,258	12,288	91,229	.....	928	4,262	549,010	7,529	818,309	261,770	196	143	.....	33	.....	20	.....	14
245,565	48,360	741,792	1,250	5,316	143,543	4,696,138	64,878	7,301,237	2,540,221	3,696	3,108	185	30	.....	373	25	15
718,857	212,300	3,744,919	5,044	103,350	350,882	20,365,307	294,822	28,421,544	7,761,415	15,551	13,122	412	566	.....	1,451	646	16
302,658	95,678	1,135,224	2,576	8,575	97,460	7,849,401	121,541	11,172,169	3,201,227	4,185	3,451	.....	38	.....	696	183	17
120,006	8,192	251,511	3,714	647	34 647	1,037,849	27,271	1,792,165	727,045	1,399	647	.....	72	.....	680	30	18
30,512	8,098	93,806	.....	270	1,480	451,937	8,461	624,312	163,914	219	203	.....	.....	.....	16	.....	19
59,871	6,466	254,610	600	4,684	5,474	887,439	23,599	1,559,034	647,996	2,355	2,138	.....	169	8	40	.....	20
29,528	2,748	92,558	150	3,750	2,972	506,640	12,155	668,724	149,929	902	600	.....	.....	.....	302	122	21
12,780	5,120	28,444	.....	795	1,600	167,902	2,801	240,285	69,582	146	118	.....	5	.....	23	.....	22
805,932	579,921	2,193,020	106	21,852	649,303	14,680,501	134,972	24,618,704	9,803,231	3,586	2,827	32	29	.....	698	1,567	23
3,443	.....	10,272	.....	213	255	20,507	1,042	53,981	32,432	72	72	.....	.....	.....	.....	.....	24
979,998	183,666	3,403,866	58,029	30,226	705,717	15,872,788	434,174	26,534,556	10,227,594	16,876	10,275	471	2,274	13	3,843	680	25
8,100	1,700	12,763	22,418	550	1,467	79,189	594	146,421	66,638	52	52	.....	.....	.....	.....	.....	26
285,099	67,253	775,723	508	3,785	174,408	4,347,443	64,869	6,838,327	2,426,015	5,103	3,844	123	400	.....	736	282	27
234,506	100,505	1,225,144	361	12,590	322,956	8,108,554	106,934	12,265,651	4,050,163	2,574	1,204	30	120	60	1,160	.....	28
91,726	17,859	397,929	862	1,190	22,251	2,295,114	38,207	3,196,331	863,010	1,791	1,588	20	71	.....	112	96	29
65,523	10,263	177,568	1,145	991	14,112	894,129	18,121	1,513,347	601,097	1,438	1,044	.....	69	.....	325	191	30
37,491	22,370	44,934	.....	205	3,621	385,204	5,532	616,670	225,934	284	77	80	4	.....	123	.....	31
175,933	29,848	628,364	1,905	2,570	164,101	2,602,330	51,992	4,389,529	1,735,207	3,122	745	35	.....	.....	2,342	5	32
24,077	4,081	64,156	.....	1,255	4,186	353,813	5,871	521,879	162,195	665	434	.....	19	.....	212	.....	33
55,930	7,937	647,609	13,052	11,374	13,904	3,077,633	69,253	4,427,441	1,280,555	6,379	6,141	40	119	.....	79	2	34
138,636	125,037	1,035,944	1,000	13,726	103,482	5,795,272	84,474	9,295,891	3,416,145	1,032	409	.....	4	.....	619	.....	35
1,170	.....	47,168	1,069	300	649	183,588	5,540	307,688	118,560	815	799	.....	14	.....	2	.....	36
827,541	119,948	2,121,209	33,121	95,138	1,083,115	9,925,137	191,035	17,036,038	6,919,866	11,758	8,737	275	748	.....	1,998	395	37
14,530	4,482	62,332	.....	1,971	2,961	179,489	8,045	310,294	122,760	276	124	.....	35	.....	117	.....	38
CANNING AND PRESERVING, FISH.																	
2,140,863	761,682	9,036,089	445,746	168,200	1,410,799	51,539,475	871,476	77,284,412	24,873,461	24,865	13,667	452	2,484	4	8,258	1,472	1
637,647	184,591	2,210,048	171	66,910	394,568	10,197,316	216,202	17,482,795	7,069,277	4,790	485	.....	90	.....	4,215	4	2
20,600	9,950	86,508	150	1,499	2,229	189,111	3,957	382,009	188,941	161	126	20	10	.....	5	.....	3
13,325	1,650	44,862	.....	100	1,895	112,183	2,683	207,830	92,964	162	150	.....	12	.....	.....	5	4
6,240	1,924	27,023	.....	3,160	920	357,160	5,369	448,316	85,787	13	.....	.....	.....	.....	13	.....	5
43,561	8,486	137,749	200	2,040	13,145	433,840	17,491	795,223	343,892	441	301	.....	140	.....	.....	80	6
517,878	143,765	2,095,029	.....	22,325	243,545	11,780,126	246,073	16,980,400	4,954,201	6,658	4,073	335	1,118	.....	1,132	967	7
.....	936	73,623	2,000	1,701	1,534	253,143	3,927	411,489	154,419	213	107	.....	106	.....	.....	.....	8
212,251	103,215	1,418,205	200	16,700	110,285	9,337,013	87,471	12,763,266	3,338,782	847	82	.....	56	.....	709	.....	9
26,900	10,688	169,561	2,513	1,370	5,195	606,791	19,617	882,132	255,724	418	408	.....	.....	.....	10	.....	10
1,600	2,652	16,561	.....	1,200	838	284,544	1,041	328,873	43,288	19	.....	.....	.....	.....	19	.....	11
72,440	57,740	130,670	.....	18,119	7,431	2,458,336	9,841	2,926,481	458,304	105	.....	.....	5	.....	100	.....	12
125,723	58,419	606,090	211,107	8,617	164,905	4,605,178	59,310	6,531,462	1,866,974	1,390	999	25	59	.....	307	15	13
2,058	9,182	12,718	120	420	1,050	66,935	2,432	103,535	34,168	1,484	1,400	.....	.....	.....	84	.....	14
12,396	3,780	145,271	2,326	335	9,437	346,956	25,504	609,995	237,535	1,337	1,294	.....	42	.....	1	340	15
437,783	159,006	1,781,027	226,383	22,655	449,883	10,137,263	163,470	15,860,141	5,559,408	6,775	4,224	72	844	4	1,631	61	16
6,961	4,673	28,226	.....	168	3,265	180,350	2,807	271,833	88,736	25	.....	.....	.....	.....	25	.....	17
3,500	1,025	52,918	576	881	674	193,230	4,281	298,572	101,061	27	18	.....	2	.....	7	.....	18

[5] All other states embrace: Alabama, 2 establishments; Kansas, 2; Massachusetts, 2; Montana, 1; Oklahoma, 1; Rhode Island, 1; South Carolina, 2; and South Dakota, 1.

[6] All other states embrace: Alabama, 1 establishment; Delaware, 1; District of Columbia, 2; Michigan, 2; North Carolina, 2; and Ohio, 1.

TABLE 23.—DETAILED STATEMENT FOR CAN-

	STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.		Wage earners. Number, 15th day of— Minimum month.		WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.
	CANNING AND PRESERVING, OYSTERS.																	
1	United States	65	1,339	51	69	19	11	1,189	De	1,836	Jy	214	2,256	842	1,409	1	4	$2,971,876
2	Georgia	3	68	2	2	1	1	62	Ja [3]	117	Je [3]	3	117	42	75	.....	.....	52,916
3	Louisiana	3	47	3	2	.....	.....	42	Oc	70	My [4]	0	77	42	35	.....	.....	97,008
4	Maine	13	91	14	7	1	.....	69	My	159	Ja [4]	0	184	65	119	.....	.....	162,507
5	Maryland	5	61	1	5	2	6	47	De	117	Mh [3]	10	110	78	32	.....	.....	72,417
6	Mississippi	7	388	1	17	4	2	364	Mh	514	Jy	6	502	122	377	1	2	465,710
7	North Carolina	6	82	5	6	3	1	67	De	144	My	8	144	61	83	.....	.....	55,703
8	South Carolina	9	397	9	12	.....	.....	376	De	695	Jy [3]	85	705	220	483	.....	2	202,285
9	Washington	14	137	15	12	2	1	107	Mh	287	Jy	6	345	169	176	.....	.....	335,751
10	All other states [5]	5	68	1	6	6	.....	55	.....		.....		72	43	29	.....	.....	1,467,579
	PICKLES, PRESERVES, AND SAUCES.																	
1	United States	723	21,381	549	1,225	1,990	996	16,621	Se	23,032	Mh	13,134	19,284	9,300	9,514	159	311	88,703,065
2	Arizona	3	22	7	2	.....	.....	13	De	52	Mh	2	52	17	35	.....	.....	51 408
3	California	84	2,133	80	110	155	69	1,719	Se	2,413	Ap	934	2,639	1,012	1,619	4	4	7,630,865
4	Colorado	6	44	5	6	6	1	26	Se	36	Ja [3]	21	23	13	10	.....	.....	133,462
5	Connecticut	7	68	8	3	8	3	46	Jy	54	Fe	31	50	26	24	.....	.....	180,501
6	Delaware	8	191	6	8	19	9	149	Se	416	Fe	37	185	132	53	.....	.....	1,565,724
7	District of Columbia	3	9	4	.....	.....	.....	5	(6)	5	(6)	5	5	.....	5	.....	.....	2,990
8	Florida	13	225	16	51	29	5	124	Ap	310	Jy	46	127	94	27	2	4	488,832
9	Illinois	68	2,731	44	151	183	98	2,255	Oc	3,083	Fe	1,855	2,718	1,345	1,347	10	16	11,008,502
10	Indiana	30	1,410	20	52	78	39	1,221	Se	2,589	My	694	1,395	760	632	3	.....	4,151,228
11	Iowa	14	435	9	27	55	33	311	Au	492	Fe	228	329	176	128	3	22	1,985,904
12	Kentucky	18	1,280	6	60	128	40	1,046	Oc	1,415	My	750	1,227	620	587	4	16	3,887,998
13	Louisiana	8	112	7	13	12	1	79	Au	93	De	52	86	33	44	5	4	205,218
14	Maine	5	16	3	4	.....	1	8	Ja [3]	9	No [3]	6	8	5	3	.....	.....	29,924
15	Maryland	26	176	25	10	14	4	123	Ju	284	Mh [3]	80	322	111	211	.....	.....	724,105
16	Massachusetts	33	645	18	43	63	41	480	De	520	Mh	440	524	268	243	9	4	3,100,895
17	Michigan	44	653	27	51	56	36	483	Se	726	Ja	328	551	411	137	3	.....	3,186,311
18	Minnesota	13	299	6	25	31	10	227	Au	614	Fe	118	267	138	129	.....	.....	936,505
19	Missouri	11	459	4	18	59	32	346	Je	424	Fe	292	366	154	210	.....	2	2,465,944
20	New Jersey	41	660	30	46	28	22	534	Se	841	Ap	356	557	306	232	5	14	3,210,526
21	New York	107	3,374	75	160	300	125	2,714	Se	3,490	Ap	2,173	3,007	1,383	1,598	5	21	13,221,246
22	Ohio	37	1,565	25	59	67	39	1,375	Se	2,074	Ja	1,019	1,416	557	852	.....	7	6,599,462
23	Oregon	8	214	5	20	26	15	148	Jy	177	De	125	131	79	52	.....	.....	1,847,257
24	Pennsylvania	48	3,466	47	221	579	331	2,288	Au	2,639	My	2,053	2,187	1,112	801	91	183	17,818,921
25	Rhode Island	4	8	5	.....	.....	.....	3	Se [3]	4	Ja [3]	2	4	4	.....	.....	.....	9,396
26	Texas	18	318	12	18	39	15	234	Au	354	Ja	160	296	146	150	.....	.....	865,523
27	Utah	6	61	5	4	3	1	48	Se	106	Ja [3]	22	46	14	32	.....	.....	187,233
28	Virginia	7	114	5	12	6	5	86	Se	120	Mh	58	112	56	39	7	10	257,016
29	Washington	17	324	10	21	26	11	256	Se	477	My	152	268	133	128	3	4	1,463,105
30	Wisconsin	17	189	19	17	2	5	146	Se	250	Fe	75	148	95	53	.....	.....	452,379
31	All other states [6]	19	180	16	13	18	5	128	.....		.....		238	100	133	5	.....	1,035,285

[1] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[2] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).
[3] Same number reported for one or more other months.
[4] None reported for one or more other months.

NING AND PRESERVING, BY STATES: 1919—Continued.

EXPENSES.										POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.		Value of products.	Value added by manufacture.	Primary horsepower.						Electric horsepower generated in establishments reporting.	
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
CANNING AND PRESERVING, OYSTERS.																	
$109,700	$39,383	$468,930	$56,053	$12,993	$30,361	$1,526,173	$56,665	$2,976,011	$1,393,173	1,025	858	.....	125	5	37	.....	1
2,731	2,750	20,390	.....	852	200	26,327	900	72,991	45,764	36	36	.....	.....	.....	.....	.....	2
4,250	261	22,631	.....	120	1,718	67,064	5,891	110,742	37,787	40	40	.....	.....	.....	.....	.....	3
5,901	1,379	31,949	198	260	4,210	96,423	3,742	161,540	61,375	180	110	.....	60	.....	10	.....	4
15,405	13,023	28,034	7,597	4,575	1,085	300,448	1,015	640,206	338,743	27	25	.....	.....	.....	2	.....	5
34,142	6,983	111,178	46,358	900	10,679	409,547	21,381	796,920	365,992	209	207	.....	.....	.....	2	.....	6
3,600	1,800	35,391	1,900	350	262	102,992	3,064	192,167	86,111	15	15	.....	.....	.....	.....	.....	7
14,710	.....	118,672	.....	600	2,726	188,493	12,745	420,539	219,301	271	241	.....	30	.....	.....	.....	8
12,400	4,393	69,624	.....	420	2,752	172,307	4,663	318,240	141,270	175	134	.....	23	5	13	.....	9
16,561	8,794	31,061	.....	4,916	6,729	162,572	3,264	262,666	96,830	72	50	.....	12	.....	10	.....	10
PICKLES, PRESERVES, AND SAUCES.																	
3,866,049	4,499,887	13,346,467	47,304	567,836	3,315,340	91,851,287	1,186,146	145,784,530	52,747,097	22,500	12,549	30	1,190	50	8,681	8,319	1
3,000	.....	8,348	.....	720	415	15,296	306	33,807	18,205	40	.....	.....	3	.....	37	.....	2
308,223	386,163	1,379,694	210	45,929	261,702	7,206,289	100,199	11,840,150	4,533,662	2,148	478	.....	16	.....	1,654	.....	3
10,840	8,935	23,725	640	937	2,184	100,402	3,618	219,935	115,915	51	30	.....	12	.....	9	.....	4
11,795	19,357	34,253	.....	4,196	6,263	139,762	2,324	346,710	204,624	35	.....	.....	2	.....	33	.....	5
13,514	34,476	99,856	952	.....	2,158	377,244	7,953	878,979	493,782	244	207	.....	.....	.....	37	80	6
.....	.....	2,080	106	540	22	6,705	181	14,533	7,647	1	.....	.....	.....	.....	1	.....	7
16,150	14,111	53,418	.....	2,062	3,981	374,712	12,948	590,336	202,676	135	70	.....	4	.....	61	.....	8
470,417	395,406	1,913,875	3,054	86,580	408,811	11,859,455	180,570	19,046,228	7,006,203	3,149	1,878	.....	117	.....	1,154	708	9
172,342	174,997	892,696	498	19,177	128,030	5,730,475	73,045	8,924,581	3,121,061	1,602	1,222	.....	11	50	319	1,776	10
63,868	111,487	224,058	314	3,480	40,996	1,445,760	22,825	2,208,457	739,872	338	202	.....	2	.....	134	221	11
232,619	285,278	621,043	.....	6,135	158,586	5,469,083	50,977	8,223,431	2,703,371	880	489	.....	2	.....	389	114	12
16,751	11,514	45,543	.....	1,550	3,944	265,261	2,059	422,111	154,791	73	30	.....	.....	.....	43	.....	13
2,133	500	6,197	.....	917	674	90,032	2,455	107,397	14,910	85	50	.....	5	.....	30	.....	14
49,244	16,608	85,592	307	3,905	100,256	759,722	9,063	1,092,858	324,073	302	239	.....	10	.....	53	25	15
169,931	163,070	420,234	.....	59,026	124,404	3,973,037	35,856	6,253,818	2,244,925	830	604	30	.....	.....	196	219	16
141,295	139,150	404,588	.....	6,991	127,283	2,971,623	37,825	4,836,452	1,827,004	661	244	30	55	.....	362	.....	17
59,658	60,250	179,081	.....	1,759	50,906	1,252,650	11,397	1,707,694	443,647	236	35	.....	51	.....	150	.....	18
63,120	116,221	256,296	.....	8,546	39,152	4,001,712	18,411	4,817,855	797,732	450	91	.....	.....	.....	359	.....	19
144,906	66,269	444,917	123	23,012	83,558	3,041,646	65,314	4,874,160	1,767,200	1,531	1,013	.....	27	.....	491	776	20
749,131	681,855	2,311,010	19,451	179,733	785,309	16,176,438	176,636	25,096,637	8,743,563	2,787	1,300	.....	232	.....	1,255	353	21
201,898	192,814	1,288,981	712	31,854	159,507	6,999,845	102,556	10,451,455	3,349,054	2,002	1,547	.....	71	.....	384	1,377	22
48,915	79,517	186,607	.....	8,097	17,680	1,455,161	30,712	1,794,022	308,149	433	92	.....	5	.....	336	1	23
714,449	1,367,537	1,850,045	.....	45,109	697,355	14,749,895	194,154	26,189,134	11,245,085	3,280	2,137	.....	466	.....	677	2,669	24
.....	.....	2,930	160	893	.....	20,473	154	28,823	8,196	11	.....	.....	.....	.....	11	.....	25
67,713	68,626	110,536	279	5,465	30,826	730,394	8,035	1,296,544	558,115	266	54	.....	58	.....	154	.....	26
3,100	4,800	28,884	.....	9	3,880	76,930	3,646	168,109	87,533	29	10	.....	.....	.....	19	.....	27
18,654	14,939	44,134	3,127	4,818	8,331	287,923	6,141	467,915	173,851	137	125	.....	.....	.....	12	.....	28
50,489	59,435	267,659	.....	8,747	50,165	1,240,958	14,659	2,041,378	785,761	262	3	.....	2	.....	257	.....	29
21,153	4,453	70,903	4,911	240	10,716	345,677	5,414	758,959	407,868	147	66	.....	37	.....	44	.....	30
40,741	22,119	89,284	12,460	7,409	8,246	689,727	6,713	1,052,062	358,622	355	333	.....	2	.....	20	.....	31

[5] All other states embrace: California, 1; Florida, 3; and Virginia, 1.
[6] Same number reported throughout the year.
[7] All other states embrace: Alabama, 2; Georgia, 1; Kansas, 2; Mississippi, 1; Montana, 1; Nebraska, 3; New Hampshire, 1; North Carolina, 1; North Dakota, 2; South Carolina, 1; Vermont, 1; and West Virginia, 3.

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DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES

MANUFACTURES: 1919

CARRIAGES AND WAGONS AND MATERIALS

Prepared under the supervision of EUGENE F. HARTLEY, Chief Statistician for Manufactures

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EXPLANATION OF TERMS.

Scope of census.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than $500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

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

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date did not portray such conditions, an earlier date was requested.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

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

In order to determine as nearly as possible the age distribution of the average number of wage earners for an industry, the per cent distribution by age of the wage earners for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year to determine the average numbers 16 years and over, and under 16, employed.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital (amount actually invested).—The instructions on the schedule for securing data relating to capital were as follows:

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

These instructions were identical with those employed at the censuses of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power equipment of the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuel is impracticable.

CARRIAGES AND WAGONS AND MATERIALS.

GENERAL STATISTICS.

General character of the industry.—The statistics here considered are for establishments engaged in the manufacture of carriages, wagons, sleighs, sleds (except children's carriages and sleds), and parts. Some establishments which are included were engaged chiefly in manufacturing materials and parts, building only a few vehicles, while a few were engaged in repair work only.

Carriages and wagons and materials were also made by establishments engaged primarily in the manufacture of other products to the value of $13,920,648 in 1919 and $4,492,615 in 1914. The value of such manufactures, however, is not included in the total value of products shown for the carriage and wagon industry, except in Table 12.

Comparative summary.—Table 1 summarizes the statistics for each census since 1899, with percentages of increase or decrease for each five-year period.

With a few exceptions decreases are noticeable at each succeeding census since 1909. The addition of the Federal income tax since 1914 will account for the increase in "Rent and taxes."

Summary of the industry.—Table 2 summarizes the statistics for the industry as a whole for 1919, and gives separate figures for the three classes of establishments: (1) Factories engaged in manufacturing carriages and wagons, (2) factories making carriage and wagon materials, and (3) factories doing repair work only.

Of the 2,544 establishments from which returns were received in 1919, 1,130, or 44.4 per cent, were engaged primarily in the manufacture of the complete vehicle and reported 69.4 per cent of the total value of products; establishments manufacturing carriage and wagon materials reported 22.6 per cent, and factories doing repair work only 8 per cent of the total value of products reported for the industry.

Principal states, ranked by value of products.—Illinois, as shown by Table 3, is the leading state in the manufacture of carriages and wagons. In 1919 this state reported 10.9 per cent of the total number of wage earners, and 12.6 per cent of the total value of products. Indiana, second in importance, contributed 9 per cent and 10.8 per cent, respectively, of these two items. Ohio, the third ranking state, and Kentucky, fourth in rank, were not far behind the two leading states. Of the states engaged in the manufacture of carriages and wagons, a great majority are located east of the Mississippi River, the only state of importance west of the river being Iowa, which manufactured products to the value of over two million dollars.

Persons engaged in the industry.—Table 4 shows the number of persons engaged in the industry as a whole and in each branch separately. The classification, by sex, for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. The age classification of the average number of wage earners in Table 4 is an estimate obtained by the method described in the "Explanation of terms," page 2. Figures in detail will be found in Table 16.

Wage earners, by months, for states.—As shown by Table 5, the number of wage earners employed in the industry month by month ranged from a maximum of 25,766 in October to a minimum of 23,713 in April, the minimum number being equivalent to 92 per cent of the maximum. Figures are given for all states in the combined industry reporting an average of over 350 wage earners, that could be shown without disclosing operations of individual establishments, while for the United States the number of males and of females is also shown.

Prevailing hours of labor.—Table 6 shows a marked shortening of the working-day for establishments reporting 54 hours per week or more, while those reporting fewer hours remained about the same as in 1914. In that year 16.4 per cent were reported as employed fewer than 54 hours per week as against 34 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 24.9 per cent of the total wage earners, as compared with 21.2 per cent in 1919.

Size of establishments, by average number of wage earners, for states.—Analysis of Table 7 discloses the significant fact that in 1919, 1,946 establishments, or 76.5 per cent of the total number for the industry, employed fewer than 6 wage earners each, while only 3,011, or 12.2 per cent of the total number of wage earners, were employed therein, evidencing the predominance of small establishments based upon the average number of wage earners.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "$100,000 to $1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "$100,000 to $500,000," and "$500,000 to $1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from returns for 1914. Table 8, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. In 1919 establishments reporting products valued at more than $100,000 employed 16,708 wage earners, or 67.7 per cent of the total average number, and reported products to the value of $90,884,218, or 76.9 per cent of the total value of products.

Character of ownership.—Table 9 shows that the individual form of ownership predominated in number of establishments only. Individuals owned 64.2 per cent of the total number of establishments for the industry in 1919. Corporations owned only 14.2 per cent of the total number of establishments, but employed 72 per cent of the total average number of wage earners, and reported 77.8 per cent of the value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 10, there was a decrease in the total horsepower for the industry of 47,883 horsepower, or 42.5 per cent, the decrease being throughout all types of power.

Fuel consumed.—Table 11 shows the principal kinds of fuel used for the industry in 1919 and 1914, and gives separately the amounts consumed in states requiring considerable quantities of fuel for manufacturing purposes. In 1919, of the total reported for bituminous coal, Illinois consumed 21.1 per cent; of the total reported for anthracite coal, Pennsylvania, New York, and Massachusetts consumed 46.4 per cent.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, AND 1899.

	1919	1914	1909	1904	1899	PER CENT OF INCREASE.[1] 1914–1919	1909–1914	1904–1909	1899–1904
Number of establishments	2,544	5,057	5,492	5,588	6,792	−49.7	−7.9	−1.7	−17.7
Persons engaged	30,697	64,446	82,944	90,751	(2)	−52.4	−22.3	−8.6	.....
Proprietors and firm members	2,867	5,629	6,213	6,575	(2)	−49.1	−9.4	−5.5	.....
Salaried employees	3,148	6,426	6,803	6,294	5,026	−51.0	−5.5	8.1	25.2
Wage earners (average number)	24,682	52,391	69,928	77,882	73,812	−52.9	−25.1	−10.2	5.5
Primary horsepower	64,666	112,549	126,032	106,159	83,771	−42.5	−10.7	18.7	26.7
Capital	$96,924,074	$177,643,015	$175,473,728	$152,344,657	$128,961,660	−45.4	1.2	15.2	18.1
Salaries and wages	30,897,048	40,331,426	45,555,126	44,943,700	38,324,427	−23.4	−11.5	1.4	17.3
Salaries	5,836,882	7,773,964	7,960,207	6,581,021	4,759,114	−24.9	−2.3	21.0	38.3
Wages	25,060,166	32,557,462	37,594,919	38,362,679	33,565,313	−23.0	−13.4	−2.0	14.3
Paid for contract work	182,039	209,393	253,512	249,327	(2)	−13.1	−17.4	1.7	.....
Rent and taxes	3,457,248	2,359,532	2,096,877	[3] 2,081,834	(2)	46.5	12.5	.....	.....
Cost of materials	63,097,129	65,718,795	81,951,288	77,527,911	66,771,919	−4.0	−19.8	5.7	16.1
Value of products	118,228,541	131,546,997	159,892,547	155,868,849	138,261,763	−10.1	−17.7	2.6	12.7
Value added by manufacture [4]	55,131,412	65,828,202	77,941,259	78,340,938	71,489,844	−16.2	−15.5	−0.5	9.6

[1] A minus sign (−) denotes decrease. [2] Figures not available. [3] Exclusive of internal revenue. [4] Value of products less cost of materials.

TABLE 2.—SUMMARY OF THE INDUSTRY: 1919.

	Total for the industry.	ESTABLISHMENTS ENGAGED PRIMARILY IN— Manufacturing carriages and wagons.	Manufacturing carriage and wagon materials.	Repair work only.		Total for the industry.	ESTABLISHMENTS ENGAGED PRIMARILY IN— Manufacturing carriages and wagons.	Manufacturing carriage and wagon materials.	Repair work only.
Number of establishments	2,544	1,130	258	1,156	Salaries and wages	$30,897,048	$20,741,019	$6,972,315	$3,183,714
Persons engaged	30,697	19,249	7,429	4,019	Salaries	5,836,882	4,272,980	1,305,544	258,358
Proprietors and firm members	2,867	1,265	212	1,390	Wages	25,060,166	16,468,039	5,666,771	2,925,356
Salaried employees	3,148	2,265	708	175	Paid for contract work	182,039	117,149	17,448	47,442
Wage earners (average number)	24,682	15,719	6,509	2,454	Rent and taxes	3,457,248	2,505,433	635,084	316,731
Primary horsepower	64,666	34,666	23,700	6,300	Cost of materials	63,097,129	44,912,172	14,734,673	3,450,284
Capital	$96,924,074	$71,701,095	$17,971,206	$7,251,773	Value of products	118,228,541	82,013,326	26,765,316	9,449,899
					Value added by manufacture	55,131,412	37,101,154	12,030,643	5,999,615

TABLE 3.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	2,544	24,682	100.0	....	$118,229	100.0	....	$55,131	100.0	...
Illinois	107	2,692	10.9	1	14,863	12.6	1	6,730	12.2	1
Indiana	100	2,216	9.0	2	12,785	10.8	2	4,316	7.8	5
Ohio	152	2,213	9.0	3	10,946	9.3	3	5,292	9.6	2
Kentucky	71	1,977	8.0	4	10,510	8.9	4	4,641	8.4	4
Wisconsin	124	1,498	6.1	7	9,455	8.0	5	4,948	9.0	3
Tennessee	66	1,665	6.7	5	6,691	5.7	6	2,921	5.3	7
North Carolina	109	1,327	5.4	8	6,392	5.4	7	2,829	5.1	8
Pennsylvania	356	1,564	6.3	6	5,534	4.7	8	3,192	5.8	6
Missouri	122	1,155	4.7	10	5,413	4.6	9	2,386	4.3	10
New York	274	1,169	4.7	9	5,095	4.3	10	2,793	5.1	9
Iowa	68	493	2.0	14	2,155	1.8	15	1,147	2.1	15
Massachusetts	50	491	2.0	15	1,672	1.4	17	995	1.8	16
Michigan	46	367	1.5	17	1,523	1.3	18	809	1.5	18
Mississippi	19	276	1.1	19	$1,105	0.9	19	$648	1.2	19
Alabama	42	307	1.2	18	1,073	0.9	20	557	1.0	20
Connecticut	56	168	0.7	22	677	0.6	24	352	0.6	23
Louisiana	24	166	0.7	23	491	0.4	26	271	0.5	26
Rhode Island	28	74	0.3	29	208	0.2	31	141	0.3	31
South Carolina	19	63	0.3	30	183	0.2	32	107	0.2	32
Florida	13	57	0.2	31	166	0.1	33	97	0.2	33
Vermont	23	35	0.1	33	130	0.1	34	80	0.1	34
Oregon	4	17	0.1	37	77	0.1	38	47	0.1	39
Delaware	5	15	0.1	39	72	0.1	39	50	0.1	38
Montana	4	7	(1)	40	65	0.1	40	31	0.1	41
Utah	3	16	0.1	38	41	(1)	42	24	(1)	42
New Mexico	4	6	(1)	41	31	(1)	44	21	(1)	44
All other	655	4,648	18.8	....	20,876	17.6	....	9,706	17.6	...

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

TABLE 4.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
CARRIAGES AND WAGONS AND MATERIALS.	1919	30,697	29,441	1,256	95.9	4.1
	1914	64,446	62,173	2,273	96.5	3.5
	1909	82,944	80,536	2,408	97.1	2.9
Proprietors and officials	1919	4,276	4,172	104	97.6	2.4
	1914	7,716	7,583	133	98.3	1.7
	1909	8,844	8,706	138	98.4	1.6
Proprietors and firm members	1919	2,867	2,790	77	97.3	2.7
	1914	5,629	5,526	103	98.2	1.8
	1909	6,213	6,103	110	98.2	1.8
Salaried officers of corporations	1919	555	535	20	96.4	3.6
	1914	981	951	30	96.9	3.1
	1909	1,166	1,143	23	98.0	2.0
Superintendents and managers	1919	854	847	7	99.2	0.8
	1914	1,106	1,106	.....	100.0	.....
	1909	1,465	1,460	5	99.7	0.3
Clerks and other subordinate salaried employees.	1919	1,739	1,089	650	62.6	37.4
	1914	4,339	2,972	1,367	68.5	31.5
	1909	4,172	2,991	1,181	71.7	28.3
Wage earners (average number)	1919	24,682	24,180	502	98.0	2.0
	1914	52,391	51,618	773	98.5	1.5
	1909	69,928	68,839	1,089	98.4	1.6
16 years of age and over	1919	24,594	24,101	493	98.0	2.0
	1914	52,253	51,482	771	98.5	1.5
	1909	69,397	68,315	1,082	98.4	1.6
Under 16 years of age	1919	88	79	9	89.8	10.2
	1914	138	136	2	98.6	1.4
	1909	531	524	7	98.7	1.3
CARRIAGES AND WAGONS, INCLUDING REPAIRS.	1919	23,268	22,388	880	96.2	3.8
	1914	51,913	50,120	1,793	96.5	3.5
	1909	63,607	61,827	1,780	97.2	2.8
Proprietors and officials	1919	3,690	3,595	95	97.4	2.6
	1914	6,879	6,763	116	98.3	1.7
	1909	7,627	7,521	106	98.6	1.4
Proprietors and firm members	1919	2,655	2,585	70	97.4	2.6
	1914	5,289	5,198	91	98.3	1.7
	1909	5,701	5,613	88	98.5	1.5
Salaried officers of corporations	1919	390	372	18	95.4	4.6
	1914	752	727	25	96.7	3.3
	1909	853	837	16	98.1	1.9
Superintendents and managers	1919	645	638	7	98.9	1.1
	1914	838	838	.....	100.0	.....
	1909	1,073	1,071	2	99.8	0.2
Clerks and other subordinate salaried employees.	1919	1,405	894	511	63.6	36.4
	1914	3,730	2,550	1,180	68.4	31.6
	1909	3,440	2,494	946	72.5	27.5
Wage earners (average number)	1919	18,173	17,899	274	98.5	1.5
	1914	41,304	40,807	497	98.8	1.2
	1909	52,540	51,812	728	98.6	1.4
16 years of age and over	1919	18,110	17,845	265	98.5	1.5
	1914	41,220	40,723	497	98.8	1.2
	1909	52,213	51,489	724	98.6	1.4
Under 16 years of age	1919	63	54	9	85.7	14.3
	1914	84	84	.....	100.0	.....
	1909	327	323	4	98.8	1.2
CARRIAGE AND WAGON MATERIALS.	1919	7,429	7,053	376	94.9	5.1
	1914	12,533	12,053	480	96.2	3.8
	1909	19,337	18,709	628	96.8	3.2
Proprietors and officials	1919	586	577	9	98.5	1.5
	1914	837	820	17	98.0	2.0
	1909	1,217	1,185	32	97.4	2.6
Proprietors and firm members	1919	212	205	7	96.7	3.3
	1914	340	328	12	96.5	3.5
	1909	512	490	22	95.7	4.3
Salaried officers of corporations	1919	165	163	2	98.8	1.2
	1914	229	224	5	97.8	2.2
	1909	313	306	7	97.8	2.2
Superintendents and managers	1919	209	209	.....	100.0	.....
	1914	268	268	.....	100.0	.....
	1909	392	389	3	99.2	0.8
Clerks and other subordinate salaried employees.	1919	334	195	139	58.4	41.6
	1914	609	422	187	69.3	30.7
	1909	732	497	235	67.9	32.1
Wage earners (average number)	1919	6,509	6,281	228	96.5	3.5
	1914	11,087	10,811	276	97.5	2.5
	1909	17,388	17,027	361	97.9	2.1
16 years of age and over	1919	6,484	6,256	228	96.5	3.5
	1914	11,033	10,759	274	97.5	2.5
	1909	17,184	16,826	358	97.9	2.1
Under 16 years of age	1919	25	25	.....	100.0	.....
	1914	54	52	2	96.3	3.7
	1909	204	201	3	98.5	1.5

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR SELECTED STATES: 1919.

[The month of maximum employment for each state is indicated by **bold-faced** figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Per cent minimum is of maximum.
United States:														
1919	24,682	23,809	23,980	23,831	*23,713*	23,937	24,104	24,778	25,327	25,511	**25,766**	25,763	25,665	92.0
Males	24,180	23,365	23,514	23,353	*23,229*	23,440	23,565	24,240	24,785	24,977	**25,275**	25,258	25,159	91.9
Females	502	*444*	466	478	484	497	539	538	**542**	534	491	505	506	81.9
1914	52,391	52,594	55,272	56,729	**57,316**	56,386	55,459	53,942	52,871	50,202	47,357	*45,014*	45,550	78.5
1909	69,928	*66,567*	69,390	71,795	72,892	**73,240**	72,181	69,618	68,326	67,894	67,949	68,857	70,427	90.9
Illinois	2,692	2,753	2,649	2,600	2,498	2,468	*2,345*	2,563	2,684	2,892	3,021	2,954	2,877	77.6
Indiana	2,216	2,261	2,251	2,075	*2,048*	2,102	2,205	2,208	2,275	2,273	2,303	2,276	**2,315**	88.5
Iowa	493	*419*	422	462	454	483	512	495	500	535	534	530	**570**	73.5
Kentucky	1,977	1,937	1,968	1,961	*1,817*	1,880	1,857	1,941	2,004	2,057	2,061	2,096	**2,145**	84.7
Massachusetts	491	*413*	458	521	514	**524**	516	498	490	498	481	482	497	78.8
Michigan	367	**402**	386	377	351	335	333	*327*	377	369	375	381	391	81.3
Missouri	1,155	1,135	*1,113*	1,118	1,152	1,150	1,130	1,163	1,165	1,121	1,199	**1,220**	1,194	91.2
New York	1,169	*1,069*	1,082	1,137	1,169	1,166	1,203	1,196	**1,255**	1,230	1,191	1,164	1,166	85.2
North Carolina	1,327	1,361	1,361	1,367	1,354	1,367	**1,401**	1,381	1,255	*1,252*	1,272	1,278	1,275	89.4
Ohio	2,213	*1,893*	1,998	2,063	2,167	2,212	2,273	2,302	2,255	2,334	2,318	2,345	**2,396**	79.0
Pennsylvania	1,564	*1,470*	1,511	1,540	1,566	1,568	**1,605**	1,598	1,601	1,583	1,579	1,564	1,583	91.6
Tennessee	1,665	1,603	1,623	1,613	1,646	*1,593*	1,609	1,671	1,747	1,735	**1,796**	1,664	1,680	88.7
Wisconsin	1,498	**1,586**	1,500	1,496	1,439	*1,409*	1,412	1,435	1,518	1,528	1,564	1,576	1,513	88.8

TABLE 6.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States	1919	24,682	382	117	2,120	5,769	2,571	8,476	5,238	9
	1914	52,391	(2)	(2)	3,209	5,360	9,780	20,986	12,958	98
	1909	69,928	(2)	(2)	3,201	4,875	11,659	21,954	27,771	465
Illinois	1919	2,692	13	.....	123	1,656	115	524	261	.....
	1914	4,861	(2)	(2)	434	210	922	2,487	778	.....
Indiana	1919	2,216	.....	.....	182	313	236	1,060	395	.....
	1914	7,306	(2)	(2)	300	492	399	5,144	960	11
Iowa	1919	493	.....	.....	21	7	14	181	270	.....
	1914	994	(2)	(2)	123	142	256	124	349	.....
Kentucky	1919	1,977	.....	5	3	809	245	667	245	3
	1914	1,897	(2)	(2)	269	235	418	282	693	.....
Massachusetts	1919	491	25	9	278	150	27	2	.....	.....
	1914	1,348	(2)	(2)	31	598	617	94	8	.....
Michigan	1919	367	.....	.....	3	60	112	141	51	.....
	1914	1,417	(2)	(2)	66	29	196	526	598	2
Missouri	1919	1,155	103	2	66	210	63	382	329	.....
	1914	2,560	(2)	(2)	96	501	363	921	679	.....
New York	1919	1,169	98	8	269	183	138	343	130	.....
	1914	3,911	(2)	(2)	167	1,049	1,039	903	751	2
North Carolina	1919	1,327	4	.....	43	7	1	445	825	2
	1914	1,462	(2)	(2)	8	4	50	410	989	1
Ohio	1919	2,213	4	.....	67	594	135	1,185	228	.....
	1914	5,997	(2)	(2)	828	589	1,115	2,013	1,452	.....
Pennsylvania	1919	1,564	30	7	177	530	196	504	117	3
	1914	6,370	(2)	(2)	119	532	974	3,653	1,080	12
Tennessee	1919	1,665	12	.....	19	175	344	324	791	.....
	1914	1,371	(2)	(2)	85	30	248	387	616	5
Wisconsin	1919	1,498	8	.....	15	68	50	1,139	218	.....
	1914	2,638	(2)	(2)	16	78	89	1,921	534	.....

[1] Includes 48 and under for 1914 and 1909.

[2] Corresponding figures not available.

TABLE 7.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States 1919	2,544	24,682	485	1,461	3,011	370	3,833	112	3,652	73	5,122	33	4,808	7	2,457	3	1,799	.....	.....
1914	5,057	52,391	509	3,006	7,244	1,087	11,291	271	8,625	113	7,911	55	8,145	11	3,729	3	1,648	2	3,798
Illinois	107	2,692	22	57	112	11	112	5	187	3	227	6	744	2	621	1	689	.....	.....
Indiana	100	2,216	10	48	100	19	209	13	403	5	335	4	631	.....	.....	1	538	.....	.....
Iowa	68	493	20	34	65	8	76	4	144	1	89	1	119	.....	.....	.....	.....	.....	.....
Kentucky	71	1,977	8	39	81	10	96	5	147	2	134	6	947	.....	.....	1	572	.....	.....
Massachusetts	50	491	4	23	55	17	195	4	126	2	115	.....	.....	.....	.....	.....	.....	.....	.....
Michigan	46	367	7	28	65	6	48	2	79	3	175	.....	.....	.....	.....	.....	.....	.....	.....
Missouri	122	1,155	24	66	146	21	197	4	118	5	403	2	291	.....	.....	.....	.....	.....	.....
New York	274	1,169	53	187	361	24	223	6	202	2	121	2	262	.....	.....	.....	.....	.....	.....
North Carolina	109	1,327	12	68	179	15	189	8	254	4	314	1	130	1	261	.....	.....	.....	.....
Ohio	152	2,213	23	70	173	33	328	15	474	8	535	2	305	1	398	.....	.....	.....	.....
Pennsylvania	356	1,564	89	218	448	35	348	5	171	9	597	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee	66	1,665	4	24	58	19	215	11	368	6	447	1	140	1	437	.....	.....	.....	.....
Wisconsin	124	1,498	37	64	108	13	131	4	120	3	186	1	213	2	740	.....	.....	.....	.....

TABLE 8.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes	2,544	5,057	5,492	24,682	52,391	69,928	$118,228,541	$131,546,997	$159,892,547	$55,131,412	$65,828,202	$77,941,259
Less than $5,000	1,021	2,255	2,114	619	2,842	2,954	2,671,195	5,713,772	5,458,031	1,779,553	3,869,385	3,530,630
$5,000 to $20,000	954	1,879	2,222	2,801	9,638	12,708	9,405,712	18,376,368	22,138,144	5,903,983	11,867,599	13,930,594
$20,000 to $100,000	366	676	845	4,554	12,933	17,187	15,267,416	28,580,230	35,281,090	8,373,536	15,003,673	18,420,065
$100,000 to $500,000	154	220	298	7,530	19,480	27,915	34,468,683	42,841,876	73,089,147	14,776,880	24,060,845	32,662,798
$500,000 to $1,000,000	33	17		3,766			20,874,348	12,567,312		8,827,979		
$1,000,000 and over	16	10	13	5,412	7,498	9,164	35,541,187	23,467,439	23,926,135	15,469,481	11,026,700	9,397,172
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	40.1	44.6	38.5	2.5	5.4	4.2	2.3	4.3	3.4	3.2	5.9	4.5
$5,000 to $20,000	37.5	37.2	40.5	11.3	18.4	18.2	8.0	14.0	13.8	10.7	18.0	17.9
$20,000 to $100,000	14.4	13.4	15.4	18.5	24.7	24.6	12.9	21.7	22.1	15.2	22.8	23.6
$100,000 to $500,000	6.1	4.4	5.4	30.5	37.2	39.9	29.2	32.6	45.7	26.8	36.5	41.9
$500,000 to $1,000,000	1.3	0.3		15.3			17.5	9.6		16.0		
$1,000,000 and over	0.6	0.2	0.2	21.9	14.3	13.1	30.1	17.8	15.0	28.1	16.8	12.1

TABLE 9.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914.

STATE.	Census year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.						VALUE OF PRODUCTS.					
					Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.	
		Individuals.	Corporations	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.
United States	1919	1,633	360	551	24,682	4,311	17,764	2,607	17.5	72.0	10.6	$118,228,541	$15,466,336	$91,934,062	$10,828,143	13.1	77.8	9.2
	1914	3,191	748	1,118	52,391	11,886	33,473	7,032	22.7	63.9	13.4	131,546,997	23,676,952	92,100,236	15,769,809	18.0	70.0	12.0
	1909	3,322	884	1,286	69,928	15,476	44,628	9,824	22.1	63.8	14.0	159,892,547	29,460,382	109,348,007	21,084,158	18.4	68.4	13.2
Illinois	1919	66	19	22	2,692	142	2,441	109	5.3	90.7	4.0	14,863,433	523,223	13,868,295	471,915	3.5	93.3	3.2
	1914	173	55	68	4,861	491	4,023	347	10.1	82.8	7.1	15,192,466	1,074,655	13,302,150	815,661	7.1	87.6	5.4
Indiana	1919	54	33	13	2,216	141	2,004	71	6.4	90.4	3.2	12,785,145	384,623	11,968,172	432,350	3.0	93.6	3.4
	1914	94	64	35	7,306	401	6,657	248	5.5	91.1	3.4	21,568,651	714,956	20,274,995	578,700	3.3	94.0	2.7
Iowa	1919	38	10	20	493	61	261	171	12.4	52.9	34.7	2,155,382	228,477	1,004,655	922,250	10.6	46.6	42.8
	1914	43	20	30	994	146	552	296	14.7	55.5	29.8	3,436,716	300,938	1,968,844	1,166,934	8.8	57.3	34.0
Kentucky	1919	36	18	17	1,977	101	1,803	73	5.1	91.2	3.7	10,509,775	349,637	9,989,932	170,206	3.3	95.1	1.6
	1914	71	33	26	1,897	274	1,523	100	14.4	80.3	5.3	4,647,467	484,689	3,930,932	231,846	10.4	84.6	5.0
Massachusetts	1919	28	8	14	491	136	170	185	27.7	34.6	37.7	1,672,091	436,376	603,895	631,820	26.1	36.1	37.8
	1914	129	13	33	1,348	633	280	435	47.0	20.8	32.3	2,821,874	1,326,753	570,307	924,814	47.0	20.2	32.8
Michigan	1919	27	8	11	367	56	272	39	15.3	74.1	10.6	1,522,891	183,823	1,186,631	152,437	12.1	77.9	10.0
	1914	111	24	42	1,417	329	853	235	23.2	60.2	16.6	3,774,827	742,965	2,543,444	488,418	19.7	67.4	12.9
Missouri	1919	73	19	30	1,155	210	845	100	18.2	73.2	8.7	5,413,110	678,729	4,373,692	360,689	12.5	80.8	6.7
	1914	120	50	53	2,560	383	2,029	148	15.0	79.3	5.8	6,850,955	779,822	5,678,839	392,294	11.4	82.9	5.7
New York	1919	190	18	66	1,169	412	603	154	35.2	51.6	13.2	5,095,290	1,732,757	2,620,268	742,265	34.0	51.4	14.6
	1914	431	53	120	3,911	1,700	1,509	702	43.5	38.6	17.9	8,759,119	3,515,157	3,805,221	1,438,741	40.1	43.4	16.4
North Carolina	1919	63	24	22	1,327	272	840	215	20.5	63.3	16.2	6,391,590	1,003,545	4,389,011	999,034	15.7	68.7	15.6
	1914	71	29	37	1,462	407	771	284	27.8	52.7	19.4	3,133,082	596,542	1,946,969	589,571	19.0	62.1	18.8
Ohio	1919	74	43	35	2,213	481	1,600	132	21.7	72.3	6.0	10,945,610	1,887,073	8,491,216	567,321	17.2	77.6	5.2
	1914	146	105	90	5,997	817	4,516	664	13.6	75.3	11.1	16,192,449	1,739,475	12,454,694	1,998,280	10.7	76.9	12.3
Pennsylvania	1919	275	21	60	1,564	582	677	305	37.2	43.3	19.5	5,533,837	2,042,323	2,409,486	1,082,028	36.9	43.5	19.6
	1914	496	45	146	6,370	2,011	3,235	1,124	31.6	50.8	17.6	12,261,637	3,663,959	6,468,984	2,128,694	29.9	52.8	17.4
Tennessee	1919	24	23	19	1,665	95	1,409	161	5.7	84.6	9.7	6,690,647	258,202	5,888,419	544,026	3.9	88.0	8.1
	1914	45	25	38	1,371	167	906	298	12.2	66.1	21.7	2,677,381	267,059	1,932,603	477,719	10.0	72.2	17.8
Wisconsin	1919	77	14	33	1,498	138	1,282	78	9.2	85.6	5.2	9,455,268	524,309	8,649,515	281,444	5.5	91.5	3.0
	1914	106	25	54	2,638	302	2,120	216	11.4	80.4	8.2	7,544,321	639,369	6,350,783	554,169	8.5	84.2	7.3

TABLE 10.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	5,390	9,159	6,501	64,666	112,549	126,032	100.0	100.0	100.0
Owned	967	1,985	2,647	43,989	79,782	100,715	68.0	70.9	79.9
Steam[1]	358	782	1,217	37,786	66,093	82,928	58.4	58.7	65.8
Engines	350	(2)	(2)	35,482	(2)	(2)	54.9	.....	.....
Turbines	8	(2)	(2)	2,304	(2)	(2)	3.6	.....	.....
Internal-combustion engines	571	1,109	1,294	4,762	10,557	13,120	7.4	9.4	10.4
Water wheels, turbines, and motors	38	94	136	1,441	3,132	4,667	2.2	2.8	3.7
Rented	4,423	7,174	3,854	20,677	32,767	25,317	32.0	29.1	20.1
Electric	4,423	7,174	3,854	19,999	32,654	24,969	30.9	29.0	19.8
Other	.....	.....	.....	678	113	348	1.0	0.1	0.3
Electric	5,325	8,238	4,805	32,751	46,384	39,424	100.0	100.0	100.0
Rented	4,423	7,174	3,854	19,999	32,654	24,969	61.1	70.4	63.3
Generated by establishments reporting	902	1,064	951	12,752	13,730	14,455	38.9	29.6	36.7

[1] Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.

[2] Not reported separately.

TABLE 11.—FUEL CONSUMED, BY STATES: 1919 AND 1914.

STATE.	Census year.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
		Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States	1919	8,678	180,258	8,626	32,165	11,720	145,747
	1914	47,516	379,432	12,269	64,567	(1)	234,191
Illinois	1919	204	37,969	719	7,636	1,148	1,786
	1914	1,207	47,874	1,592	8,856	(1)	7,346
Indiana	1919	56	22,788	2,090	12,900	100	5,052
	1914	169	82,752	2,966	22,511	(1)	8,313
Iowa	1919	50	6,804	29	204	116	.....
	1914	39	10,760	118	211	(1)	997
Kentucky	1919	.....	21,196	272	2,797	381	1,070
	1914	13	30,525	609	144	(1)	1,840
Massachusetts	1919	732	1,638	28	3	66	1,551
	1914	867	5,240	71	141	(1)	2,999
Michigan	1919	74	2,385	.....	1	3	300
	1914	133	11,006	183	142	(1)	480
Missouri	1919	163	4,811	126	1	188	1,939
	1914	675	7,504	163	379	(1)	4,129
New York	1919	1,421	6,928	1,068	1,564	321	3,661
	1914	3,694	21,137	137	1,854	(1)	14,228
North Carolina	1919	169	2,623	110	209	609	.....
	1914	95	3,320	438	330	(1)	10
Ohio	1919	277	16,115	393	2,658	496	42,341
	1914	306	57,563	1,238	11,521	(1)	62,467
Pennsylvania	1919	1,873	7,280	288	479	454	8,402
	1914	34,768	29,641	1,431	9,066	(1)	100,508
Tennessee	1919	3	4,513	22	11	50	160
	1914	211	6,792	540	156	(1)	544
Wisconsin	1919	177	22,225	2,149	541	6,202	711
	1914	154	23,422	1,656	1,269	(1)	1,436
All other states	1919	3,479	22,983	1,332	4,061	1,586	78,771
	1914	5,185	41,896	1,127	7,987	(1)	28,894

[1] Included in figures for fuel oils.

SPECIAL STATISTICS.

Detailed statistics of number and value.—Table 12 shows statistics for 1919, 1914, and 1909, regarding the number and value of vehicles and value of all other products and receipts from repairs, reported by establishments engaged primarily in the manufacture of carriages and wagons, parts, and repairs, together with similar statistics for establishments engaged primarily in other industries which incidentally reported the manufacture of carriages and wagons or parts and materials.

TABLE 12.—DETAILED STATISTICS OF NUMBER AND VALUE: 1919, 1914, AND 1909.

KIND.	PRODUCTS.					
	Number.			Value.		
	1919	1914	1909	1919	1914	1909
Establishments reporting	2,666	5,286	5,613	.....	.....	.....
All products	.....	.....	.....	$132,149,189	$136,039,612	$164,420,558
All vehicles	708,107	1,177,415	1,584,571	66,468,654	72,283,698	94,037,900
Carriages	14,851	550,401	843,319	1,665,040	34,193,368	48,835,053
Buggies	230,015			21,017,131		
Wagons	426,502	572,409	629,797	42,412,833	36,533,152	42,026,198
Public conveyances	277	1,284	2,347	105,452	325,164	944,882
Sleighs and sleds	36,462	53,321	109,108	1,268,198	1,232,014	2,231,767
All other products, parts, repairs, etc	.....	.....	.....	62,865,569	63,755,914	70,382,658
Made by establishments in the industry.						
Establishments reporting	2,544	5,057	5,492	.....	.....	.....
All products	.....	.....	.....	118,228,541	131,546,997	159,892,547
All vehicles	608,833	1,124,903	1,519,238	56,174,332	69,324,182	90,694,145
Carriages	13,704	538,071	828,411	1,562,023	33,329,879	47,756,118
Buggies	202,105			18,114,423		
Wagons [1]	356,837	533,601	587,685	35,183,807	34,506,942	39,932,910
Public conveyances	194	1,221	2,243	76,957	279,656	939,267
Sleighs and sleds	35,993	52,010	100,899	1,237,122	1,207,705	2,065,850
All other products, parts, repairs, etc	.....	.....	.....	62,054,209	62,222,815	69,198,402
Made by establishments in other industries.						
Establishments reporting	122	229	121	.....	.....	.....
All products	.....	.....	.....	13,920,648	4,492,615	4,528,011
All vehicles	99,274	52,512	65,333	10,294,322	2,959,516	3,343,755
Carriages	1,147	12,330	14,908	103,017	863,489	1,078,935
Buggies	27,910			2,902,708		
Wagons	69,665	38,808	42,112	7,229,026	2,026,210	2,093,288
Public conveyances	83	63	104	28,495	45,508	5,615
Sleighs and sleds	469	1,311	8,209	31,076	24,309	165,917
All other parts, materials, and repair work	.....	.....	.....	3,626,326	1,533,099	1,184,256

[1] Includes 11,593 pushcarts and hand trucks valued at $295,561 in 1919.

In addition to the $118,228,541 reported as the value of products by the 2,544 establishments engaged primarily in the manufacture of carriages and wagons, parts and supplies, in 1919, 122 establishments engaged primarily in other branches of industry reported similar products to the value of $13,920,648. Thus the total value of these products for 1919 amounted to $132,149,189, as compared with $136,039,612 for 1914, a decrease of 2.9 per cent, and from 1909 to 1919 there was a decrease in the value of products of $32,271,369, or 19.6 per cent. There were 708,107 vehicles of all kinds manufactured during 1919, including those made as subsidiary products of establishments engaged primarily in other industries, as compared to 1,177,415 in 1914, a decrease of 39.8 per cent, and a decrease of 876,464 vehicles, or 55.3 per cent in the number manufactured in 1919 as compared with the number manufactured in 1909.

The 122 establishments which manufactured carriages, wagons, and materials as a subsidiary product in 1919 were engaged chiefly in the production of automobile bodies and parts and agricultural implements. The increase in the value of products for such establishments is due to the fact that a number of large companies, as the demand decreased for products of this industry, turned to other industries, carriages and wagons becoming a subsidiary product. Many factories discontinued manufacturing such products even as a subsidiary product.

Detailed statistics of kind, number, and value.—Table 13 presents for 1919, 1914, 1909, and 1904 detailed statistics of all products manufactured by establishments engaged in the industry. The product of factories making parts to be used in the manufacture of carriages and wagons is included in "All other products," of the table. This combination gives a complete product for the industry, although it involves a certain amount of duplication, as a part of the product of establishments manufacturing parts and supplies is used in the factories making carriages and wagons. The amount received for repair work for all establishments is included in the value given for "All other products."

The total value of all products for the industry in 1919 was $118,228,541. Of this amount, the value of completed vehicles was $56,174,332, or 47.5 per cent. Of the total number of completed vehicles produced in 1919, wagons represented 58.6 per cent; carriages, buggies, and light pleasure vehicles, 35.4 per cent; and sleighs and sleds, 5.9 per cent.

Of the total value of completed vehicles, wagons represented 62.7 per cent; carriages, buggies, and light pleasure vehicles, 35 per cent, and sleighs and sleds, 2.2 per cent.

The manufacture of complete vehicles of all kinds by establishments classified in this industry decreased 11.2 per cent in number and 6.5 per cent in value from 1904 to 1909, and 26 per cent in number and 23.6

per cent in value from 1909 to 1914, while for the period of 1914 to 1919 the decrease was 45.9 per cent in number and 19 per cent in value.

TABLE 13.—DETAILED STATISTICS OF NUMBER AND VALUE: 1919, 1914, 1909, AND 1904.

CLASS.	1919	1914	1909	1904
Products, total value	$118,228,541	$131,546,997	$159,892,547	$155,868,849
Complete vehicles of all classes:				
Number	608,833	1,124,903	1,519,238	1,711,330
Value	$56,174,332	$69,324,182	$90,694,145	$96,955,018
Carriages (family and pleasure):				
Number	13,704			
Value	$1,562,023	538,071	828,411	937,409
Buggies and light pleasure vehicles:				
Number	202,105	$33,329,879	$47,756,118	$55,750,276
Value	$18,114,423			
Wagons:				
Number	356,837	533,601	587,685	643,755
Value	$35,183,807	$34,506,942	$39,932,910	$37,195,230
Business—				
Number	51,018	139,621	154,631	133,422
Value	$6,919,695	$13,022,860	$16,440,816	(1)
Light and package commodity, number	18,132	81,393	107,190	71,733
Heavy and bulky commodity, number	19,044	31,458	32,780	31,956
Pushcarts, number	11,593	14,937	7,330	6,089
Hearses, number	301	402	807	642
Street sprinklers, number	38	197	1,053	157
Other business wagons, number	1,910	11,234	5,471	22,845
Farm (including carts and trucks)—				
Number	303,231	384,663	429,952	505,025
Value	$27,567,838	$19,708,423	$22,615,875	(1)
Government, municipal, etc.—				
Number	2,588	9,317	3,102	5,308
Value	$696,274	$1,775,659	$876,210	(1)
Ambulances, number	1,568	346	598	245
Mail and mail-carriers' wagons, and carts, number	1,007	5,549	1,912	4,703
Patrol (fire and police), hose wagons, and prison vans, number	13	3,422	592	360
Public conveyances:				
Number	194	1,221	2,243	2,711
Value	$76,957	$279,656	$939,267	$1,314,952
Sleighs and sleds:				
Number	35,993	52,010	100,899	127,455
Value	$1,237,122	$1,207,705	$2,065,850	$2,694,560
All other products, including parts and amount received for repair work, value [2]	$62,054,209	$62,222,815	$69,198,402	$58,913,831

[1] Not reported separately.
[2] Includes 1,659 automobiles, valued at $1,795,159 in 1919; 1,123, valued at $574,925 in 1914; 544 valued at $569,119 in 1909; and 199 valued at $235,675 in 1904, manufactured in establishments devoted primarily to the manufacture of carriages and wagons.

Comparative summary, by class of vehicles, by states.—Table 14 shows, by states, the number of the several general classes of vehicles manufactured by establishments engaged primarily in the manufacture of carriages and wagons during 1919, 1914, 1909, and 1904, and the value of those manufactured in 1919. In 1914, 38 states reported the manufacture of 538,071 carriages, buggies, and light pleasure vehicles, as compared with 25 states reporting the manufacture of 215,809 in 1919, a decrease of 59.9 per cent in number of vehicles. In 1919 the states reporting the manufacture of wagons were 41, producing 345,244 vehicles, while in 1914, 43 states reported the production of wagons to the number of 533,601, a decrease of 35.3 per cent.

TABLE 14.—COMPARATIVE SUMMARY, BY CLASS OF VEHICLE, BY STATES: 1919, 1914, 1909 AND 1904.

CLASS AND STATE.	NUMBER.				Value, 1919.
	1919	1914	1909	1904	
CARRIAGES, BUGGIES, AND LIGHT PLEASURE VEHICLES.					
United States	215,809	538,071	828,411	937,409	$19,676,446
Georgia	14,445	20,071	21,974	20,919	1,585,921
Illinois	6,011	81,477	101,875	56,075	484,916
Indiana	71,510	143,042	177,194	178,962	5,670,400
Iowa	2,187	13,844	29,809	16,498	340,135
Kentucky	38,504	31,925	24,259	27,195	3,618,041
Maine	123	1,380	2,551	2,802	11,905
Maryland	154	827	1,708	2,945	16,740
Michigan	3,706	25,265	91,558	174,889	341,606
Missouri	18,260	53,552	97,444	74,650	1,452,995
New York	597	15,220	25,474	42,249	61,118
North Carolina	24,556	29,098	31,813	25,157	2,600,846
Ohio	17,644	71,972	135,877	199,428	1,592,768
Pennsylvania	751	15,551	23,395	33,467	74,962
Tennessee	4,366	3,067	2,470	5,374	629,402
Virginia	12,117	15,144	13,720	19,366	1,120,286
Wisconsin	142	5,314	24,726	23,466	17,770
All other states	736	11,313	22,564	33,967	56,585
WAGONS (BUSINESS, FARM, GOVERNMENT, ETC.).					
United States	[1] 345,244	533,601	587,685	643,755	[1] 34,888,246
Alabama	5,518	3,537	4,588	12,512	584,918
Arkansas	12,686	5,726	7,415	1,625	1,091,798
California	638	1,868	3,347	3,045	44,147
Connecticut	83	1,139	1,786	1,944	10,545
Florida	373	843	1,578	2,652	25,366
Georgia	6,295	7,805	15,708	18,848	667,697
Illinois	93,499	118,202	85,097	72,033	8,798,285
Indiana	21,733	75,530	87,844	92,893	1,528,051
Iowa	8,024	16,865	26,495	22,815	609,241
Kentucky	27,044	23,434	25,911	49,266	2,720,925
Louisiana	804	1,170	1,269	1,246	109,571
Maine	676	2,226	2,259	1,764	139,557
Maryland	735	2,861	2,719	1,849	57,198
Massachusetts	221	3,082	3,360	3,278	113,246
Michigan	1,172	11,454	28,720	52,273	107,462
Minnesota	12,087	12,315	17,231	15,059	1,311,053
Mississippi	3,566	1,115	1,683	2,012	662,551
Missouri	17,293	21,456	20,140	25,281	1,896,403
New Hampshire	26	769	1,049	1,188	3,869
New Jersey	469	3,687	4,337	5,647	209,037
New York	5,097	19,656	21,937	19,879	1,026,066
North Carolina	32,272	20,030	26,248	23,553	2,417,792
Ohio	2,381	25,417	28,882	40,905	526,176
Pennsylvania	7,126	32,983	33,634	35,395	1,073,937
Tennessee	13,093	8,126	12,499	20,241	1,299,736
Texas	360	1,681	1,243	718	122,818
Virginia	20,022	20,575	18,835	19,195	2,176,656
West Virginia	2,124	3,819	2,906	5,117	319,255
Wisconsin	49,267	81,238	92,011	83,916	5,166,408
All other states	560	4,992	6,954	7,606	68,482
PUBLIC CONVEYANCES.					
United States	194	1,221	2,243	2,711	76,957
SLEIGHS AND SLEDS.					
United States	35,993	52,010	100,899	127,455	1,237,122
Iowa	2,654	1,330	8,094	(2)	75,864
Maine	800	1,549	2,169	2,802	41,447
Michigan	2,791	12,205	32,751	53,180	141,346
Minnesota	11,654	10,270	10,954	10,003	334,399
New York	628	6,801	10,823	19,433	28,904
Ohio	657	3,007	7,589	8,479	16,502
Pennsylvania	178	2,404	3,210	5,551	11,938
Wisconsin	16,236	11,221	17,720	15,365	557,681
All other states	395	2,323	7,589	12,642	20,041

[1] Excludes 11,593 pushcarts and hand trucks valued at $295,561.
[2] Included in "All other states."

GENERAL TABLES.

Table 15 gives for 1919, 1914, and 1909, by states, number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the combined industry.

Table 16 presents, for 1919, statistics in detail for the industry as a whole, for "Carriages and wagons, including repairs," and for "Carriage and wagon materials," for each state that can be shown separately without the possibility of disclosing the operations of individual establishments.

TABLE 15.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	2,544	24,682	64,666	$25,060	$63,097	$118,229
	1914	5,057	52,391	112,549	32,557	65,719	131,547
	1909	5,492	69,928	126,032	37,595	81,951	159,893
Alabama	1919	42	307	912	296	516	1,073
	1914	63	385	1,051	233	304	707
	1909	35	424	991	194	303	684
Connecticut	1919	56	168	483	182	325	677
	1914	84	452	945	311	411	996
	1909	92	578	957	372	383	1,077
Delaware	1919	5	15	29	22	23	72
	1914	28	118	181	67	68	197
	1909	25	163	204	81	124	290
Florida	1919	13	57	98	70	69	166
	1914	46	169	203	115	95	305
	1909	39	230	354	136	210	453
Illinois	1919	107	2,692	7,621	3,238	8,134	14,863
	1914	296	4,861	12,285	3,405	8,368	15,192
	1909	325	5,852	9,684	3,588	9,479	16,831
Indiana	1919	100	2,216	6,392	2,063	8,469	12,785
	1914	193	7,306	15,257	4,386	10,725	21,569
	1909	221	8,867	13,790	4,355	12,458	21,655
Iowa	1919	68	493	1,689	432	1,008	2,155
	1914	93	994	2,120	636	1,903	3,437
	1909	119	1,441	2,387	828	2,748	4,786
Kentucky	1919	71	1,977	5,599	1,862	5,869	10,510
	1914	130	1,897	5,748	999	2,554	4,647
	1909	161	2,777	6,617	1,164	2,713	5,141
Louisiana	1919	24	166	350	146	220	491
	1914	31	333	849	178	238	509
	1909	40	358	568	196	206	529
Massachusetts	1919	50	491	901	550	677	1,672
	1914	175	1,348	1,953	781	1,140	2,822
	1909	177	1,539	2,038	986	1,282	3,185
Michigan	1919	46	367	1,134	389	714	1,523
	1914	177	1,417	2,739	982	1,928	3,775
	1909	212	4,034	6,362	2,240	5,262	10,159
Mississippi	1919	19	276	706	236	457	1,105
	1914	23	210	1,074	101	223	479
	1909	41	365	1,350	154	274	642
Missouri	1919	122	1,155	2,516	$1,130	$3,027	$5,413
	1914	223	2,560	4,528	1,636	3,832	6,851
	1909	243	3,302	5,858	1,781	4,860	8,469
Montana	1919	4	7	27	10	34	65
	1914	5	20	26	23	17	56
	1909	4	28	19	32	29	79
New York	1919	274	1,169	3,436	1,240	2,302	5,095
	1914	604	3,911	8,530	2,711	3,577	8,759
	1909	610	6,116	10,029	3,740	5,809	13,293
North Carolina	1919	109	1,327	2,808	1,178	3,562	6,392
	1914	137	1,462	2,176	644	1,777	3,133
	1909	138	1,629	2,608	603	1,894	3,283
Ohio	1919	152	2,213	5,361	2,255	5,654	10,946
	1914	341	5,997	13,381	3,839	8,561	16,192
	1909	407	8,815	14,771	4,647	11,414	21,949
Pennsylvania	1919	356	1,564	3,281	1,727	2,342	5,534
	1914	687	6,370	10,906	3,780	5,442	12,262
	1909	655	7,498	11,544	3,861	5,707	12,748
Rhode Island	1919	28	74	230	78	67	208
	1914	47	271	487	180	181	509
	1909	40	238	387	152	163	422
South Carolina	1919	19	63	112	74	77	183
	1914	18	209	313	110	273	500
	1909	23	272	272	104	244	464
Tennessee	1919	66	1,665	5,634	1,402	3,770	6,691
	1914	108	1,371	4,221	674	1,297	2,677
	1909	129	1,706	4,537	693	1,439	3,040
Vermont	1919	23	35	346	29	49	130
	1914	31	60	349	36	44	118
	1909	38	94	429	50	58	158
Wisconsin	1919	124	1,498	3,975	1,786	4,507	9,455
	1914	185	2,638	5,502	1,827	4,259	7,544
	1909	286	3,437	6,426	1,930	5,163	8,899
All other states	1919	666	4,687	11,026	4,665	11,225	21,025
	1914	1,332	8,032	17,725	4,903	8,502	18,311
	1909	1,432	10,165	23,850	5,708	9,729	21,657

TABLE 16.—DETAILED STATEMENT,

	STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.
	CARRIAGES AND WAGONS AND MATERIALS.															
1	United States	2,544	30,697	2,867	1,409	1,089	650	24,682	Oc 25,766	Ap 23,713	26,112	25,506	520	77	9	$96,924,074
2	Alabama	42	387	47	18	12	3	307	Ap 323	Ja 281	320	319	.....	1	.....	1,162,955
3	Connecticut	56	241	52	13	6	2	168	Ja [3] 174	No 161	166	166	.....	.....	.....	484,814
4	Delaware	5	24	5	4	.....	.....	15	([4]) 15	([4]) 15	16	16	.....	.....	.....	101,502
5	Florida	13	78	17	3	.....	1	57	De 68	Ja 49	75	74	1	.....	.....	158,178
6	Illinois	107	3,169	112	142	143	80	2,692	Oc 3,021	Je 2,345	2,847	2,830	11	6	.....	15,920,767
7	Indiana	100	2,659	85	102	130	126	2,216	De 2,315	Ap 2,048	2,348	2,215	115	18	.....	9,087,122
8	Iowa	68	702	82	40	65	22	493	De 570	Ja 419	565	558	7	.....	.....	2,589,664
9	Kentucky	71	2,389	73	138	128	73	1,977	De 2,145	Ap 1,817	2,170	2,124	45	1	.....	8,728,690
10	Louisiana	24	216	30	11	6	3	166	No 183	Ja 154	176	175	1	.....	.....	406,997
11	Massachusetts	50	603	62	25	13	12	491	My 524	Ja 413	498	486	3	9	.....	1,064,621
12	Michigan	46	452	51	18	5	11	367	Ja 402	Jy 327	371	367	4	.....	.....	1,388,948
13	Mississippi	19	336	20	19	19	2	276	No 318	Fe 231	290	290	.....	.....	.....	701,050
14	Missouri	122	1,422	141	62	48	16	1,155	No 1,220	Fe 1,113	1,196	1,186	8	2	.....	4,198,002
15	Montana	4	10	3	.....	.....	.....	7	Se 9	De 5	5	4	.....	1	.....	68,865
16	New Mexico	4	12	5	.....	1	.....	6	([4]) 6	([4]) 6	6	6	.....	.....	.....	14,925
17	New York	274	1,666	336	63	59	39	1,169	Au 1,255	Ja 1,069	1,250	1,207	40	3	.....	5,806,304
18	North Carolina	109	1,593	111	103	39	13	1,327	Je 1,401	Se 1,252	1,435	1,422	10	3	.....	5,158,876
19	Ohio	152	2,707	147	142	114	91	2,213	De 2,396	Ja 1,893	2,390	2,221	168	1	.....	7,451,358
20	Oregon	4	22	5	.....	.....	.....	17	Jy 22	My [3] 15	19	18	.....	1	.....	22,832
21	Pennsylvania	356	2,106	409	83	29	21	1,564	Je 1,605	Ja 1,470	1,564	1,546	5	13	.....	4,956,283
22	Rhode Island	28	113	29	6	.....	4	74	Mh 85	De 62	62	62	.....	.....	.....	165,748
23	South Carolina	19	86	22	1	.....	.....	63	Ja 68	Oc [3] 59	67	67	.....	.....	.....	132,378
24	Tennessee	66	1,881	74	87	37	18	1,665	Oc 1,796	My 1,593	1,740	1,719	21	.....	.....	4,003,279
25	Utah	3	18	2	.....	.....	.....	16	De 20	Ja 13	20	20	.....	.....	.....	65,396
26	Vermont	23	67	31	1	.....	.....	35	Se 38	Mh 31	39	39	.....	.....	.....	141,630
27	Wisconsin	124	1,835	152	85	76	24	1,498	Ja 1,586	My 1,409	1,555	1,525	14	7	9	7,487,837
28	All other states [5]	655	5,903	764	243	159	89	4,648	.....	.....	4,922	4,844	67	11	.....	15,455,053
	CARRIAGES AND WAGONS, INCLUDING REPAIRS.															
1	United States	2,286	23,268	2,655	1,035	894	511	18,173	No 18,707	Ap 17,667	18,955	18,621	273	52	9	$78,952,868
2	Alabama	38	353	44	14	11	3	281	My 296	Ja 262	280	279	.....	1	.....	1,122,623
3	California	29	163	37	3	7	4	112	De 121	Ja 96	121	120	.....	1	.....	417,508
4	Colorado	6	40	5	2	.....	.....	33	De 36	Ap [3] 31	36	36	.....	.....	.....	53,585
5	Connecticut	49	207	46	10	5	1	145	Au 153	Ja 140	144	144	.....	.....	.....	394,904
6	Delaware	5	24	5	4	.....	.....	15	([4]) 15	([4]) 15	16	16	.....	.....	.....	101,502
7	Florida	13	78	17	3	.....	1	57	De 68	Ja 49	75	74	1	.....	.....	158,178
8	Georgia	66	852	69	51	38	11	683	Au 758	Ja 514	713	694	19	.....	.....	1,796,651
9	Illinois	99	2,724	104	122	123	72	2,303	Oc 2,589	Je 1,963	2,453	2,440	10	3	.....	14,486,030
10	Indiana	79	1,777	74	63	107	99	1,434	No 1,479	Ap 1,331	1,508	1,421	77	10	.....	6,473,479
11	Iowa	60	573	78	25	54	17	399	De 457	Fe 348	452	445	7	.....	.....	2,181,674
12	Kansas	10	21	13	.....	.....	.....	8	([4]) 8	([4]) 8	8	8	.....	.....	.....	46,273
13	Kentucky	52	1,794	56	95	121	66	1,456	De 1,537	Ap 1,323	1,560	1,515	44	1	.....	7,229,923
14	Louisiana	21	184	24	11	2	3	144	No 161	Ja 132	154	153	1	.....	.....	365,949
15	Maine	58	211	65	8	3	4	131	Au [3] 137	Ja 124	140	139	1	.....	.....	563,219
16	Maryland	42	206	57	3	3	1	142	No 146	Oc 138	145	145	.....	.....	.....	310,018
17	Massachusetts	43	508	49	22	11	10	416	Mh 455	Ja 347	415	412	1	2	.....	879,341
18	Michigan	39	303	47	12	5	7	232	Ja 266	My 213	211	208	3	.....	.....	914,069
19	Minnesota	67	712	72	36	23	16	565	No 608	Je 521	613	609	4	.....	.....	2,845,567
20	Mississippi	14	235	15	12	19	2	187	No 211	Fe 164	203	203	.....	.....	.....	614,227
21	Missouri	113	1,117	137	44	39	12	885	No 948	Fe 834	913	906	5	2	.....	3,431,037
22	Montana	4	10	3	.....	.....	.....	7	Se 9	De 5	5	4	.....	1	.....	68,865
23	Nebraska	9	20	12	.....	.....	.....	8	Se 9	Ja 7	8	8	.....	.....	.....	30,875
24	New Hampshire	10	95	13	3	2	1	76	Ap 79	De 73	75	75	.....	.....	.....	196,766
25	New Jersey	118	491	143	14	7	5	322	Au 334	Ja 306	329	327	1	1	.....	1,253,300
26	New Mexico	4	12	5	.....	1	.....	6	([4]) 6	([4]) 6	6	6	.....	.....	.....	14,925
27	New York	256	1,371	318	52	52	21	928	Au 972	No 874	960	934	25	1	.....	4,787,460
28	North Carolina	101	1,471	107	93	37	13	1,221	Je 1,297	Au 1,144	1,314	1,301	10	3	.....	4,981,346
29	North Dakota	3	7	4	.....	.....	.....	3	Ju [3] 4	Ja [3] 2	3	3	.....	.....	.....	17,406
30	Ohio	119	1,317	125	84	62	52	994	Mh 1,066	Oc 929	940	918	22	.....	.....	3,818,584
31	Oklahoma	11	35	16	2	.....	1	16	Au [3] 18	De [3] 14	16	16	.....	.....	.....	40,400
32	Oregon	4	22	5	.....	.....	.....	17	Jy 22	My [3] 15	19	18	.....	1	.....	22,832
33	Pennsylvania	337	1,894	393	65	29	19	1,388	Au [3] 1,427	Ja 1,300	1,385	1,368	5	12	.....	4,436,793
34	Rhode Island	25	103	25	6	.....	4	68	Mh 79	De 56	56	56	.....	.....	.....	133,073
35	South Carolina	19	86	22	1	.....	.....	63	Ja 68	Oc [3] 59	67	67	.....	.....	.....	132,378
36	South Dakota	31	74	34	4	.....	1	35	Oc [3] 37	Mh 32	36	36	.....	.....	.....	187,690

[1] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[2] Chiefly electric motors operated by rented (or purchased) current, other power included (chiefly shaft-belt or transmitted power from neighboring power plants).
[3] Same number reported for one or more other months.

BY STATES: 1919.

EXPENSES.										POWER.							
Salaries and wages.				Rent and taxes.		For materials.				Primary horsepower.							Electric horsepower generated in establishments reporting.
											Owned.						
Officials.	Clerks, etc.	Wage earners.	For contract work.	Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Value of products.	Value added by manufacture.	Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
CARRIAGES AND WAGONS AND MATERIALS.																	
$3,708,655	$2,128,227	$25,060,166	$182,039	$613,455	$2,843,793	$61,647,415	$1,449,714	$118,228,541	$55,131,412	64,666	35,482	2,304	4,762	1,441	20,677	12,752	1
33,836	21,515	296,286	.....	8,376	17,203	497,164	18,538	1,072,916	557,214	912	680	.....	69	.....	163	.....	2
27,518	7,092	182,251	1,053	9,861	4,427	312,640	12,843	677,473	351,990	483	115	.....	120	60	188	.....	3
4,282	.....	21,530	.....	794	1,359	21,800	1,026	72,360	49,534	29	.....	.....	4	.....	25	.....	4
4,800	314	70,033	7,379	1,320	1,682	66,737	2,630	165,894	96,527	98	.....	.....	12	.....	86	20	5
391,082	266,725	3,238,033	35,342	42,472	418,635	7,930,386	203,533	14,863,433	6,729,514	7,621	3,160	2,150	56	200	2,055	1,820	6
277,233	197,666	2,063,427	1,539	17,640	264,361	8,346,365	123,011	12,785,145	4,315,769	6,392	3,260	70	116	.....	2,946	1,032	7
87,481	71,927	432,165	1,565	15,806	18,336	967,403	40,689	2,155,382	1,147,290	1,689	749	.....	147	.....	793	14	8
265,058	238,972	1,862,077	1,337	7,018	189,818	5,762,432	106,076	10,509,775	4,641,267	5,599	4,230	.....	151	.....	1,218	2,391	9
14,547	6,539	146,297	.....	4,526	4,339	211,384	8,596	490,531	270,551	350	95	.....	16	.....	239	8	10
68,015	25,816	550,040	116	31,921	15,921	639,825	37,372	1,672,091	994,894	901	302	.....	78	18	503	.....	11
46,404	16,508	389,242	1,515	5,454	32,881	688,183	25,700	1,522,891	809,008	1,134	475	.....	35	27	597	.....	12
58,711	32,771	235,837	13,575	1,438	64,858	447,278	9,790	1,105,211	648,143	706	467	.....	79	.....	160	.....	13
220,100	78,987	1,130,481	9,758	40,707	112,015	2,978,235	48,882	5,413,110	2,385,993	2,516	1,054	.....	218	.....	1,244	416	14
.....	.....	10,312	.....	300	1,309	33,193	837	65,135	31,105	27	.....	.....	3	.....	24	.....	15
.....	336	11,081	.....	1,380	253	9,138	752	30,900	21,010	21	.....	.....	.....	.....	21	.....	16
161,485	106,159	1,239,533	19,306	106,035	173,347	2,207,328	94,957	5,095,290	2,793,005	3,436	933	4	330	334	1,835	275	17
272,684	77,728	1,178,225	23,265	9,681	125,124	3,514,306	47,966	6,391,590	2,829,318	2,808	1,970	20	348	10	460	655	18
405,583	223,703	2,254,790	10,082	62,959	272,326	5,531,939	122,245	10,945,610	5,291,426	5,361	3,023	.....	660	.....	1,678	604	19
.....	.....	24,004	.....	3,106	206	29,304	1,503	77,394	46,587	32	.....	.....	.....	.....	32	.....	20
209,477	68,939	1,727,012	16,789	71,914	47,220	2,245,921	95,759	5,533,837	3,192,157	3,281	1,160	.....	708	49	1,364	.....	21
9,428	2,387	78,231	175	5,280	2,398	61,401	5,482	208,224	141,341	230	24	.....	51	38	117	.....	22
2,080	.....	73,909	.....	2,711	1,817	73,607	2,999	183,253	106,647	112	14	.....	30	.....	68	.....	23
247,000	74,974	1,402,142	1,616	16,341	152,554	3,729,543	40,718	6,690,647	2,920,386	5,634	5,106	45	106	.....	377	1,218	24
.....	.....	19,088	.....	360	548	16,401	936	41,064	23,727	28	.....	.....	.....	.....	28	.....	25
1,800	.....	29,483	.....	796	1,423	46,351	3,094	129,828	80,383	346	.....	.....	52	215	79	12	26
269,843	154,900	1,786,288	17,019	19,491	332,455	4,371,015	136,009	9,455,268	4,948,244	3,975	3,176	15	270	62	452	2,751	27
630,208	454,269	4,608,369	20,608	125,768	586,978	10,908,136	257,771	20,874,289	9,708,382	10,945	5,489	.....	1,103	428	3,925	1,536	28
CARRIAGES AND WAGONS, INCLUDING REPAIRS.																	
$2,773,967	$1,757,371	$19,393,395	$164,591	$539,453	$2,282,711	$47,210,301	$1,152,155	$91,463,225	$43,100,769	40,966	17,919	2,169	4,294	896	15,688	9,868	1
25,855	19,111	276,718	.....	8,216	16,570	452,796	17,786	983,483	512,901	697	480	.....	54	.....	163	.....	2
5,664	13,948	145,789	400	8,762	2,315	205,794	11,542	463,775	246,439	336	.....	.....	.....	1	335	.....	3
3,956	.....	46,130	900	2,340	958	41,700	1,828	108,598	65,070	55	.....	.....	.....	.....	55	.....	4
19,843	6,759	153,972	1,053	8,921	3,477	218,231	9,135	519,933	292,567	356	35	.....	120	60	141	.....	5
4,282	.....	21,530	.....	794	1,359	21,800	1,026	72,360	49,534	29	.....	.....	4	.....	25	.....	6
4,800	314	70,033	7,379	1,320	1,682	66,737	2,630	165,894	96,527	98	.....	.....	12	.....	86	20	7
144,621	119,423	702,060	.....	17,561	62,602	2,052,397	29,655	3,544,259	1,492,207	910	385	.....	74	.....	451	384	8
337,468	234,574	2,859,097	35,342	42,376	353,413	6,923,194	186,069	12,997,031	5,887,768	6,350	2,145	2,150	49	200	1,806	1,820	9
168,886	138,681	1,351,898	1,539	16,402	182,829	6,346,983	49,981	9,268,688	2,871,724	2,809	1,390	.....	104	.....	1,315	32	10
43,104	55,168	332,971	1,565	13,920	14,588	611,497	29,728	1,544,383	903,158	1,251	624	.....	138	.....	489	14	11
.....	.....	11,134	.....	803	739	19,004	1,053	53,783	33,726	33	.....	.....	.....	.....	33	.....	12
209,240	226,003	1,420,146	1,157	6,023	150,137	5,030,569	88,190	8,751,095	3,632,336	3,610	2,635	.....	123	.....	852	2,333	13
14,547	3,143	134,277	.....	4,226	3,948	170,378	8,180	414,407	235,849	282	35	.....	16	.....	231	8	14
13,600	7,540	149,298	1,130	4,636	7,367	571,312	12,390	902,252	318,550	491	45	.....	188	.....	258	.....	15
4,920	3,530	163,118	515	4,774	6,642	171,766	6,783	454,963	276,414	209	.....	.....	36	.....	173	.....	16
58,192	20,440	464,712	116	24,581	12,799	492,374	28,852	1,323,571	802,345	552	65	.....	59	.....	428	.....	17
23,291	11,992	252,379	1,515	5,406	21,945	419,839	15,991	1,016,954	581,124	565	125	.....	25	2	413	.....	18
89,092	71,365	648,005	.....	9,581	76,294	1,450,372	49,318	2,969,738	1,470,048	1,501	970	.....	120	.....	411	915	19
46,411	32,771	172,564	4,508	1,388	63,677	365,964	9,680	933,042	557,398	534	295	.....	79	.....	160	.....	20
175,930	67,669	930,946	9,545	33,423	87,217	2,423,345	40,560	4,445,838	1,981,933	1,528	514	.....	193	.....	821	416	21
.....	.....	10,312	.....	300	1,309	33,193	837	65,135	31,105	27	.....	.....	3	.....	24	.....	22
.....	.....	9,007	.....	360	429	8,795	1,083	34,639	24,761	68	.....	.....	38	.....	30	.....	23
5,700	3,048	60,319	.....	1,470	2,150	54,857	4,712	191,936	132,367	366	135	.....	39	22	170	.....	24
29,415	15,300	406,884	12,963	13,667	14,880	553,784	26,214	1,401,847	821,849	632	44	.....	201	25	362	.....	25
.....	336	11,081	.....	1,380	253	9,138	752	30,900	21,010	21	.....	.....	.....	.....	21	.....	26
113,508	81,860	988,951	17,314	101,150	132,921	1,627,923	76,607	3,877,956	2,173,426	2,475	648	4	313	274	1,236	270	27
249,470	74,650	1,095,570	23,090	8,681	118,315	3,272,456	41,382	5,992,423	2,678,585	2,418	1,635	.....	348	10	425	655	28
.....	.....	5,986	.....	990	87	4,402	461	20,751	15,888	11	.....	.....	8	.....	3	.....	29
243,941	123,844	1,072,636	10,082	47,350	174,984	2,334,197	58,455	5,014,008	2,621,356	1,928	182	.....	465	.....	1,281	11	30
2,400	500	16,748	.....	1,570	506	11,909	1,515	46,584	33,160	68	.....	.....	36	.....	32	.....	31
.....	.....	24,004	.....	3,106	206	29,304	1,503	77,394	46,587	32	.....	.....	.....	.....	32	.....	32
183,077	67,303	1,577,352	16,309	68,952	40,480	1,828,536	82,775	4,830,159	2,918,848	2,704	820	.....	647	37	1,200	.....	33
9,428	2,387	70,693	175	5,280	2,224	54,904	4,843	187,919	128,172	211	24	.....	43	38	106	.....	34
2,080	.....	73,909	.....	2,711	1,817	73,607	2,999	183,253	106,647	112	14	.....	30	.....	68	.....	35
6,900	568	48,672	.....	3,360	3,440	84,664	5,652	214,141	123,825	176	.....	.....	47	.....	129	.....	36

[1] Same number reported throughout the year.
[2] All other states embrace: Arkansas, 26 establishments; California, 32; Colorado, 7; Georgia, 71; Kansas, 12; Maine, 60; Maryland, 43; Minnesota, 70; Nebraska, 10; New Hampshire, 13; New Jersey, 122; North Dakota, 4; Oklahoma, 12; South Dakota, 32; Texas, 18; Virginia, 66; Washington, 14; West Virginia, 39; and Wyoming, 4.

TABLE 16.—DETAILED STATEMENT,

	STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.		Wage earners. Number, 15th day of— Minimum month.		WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male	Under 16. Female	Capital.
	CARRIAGES, AND WAGONS, INCLUDING REPAIRS—Continued.																	
1	Tennessee	47	720	65	33	14	10	598	Au	661	Ja	534	616	611	5	.....	.....	$1,955,713
2	Texas	15	126	19	5	2	2	98	Au [3]	101	Mh [3]	93	99	98	.....	1	.....	204,803
3	Utah	3	18	2	.....	.....	.....	16	De	20	Ja	13	20	20	.....	.....	.....	65,396
4	Vermont	23	67	31	1	.....	.....	35	Se	38	Mh	31	39	39	.....	.....	.....	141,030
5	Virginia	63	943	79	35	32	20	777	De	866	Ap	696	874	856	16	2	.....	2,725,562
6	Washington	13	36	16	.....	.....	.....	20	Mh [3]	21	No [3]	18	20	19	.....	1	.....	73,029
7	West Virginia	36	200	48	7	1	7	137	No	140	Oc	133	139	137	2	.....	.....	449,682
8	Wisconsin	118	1,777	142	82	75	24	1,454	Ja	1,558	My	1,349	1,500	1,470	14	7	9	7,406,366
9	All other states [4]	14	291	14	8	9	2	258	.....	.....	.....	.....	269	267	.....	2	.....	1,421,637
	CARRIAGE AND WAGON MATERIALS.																	
1	United States	258	7,429	212	374	195	139	6,509	Oc	7,095	Mh	5,856	7,157	6,885	247	25	.....	$17,971,206
2	Alabama	4	34	3	4	1	.....	26	De	40	Ja	19	40	40	.....	.....	.....	40,332
3	Arkansas	15	720	7	30	11	3	669	No	792	Mh	550	711	708	.....	3	.....	1,166,228
4	Connecticut	7	34	6	3	1	1	23	Ja	34	Oc	19	22	22	.....	.....	.....	89,910
5	Illinois	8	445	8	20	20	8	389	Au	437	Ap	339	394	390	1	3	.....	1,434,737
6	Indiana	21	882	11	39	23	27	782	Oc	868	Mh	696	840	794	38	8	.....	2,613,643
7	Iowa	8	129	4	15	11	5	94	De	113	Ja	70	113	113	.....	.....	.....	407,990
8	Kentucky	19	595	17	43	7	7	521	De	608	Fe [3]	455	610	609	1	.....	.....	1,498,767
9	Louisiana	3	32	6	.....	4	.....	22	Oc [3]	24	Se [3]	18	22	22	.....	.....	.....	41,048
10	Massachusetts	7	95	13	3	2	2	75	De [3]	84	Fe	60	83	74	2	7	.....	185,280
11	Michigan	7	149	4	6	.....	4	135	Se	160	Jy	106	160	159	1	.....	.....	474,879
12	Mississippi	5	101	5	7	.....	.....	89	Au	112	Ja	64	87	87	.....	.....	.....	86,823
13	Missouri	9	305	4	18	9	4	270	Fe	279	Jy	256	283	280	3	.....	.....	766,965
14	New York	18	295	18	11	7	18	241	No	290	Ja	173	290	273	15	2	.....	1,018,844
15	North Carolina	8	122	4	10	2	.....	106	De [3]	116	My	97	121	121	.....	.....	.....	177,530
16	Ohio	33	1,390	22	58	52	39	1,219	De	1,461	Ja	904	1,450	1,303	146	1	.....	3,632,774
17	Pennsylvania	19	212	16	18	.....	2	176	De	181	Ja	170	179	178	.....	1	.....	519,490
18	Rhode Island	3	10	4	.....	.....	.....	6	(5)	6	(5)	6	6	6	.....	.....	.....	32,675
19	Tennessee	19	1,161	9	54	23	8	1,067	Oc	1,139	Je	1,033	1,124	1,108	16	.....	.....	2,047,566
20	Wisconsin	6	58	10	3	1	.....	44	My	60	Oc [3]	24	55	55	.....	.....	.....	81,471
21	All other states [6]	39	660	41	32	21	11	555	.....	.....	.....	.....	567	543	24	.....	.....	1,654,254

[1] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[2] Chiefly electric motors operated by rented power (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).
[3] Same number reported for one or more other months.
[4] All other states embrace: Arkansas, 11 establishments; and Wyoming, 3.

BY STATES: 1919—Continued.

EXPENSES.										POWER.						
Salaries and wages.				Rent and taxes.		For materials.				Primary horsepower.						
											Owned.					
Officials.	Clerks, etc.	Wage earners.	For contract work.	Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Value of products.	Value added by manufacture.	Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]	Electric horsepower generated in establishments reporting.	
CARRIAGES, AND WAGONS, INCLUDING REPAIRS—Continued.																	
$92,936	$38,068	$525,815	$125	$16,201	$36,114	$1,407,910	$40,216	$2,577,390	$1,129,264	1,117	653	.....	97	.....	367	115	1
8,920	1,985	92,611	.....	3,960	2,425	101,714	4,926	280,600	173,960	96	.....	.....	22	.....	74	.....	2
.....	.....	19,088	.....	360	548	16,401	936	41,064	23,727	28	.....	.....	.....	.....	28	.....	3
1,800	.....	29,483	.....	796	1,423	46,351	3,094	129,828	80,383	346	.....	.....	52	215	79	12	4
129,995	128,875	740,773	.....	18,275	286,140	2,181,173	33,555	4,054,170	1,839,442	1,042	379	.....	69	.....	594	30	5
.....	.....	33,583	72	2,712	1,097	29,901	4,214	99,546	65,431	66	.....	.....	6	.....	60	.....	6
14,370	15,586	151,175	500	5,843	10,094	309,644	10,373	626,213	306,196	479	200	.....	127	.....	152	7	7
268,785	154,117	1,750,035	17,019	14,511	331,406	4,300,811	134,436	9,315,834	4,880,587	3,653	2,916	15	260	12	450	2,741	8
17,540	16,513	271,931	278	1,015	48,905	778,675	10,238	1,235,488	446,575	694	526	.....	49	.....	119	85	9
CARRIAGE AND WAGON MATERIALS.																	
$934,688	$370,856	$5,666,771	$17,448	$74,002	$561,082	$14,437,114	$297,559	$26,765,316	$12,030,643	23,700	17,563	135	468	545	4,989	2,884	1
7,981	2,404	19,568	.....	160	633	44,368	752	89,433	44,313	215	200	.....	15	.....	.....	.....	2
56,314	15,072	406,927	3,750	1,212	28,067	935,333	6,976	1,807,497	865,188	1,961	1,875	.....	.....	.....	86	100	3
7,675	333	28,279	.....	940	950	94,409	3,708	157,540	59,423	127	80	.....	.....	.....	47	.....	4
53,614	32,151	378,936	.....	96	65,222	1,007,192	17,464	1,866,402	841,746	1,271	1,015	.....	7	.....	249	.....	5
108,347	58,985	711,529	.....	1,238	81,532	1,999,382	73,030	3,516,457	1,444,045	3,583	1,870	70	12	.....	1,631	1,000	6
44,377	16,759	99,194	.....	1,886	3,748	355,906	10,961	610,999	244,132	438	125	.....	9	.....	304	.....	7
55,818	12,969	441,931	180	995	39,681	731,863	17,886	1,758,680	1,008,931	1,989	1,595	.....	28	.....	366	58	8
.....	3,396	12,020	.....	300	391	41,006	416	76,124	34,702	68	60	.....	.....	.....	8	.....	9
9,823	5,376	85,328	.....	7,340	3,122	147,451	8,520	348,520	192,549	349	237	.....	19	18	75	.....	10
23,113	4,516	136,863	.....	48	10,936	268,344	9,709	505,937	227,884	569	350	.....	10	25	184	.....	11
12,300	.....	63,273	9,067	50	1,181	81,314	110	172,169	90,745	172	172	.....	.....	.....	.....	.....	12
44,170	11,318	199,535	213	7,284	24,798	554,890	8,322	967,272	404,060	988	540	.....	25	.....	423	.....	13
47,977	24,299	250,582	1,992	4,885	40,426	579,405	18,350	1,217,334	619,579	961	285	.....	17	60	599	5	14
23,214	3,078	82,655	175	1,000	6,809	241,850	6,584	399,167	150,733	390	335	20	.....	.....	35	.....	15
161,642	99,859	1,182,154	.....	15,609	97,342	3,197,742	63,790	5,931,602	2,670,070	3,433	2,841	.....	195	.....	397	593	16
26,400	1,636	149,660	480	2,962	6,740	417,385	12,984	703,678	273,309	577	340	.....	61	12	164	.....	17
.....	.....	7,538	.....	.....	174	6,497	639	20,305	13,169	19	.....	.....	8	.....	11	.....	18
154,064	36,906	876,327	1,491	140	116,440	2,321,633	502	4,113,257	1,791,122	4,517	4,453	45	9	.....	10	1,103	19
1,058	783	36,253	.....	4,980	1,049	70,204	1,573	139,434	67,657	322	260	.....	10	50	2	10	20
96,801	41,016	498,219	100	22,877	31,841	1,340,940	35,283	2,363,509	987,286	1,751	930	.....	43	380	398	15	21

[5] Same number reported throughout the year.

[6] All other states embrace: California, 3 establishments; Colorado, 1; Georgia, 5; Kansas, 2; Maine, 2; Maryland, 1; Minnesota, 3; Nebraska, 1; New Hampshire, 3; New Jersey, 4; North Dakota, 1; Oklahoma, 1; South Dakota, 1; Texas, 3; Virginia, 3; Washington, 1; West Virginia, 3; and Wyoming, 1.

DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES

MANUFACTURES: 1919

CAST-IRON PIPE

Prepared under the supervision of EUGENE F. HARTLEY, Chief Statistician for Manufactures

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EXPLANATION OF TERMS.

Scope of census.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than $500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

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

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date did not portray such conditions, an earlier date was requested.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

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

In order to determine as nearly as possible the age distribution of the average number of wage earners for an industry, the per cent distribution by age of the wage earners for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year to determine the average numbers 16 years and over, and under 16, employed.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital (amount actually invested).—The instructions on the schedule for securing data relating to capital were as follows:

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

These instructions were identical with those employed at the censuses of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power equipment of the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuel is impracticable.

CAST-IRON PIPE.

GENERAL STATISTICS.

General character of the industry.—Establishments primarily engaged in the manufacture of cast-iron pipe were first segregated as an industry at the census of 1909. Prior thereto they were included with those for foundry and machine-shop products, which included iron foundries not specially provided for.

Comparative summary.—Table 1 presents the general statistics for 1919, 1914, and 1909.

Principal states, ranked by value of products.—Statistics are presented in Table 2 for the chief factors: Number of establishments; number of wage earners; value of products; and value added by manufacture, for all states for which the statistics can be reported.

Persons engaged in the industry.—The age classification of the average number of wage earners in Table 3 is an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 12.

Wage earners, by months.—The statistics for wage earners in Table 4 show the labor movement in accordance with the industrial conditions existing throughout the year.

Prevailing hours of labor.—Table 5 shows that of the total number of wage earners employed only 3.1 per cent were in establishments where the prevailing hours per week were 48 or fewer in 1909, and 1.4 per cent in 1914. In 1919 this ratio was 12.4 per cent. On the other hand, in 1909, 76 per cent were in the "60 hours per week" group, and in 1914, 64 per cent, whereas in 1919 this group carried but 21.4 per cent.

Size of establishments, by average number of wage earners.—Table 6 shows the industry to be one of relatively large units. Only six establishments with 180 wage earners are found in the groups employing 50 wage earners or less in 1919 and nine establishments with 179 wage earners in 1914.

Size of establishments, by value of products.—The average value of products per establishment for all classes in 1919 was approximately $850,000, as compared with $450,000 in 1914 and $700,000 in 1909. The increase from 1914 to 1919 was due primarily to enhanced values, and as a result, Table 7, being based upon value of products, shows heavy gains in the higher groups.

Character of ownership.—The industry is almost entirely under corporate ownership. Of the 59 establishments, 56 are owned by corporations, and they reported 98.4 per cent of the value of all products.

Number and horsepower of types of prime movers.—Table 8 gives the total horsepower reported for the industry. Of the total primary power, 60 per cent was purchased electric power in 1919, as compared with 31.7 per cent in 1914 and 14.9 in 1909.

Fuel consumed.—Table 9 shows the consumption of fuel, by kinds and by states. The figures for gas include both manufactured and natural gas.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, AND 1909.

	1919	1914	1909	PER CENT OF INCREASE.[1] 1914–1919	PER CENT OF INCREASE.[1] 1909–1914		1919	1914	1909	PER CENT OF INCREASE.[1] 1914–1919	PER CENT OF INCREASE.[1] 1909–1914
Number of establishments	59	59	52	.....	.....	Salaries and wages	$17,136,610	$8,112,385	$7,427,175	111.2	9.2
Persons engaged	13,777	13,290	12,884	3.7	3.2	Salaries	2,431,212	1,036,409	924,837	134.6	12.1
Proprietors and firm members	4	8	7	.....	.....	Wages	14,705,398	7,075,976	6,502,338	107.8	8.8
Salaried employees	1,148	725	649	58.3	11.7	Paid for contract work	37,795	2,672	8,210	1314.5	−67.5
Wage earners (average number)	12,625	12,557	12,228	0.5	2.7	Rent and taxes	1,267,255	167,226	120,900	657.8	38.3
Primary horsepower	28,741	25,864	18,737	11.1	38.0	Cost of materials	25,386,552	16,930,141	18,884,342	49.9	−10.3
Capital	$42,863,026	$26,981,070	$23,110,318	58.9	16.7	Value of products	50,235,101	26,659,365	29,153,723	88.4	−8.6
						Value added by manufacture[2]	24,848,549	9,729,224	10,269,381	155.4	−5.3

[1] A minus sign (−) denotes decrease. Per cent omitted where base is less than 100.

[2] Value of products less cost of materials.

TABLE 2.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	59	12,625	100.0	.....	$50,235	100.0	.....	$24,849	100.0	.....
Alabama	21	5,285	41.9	1	18,784	37.4	1	9,323	37.5	1
New Jersey	8	2,035	16.1	2	9,030	18.0	2	4,293	17.3	3
Pennsylvania	7	1,707	13.5	3	8,710	17.3	3	4,550	18.4	2
New York	5	312	2.5	7	1,342	2.7	7	758	3.0	7
All other states	18	3,286	26.0	.....	12,369	24.6	.....	5,919	23.8	.....

TABLE 3.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
All classes	1919	13,777	13,545	232	98.3	1.7
	1914	13,290	13,190	100	99.2	0.8
	1909	12,884	12,832	52	99.6	0.4
Proprietors and officials	1919	427	423	4	99.1	0.9
	1914	188	187	1	99.5	0.5
	1909	192	192	.....	.....	.....
Proprietors and firm members	1919	4	4	.....	100.0	.....
	1914	8	8	.....	100.0	.....
	1909	7	7	.....	100.0	.....
Salaried officers of corporations	1919	108	105	3	97.2	2.8
	1914	78	78	.....	100.0	.....
	1909	61	61	.....	100.0	.....
Superintendents and managers	1919	315	314	1	99.7	0.3
	1914	102	101	1	99.0	1.0
	1909	124	124	.....	100.0	.....
Clerks and other subordinate salaried employees.	1919	725	549	176	75.7	24.3
	1914	545	459	86	84.2	15.8
	1909	464	424	40	91.4	8.6
Wage earners (average number)	1919	12,625	12,573	52	99.6	0.4
	1914	12,557	12,544	13	99.9	0.1
	1909	12,228	12,216	12	99.9	0.1
16 years of age and over	1919	12,588	12,536	52	99.6	0.4
	1914	12,507	12,494	13	99.9	0.1
	1909	12,155	12,143	12	99.9	0.1
Under 16 years of age	1919	37	37	.....	100.0	.....
	1914	50	50	.....	100.0	.....
	1909	73	73	.....	100.0	.....

TABLE 4.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

[The month of maximum employment for each state is indicated by **bold-faced** figures and that of minimum employment by *italic* figures.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Per cent minimum is of maximum.
United States:														
1919	12,625	10,615	9,924	*9,753*	10,529	11,268	11,482	13,006	13,781	14,625	15,478	15,454	**15,585**	62.6
Males	12,573	10,569	9,883	*9,718*	10,494	11,227	11,434	12,960	13,723	14,570	15,407	15,385	**15,506**	62.7
Females	52	46	41	*35*	*35*	41	48	46	58	55	71	69	**79**	44.3
1914	12,557	11,816	12,572	13,193	12,701	12,613	12,849	13,221	**13,427**	13,211	12,555	11,336	*11,190*	83.3
Alabama	5,285	3,830	*3,551*	3,719	4,189	4,539	4,598	5,777	6,010	6,496	6,900	6,863	**6,948**	51.1
New Jersey	2,035	1,908	1,657	*1,602*	1,842	1,914	2,030	2,069	2,221	2,197	2,330	2,278	**2,372**	67.5
New York	312	300	326	317	303	316	*261*	277	309	314	312	*356*	353	73.3
Pennsylvania	1,707	1,620	*1,429*	1,454	1,492	1,705	1,692	1,720	1,769	1,861	**1,950**	1,923	1,869	73.3
All other states	3,286	2,957	2,961	*2,661*	2,703	2,794	2,901	3,163	3,472	3,757	3,986	4,034	*4,043*	65.8

TABLE 5.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—				
			48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.
United States	1919	12,625	[1] 1,564	440	4,709	3,208	2,704
	1914	12,557	171	.....	1,303	3,026	8,057
	1909	12,228	378	.....	1,425	1,131	9,264
Alabama	1919	5,285	[1] 1,032	.....	1,580	1,456	1,217
	1914	3,696	113	.....	795	802	1,986
New Jersey	1919	2,035	.....	242	548	741	504
	1914	3,421	.....	.....	100	1,875	1,446
New York [2]	1919	312	63	68	138	43	.....
Pennsylvania	1919	1,707	.....	130	673	546	358
	1914	1,835	.....	.....	101	194	1,540

[1] Includes 293 of group "44 and under."

[2] Figures for 1914 not available.

TABLE 6.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919 AND 1914.

STATE.	Census year.	TOTAL.		ESTABLISHMENTS EMPLOYING—															
				1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
		Establishments.	Wage earners (average number).	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States	1919	59	12,625	.....	.....	2	15	4	165	14	961	20	3,310	14	4,772	4	2,255	1	1,147
	1914	59	12,557	2	8	3	39	4	132	12	984	18	2,589	14	4,825	6	3,980	.....	.....
Alabama	1919	21	5,285	.....	.....	.....	.....	.....	.....	5	341	8	1,291	6	1,990	1	516	1	1,147
	1914	20	3,696	1	4	2	31	1	35	3	237	8	1,149	3	988	2	1,252	.....	.....
New Jersey	1919	8	2,035	.....	.....	.....	.....	.....	.....	2	145	3	559	2	770	1	561	.....	.....
	1914	9	3,421	.....	.....	.....	.....	.....	.....	1	100	3	516	3	1,206	2	1,599	.....	.....
New York [1]	1919	5	312	.....	.....	.....	.....	2	88	3	226	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania	1919	7	1,707	.....	.....	.....	.....	.....	.....	2	123	2	244	2	667	1	673	.....	.....
	1914	7	1,835	.....	.....	.....	.....	.....	.....	2	193	2	231	2	862	1	549	.....	.....

[1] Figures for 1914 not available.

TABLE 7.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes	59	59	52	12,625	12,557	12,228	$50,235,101	$26,659,365	$29,153,723	$24,848,549	$9,729,224	$10,269,381
Less than $100,000	3	[1] 14	[1] 11	66	[1] 550	[1] 304	180,264	[1] 829,449	[1] 540,922	91,401	[1] 398,656	[1] 246,769
$100,000 to $500,000	23	27	28	1,975	7,190	4,815	6,927,931	6,351,931	10,641,104	3,828,542	5,684,793	3,920,565
$500,000 to $1,000,000	15	10		2,813			10,368,067	7,675,640		5,480,965		
$1,000,000 and over	18	8	13	7,771	4,817	7,109	32,758,839	11,802,345	17,971,697	15,447,641	3,645,775	6,102,047
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $100,000	5.1	23.7	21.2	0.5	4.4	2.5	0.4	3.1	1.9	0.4	4.1	2.4
$100,000 to $500,000	39.0	45.7	53.8	15.6	57.2	39.4	13.8	23.8	36.5	15.4	58.4	38.2
$500,000 to $1,000,000	25.4	17.0		22.3			20.6	28.8		22.1		
$1,000,000 and over	30.5	13.6	25.0	61.5	38.4	58.1	65.2	44.3	61.6	62.1	37.5	59.4

[1] Includes the groups "Less than $5,000" and "$5,000 to $20,000."

TABLE 8.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	1,040	589	354	28,741	25,864	18,737	100.0	100.0	100.0
Owned	92	145	162	11,501	17,666	15,950	40.0	68.3	85.1
Steam	90	135	150	11,297	15,966	14,385	39.3	61.7	76.8
Engines	86	(1)	(1)	10,547	(1)	(1)	36.7	.....	.....
Turbines	4	(1)	(1)	750	(1)	(1)	2.6	.....	.....
Internal-combustion engines	1	8	11	4	1,500	1,505	(2)	5.8	8.0
Water wheels and turbines	1	2	1	200	200	60	0.7	0.8	0.3
Rented—Electric	948	444	192	17,240	8,198	2,787	60.0	31.7	14.9
Electric	2,106	1,616	1,189	35,493	28,518	19,333	100.0	100.0	100.0
Rented	948	444	192	17,240	8,198	2,787	48.6	28.7	14.4
Generated by establishments reporting	1,158	1,172	997	18,253	20,320	16,546	51.4	71.3	85.6

[1] Not reported separately.

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

TABLE 9.—FUEL CONSUMED, BY STATES: 1919 AND 1914.

STATE.	Census year.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
		Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States	1919	27,374	96,387	256,781	419	658	5,386
	1914	45,663	99,991	248,305	2,036	(1)	163,833
Alabama	1919	.....	28,520	132,314	.....	.....	175
	1914	.....	25,382	88,684	1,067	(1)	.....
New Jersey	1919	16,751	21,067	32,255	10	50	.....
	1914	30,094	17,539	46,146	692	.....	151,013
New York	1919	106	1,096	3,601	8	70	.....
Pennsylvania	1919	9,799	15,618	31,769	51	126	1,335
	1914	15,416	16,424	38,294	270	(1)	908
All other states	1919	718	30,086	56,842	350	412	3,876
	1914	153	40,646	75,181	7	(1)	11,912

[1] Included in figures for fuel oils.

SPECIAL STATISTICS.

Certain additional information concerning the quantity and value of products for the industry is collected by means of supplemental schedules, data for which are presented in Table 10.

Products—comparative statistics, by states.—Table 10 presents detailed statistics of products for 1919 and 1914. The table shows distribution by states so far as the figures can be shown without disclosing individual operations. There is a considerable production of cast-iron pipe by establishments falling under other industry classifications, which has been included. With respect to 1914, this subsidiary production is included in the totals, but figures are not available to permit a distribution by states.

In 1919 there were 59 establishments in the classified industry, and 7 establishments in other industries reporting cast-iron pipe products. Of these, 18 establishments manufactured bell-and-spigot pipe, 15 flanged pipe, 3 culvert pipe, 22 gas and water pipe fittings, and 40 reported the manufacture of soil and plumbers' pipe and fittings.

The tonnage production of cast-iron pipe and fittings was 702,554 tons in 1919 as compared with 1,120,721 tons in 1914, a decrease of 37.3 per cent; but in value these products increased from $25,979,192 in 1914 to $48,514,581 in 1919, an increase of 86.7 per cent. The figures show an average ton value of $69 for 1919 as compared with $23.20 for 1914. Considering the different kinds of pipe products, there was a decrease of 54.7 per cent for the period 1914–1919 in tonnage of bell-and-spigot pipe, with an increase of 15.5 per cent in value; a decrease of 9.9 per cent in the tonnage of flanged pipe, with an increase of 143 per cent in value; a decrease of 48.5 per cent in culvert pipe, with an increase of 39.6 per cent in value; and a slight increase in tonnage of pipe fittings, namely, 1.8 per cent, with an increase of 212 per cent in value. Soil and plumbers' pipe and fittings increased 20.3 per cent in tonnage and 230 per cent in value. The figures show fairly uniform increases in unit values for the various classes, namely, bell-and-spigot pipe $20 per ton in 1914, to $51 in 1919; flanged pipe, $27 in 1914, $72 in 1919; soil and plumbers' pipe and fittings, $29 in 1914, and $80 in 1919.

TABLE 10.—PRODUCTS—COMPARATIVE STATISTICS, BY STATES: 1919 AND 1914.

	1919		1914	
	Quantity (tons) 2,000 pounds.	Value.	Quantity (tons).	Value.
Total	.....	$51,902,763	.....	$28,102,607
Cast-iron pipe industry	.....	50,235,101	.....	26,659,365
Subsidiary cast-iron pipe products, other industries	.....	1,667,662	.....	1,443,242
Cast-iron pipe and fittings	702,554	48,516,581	1,120,721	25,979,192
Gas and water pipe and fittings	447,881	28,124,128	[1] 909,069	[1] 19,805,484
Alabama	149,761	8,895,383	186,415	4,469,284
New Jersey	80,694	4,919,620	215,481	4,689,296
New York	2,069	254,352	876	43,835
Pennsylvania	69,834	5,102,831	191,179	3,977,619
Other states	145,523	8,951,942	286,487	5,855,720
Bell-and-spigot pipe	[2] 375,203	19,257,663	[1] 828,905	[1] 16,669,533
Alabama	123,433	6,124,643	170,515	3,945,013
New Jersey	68,652	3,464,419	193,454	3,828,131
Pennsylvania	67,236	3,519,357	180,994	3,521,563
Other states	115,882	6,149,244	262,343	4,831,983
Flanged pipe	[2] 23,791	1,714,250	[1] 27,289	[1] 706,531
Alabama	7,916	545,394	8,051	176,685
New Jersey	4,855	370,028	8,918	236,590
Other states	11,020	798,828	5,011	140,596
Culvert pipe	[2] 5,657	344,062	[1] 11,011	[1] 246,527
Fittings	[2] 43,230	6,808,153	[1] 41,864	[1] 2,182,893
Alabama	17,944	2,189,297	4,869	263,935
New Jersey	6,993	1,070,849	10,970	583,076
New York	2,069	254,352	876	43,835
Pennsylvania	2,465	1,568,908	8,614	420,967
Other states	13,759	1,718,747	14,871	797,928
Soil and plumbers' pipe and fittings	[2] 254,673	20,390,453	[1] 211,652	[1] 6,173,708
Alabama	122,827	9,336,677	77,996	2,161,644
New Jersey	34,543	3,420,445	48,434	1,649,271
New York	18,088	1,518,978	10,896	321,525
Pennsylvania	46,062	3,680,711	17,425	501,823
Other states	33,153	2,433,642	30,814	865,933
Other castings (not pipe and fittings)	16,401	1,614,465	13,581	681,737
Other products	.....	1,773,717	.....	1,441,678

[1] Includes production not distributed by states, 1914:

Gas and water pipe and fittings	28,631 tons;	$769,730
Bell-and-spigot pipe	21,599 tons;	542,843
Flanged pipe	5,309 tons;	152,660
Culvert pipe and fittings	1,723 tons;	74,227
Soil and plumbers' pipe and fittings	26,087 tons;	673,512

[2] Number of establishments, 1919:

Bell-and-spigot pipe	18
Flanged pipe	15
Culvert pipe	3
Pipe fittings	22
Soil and plumbers' pipe and fittings	40

GENERAL TABLES.

Table 11 gives, for 1919, 1914, and 1909, a comparative summary, by states, for number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products. Table 12 presents, for 1919, the detailed statistics for the industry for such states as can be shown without disclosing the operations of individual establishments.

TABLE 11.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Census year.	Number of establishments	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	59	12,625	28,741	$14,705	$25,387	$50,235
	1914	59	12,557	25,864	7,076	16,930	26,659
	1909	52	12,228	18,737	6,502	18,884	29,154
Alabama	1919	21	5,285	10,754	5,776	9,461	18,784
	1914	20	3,696	6,130	2,054	3,907	6,754
	1909	14	2,878	4,632	1,393	3,706	6,097
New Jersey	1919	8	2,035	3,714	2,655	4,737	9,030
	1914	9	3,421	4,785	1,991	4,784	7,353
	1909	8	3,275	4,035	1,951	5,355	8,003
New York	1919	5	312	767	$373	$585	$1,342
	1914	3	213	293	124	186	370
	1909	4	464	1,052	268	687	990
Pennsylvania	1919	7	1,707	3,892	2,148	4,154	8,710
	1914	7	1,835	4,062	1,029	3,295	4,551
	1909	5	1,435	2,531	711	2,423	3,534
All other states	1919	18	3,286	9,614	3,753	6,450	12,369
	1914	20	3,392	10,594	1,878	4,758	7,631
	1909	21	4,176	6,487	2,179	6,713	10,530

TABLE 12.—DETAILED STATEMENT FOR THE INDUSTRY, BY STATES: 1919.

STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Number, 15th day of— Maximum month.	Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Capital.	EXPENSES. Salaries and wages. Officials.	EXPENSES. Salaries and wages. Clerks, etc.
United States	59	13,777	4	423	549	176	12,625	De 15,585	Mh 9,753	15,651	15,542	72	37	$42,863,026	$1,385,596	$1,045,616
Alabama	21	5,767	1	147	265	69	5,285	De 6,948	Fe 3,551	6,948	6,914	34	.....	12,365,071	499,709	477,142
New Jersey	8	2,248	.....	97	84	32	2,035	De 2,372	Mh 1,602	2,372	2,368	3	1	8,637,290	238,403	171,945
New York	5	350	2	14	14	8	312	No 356	Je 261	353	352	1	.....	1,145,231	73,002	28,003
Pennsylvania	7	1,859	.....	55	87	10	1,707	Oc 1,950	Fe 1,429	1,931	1,896	18	17	11,008,421	191,280	120,028
All other states [1]	18	3,553	1	110	99	57	3,286	.....	.....	4,047	4,012	16	19	9,707,013	383,202	248,498

STATE.	EXPENSES—continued. Salaries and wages—Con. Wage earners.	For contract work.	Rent and taxes. Rent of factory.	Rent and taxes. Taxes, Federal, state, county, and local.	For materials. Principal materials.	For materials. Fuel and rent of power.	Value of products.	Value added by manufacture.	POWER. Primary horsepower. Total.	Owned. Steam engines (not turbines).	Owned. Steam turbines.	Owned. Internal-combustion engines.	Owned. Water power.	Rented (electric).	Electric horsepower generated in establishments reporting.
United States	$14,705,398	$37,795	$20,782	$1,246,473	$22,744,779	$2,641,773	$50,235,101	$24,848,549	28,741	10,547	750	4	200	17,240	18,253
Alabama	5,776,258	5,413	13,380	453,439	8,381,774	1,079,183	18,784,305	9,323,348	10,754	3,545	.....	.....	.....	7,209	5,841
New Jersey	2,655,154	.....	.....	101,546	4,259,465	477,688	9,029,796	4,292,643	3,714	2,447	750	.....	.....	517	4,637
New York	372,939	.....	.....	50,382	531,321	53,310	1,342,422	757,791	767	210	.....	.....	.....	557	312
Pennsylvania	2,148,481	.....	4,404	406,601	3,837,182	316,810	8,709,771	4,555,779	3,892	1,585	.....	.....	.....	2,307	1,447
All other states [1]	3,752,566	32,382	2,998	234,505	5,735,037	714,782	12,368,807	5,918,988	9,614	2,760	.....	4	200	6,650	6,016

[1] All other states embrace: Ohio, 6 establishments; Virginia, 3; Maryland, 2; and 1 each in California, Georgia, Indiana, Massachusetts, North Carolina, Oregon, and Tennessee.