

DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS  
WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES  
MANUFACTURES: 1919

# KNIT GOODS

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

## CONTENTS

Page.	
<b>EXPLANATION OF TERMS.....</b>	<b>2</b>
<b>GENERAL STATISTICS.</b>	
General character of the industry.....	3
Comparative summary.....	4
Principal states, ranked by value of products.....	4
Persons engaged in the industry.....	5
Wage earners, by months, for states.....	5
Per cent distribution of wage earners, for states.....	6
Wage earners, distributed by occupation, age, and sex, for selected states.....	6
Average number of wage earners, by prevailing hours of labor per week, for states.....	7
Size of establishments, by average number of wage earners, for states.....	7
Size of establishments, by value of products.....	8
Character of ownership, by states.....	8
Number and horsepower of types of prime movers.....	9
Fuel consumed, by states.....	9
<b>SPECIAL STATISTICS.</b>	
<b>Materials:</b>	<b>SECTION 1.</b>
Summary of materials for the United States.....	10
Principal materials used in the industry, by states.....	10
Additional materials, by states.....	11
Yarn and sewing thread manufactured for own use.....	12

SPECIAL STATISTICS—Continued.	
<b>Products:</b>	<b>SECTION 1—continued.</b>
Summary of products for the United States .....	12
Products for the industry, by states .....	13
Principal products, by geographic divisions .....	15
Production of men's, women's, and children's knit goods.....	16
<b>Equipment:</b>	
Cards and spindles used in the industry, for the United States .....	17
Cards and spindles used in the industry, by states .....	18
Distribution of establishments and spindles, by states .....	19
Knitting machines used in the industry, for the United States .....	19
Knitting machines used in the industry, by states .....	20
Sewing machines, active and idle, by states .....	22
	<b>SECTION 2.</b>
Summary of materials .....	23
Summary of products .....	24
Number of establishments and value of products, by states .....	25
Production of yarn and sewing thread, for own consumption .....	25
Cards and spindles used in the industry .....	25
Knitting machines used in the industry .....	26
Sewing machines, active, by states .....	26
Number of spinners, knitters, etc., by sex and age .....	26
	<b>GENERAL TABLES.</b>
Comparative summary, by states .....	27
Detailed statement, by states .....	28



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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 calcu-

late 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.

# KNIT GOODS.

By ARTHUR J. LECK.

## GENERAL STATISTICS.

**General character of the industry.**—The classification "knit goods" includes establishments whose product is the result of knitting, either by power or hand machine, without regard to whether the yarns are of cotton, wool, silk, or other material.

In addition to the general statistics which follow, special statistics relating to materials, products, and equipment have been prepared from supplemental reports, the form of which was designed for the exclusive use of the knit-goods industry, and these statistics are presented herewith in two sections.

"Section 1," like the general statistics, relates to the industry as a whole, many of the tables being comparative for a number of census years. "Section 2" is the result of sorting the reports for the industry into five groups, comprising establishments whose chief product according to value in 1919 was hosiery, underwear, fancy knit goods, knitted cloth, and contract work, a separate tabulation being made for each. These groups, except for "contract work," are industries within themselves, having many separate interests and independent trade associations, each one sufficiently large and important, in relation to other industries, to warrant a segregation of statistics for the industry as a whole into these five parts. As the report of the census of 1919 was the first publication of information based on the plan of "Section 2," comparative figures with other years are not available.

**Comparative summary.**—Table 1 gives a general summary of the progress of the industry from 1899 to 1919, inclusive.

**Principal states, ranked by value of products.**—The rank of the principal states by value of products in 1919 is shown in Table 2. The same is expressed in the form of a diagram which follows and makes a comparison with the value of products reported for 1914.

**Persons engaged in the industry.**—A division, by sex, of the number of persons engaged in the manufacture of knit goods is presented in Table 3. In the wage-earner class females predominated at each census period.

**Wage earners, by months, for states.**—The regularity with which the wage earners are employed in the industry throughout the year is evidenced by Table 4, for 1919, 1914, and 1909. Figures are presented by states for 1919.

**Wage earners, per cent distribution, by sex and age, for states.**—Table 5 gives a distribution in percentages

for the number of wage earners, male and female, according to age, employed in the various states which lead in the manufacture of knit goods.

**Number of spinners, knitters, etc., by sex and age, for selected states.**—The number of wage earners with reference to their occupation is shown in Table 6, by sex and age, for the United States and for the two leading states, New York and Pennsylvania.

**Prevailing hours of labor.**—Table 7 shows a marked shortening of the working day between 1909 and 1919. In 1909 the largest number of wage earners for any one group was reported as working between 54 and 60 hours per week as compared with 54 hours in 1914 and 48 hours in 1919.

**Size of establishments, by average number of wage earners.**—Statistics relating to the size of establishments as measured by the average number of wage earners employed in the industry are presented in Table 8 for the United States, for 1919 and 1914, and for the principal states for 1919.

**Size of establishments, by value of products.**—Table 9 gives the relation of the value of products to the number of establishments engaged in the manufacture of knit goods for the United States during 1919, 1914, and 1909. 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.

**Character of ownership.**—That the corporate form of ownership prevails in the industry is revealed in Table 10, based on the number of establishments, average number of wage earners, and value of products.

**Number and horsepower of types of prime movers.**—The various types of power, with horsepower for each type, used in the manufacture of knit goods is shown for 1919, 1914, and 1909 in Table 11.

**Fuel consumed, by states.**—Table 12 gives the different kinds of fuel for the industry in the United States and for each state in 1919 compared with 1914.

## MANUFACTURES.

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

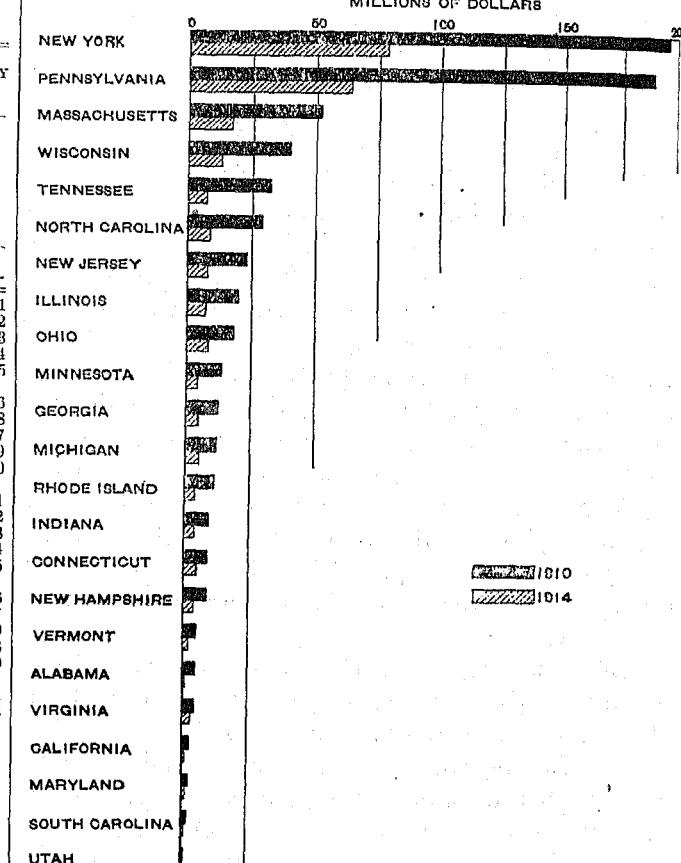
	1919	1914	1909	1904	1899	PER CENT OF INCREASE, <sup>1</sup>			
						1914-1919	1909-1914	1904-1909	1899-1904
Number of establishments.....	2,050	1,622	1,374	1,144	1,000	26.4	18.0	20.1	13.7
Persons engaged.....	186,673	159,673	136,130	109,489	(2)	16.9	17.3	24.3	.....
Proprietors and firm members.....	1,488	1,293	1,134	1,067	(2)	14.6	14.5	6.3	.....
Salaried employees.....	12,613	7,855	5,721	4,330	2,831	60.6	37.3	32.1	52.9
Wage earners (average number).....	172,572	150,520	129,275	104,092	83,691	14.7	16.4	24.2	24.4
Primary horsepower.....	151,601	125,842	103,709	78,769	57,346	20.5	21.3	31.7	37.4
Capital.....	\$516,457,991	\$215,826,340	\$166,641,171	\$106,943,072	\$82,065,517	139.3	31.9	53.0	30.3
Salaries and wages.....	157,526,402	71,039,180	52,431,680	36,069,758	27,572,657	121.7	35.5	45.4	.....
Salaries.....	32,326,582	11,231,035	7,691,457	4,495,151	3,138,100	186.6	46.7	72.6	30.8
Wages.....	125,199,820	50,758,151	44,740,223	31,614,607	24,434,497	109.5	33.6	41.5	42.0
Paid for contract work.....	8,495,982	3,239,695	2,158,078	786,215	1,141,828	162.2	50.1	174.5	.....
Rent and taxes.....	25,966,579	2,355,597	1,345,341	3,034,331	3,711,030	1,002.3	75.1	44.0	-31.1
Cost of materials.....	427,095,570	140,687,458	110,241,053	76,739,348	51,195,330	191.2	33.1	43.6	31.4
Value of products.....	713,189,089	253,912,903	200,143,527	137,076,454	95,833,092	175.4	29.4	46.0	50.0
Value added by manufacture <sup>2</sup> .....	286,044,119	112,225,445	89,902,474	60,287,106	44,038,302	154.9	24.8	49.1	43.0

<sup>1</sup> A minus sign (—) denotes decrease.<sup>2</sup> Figures not available.<sup>3</sup> Exclusive of internal revenue.<sup>4</sup> Value of products less cost of materials.TABLE 2.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS:  
1919.

## KNIT GOODS—VALUE OF PRODUCTS FOR STATES: 1919 AND 1914.

MILLIONS OF DOLLARS

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Percent distribution.	Rank.	Amount (expressed in thousands).	Percent distribution.	Rank.
United States	2,050	172,572	100.0	....	\$713,140	100.0	....	\$286,044	100.0	...
New York	682	41,372	24.0	2	195,377	27.4	1	80,411	28.1	1
Pennsylvania	606	44,156	25.6	1	188,261	26.4	2	71,564	25.0	2
Massachusetts	77	12,751	7.4	3	52,121	7.3	3	21,252	7.4	3
Wisconsin	72	8,736	5.1	6	40,778	5.7	4	16,561	5.8	4
Tennessee	63	10,308	6.0	4	32,052	4.6	5	12,607	4.4	5
North Carolina	121	10,216	5.9	5	29,834	4.2	6	12,251	4.3	6
New Jersey	90	4,853	2.8	8	23,853	3.3	7	8,503	3.0	8
Illinois	58	5,095	3.0	7	20,360	2.9	8	8,759	3.1	7
Ohio	34	4,407	2.6	9	18,779	2.6	9	7,700	2.7	9
Minnesota	16	3,504	2.1	11	13,085	2.0	10	6,498	2.3	10
Georgia	28	3,808	2.2	10	12,567	1.8	11	5,752	2.0	11
Michigan	31	3,170	1.8	12	12,039	1.7	12	5,249	1.8	12
Rhode Island	26	1,983	1.1	16	11,930	1.7	13	4,547	1.6	13
Indiana	8	2,675	1.6	14	9,802	1.4	14	4,187	1.5	14
Connecticut	24	2,619	1.5	15	9,330	1.3	15	3,984	1.4	15
New Hampshire	10	2,979	1.7	13	9,016	1.3	16	3,897	1.4	16
Vermont	17	1,105	0.8	19	5,063	0.7	17	1,969	0.7	17
Alabama	10	1,055	1.0	17	4,787	0.7	18	1,482	0.5	19
Virginia	10	1,678	0.9	18	4,085	0.6	19	1,782	0.6	18
California	21	695	0.4	22	2,878	0.4	20	1,361	0.5	20
Maryland	7	749	0.4	21	2,687	0.4	21	915	0.3	21
South Carolina	14	781	0.5	20	2,076	0.3	22	830	0.3	22
Utah	10	198	0.1	24	1,156	0.2	23	369	0.1	21
Washington	18	165	0.1	25	401	0.1	25	241	0.1	25
All other states	14	2,984	1.7	....	8,041	1.1	...	3,373	1.2	...



# KNIT GOODS.

5

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

CLASS.	Cen-sus year.	Total.	Male.	Fe-male.	PER CENT OF TOTAL.		CLASS.	Cen-sus yaer.	Total.	Male.	Fe-male.	PER CENT OF TOTAL.	
					Male.	Fe-male.						Male.	Fe-male.
All classes.....	1919	186,673	60,563	126,110	32.4	67.6	Clerks and other subordinate salaried employees.	1919	7,403	3,718	3,685	50.2	49.8
	1914	150,673	51,335	108,338	32.2	67.8		1914	5,187	3,125	2,062	60.2	39.8
	1909	136,130	43,950	92,180	32.3	67.7		1909	3,517	2,398	1,149	67.6	32.4
Proprietors and officials.....	1919	6,008	6,221	474	92.9	7.1	Wage earners (average number)...	1919	172,572	50,621	121,951	29.3	70.7
	1914	3,906	3,782	181	95.1	4.8		1914	150,520	44,428	106,092	29.5	70.5
	1909	3,308	3,125	183	91.5	5.5		1909	120,275	38,427	90,848	29.7	70.3
Proprietors and firm members.....	1919	1,488	1,421	64	95.7	4.3	16 years of age and over.....	1919	163,222	47,020	115,302	29.4	70.6
	1914	1,298	1,238	60	95.4	4.6		1914	141,533	41,874	99,659	29.6	70.4
	1909	1,134	1,067	67	94.1	5.9		1909	118,769	35,383	83,386	29.8	70.2
Salaried officers of corporations.....	1919	1,023	1,808	65	98.6	3.4	Under 16 years of age.....	1919	9,350	2,701	6,619	28.9	71.1
	1914	1,050	1,019	31	97.0	3.0		1914	8,987	2,554	6,433	28.4	71.6
	1909	769	781	18	97.7	2.3		1909	10,506	3,044	7,462	29.0	71.0
Superintendents and managers.....	1919	3,277	2,932	345	89.5	10.5							
	1914	1,618	1,525	93	91.3	5.7							
	1909	1,375	1,277	98	92.9	7.1							

TABLE 4.—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.	Aver-age num-ber em-ployed dur-ing year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.											Per cent min-imum is of max-i-mum.	
		Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	Octo- ber.	Novem- ber.	Decem- ber.	
United States:														
1919.....	172,572	168,304	103,582	160,438	162,956	166,713	168,617	173,887	177,339	177,244	181,315	184,046	186,423	86.1
Males.....	49,891	47,982	45,026	45,197	46,709	48,291	49,445	50,709	51,885	51,576	52,759	53,651	54,522	82.6
Females.....	122,681	120,322	117,656	115,301	116,247	118,422	119,172	123,178	125,454	125,668	128,556	130,395	131,801	87.5
1914.....	150,620	152,074	155,083	157,638	157,054	155,273	153,071	148,572	142,779	143,747	147,518	146,356	145,582	90.6
1909.....	120,275	123,308	125,181	128,052	129,317	120,270	128,899	127,845	128,231	130,329	132,997	134,540	133,340	91.7
Alabama.....	1,055	1,046	1,052	1,053	1,048	1,055	1,025	1,021	1,034	1,066	1,091	1,079	1,090	95.9
California.....	605	604	614	613	615	614	602	603	608	633	748	875	630	63.0
Connecticut.....	2,010	2,500	2,573	2,579	2,587	2,600	2,622	2,738	2,716	2,726	2,702	2,721	2,718	91.3
Georgia.....	3,808	3,956	3,609	3,612	3,540	3,594	3,701	3,726	3,608	3,059	4,054	4,142	4,196	83.7
Illinois.....	5,005	5,017	5,017	4,980	4,940	5,006	5,090	5,183	5,160	5,124	5,185	5,213	5,159	94.8
Indiana.....	2,075	2,084	2,090	2,641	2,651	2,617	2,620	2,627	2,663	2,681	2,605	2,730	2,753	95.4
Maryland.....	749	732	730	872	613	702	737	773	751	737	811	824	873	73.7
Massachusetts.....	12,761	12,722	12,501	12,484	12,402	11,970	12,117	12,432	12,003	12,964	13,353	13,499	13,975	85.7
Michigan.....	3,170	3,201	3,175	3,058	3,115	3,001	2,971	3,097	3,188	3,121	3,352	3,345	3,416	87.0
Minnesota.....	3,561	3,072	4,170	4,171	4,055	3,000	3,712	3,307	3,120	3,087	3,106	3,063	3,026	72.5
New Hampshire.....	2,070	3,021	2,081	2,897	2,890	2,050	2,998	2,618	3,018	3,038	3,093	2,986	3,228	82.0
New Jersey.....	4,553	4,545	4,618	4,755	4,705	4,721	4,679	4,837	4,032	4,900	5,100	5,184	5,180	87.7
New York.....	41,372	40,941	39,942	37,408	38,830	40,240	39,741	41,427	42,812	42,140	43,070	44,281	45,587	82.1
North Carolina.....	10,215	10,470	10,058	9,669	9,763	9,898	10,081	10,081	10,138	10,232	10,479	10,808	10,908	88.6
Ohio.....	4,407	3,877	3,588	3,638	3,850	4,000	4,263	4,525	4,879	4,863	5,075	5,123	5,149	69.6
Pennsylvania.....	44,156	41,794	39,404	39,706	40,226	42,305	43,387	45,676	46,055	46,885	47,556	48,182	48,086	82.0
Rhode Island.....	1,083	1,045	1,871	1,835	1,857	1,920	1,960	2,024	2,033	2,069	2,053	2,091	2,138	85.8
South Carolina.....	781	734	708	761	781	753	728	773	799	805	837	803	835	86.4
Tennessee.....	10,308	10,015	9,086	9,645	9,605	9,960	10,355	10,655	10,655	10,688	10,839	10,930	11,014	86.7
Utah.....	108	120	142	147	163	170	211	222	244	244	237	225		
Vermont.....	1,105	1,113	1,122	1,144	1,099	1,109	1,159	1,183	1,198	949	1,033	1,063	1,108	79.2
Virginia.....	1,578	1,214	1,207	1,240	1,417	1,437	1,606	1,759	1,789	1,806	1,804	1,831	1,817	65.9
Washington.....	105	72	66	67	64	72	82	100	119	133	161	180	164	39.0
Wisconsin.....	8,736	8,508	8,410	8,278	8,428	8,379	8,506	8,904	8,867	8,855	9,087	9,302	9,308	88.9
<i>States showing large proportion of females,</i>														Per cent av. is of state.
Alabama.....	1,080	1,077	1,084	1,081	1,074	1,076	1,060	1,053	1,059	1,085	1,105	1,097	1,108	65.3
Connecticut.....	1,709	1,507	1,450	1,609	1,663	1,679	1,685	1,775	1,754	1,766	1,752	1,764	1,754	64.5
Georgia.....	2,283	2,361	2,117	2,060	2,185	2,206	2,246	2,242	2,184	2,387	2,421	2,488	2,529	60.0
Illinois.....	3,045	3,582	3,602	3,500	3,508	3,646	3,051	3,710	3,679	3,655	3,687	3,723	3,667	71.5
Massachusetts.....	9,019	9,072	8,918	8,875	8,774	8,503	8,613	8,898	9,220	9,521	9,681	9,826	71.0	
Minnesota.....	2,085	3,416	3,575	3,593	3,448	3,288	3,094	2,778	2,662	2,501	2,551	2,513	2,498	83.8
New Jersey.....	3,774	3,601	3,683	3,756	3,700	3,704	3,608	3,775	3,815	3,781	3,907	3,982	3,967	77.8
North Carolina.....	6,283	6,495	6,205	5,031	6,009	6,070	6,207	6,111	6,195	6,291	6,443	6,706	6,733	61.5
Pennsylvania.....	33,730	32,412	30,842	31,152	30,871	32,215	32,786	31,600	35,450	35,610	36,150	36,137	36,445	70.4
Tennessee.....	7,480	7,201	7,051	6,910	6,092	7,230	7,520	7,682	7,728	7,916	7,906	8,020	72.7	
Wisconsin.....	6,630	6,474	6,405	6,288	6,370	6,322	6,416	6,702	6,770	6,733	6,918	7,055	7,095	70.0

## MANUFACTURES.

TABLE 5.—PER CENT DISTRIBUTION OF WAGE EARNERS, FOR STATES: 1919 AND 1914.

STATE.	Census year.	Wage earners (average number).	PER CENT OF TOTAL.			STATE.	Census year.	Wage earners (average number).	PER CENT OF TOTAL.		
			16 years of age and over.		Under 16 years of age.				16 years of age and over.		Under 16 years of age.
			Male.	Female.	Male.				Male.	Female.	Male.
United States.....	1919	172,572	27.4	67.2	5.4	New Jersey.....	1919	4,853	21.7	73.1	5.2
	1914	150,520	27.8	66.2	6.0		1914	4,025	37.3	59.4	3.3
	1909	129,275	27.4	64.5	8.1	New York.....	1919	41,372	34.7	64.3	1.0
							1914	40,005	34.2	63.8	2.0
Alabama.....	1919	1,655	33.5	63.7	2.8	North Carolina.....	1919	10,216	36.3	51.8	11.9
	1914	781	25.9	59.5	15.6		1914	7,787	30.8	52.4	16.8
California <sup>1</sup> .....	1919	695	14.4	55.0	0.6	Ohio.....	1919	4,407	20.6	78.3	1.1
Connecticut.....	1919	2,649	33.5	50.8	6.7		1914	3,411	22.9	76.4	0.7
	1914	2,904	30.1	67.3	2.5	Pennsylvania.....	1919	44,156	21.2	70.8	8.0
Georgia.....	1919	3,808	36.8	55.7	7.5		1914	41,130	21.0	69.5	9.4
	1914	3,468	35.0	56.2	8.8	Rhode Island.....	1919	1,983	23.8	69.7	6.5
Illinois.....	1919	5,095	27.3	62.0	3.6		1914	2,030	18.9	75.4	5.7
	1914	5,535	31.2	66.5	2.3	South Carolina.....	1919	781	40.1	54.4	5.5
Indiana.....	1919	2,075	32.6	60.5	6.8		1914	771	34.2	44.9	20.9
	1914	2,338	29.4	63.3	7.3	Tennessee.....	1919	10,308	25.9	69.1	5.0
Louisiana.....	1919	683	18.2	54.6	27.2		1914	5,690	33.1	58.6	8.3
Maryland.....	1919	749	18.6	77.8	3.6	Utah <sup>1</sup> .....	1919	198	8.6	89.4	2.0
	1914	1,077	22.9	73.4	3.7	Vermont.....	1919	1,105	32.2	67.6	0.2
Massachusetts.....	1919	12,751	27.5	67.8	4.7		1914	963	36.0	63.6	0.4
	1914	10,635	25.0	72.2	1.9	Virginia.....	1919	1,578	26.0	66.4	6.7
Michigan.....	1919	3,170	23.8	74.3	1.9		1914	2,272	34.8	53.9	11.3
	1914	2,714	24.4	74.1	1.5	Washington <sup>1</sup> .....	1919	105	15.2	84.8	—
Minnesota.....	1919	3,564	16.2	83.8	(2)		1919	8,736	20.1	66.7	13.2
	1914	2,088	14.5	85.5	(2)	Wisconsin.....	1914	6,244	21.8	72.6	5.6
New Hampshire.....	1919	2,979	30.1	67.5	2.4						
	1914	3,328	30.5	66.8	2.7						

<sup>1</sup> Figures not available for 1914.<sup>2</sup> Less than one-tenth of 1 per cent.

TABLE 6.—WAGE EARNERS DISTRIBUTED BY OCCUPATION, AGE, AND SEX, FOR SELECTED STATES: 1919, 1914, AND 1909.

(On Dec. 15, or nearest representative date.)

OCCUPATION AND STATE.	Cen-sus year.	Total.	16 YEARS OF AGE AND OVER.		UNDER 16 YEARS OF AGE.		OCCUPATION AND STATE.	Cen-sus year.	Total.	16 YEARS OF AGE AND OVER.		UNDER 16 YEARS OF AGE.				
			Male.	Female.	Male.	Fe-male.				Male.	Female.	Male.	Female.			
United States, total.....	1919	187,746	52,134	125,440	2,938	7,234	New York—Continued.			3,373	16,719	34	85			
	1914	153,438	42,693	101,586	2,602	6,557	Stitchers, loopers, and finishers.....	1919	20,211	1,050	16,392	76	183			
	1909	130,713	37,410	88,183	3,219	7,892		1914	18,310							
Spinners.....	1919	3,438	2,356	944	72	66	All other.....	1919	18,780	7,730	10,721	89	237			
	1914	3,057	2,610	955	47	45		1914	16,519	7,454	8,551	47	407			
	1909	3,133	2,078	839	116	100	Per cent of total:									
Knitters.....	1919	42,397	14,500	25,898	389	1,610	Spinners.....	1919		3.3	8.1	0.6	2.9	1.5		
	1914	36,764	12,228	21,640	806	2,090		1914		4.9	11.5	1.5	2.9	0.8		
	1909	30,193	9,994	22,973	829	2,397	Knitters.....	1919	12.6	23.9	6.4	9.3	0.9	1.4		
Stitchers, loopers, and finishers.....	1919	64,200	5,056	56,520	228	1,580		1914	10.3	23.7	3.3	9.3	1.4			
	1914	61,458	9,462	48,642	1,142	2,213	Stitchers, loopers, and finishers.....	1919	43.6	20.6	56.6	24.3	25.8			
	1909	53,818	6,991	43,627	857	2,343		1914	44.6	11.8	62.6	54.3	27.6			
All other.....	1919	77,621	29,322	42,072	2,249	3,978	All other.....	1919	40.5	47.3	36.3	63.6	71.8			
	1914	51,558	18,393	30,349	607	2,209		1914	40.2	53.0	32.6	33.6	70.3			
Per cent of total:							Pennsylvania, total.....	1919	48,357	10,485	34,019	1,181	2,072			
Spinners.....	1919	1.8	4.5	0.8	2.5	0.9		1914	41,832	8,301	29,081	930	3,020			
	1914	2.4	6.1	0.9	1.8	0.7	Spinners.....	1919	104	86	16	2	—			
	1909	2.3	5.6	1.0	3.6	1.3		1914	80	68	19	2	—			
Knitters.....	1919	22.6	27.8	20.6	18.2	22.3	Knitters.....	1919	14,740	3,958	9,930	133	728			
	1914	24.0	28.6	21.3	31.0	31.9		1914	14,648	3,208	10,155	176	1,049			
	1909	26.5	26.7	26.1	25.8	30.4	Stitchers, loopers, and finishers.....	1919	16,325	740	14,981	86	518			
Stitchers, loopers, and finishers.....	1919	34.2	11.4	45.1	7.8	21.8		1914	14,802	2,523	10,946	346	987			
	1914	40.0	22.2	47.9	43.0	33.8	All other.....	1919	17,179	5,701	9,002	960	1,426			
	1909	39.4	18.7	49.5	26.6	20.7		1914	12,293	2,042	7,961	408	984			
All other.....	1919	41.3	56.2	33.5	76.5	55.0	Per cent of total:									
	1914	33.6	48.1	29.0	23.3	33.7	Spinners.....	1919	0.2	0.8	(1)	0.2	—			
	1909	31.9	49.1	23.5	44.0	38.7		1914	0.2	0.8	0.1	0.2	—			
New York, total.....	1910	46,346	16,357	29,510	140	330	Knitters.....	1919	30.5	37.7	29.2	11.3	27.2			
	1914	41,004	14,060	26,200	140	664		1914	35.0	37.1	34.0	18.0	34.7			
Spinners.....	1919	1,519	1,330	180	4	5	Stitchers, loopers, and finishers.....	1919	33.8	7.1	44.0	7.3	19.4			
	1914	2,015	1,616	300	4	5		1914	35.4	28.7	37.6	37.2	32.7			
Knitters.....	1919	5,830	3,915	1,899	13	3	All other.....	1919	35.5	54.4	26.7	31.3	53.4			
	1914	4,220	3,331	867	13	0		1914	29.4	33.4	27.4	43.7	32.5			

<sup>1</sup> Less than one-tenth of 1 per cent.

## KNIT GOODS.

7

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

STATE.	Cen-sus year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—								STATE.	Cen-sus year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—										
			44 and under.	Be-tween 44 and 48.	48. <sup>1</sup>	Be-tween 48 and 54.	54.	Be-tween 54 and 60.	60.	Over 60.				44 and under.	Be-tween 44 and 48.	48. <sup>1</sup>	Be-tween 48 and 54.	54.	Be-tween 54 and 60.	60.	Over 60.			
			(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)				(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)			
United States..	1919	172,572	7,818	4,701	54,674	46,149	30,387	23,009	4,578	356	New Jersey.....	1919	4,853	462	114	980	2,552	582	183	—	—			
	1914	150,520	—	—	—	—	—	—	—	—	1914	4,025	(2)	(2)	73	171	363	3,328	90	—	—			
	1900	129,273	—	—	—	—	—	—	—	—	New York.....	1919	41,372	5,020	2,495	16,000	7,469	5,590	4,027	406	356	405		
	—	—	—	—	—	—	—	—	—	—	1914	40,095	(2)	(2)	200	3,827	30,382	2,145	3,127	—	—			
Alabama.....	1919	1,055	—	—	—	—	216	—	1,124	315	North Carolina.....	1919	10,216	12	—	453	3,816	623	3,569	1,743	—	—		
	1914	781	—	—	—	—	—	—	174	607	1914	7,787	—	—	—	—	6	683	7,030	18	—			
California <sup>2</sup> .....	1919	605	146	21	528	—	—	—	—	—	Ohio.....	1919	4,407	7	184	374	3,333	286	203	20	—	—		
	1914	2,049	24	25	409	908	—	—	1,283	—	1914	3,411	(2)	(2)	64	205	3,035	107	—	—				
Connecticut.....	1919	2,049	24	25	409	323	306	511	1,644	—	Pennsylvania.....	1919	44,156	1,415	454	16,027	9,725	15,400	600	535	—	—		
	1914	2,004	(2)	(2)	(2)	(2)	—	—	—	—	1914	41,130	(2)	(2)	807	1,533	34,353	4,073	364	—	—			
Georgia.....	1919	3,808	—	—	—	—	635	1,077	1,020	1,067	Rhode Island.....	1919	1,983	—	—	1,235	34	714	—	—	—	—		
	1914	3,468	—	—	—	—	—	—	896	2,346	1914	2,080	(2)	(2)	305	10	1,519	196	—	—	—			
Illinois.....	1919	5,005	509	657	980	2,066	—	2	872	—	South Carolina.....	1919	781	—	—	—	7	3	26	456	289	—	—	
	1914	5,355	(2)	(2)	(2)	266	525	511	1,786	447	1914	771	—	—	—	—	—	—	120	651	—	—		
Indiana.....	1919	2,675	—	—	—	2,170	495	1	—	—	Tennessee.....	1919	10,308	—	—	116	625	1,918	3,241	4,408	—	—	—	
	1914	2,333	—	—	—	10	—	2,328	—	—	1914	5,090	—	—	—	—	—	—	4,094	696	—	—		
Louisiana <sup>2</sup> .....	1919	533	—	—	—	30	92	411	—	—	Utah <sup>2</sup> .....	1919	198	53	74	71	—	—	—	—	—	—	—	
Maryland.....	1919	749	—	—	—	206	97	446	—	—	Vermont.....	1919	1,105	—	—	168	56	340	—	—	541	261	—	—
	1914	1,077	—	—	—	12	—	1,001	64	—	1914	963	—	—	—	—	—	—	—	—	—	—		
Massachusetts.....	1919	12,751	25	14	12,292	60	236	124	—	—	Virginia.....	1919	1,578	—	—	221	—	270	609	388	—	—	—	
	1914	10,635	(2)	(2)	(2)	9	496	9,702	400	19	1914	2,272	—	—	172	1,778	308	14	—	—	—			
Michigan.....	1919	3,170	34	13	921	1,431	771	—	—	—	Washington <sup>2</sup> .....	1919	105	—	—	37	—	68	—	—	—	—	—	—
	1914	2,714	(2)	(2)	(2)	26	201	2,315	172	—	1914	6,244	(2)	(2)	1,085	155	5,410	262	2,835	—	—	—		
Minnesota.....	1919	3,504	1	80	403	3,080	32	2,021	—	—	Wisconsin.....	1919	8,736	64	—	105	36,249	37	24,777	14	25,332	—	—	—
	1914	2,088	(2)	(2)	(2)	35	—	—	—	—	1914	6,244	(2)	(2)	1,085	300	1,600	3,100	39	22,422	—	—	—	
New Hampshire.....	1919	2,979	—	—	2,086	173	120	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	1914	3,328	—	—	—	3	601	2,684	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

<sup>1</sup> Includes 48 and under for 1914 and 1900.<sup>2</sup> Corresponding figures not available.<sup>3</sup> Not shown separately in 1914.

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.				
United States.....	1919	2,050	172,572	82	379	1,026	472	5,786	379	13,150	303	22,146			
	1914	1,022	150,520	47	295	840	310	4,445	291	9,738	257	10,071			
Alabama.....	1919	10	1,055	—	—	8	—	1	25	3	205	3	896		
	1914	21	895	1	5	14	—	3	111	3	241	1	—		
Connecticut.....	1919	21	2,619	1	2	4	—	4	97	2	166	9	952		
	1914	28	3,808	—	—	—	—	13	473	4	290	9	—		
Illinois.....	1919	58	6,005	7	12	25	9	100	6	234	7	516	10	1,371	
	1914	—	—	—	—	—	—	—	—	—	—	6	507		
Indiana.....	1919	8	2,675	—	1	1	—	2	94	1	55	1	220		
	1914	7	740	—	—	—	—	2	65	2	167	3	517		
Massachusetts.....	1919	77	12,751	3	13	43	12	140	13	483	12	809	13	1,982	
	1914	31	3,170	1	3	6	7	93	6	224	7	554	3	1,716	
Michigan.....	1919	10	3,504	1	4	7	7	73	1	43	1	432	2	826	
	1914	16	2,088	1	4	7	7	104	2	98	7	494	8	1,035	
New Hampshire.....	1919	16	2,979	—	—	—	—	3	88	3	291	6	950		
	1914	90	4,853	4	25	50	28	333	13	427	9	730	3	550	
New York.....	1919	682	41,372	41	221	614	192	2,193	73	2,407	51	3,711	66	10,197	
	1914	121	10,216	—	12	27	26	342	34	1,160	32	2,225	10	1,568	
Ohio.....	1919	34	4,407	1	3	0	7	104	2	98	7	494	8	1,368	
	1914	—	—	—	—	—	—	—	—	—	—	—	6	2,334	
Pennsylvania.....	1919	606	44,156	11	61	177	141	1,880	162	5,618	123	8,721	76	12,537	
	1914	26	1,083	3	9	7	7	70	4	160	3	229	9	1,516	
Rhode Island.....	1919	14	781	—	1	3	4	46	5	150	1	78	2	237	
	1914	63	10,308	—	1	4	3	31	11	366	18	1,269	19	3,258	
Tennessee.....	1919	10	108	—	2	7	5	65	2	68	1	58	7	2,445	
	1914	—	—	—	—	—	—	—	—	—	—	—	4	2,935	
Utah.....	1919	7	1,105	—	—	—	—	—	3	219	3	447	1	439	
	1914	10	1,578	—	3	10	17	13	143	15	527	8	474	10	1,297
Vermont.....	1919	8	105	—	—	—	—	—	—	—	—	6	2,023	2	1,273
	1914	72	8,736	6	10	17	13	143	15	527	8	474	10	1,297	
Virginia.....	1919	7	1,105	—	—	—	—	—	—	—	—	—	—	—	—
	1914	10	1,578	—	—	—	—	—	—	—	—	—	—	—	—
Washington.....	1919	8	105	—	3	10	17	13	143	15	527	8	474	10	1,297
	1914	72	8,736	6	10	17	13	143	15	527	8	474	10	1,297	
Wisconsin.....	1919	72	8,736	6	10	17	13	143	15	527	8	474	10	1,297	

## MANUFACTURES.

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	2,050	1,622	1,374	172,572	150,520	129,275	\$713,139,689	\$258,912,903	\$200,143,527	\$286,044,129	\$112,225,445
Less than \$5,000	145	194	129	113	395	296	300,608	476,663	319,050	221,052	283,745	161,156
\$5,000 to \$20,000	251	320	221	1,104	2,928	2,418	2,352,214	3,831,526	2,627,769	1,560,100	1,851,970	1,349,956
\$20,000 to \$100,000	589	553	534	10,718	18,901	20,712	31,303,774	28,146,728	27,241,283	12,675,788	12,136,548	12,209,812
\$100,000 to \$500,000	717	437	465	{ 46,067	{ 82,751	82,160	{ 168,890,243	{ 95,347,054	{ 132,820,875	{ 55,390,471	{ 59,250,581	{ 57,082,405
\$500,000 to \$1,000,000	184	71	25	{ 31,252	{ 45,545	23,689	{ 128,609,577	{ 47,157,418	{ 381,093,133	{ 38,953,514	{ 37,125,550	{ 156,524,280
\$1,000,000 and over	164	47	25	{ 83,318	{ 45,545	23,689	{ 381,093,133	{ 38,953,514	{ 37,125,550	{ 38,606,601	{ 18,208,031	{ 18,208,031
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	7.1	12.0	9.4	0.1	0.3	0.2	0.1	0.2	0.2	0.1	0.3	0.2
\$5,000 to \$20,000	12.2	10.7	16.1	0.6	1.9	1.9	0.4	1.5	1.3	0.5	1.7	1.5
\$20,000 to \$100,000	28.7	34.1	33.9	6.2	12.6	16.0	4.4	10.9	13.6	4.4	10.8	13.6
\$100,000 to \$500,000	35.0	26.9	33.8	{ 20.7	{ 55.0	63.6	{ 23.7	{ 36.8	{ 60.4	{ 22.9	{ 52.8	{ 64.5
\$500,000 to \$1,000,000	9.0	4.4	18.1	{ 18.1	{ 18.0	18.2	{ 18.0	{ 18.2	{ 54.7	{ 54.7	{ 34.5	{ 29.3
\$1,000,000 and over	8.0	2.9	1.8	{ 48.3	{ 30.3	18.3	{ 53.4	{ 32.4	{ 18.5	{ 18.5	{ 34.5	{ 29.3

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

STATE.	Cen-	SUS- YEAR.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			
			Total.			In establishments owned by—			Of establishments owned by—			
			Individ- uals.	Cor- pora- tions.	All oth- ers.	Individ- uals.	Cor- pora- tions.	All oth- ers.	Individ- uals.	Corpora- tions.	All oth- ers.	
United States..	1910	564	1,006	390	172,572	9,986	147,052	15,534	5.8	85.2	9.0	\$713,139,689
	1914	510	785	318	150,520	13,907	120,897	15,910	9.2	80.2	10.6	258,912,903
	1909	443	651	280	129,275	16,453	93,174	19,648	12.7	72.1	15.2	200,143,527
Alabama <sup>1</sup>	1919	1	9	—	1,655	—	1,655	—	—	100.0	—	4,757,008
California <sup>1</sup>	1919	7	11	3	695	52	614	29	7.5	88.3	4.2	2,878,226
Connecticut	1919	1	18	2	2,649	—	3,2,649	—	—	100.0	—	9,332,776
	1914	3	18	4	2,904	—	2,849	55	—	98.1	1.9	5,221,683
Georgia <sup>1</sup>	1919	1	26	1	3,808	—	3,808	—	—	100.0	—	12,566,787
Illinois	1919	19	33	6	5,095	36	4,927	132	0.7	96.7	2.6	20,460,360
	1914	16	27	3	3,555	190	3,345	—	5.4	94.6	—	7,367,235
Indiana <sup>1</sup>	1919	1	7	—	2,675	—	2,675	—	—	100.0	—	9,801,928
Maryland <sup>1</sup>	1919	6	1	749	—	4749	—	—	100.0	—	2,687,496	—
Massachusetts	1919	16	51	10	12,751	223	11,700	828	1.7	91.8	6.5	52,424,235
	1914	23	44	10	10,635	254	9,601	780	2.4	90.3	7.8	17,419,077
Michigan	1919	6	24	1	3,170	460	3,104	—	2.1	97.9	—	12,039,377
	1914	5	26	3	2,714	416	2,698	—	4.3	95.7	—	5,232,985
Minnesota	1919	7	8	1	3,564	446	3,518	—	1.3	98.7	—	13,984,944
	1914	5	6	2	2,083	459	2,020	—	2.8	97.2	—	4,665,325
New Hampshire	1919	1	13	2	2,979	—	2,434	545	5.1	81.7	18.3	9,015,583
	1914	3	12	5	3,328	170	2,437	721	73.2	21.7	4,282,739	240,166
New Jersey	1919	29	43	18	4,853	170	4,271	412	3.5	88.0	8.5	23,853,075
	1914	24	29	9	4,025	444	3,381	190	11.0	84.2	4.7	7,340,556
New York	1919	256	266	160	41,372	2,719	33,835	4,818	6.6	81.8	11.6	195,376,641
	1914	198	176	109	40,095	3,347	31,610	5,138	8.3	78.8	12.8	78,229,235
North Carolina	1919	13	93	15	10,216	193	9,860	363	1.9	94.6	3.6	28,833,588
	1914	10	57	7	7,787	360	7,241	186	4.6	93.0	2.4	5,892,362
Ohio	1919	2	28	4	4,407	—	4,328	70	—	98.2	1.8	18,778,844
	1914	5	30	3	3,411	171	2,927	313	5.0	85.8	9.2	8,654,103
Pennsylvania	1919	169	279	153	44,156	5,540	30,996	7,620	12.5	70.2	17.3	188,260,800
	1914	183	179	136	41,130	7,234	26,718	7,178	17.6	65.0	17.5	64,153,449
Rhode Island	1919	8	15	3	1,983	372	1,601	10	18.8	80.7	0.5	11,936,313
	1914	4	16	3	2,030	438	1,399	193	21.6	88.9	9.5	4,191,841
South Carolina <sup>1</sup>	1910	1	13	—	781	—	781	—	—	100.0	—	2,076,036
Tennessee <sup>1</sup>	1910	62	1	10,308	—	4,10,308	—	—	100.0	—	32,952,349	—
Utah <sup>1</sup>	1910	1	9	—	108	—	108	—	—	100.0	—	1,156,380
Vermont	1919	6	1	1,105	—	4,1,105	—	—	100.0	—	5,063,801	—
	1914	1	4	2	663	—	699	264	—	72.6	27.4	2,164,897
Virginia	1919	2	8	—	1,578	—	1,578	—	—	100.0	—	4,684,504
	1914	3	9	1	2,272	4972	1,300	—	42.8	57.2	—	3,515,016
Wisconsin	1919	18	51	3	8,736	49	8,585	102	0.6	98.3	1.2	40,777,704
	1914	21	41	6	6,244	55	6,070	119	0.9	97.2	1.0	13,292,305

<sup>1</sup> Not reported separately in 1914.<sup>2</sup> Includes the group "Individuals."<sup>3</sup> Includes the groups "Individuals" and "All others."<sup>4</sup> 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.....	11,806	5,333	2,736	151,601	125,842	103,709	100.0	100.0	100.0
Owned.....	878	965	1,085	89,758	96,635	88,033	59.2	76.8	84.9
Steam <sup>1</sup> .....	539	737	811	70,003	80,884	74,760	50.1	64.3	72.1
Engines.....	509	(2)	(2)	68,509	(2)	(2)	45.2	.....	.....
Turbines.....	20	(2)	(2)	7,434	(2)	(2)	4.9	.....	.....
Internal-combustion engines.....	53	74	113	814	1,108	1,235	0.5	0.9	1.2
Water wheels, turbines, and motors.....	236	154	161	12,941	14,643	12,038	8.5	11.6	11.6
Rented.....	10,928	4,368	1,651	61,843	29,207	15,676	40.8	23.2	15.1
Electric.....	10,928	4,368	1,651	59,680	26,284	13,286	39.4	20.9	12.8
Other.....	.....	.....	2,103	2,923	2,390	1.4	2.3	2.3	2.3
Electric.....	15,500	6,888	2,839	91,137	46,117	25,485	100.0	100.0	100.0
Rented.....	10,928	4,368	1,651	59,680	26,284	13,286	65.5	57.0	52.1
Generated by establishments reporting.....	4,581	2,520	1,188	31,457	19,833	12,109	34.5	43.0	47.9

<sup>1</sup> Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.<sup>2</sup> Not reported separately.

TABLE 12.—FUEL CONSUMED, BY STATES: 1919 AND 1914.

STATE.	Cen-	COAL.			STATE.	Cen-	COAL.			Gasoline															
		Anthra-	Bitumi-	Coke			Anthra-	Bitumi-	Coke																
		cite	nous	(tons,	Fuel	Gaso-	line	(1,000	Gas	year	(tons,	tons,	lbs.)	bar-	and	volatil-	feet).	year	(tons,	lbs.)	bar-	and	volatil-	feet).	
United States.....	1919	102,024	584,787	1,654	4,172	3,354	73,068	New Jersey.....	1919	6,355	4,093	10	.....	1	491	.....	1914	2,572	12,784	.....	6	(1)	1,647		
	1914	118,071	484,268	2,849	2,476	(1)	40,705	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Alabama.....	1919	7,908	.....	.....	.....	8	.....	New York.....	1919	30,124	201,534	3	.....	944	29,076	.....	1914	41,146	164,981	4	400	(1)	11,401		
	1914	3,733	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
California <sup>1</sup> .....	1910	74	.....	695	.....	.....	5,229	North Carolina.....	1919	156	45,729	215	68	209	746	.....	1914	1,608	27,570	552	370	(1)	572		
Connecticut.....	1919	9	15,309	.....	.....	102	(1)	2,610	Ohio.....	1919	2	11,777	9	105	.....	4,626	.....	1914	165	13,391	129	(1)	6,351		
	1914	61	13,087	.....	.....	.....	.....	.....	Pennsylvania.....	1919	50,606	60,344	972	104	1,025	24,180	.....	1914	70,234	42,324	1,388	449	(1)	9,207	
Georgia.....	1919	22,013	.....	14	69	21	(1)	250	Rhode Island.....	1919	74	2,896	31	2,924	.....	42	.....	1914	21	1,077	29	(1)	104		
	1914	15,303	.....	.....	.....	.....	.....	.....	South Carolina.....	1919	2	4,961	4	136	4	(1)	.....	1914	.....	.....	.....	.....	.....		
Illinois.....	1919	73	20,807	85	129	(1)	371	2,701	Tennessee.....	1919	47,400	13	566	2	284	2	.....	.....	1914	28,000	139	(1)	3		
	1914	52	21,101	.....	.....	.....	.....	1,076	Utah <sup>2</sup> .....	1919	.....	394	.....	.....	.....	.....	.....	.....	1914	.....	.....	.....	.....		
Indiana.....	1919	6	13,786	.....	8	(1)	.....	.....	Vermont.....	1919	2	6,245	.....	.....	20	.....	.....	.....	1914	22	5,158	.....	(1)	.....	
	1914	70	9,095	.....	.....	.....	.....	.....	Virginia.....	1919	.....	8,403	28	(1)	.....	.....	.....	.....	1914	.....	.....	.....	.....		
Louisiana <sup>2</sup> .....	1919	2,045	.....	30	140	.....	.....	.....	Washington <sup>2</sup> .....	1919	.....	65	.....	.....	.....	.....	.....	.....	1914	125	7,887	10	462	(1)	1,853
	1914	4,342	.....	.....	110	(1)	1,580	.....	Wisconsin.....	1919	208	35,441	8	1	2,282	.....	.....	1914	228	20,539	18	10	(1)	60	
Maryland.....	1919	142	4,252	.....	.....	.....	.....	.....	All other states.....	1919	125	7,887	10	462	(1)	279	.....	1914	135	10,678	10	.....	.....	1,853	
	1914	1,152	30,205	74	882	74	(1)	5,018	.....	.....	.....	.....	.....	.....	.....	.....	.....	1914	.....	.....	.....	.....	.....		
Massachusetts.....	1910	4,880	42,503	74	8	1	1,330	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1914	.....	.....	.....	.....	.....		
	1914	1,152	30,205	882	74	(1)	5,018	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1914	.....	.....	.....	.....	.....		
Michigan.....	1910	10	84	138	100	140	5	151	.....	.....	.....	.....	.....	.....	.....	.....	.....	1914	.....	.....	.....	.....	.....		
	1914	255	10,406	.....	.....	.....	.....	151	.....	.....	.....	.....	.....	.....	.....	.....	.....	1914	.....	.....	.....	.....	.....		
Minnesota.....	1910	40	9,402	.....	.....	.....	457	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1914	.....	.....	.....	.....	.....		
	1914	11	5,308	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1914	.....	.....	.....	.....	.....		
New Hampshire.....	1919	336	8,055	70	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1914	.....	.....	.....	.....	.....		
	1914	315	8,080	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1914	.....	.....	.....	.....	.....		

<sup>1</sup> Included in figures for fuel oils.<sup>2</sup> Figures not available for 1914.

## MANUFACTURES.

## SPECIAL STATISTICS.

## SECTION 1.

## MATERIALS.

**Summary of materials for the United States.**—Table 13 is a comparative summary relating to the quantity and cost of all materials used in the knit-goods industry for 1919, 1914, 1909, and 1904.

TABLE 13.—QUANTITY AND COST OF MATERIALS USED IN THE KNIT-GOODS INDUSTRY: 1919, 1914, 1909, AND 1904.

	1919	1914	1909	1904
Materials, total cost	\$427,095,570	\$146,687,458	\$110,241,053	\$76,789,348
Cotton:				
Domestic—				
Pounds.....	92,446,380	86,202,432	71,986,529	48,668,643
Cost.....	\$30,387,995	\$11,083,987	\$8,277,508	\$5,526,396
Foreign—				
Pounds.....	603,938	2,187,776	3,429,494	1,918,117
Cost.....	\$275,281	\$360,919	\$526,001	\$342,921
Carded and other prepared—				
Pounds.....	838,753	1,920,124	(1)	(1)
Cost.....	\$262,772	\$235,832	(1)	(1)
Waste purchased—				
Pounds.....	24,832,027	24,303,514	(1)	(1)
Cost.....	\$4,857,149	\$2,100,762	(1)	(1)
Wool:				
Domestic (in condition purchased)—				
Pounds.....	3,706,825	5,735,395	6,596,081	16,170,183
Cost.....	\$4,125,884	\$2,436,524	\$2,060,636	\$5,610,440
Foreign (in condition purchased)—				
Pounds.....	811,243	1,212,203	472,707	1,130,433
Cost.....	\$934,068	\$530,959	\$252,419	\$543,418
Equivalent of above in scoured condition, pounds.....	4,116,365	6,072,257	5,582,839	13,909,144
All other animal hair:				
Pounds.....	705,839	690,714	191,344	89,502
Cost.....	\$339,577	\$153,099	\$82,303	\$54,877
Recovered wool fiber, purchased:				
Pounds.....	5,367,065	3,453,682	7,482,553	7,489,358
Cost.....	\$2,066,168	\$602,392	\$919,970	\$923,719
Wool waste and noils, purchased:				
Pounds.....	5,026,522	5,946,337	8,586,261	6,020,459
Cost.....	\$3,852,720	\$1,827,122	\$2,813,120	\$1,711,689
Tops, purchased:				
Pounds.....	146,812	265,216	121,565	182,149
Cost.....	\$240,434	\$140,153	\$82,095	\$116,773
Raw silk, purchased:				
Pounds.....	1,265,568	1,590,162	(1)	(1)
Cost.....	\$8,310,769	\$6,331,413	(1)	(1)
Yarns, purchased:				
Cotton, not mercerized—				
Pounds.....	188,892,109	189,851,716	216,087,611	161,500,466
Cost.....	\$120,701,157	\$47,405,667	\$48,185,749	\$34,372,910
Cotton, mercerized—				
Pounds.....	30,519,234	15,672,427	(1)	(1)
Cost.....	\$49,403,099	\$9,289,859	(1)	(1)
Woolen—				
Pounds.....	5,383,926	7,145,453	6,140,265	4,839,343
Cost.....	\$8,886,287	\$4,442,705	\$3,834,094	\$2,798,484
Worsted—				
Pounds.....	12,635,631	14,305,333	10,370,004	8,789,570
Cost.....	\$32,148,641	\$11,094,039	\$10,116,325	\$7,457,690
Merino—				
Pounds.....	6,965,256	4,333,309	4,014,600	2,568,890
Cost.....	\$10,273,050	\$2,380,702	\$2,667,051	\$1,118,999
Silk and spun silk—				
Pounds.....	5,711,110	1,913,478	982,753	320,671
Cost.....	\$49,222,061	\$7,510,872	\$3,006,599	\$1,200,289
Artificial silk—				
Pounds.....	4,153,546	1,257,243	(1)	(1)
Cost.....	\$24,101,514	\$2,337,949	(1)	(1)
Linen, jute, and other vegetable fiber—				
Pounds.....	288,009	70,278	241,754	62,617
Cost.....	\$182,774	\$80,830	\$180,818	\$56,224
Chemicals and dyestuffs, cost	\$8,222,817	\$2,913,027	\$2,541,939	\$1,677,252
All other materials, cost.....	\$67,195,453	\$32,758,577	\$23,517,457	\$13,277,347
Yarns made for consumption within same establishment:				
Cotton, pounds.....	87,063,037	75,970,761	69,171,277	39,954,890
Woolen, pounds.....	5,861,147	7,714,761	8,316,349	(1)
Worsted, pounds.....	532,694	231,752	223,404	(1)
Merino, pounds.....	17,239,895	24,180,086	20,856,983	(1)

<sup>1</sup> Not reported separately.

Principal materials used in the industry, by states.—A distribution, by states, of the principal materials used in the industry, according to quantity and cost, is given in Table 14.

TABLE 14.—PRINCIPAL MATERIALS USED IN THE KNIT-GOODS INDUSTRY, BY STATES: 1919, 1914, AND 1909.

MATERIAL AND STATE.	COST.	QUANTITY (POUNDS).			
		1919	1910	1914	1909
Cotton, raw.....	\$180,663,276	1,93,050,318	1,88,390,208	1,75,416,023	
Connecticut.....	562,944	1,801,338	1,844,557	1,971,512	
Georgia.....	2,462,301	7,050,262	8,738,056	4,013,536	
Massachusetts.....	5,129,028	10,421,015	14,369,080	16,459,053	
New Hampshire.....	234,095	665,020	1,247,298	1,314,269	
New York.....	11,318,970	34,004,413	39,560,749	34,665,053	
North Carolina.....	5,155,400	14,169,262	10,213,353	3,631,967	
Pennsylvania.....	350,654	963,824	2,767,922	2,506,120	
Tennessee.....	3,061,243	9,258,751	3,985,128	3,591,120	
Virginia.....	31,709	274,008	1,956,792	1,018,657	
All other states.....	2,352,972	7,141,825	3,705,064	6,314,745	
Open cotton fiber, dyed, bleached, or otherwise treated, purchased.....	113,147	320,665	(2)	(2)	
Cotton card laps.....	149,025	500,088	1,920,124	(2)	
Cotton waste.....	4,857,149	24,832,027	24,303,514	(2)	
Connecticut.....	109,828	381,895	688,320	(2)	
Massachusetts.....	293,638	1,054,918	(2)	(2)	
New Hampshire.....	174,719	595,339	458,286	(2)	
New York.....	3,981,772	20,778,984	19,624,839	(2)	
Virginia.....	94,700	471,754	945,646	(2)	
All other states.....	202,492	1,549,109	2,586,423	(2)	
Wool:					
In condition purchased.....	5,060,852	4,518,068	4,6,947,598	4,7,008,788	
Connecticut.....	681,723	596,589	1,090,505	1,019,245	
Massachusetts.....	599,618	534,068	313,877	440,374	
Michigan.....	138,525	135,256	255,880	166,136	
New Hampshire.....	179,133	128,305	172,081	211,544	
New York.....	1,044,631	1,354,405	2,787,835	1,967,337	
Pennsylvania.....	1,156,920	1,113,994	582,590	467,877	
Wisconsin.....	223,183	218,782	528,758	302,740	
All other states.....	437,139	436,660	1,216,072	2,493,535	
Equivalent of above in scoured condition.....	4,116,365	6,072,257	5,582,839		
Connecticut.....	524,661	550,743	815,927		
Massachusetts.....	501,932	303,877	349,769		
Michigan.....	135,256	124,605	150,082		
New Hampshire.....	128,305	126,768	210,171		
New York.....	1,244,962	2,497,961	1,967,327		
Pennsylvania.....	1,015,701	335,941	435,848		
Wisconsin.....	183,773	528,758	287,065		
All other states.....	381,685	1,039,004	1,375,620		
Recovered wool fiber.....	2,066,168	5,367,065	3,453,682	7,482,553	
New Hampshire.....	215,978	600,274	608,004	566,214	
New York.....	757,689	2,197,071	1,742,352	5,410,605	
All other states.....	1,092,501	2,668,820	1,102,426	1,503,734	
Wool waste and noils.....	3,852,720	5,025,522	5,916,337	8,588,261	
Connecticut.....	590,280	826,903	811,013	2,015,712	
Michigan.....	17,044	13,468	210,922	356,037	
New York.....	1,393,891	1,783,285	2,602,559	4,388,579	
Pennsylvania.....	307,797	481,148	636,390	548,497	
Wisconsin.....	353,497	607,351	428,988	199,878	
All other states.....	1,100,211	1,311,307	1,255,865	1,065,558	
Tops.....	240,434	146,812	265,216	121,565	
Connecticut.....	31,778	17,394	29,000	35,783	
New York.....	59,273	43,875	80,042	66,914	
All other states.....	149,383	85,543	150,174	15,868	
Raw silk.....	9,340,769	1,205,508	1,590,162	(2)	
New Jersey.....	304,452	47,541	164,490	(2)	
New York.....	5,274,611	704,039	1,025,446	(2)	
Pennsylvania.....	3,587,861	372,091	400,226	(2)	
All other states.....	83,845	141,897	127,897	(2)	

<sup>1</sup> Includes for 1919, 603,938 pounds of foreign cotton, costing \$275,281; for 1914, 2,187,776 pounds; and for 1909, 3,420,494 pounds.

<sup>2</sup> Not reported separately.

<sup>3</sup> Figures not available; included with "all other states."

<sup>4</sup> Includes for 1919, 811,243 pounds of foreign wool, costing \$934,068; for 1914, 1,212,203 pounds; and for 1909, 472,707 pounds.

<sup>5</sup> Not reported.

# KNIT GOODS.

11

TABLE 14.—PRINCIPAL MATERIALS USED IN THE KNIT-GOODS INDUSTRY, BY STATES: 1919, 1914, AND 1909—Continued.

MATERIAL AND STATE.	COST.	QUANTITY (POUNDS).		
		1919	1914	1909
Cotton yarn, not mercerized.	\$120,701,157	186,892,100	180,851,710	216,987,611
Alabama	1,645,869	1,266,191	(2)	576,908
California	279,480	310,154	(2)	132,922
Connecticut	414,087	591,600	718,264	1,539,828
Delaware	129,435	234,130	(2)	936,708
Georgia	1,834,503	3,300,974	(2)	4,886,428
Illinois	5,477,770	9,211,562	7,030,000	6,077,751
Indiana	1,710,170	1,659,710	1,650,340	1,420,204
Maryland	825,036	1,351,519	(2)	2,000,505
Massachusetts	6,008,948	8,299,748	6,211,733	6,903,775
Michigan	2,321,190	3,774,503	3,128,074	2,306,690
Minnesota	3,071,346	6,341,270	(2)	1,794,137
New Hampshire	1,820,943	3,046,773	(2)	3,712,733
New Jersey	1,018,735	2,260,807	1,801,370	2,204,814
New York	31,351,296	53,325,500	53,515,303	86,076,623
North Carolina	6,402,220	9,781,189	12,218,484	9,527,471
Ohio	4,110,410	6,029,906	5,775,019	4,207,238
Pennsylvania	30,482,876	43,371,847	53,457,783	50,036,058
Rhode Island	83,584,184	4,819,005	3,389,434	4,608,882
South Carolina	582,584	931,272	(2)	632,035
Tennessee	9,124,733	13,011,890	9,025,995	4,746,986
Utah	209,409	187,943	(2)	201,231
Vermont	876,389	1,483,390	(2)	1,181,332
Virginia	2,100,037	4,083,901	6,855,602	5,017,117
Wisconsin	3,245,498	5,297,497	5,935,029	4,804,716
All other states	654,984	831,860	11,487,954	1,073,571
Cotton yarn, mercerized.	49,403,099	30,512,284	15,072,427	(2)
Connecticut	121,880	81,493	64,254	(2)
Illinois	1,425,664	917,079	313,465	(2)
Indiana	1,548,116	998,633	1,542,360	(2)
Massachusetts	2,922,230	1,652,328	1,113,536	(2)
Michigan	507,403	354,198	389,533	(2)
New Jersey	3,155,791	1,834,997	591,808	(2)
New York	1,841,209	1,121,146	484,290	(2)
North Carolina	1,441,041	963,320	115,491	(2)
Ohio	650,720	473,587	380,502	(2)
Pennsylvania	24,748,303	14,707,613	6,249,201	(2)
Rhode Island	240,782	128,390	82,076	(2)
Tennessee	2,483,434	2,037,678	1,074,332	(2)
Virginia	55,550	23,543	34,970	(2)
Wisconsin	4,998,313	3,178,470	1,733,789	(2)
All other states	3,361,703	2,051,859	1,502,101	(2)
Woolen yarn	8,860,287	5,383,926	7,145,453	6,140,205
Illinois	313,983	208,072	472,487	187,752
Massachusetts	604,488	374,508	123,022	113,368
Michigan	409,871	501,228	505,249	449,928
Minnesota	180,627	92,672	47,338	42,420
New Jersey	137,290	70,100	195,672	154,248
New York	3,883,859	2,042,342	3,133,302	3,186,382
Ohio	509,733	345,001	776,308	773,371
Pennsylvania	1,232,926	640,548	611,845	618,809
Utah	47,611	28,207	17,387	11,271
Vermont			46,803	
Wisconsin	1,154,116	939,869	838,740	452,890
All other states	301,778	134,170	317,400	149,870
Worsted yarn	32,148,641	12,035,631	14,305,333	10,370,004
California	741,700	261,401	130,951	80,040
Connecticut	970,833	409,700	378,595	416,560
Illinois	792,454	377,972	493,801	287,276
Massachusetts	3,030,087	1,211,375	1,857,338	819,140
Michigan	482,500	221,108	301,146	306,325
Minnesota	185,247	71,144	111,571	110,190
New Hampshire	690,080	250,176	643,702	733,465
New Jersey	1,001,747	391,738	441,467	338,508
New York	11,324,766	4,280,339	4,059,388	3,222,368
Ohio	1,906,945	810,400	1,449,055	1,095,829
Pennsylvania	6,748,728	2,681,474	2,114,360	1,684,786
Rhode Island	1,592,702	809,028	605,977	507,037
Utah	247,361	98,435	170,368	91,872
Wisconsin	1,080,500	705,374	669,424	668,093
All other states	596,605	246,900	327,480	208,445
Merino yarn	10,278,050	6,065,256	4,333,300	4,014,009
Connecticut	166,473	72,048	90,010	46,178
Illinois	410,520	322,381	409,100	297,110
Massachusetts	1,525,978	704,842	558,104	466,747
Michigan	222,571	132,271	105,870	149,591
New Jersey	119,390	67,318	43,341	35,139
New York	2,155,136	1,099,086	608,811	925,440
Ohio	1,059,102	1,209,056	1,107,910	843,181
Pennsylvania	1,755,730	921,612	330,279	380,298
Rhode Island	423,770	187,761	85,906	314,648
Wisconsin	459,537	366,622	148,549	238,931
All other states	1,043,834	931,659	715,442	308,339
Silk yarn and spun-silk yarn	49,222,001	5,711,110	1,013,478	982,753
Connecticut	71,407	9,472	12,000	7,139
Indiana	1,027,047	141,020	50,185	
Massachusetts	1,503,053	139,907	180,000	124,715
New Jersey	3,268,261	354,448	67,520	57,408
New York	9,078,746	1,109,436	224,007	423,230

<sup>a</sup> Not reported separately.

<sup>b</sup> Figures not available; included with "all other states."

TABLE 14.—PRINCIPAL MATERIALS USED IN THE KNIT-GOODS INDUSTRY, BY STATES: 1919, 1914, AND 1909—Continued.

MATERIAL AND STATE.	COST.	QUANTITY (POUNDS).		
		1919	1914	1909
Silk yarn and spun-silk yarn—Continued.				
Ohio	\$74,346	8,991	20,796	38,281
Pennsylvania	22,576,841	2,003,409	877,180	250,467
Rhode Island	651,422	84,998	98,640	22,900
Wisconsin	7,305,774	803,550	264,453	38,582
All other states	3,575,104	405,810	111,629	20,036
Linen, jute, and other vegetable fiber yarn	182,774	288,009	70,278	241,754
Pennsylvania	1,692	1,615	22,743	15,975
All other states	181,082	288,364	47,535	225,779

Additional materials, by states.—In addition to the materials shown in the foregoing table certain other materials used in the industry, and reported separately for the first time in connection with the census of 1919, are shown, by states, in Table 15.

TABLE 15.—QUANTITY AND COST OF MATERIALS NOT REPORTED SEPARATELY AT PREVIOUS CENSUSES: 1919.

MATERIAL AND STATE.	Quantity (pounds).	Cost.
Silk yarn (organzine and tann).	5,073,854	\$44,238,372
Illinois	49,102	414,322
Massachusetts	165,421	1,411,759
New Jersey	353,983	3,283,730
New York	1,060,050	8,654,052
Pennsylvania	2,271,999	20,137,777
Wisconsin	766,507	8,971,951
All other states	406,782	3,384,781
Sewing thread, cotton.	2,529,680	3,829,796
Connecticut	35,163	64,966
Georgia	32,734	42,107
Illinois	23,244	50,253
Massachusetts	158,948	257,322
Michigan	68,928	125,678
Minnesota	31,823	63,312
New Hampshire	34,572	51,945
New Jersey	25,549	53,779
New York	1,057,430	1,507,318
North Carolina	162,755	199,403
Ohio	53,025	99,857
Pennsylvania	484,927	782,004
Tennessee	114,622	183,623
Vermont	71,086	106,798
Virginia	36,299	49,538
Wisconsin	81,149	134,984
All other states	57,426	106,269
Sewing thread, silk.	65,832	\$563,024
Illinois	8,723	15,624
Massachusetts	3,392	32,766
New York	21,323	274,788
Pennsylvania	22,127	173,381
All other states	10,268	66,485
Gross.	5,351,529	2,230,295
Buttons, pearl.	99,227	43,068
Connecticut	49,942	20,399
Illinois	479,523	212,351
Massachusetts	120,022	42,333
Michigan	306,066	137,280
Minnesota	44,260	31,796
New Jersey	2,265,550	1,013,239
Ohio	225,817	102,116
Pennsylvania	415,867	175,895
Rhode Island	75,044	25,707
Tennessee	326,347	140,888
Vermont	153,830	68,322
Virginia	69,101	22,841
Wisconsin	91,579	40,220
All other states	568,402	213,826
Buttons, other than pearl.	1,479,107	873,136
Connecticut	9,112	4,173
Illinois	12,915	126,189
Massachusetts	28,673	40,823
Michigan	16,920	26,696
Minnesota	84,357	21,877
New Jersey	2,369	4,767
New York	729,009	324,619
Ohio	64,065	77,114
Pennsylvania	378,565	172,097
Rhode Island	36,804	7,884
Virginia	44,291	11,907
Wisconsin	41,132	37,891
All other states	30,805	17,299

## MANUFACTURES.

**Yarn and sewing thread manufactured for own use.**—Table 16 gives the quantity of yarn and sewing thread manufactured, by states, during 1919 for consumption within the same establishment where it was made.

TABLE 16.—YARN AND SEWING THREAD MANUFACTURED IN KNITTING MILLS FOR CONSUMPTION WITHIN SAME ESTABLISHMENT: 1919.

STATE.	YARN.					THREAD.	
	Cotton.	Woolen (carded).	Worsted (combed).	Merino (cotton-mixed).	All other.	Cotton.	Silk.
United States....	87,063,037	5,861,147	532,694	17,239,895	2,270,640	134,715	593
Connecticut.....	46,378	—	—	4,068,105	—	—	—
Georgia.....	16,925,522	—	—	—	—	—	—
Massachusetts.....	7,689,061	727,025	19,000	1,409,450	143	—	—
Michigan.....	125,399	478,721	—	805,641	—	—	—
New Hampshire.....	68,080	869,268	53,240	1,237,223	—	—	—
New York.....	42,550,565	3,083,198	188,279	3,204,561	501,739	73,075	—
North Carolina.....	8,231,050	—	—	—	12,550	—	—
Pennsylvania.....	1,646,720	23,045	—	746,896	31,954	—	—
Tennessee.....	7,498,040	—	—	—	31,621	—	—
Virginia.....	—	376,715	242,700	503,304	1,128,950	—	—
Wisconsin.....	2,279,822	303,168	29,376	3,271,700	17,605	17,326	593
All other states.....	—	—	—	—	—	—	—

## PRODUCTS.

**Summary of products for the United States.**—A detailed summary of the products for the industry in the United States is shown comparatively in Table 17 for the census years 1904 to 1919, inclusive.

TABLE 17.—QUANTITY AND VALUE OF THE PRODUCTS OF THE KNIT-GOODS INDUSTRY: 1919, 1914, 1909, AND 1904.

	1919	1914	1909	1904
Products, total value <sup>1</sup> ....	\$713,130,089	\$258,912,903	\$200,143,527	\$137,076,454
Hosiery:				
Dozen pairs.....	84,645,757	75,164,911	62,825,069	44,186,063
Value.....	\$308,662,377	\$98,098,590	\$68,721,825	\$44,113,260
Hose—				
Dozen pairs.....	51,425,340	44,186,412	34,933,976	26,041,378
Value.....	\$216,651,368	\$63,144,500	\$31,503,427	\$26,674,316
Cotton—				
Dozen pairs.....	36,835,602	36,952,380	32,409,104	24,169,804
Value.....	\$105,647,876	\$38,390,194	\$24,078,622	\$22,764,790
Wool—				
Dozen pairs.....	8,895,268	1,369,492	1,166,429	1,033,783
Value.....	\$2,139,960	\$2,545,047	\$2,358,106	\$2,205,080
Merino—				
Dozen pairs.....	1,029,371	723,433	834,029	746,226
Value.....	\$4,456,430	\$1,414,118	\$1,466,283	\$1,182,164
Silk—				
Dozen pairs.....	42,589,358	2,354,648	2,434,414	2,42,065
Value.....	\$25,337,049	\$13,851,251	\$3,600,416	\$522,303
Silk-mixed—				
Dozen pairs.....	10,575,741	2,786,458	(6)	(6)
Value.....	\$79,070,053	\$6,940,959	(6)	(6)
Half-hose—				
Dozen pairs.....	33,220,417	30,978,499	27,891,093	18,144,185
Value.....	\$92,011,000	\$34,954,021	\$27,218,398	\$17,438,914
Cotton—				
Dozen pairs.....	23,777,740	24,457,195	24,805,017	15,223,243
Value.....	\$47,849,610	\$21,241,280	\$21,881,365	\$11,821,830
Wool—				
Dozen pairs.....	651,782	616,341	1,061,535	1,309,876
Value.....	\$8,250,910	\$1,327,430	\$2,087,121	\$3,402,400
Merino—				
Dozen pairs.....	3,164,007	2,335,861	2,023,641	1,611,066
Value.....	\$10,541,696	\$3,384,881	\$3,299,912	\$2,214,678
Silk—				
Dozen pairs.....	1,926,995	1,305,792	(7)	(7)
Value.....	\$8,758,019	\$4,701,969	(7)	(7)
Silk-mixed—				
Dozen pairs.....	8,699,893	2,263,310	(6)	(6)
Value.....	\$20,604,774	\$4,298,502	(6)	(6)

<sup>1</sup> In addition, knit goods, in 1910 to the value of \$8,374,682, in 1914 to the value of \$5,088,033, and in 1909 to the value of \$2,975,749, were reported by establishments engaged primarily in other industries.

<sup>2</sup> Includes silk half-hose.

<sup>3</sup> Includes worsted.

<sup>4</sup> Includes 740,804 dozen pairs artificial silk, valued at \$3,737,021.

<sup>5</sup> Not reported separately.

<sup>6</sup> Includes 846,170 dozen pairs artificial silk, valued at \$2,906,113.

<sup>7</sup> Included in silk hose.

TABLE 17.—QUANTITY AND VALUE OF THE PRODUCTS OF THE KNIT-GOODS INDUSTRY: 1919, 1914, 1909, AND 1904—Continued.

	1919	1914	1909	1904
Shirts and drawers:				
Dozens.....	17,180,404	21,758,775	25,337,770	19,723,141
Value.....	\$98,286,403	\$87,523,051	\$69,592,817	\$56,613,560
Cotton—				
Dozens.....	14,055,963	19,735,898	22,507,121	17,107,958
Value.....	\$72,504,633	\$43,097,937	\$50,007,598	\$39,658,762
Wool—				
Dozens.....	315,642	373,045	178,163	485,323
Value.....	\$3,055,521	\$3,418,575	\$1,820,521	\$3,647,934
Merino—				
Dozens.....	1,848,863	1,434,504	2,536,473	2,113,810
Value.....	\$19,621,061	\$9,228,680	\$17,055,624	\$13,031,751
Silk—				
Dozens.....	85,852	69,786	85,022	8,16,015
Value.....	\$1,404,231	\$1,214,609	\$8709,074	\$305,416
Silk-mixed—				
Dozens.....	9,274,084	43,118	(10)	(10)
Value.....	\$164,054	\$313,439	(10)	(10)
All other—				
Dozens.....	(11)	102,424	(5)	(5)
Value.....	(11)	\$219,805	(5)	(5)
Union suits:				
Dozens.....	9,211,032	6,272,515	2,473,103	1,440,429
Value.....	\$105,243,880	\$35,508,034	\$14,853,536	\$8,783,947
Cotton—				
Dozens.....	7,515,516	5,468,730	2,017,637	1,210,301
Value.....	\$71,122,386	\$25,617,815	\$9,713,507	\$4,478,664
Wool—				
Dozens.....	70,701	147,221	50,192	68,067
Value.....	\$2,003,011	\$2,490,815	\$883,289	\$965,132
Merino—				
Dozens.....	1,133,750	486,128	364,387	105,242
Value.....	\$21,415,047	\$5,708,102	\$4,217,432	\$1,199,949
Silk—				
Dozens.....	49,388	31,714	12,10,977	12,6,510
Value.....	\$1,313,131	\$880,248	\$239,218	\$150,202
Silk-mixed—				
Dozens.....	432,677	29,895	(13)	(13)
Value.....	\$9,389,705	\$393,018	(13)	(13)
All other—				
Dozens.....	108,827	(5)	(5)	(5)
Value.....	\$501,436	(5)	(5)	(5)
Bathing suits:				
Dozens.....	301,303	274,454	(5)	(5)
Value.....	\$6,644,903	\$2,033,880	(5)	(5)
Leggings:				
Dozen pairs.....	4,035	74,901	65,326	122,462
Value.....	\$82,510	\$313,052	\$102,242	\$610,908
Gloves and mittens:				
Dozen pairs.....	3,571,123	2,470,183	2,527,880	2,260,505
Value.....	\$19,530,411	\$10,519,613	\$7,200,887	\$5,556,260
Knitted headwear (except infants):				
Dozens.....	557,732	987,178	888,223	589,315
Value.....	\$3,996,303	\$3,450,326	\$3,217,985	\$1,774,862
Sweaters, sweater coats, jerseys, cardigan jackets, etc.:				
Dozens.....	2,132,581	2,249,142	2,221,410	811,629
Value.....	\$61,004,311	\$26,195,002	\$22,439,817	\$8,345,369
Scarfs and shawls:				
Dozens.....	208,237	63,264	218,923	435,306
Value.....	\$4,051,859	\$713,545	\$916,294	\$1,293,343
All other fancy knit goods, value.....				
value.....	\$16,321,888	\$3,196,979	\$2,302,927	\$2,118,812
Fleece lining (shoe and glove):				
Square yards.....	6,581,183	6,221,601	9,726,770	11,768,981
Value.....	\$2,521,369	\$870,095	\$1,209,464	\$1,249,401
Eider down:				
Square yards.....	911,017	1,076,995	1,298,322	4,843,939
Value.....	\$1,174,592	\$510,957	\$142,481	\$1,018,931
Jersey cloth and stockinette:				
Square yards.....	30,344,402	10,503,986	3,111,272	3,354,026
Value.....	\$28,090,935	\$4,378,544	\$784,255	\$1,145,127
Princette:				
Square yards.....	5,051,630	(6)	(6)	(6)
Value.....	\$17,172,431	(6)	(6)	(6)
All other knitted cloth:				
Square yards.....	20,889,095	1,854,851	410,207	455,274
Value.....	\$9,785,418	\$1,251,653	\$269,323	\$554,316
Yarns for sale:				
Cotton—				
Pounds.....	17,493,355	17,052,510	7,457,412	3,304,815
Value.....	\$9,834,118	\$3,990,349	\$1,583,417	\$654,234
Woolen—				
Pounds.....	451,804	14,117,634	14,485,322	62,653
Value.....	\$337,497	\$14,304,499	\$1217,114	\$14,268
Worsted—				
Pounds.....	22,833	(16)	(16)	232,569
Value.....	\$61,202	(16)	(16)	\$230,533
Merino—				
Pounds.....	324,638	183,147	(6)	196,037
Value.....	\$242,707	\$76,905	(6)	\$100,745
Cotton waste—				
Pounds.....	15,452,314	12,999,218	(5)	(5)
Value.....	\$1,490,933	\$828,944	(5)	(5)
Old bagging and ties, value.....				
value.....	\$5,482	\$24,452	(5)	(5)
Contract work, value.....				
value.....	\$8,771,094	\$3,649,274	\$1,082,485	\$208,167
All other products, value.....				
value.....	\$8,501,477	\$6,014,250	\$4,954,708	\$4,840,633

<sup>8</sup> Includes silk-mixed.

<sup>9</sup> Includes all other shirts and drawers to avoid disclosure of individual operations.

<sup>10</sup> Included in silk shirts and drawers.

<sup>11</sup> Included in silk-mixed shirts and drawers.

<sup>12</sup> Includes silk-mixed union suits.

<sup>13</sup> Included in silk union suits.

<sup>14</sup> Includes worsted yarn to avoid disclosure of individual operations.

<sup>15</sup> Includes woolen, worsted, and merino yarns.

<sup>16</sup> Included in woolen yarn to avoid disclosure of individual operations.

# KNIT GOODS.

13

**Products for the industry, by states.—Table 18** presents statistics with reference to the quantity and value of the chief products of the industry according to location, by states, where they were manufactured.

**TABLE 18.—COMPARATIVE SUMMARY OF THE PRODUCTS OF THE KNIT-GOODS INDUSTRY, BY STATES: 1919, 1914, AND 1909.**

PRODUCT AND STATE.	VALUE,	QUANTITY.			
		1919	1914	1909	
	\$308,662,377	Doz. pairs.	Doz. pairs.	Doz. pairs.	
Hosiery.....		84,645,757	75,164,911	62,825,069	
Alabama.....	2,732,309	1,108,370	583,334	373,500	
Connecticut.....	1,214,648	370,585	541,475	500,100	
Delaware.....	844,981	320,120	693,416	661,104	
Georgia.....	9,822,523	5,003,420	1,651,061	3,726,330	
Illinois.....	14,207,551	5,281,624	4,238,360	3,550,613	
Maryland.....	1,475,176	829,743	731,754	866,476	
Massachusetts.....	20,474,521	5,800,020	4,525,409	4,506,960	
Michigan.....	4,225,868	582,638	761,770	605,589	
New Hampshire.....	6,494,816	2,080,550	2,597,049	2,081,273	
New Jersey.....	16,709,728	2,812,052	855,252	850,082	
New York.....	9,180,302	910,406	272,663	355,087	
North Carolina.....	19,553,767	9,176,861	8,762,007	5,811,340	
Ohio.....	2,277,469	605,630	591,199	400,275	
Pennsylvania.....	124,662,543	20,097,288	29,855,866	27,832,601	
Rhode Island.....	3,470,253	505,576	580,084	554,194	
South Carolina.....	2,001,784	1,012,533	983,871	855,431	
Tennessee.....	22,260,832	8,842,082	5,537,249	3,267,156	
Virginia.....	2,228,067	1,387,716	1,524,174	715,807	
Wisconsin.....	28,722,035	5,253,280	3,031,304	2,373,201	
All other states.....	15,303,254	3,550,065	3,233,034	2,276,410	
Cotton.....	153,497,486	60,613,342	61,409,575	57,305,021	
Alabama.....	2,732,309	1,108,370	583,334	373,500	
Delaware.....	350,737	206,120	693,416	661,104	
Georgia.....	9,704,848	4,907,042	4,651,961	3,726,330	
Illinois.....	10,035,100	4,484,480	3,686,091	3,069,634	
Maryland.....	1,718,315	783,081	699,954	825,921	
Massachusetts.....	5,025,585	1,990,075	3,791,770	4,280,266	
New Hampshire.....	1,538,710	657,326	1,034,358	1,186,912	
New Jersey.....	2,758,786	1,175,459	364,497	752,452	
North Carolina.....	19,256,273	9,431,825	8,746,982	5,806,140	
Pennsylvania.....	44,132,833	17,722,549	23,383,706	27,139,582	
South Carolina.....	2,001,784	1,012,533	883,871	855,431	
Tennessee.....	20,759,258	8,043,370	5,420,052	3,207,165	
Virginia.....	2,228,067	1,387,716	1,524,174	715,807	
Wisconsin.....	17,707,337	3,054,564	2,507,571	2,042,952	
All other states.....	12,947,458	3,387,074	3,298,700	2,001,634	
Hose.....	105,647,876	30,835,002	30,052,380	32,490,104	
Alabama.....	2,261,615	845,300	495,800	288,352	
Georgia.....	6,086,447	2,906,800	2,515,103	1,226,235	
Illinois.....	7,746,757	2,770,386	2,046,050	1,188,667	
Maryland.....	1,244,000	557,043	339,046	271,467	
Massachusetts.....	3,309,810	1,213,330	3,097,781	3,500,516	
New Hampshire.....	1,538,710	657,326	902,116	1,164,366	
New Jersey.....	2,737,536	1,170,450	302,918	659,289	
North Carolina.....	12,956,499	5,550,547	5,017,709	3,870,392	
Pennsylvania.....	24,038,858	8,273,105	11,710,000	13,875,893	
South Carolina.....	1,291,311	530,990	377,123	159,401	
Tennessee.....	10,800,910	6,072,904	4,404,822	2,420,817	
Virginia.....	1,537,200	1,072,716	1,127,595	495,803	
Wisconsin.....	14,720,551	2,488,452	1,776,617	1,143,366	
All other states.....	8,408,015	2,108,157	2,405,768	2,221,257	
Half hose.....	47,849,610	23,777,740	24,457,196	24,805,917	
Georgia.....	3,918,401	2,070,233	2,136,708	2,000,005	
Illinois.....	2,888,343	1,705,004	1,639,441	1,380,067	
Maryland.....	4,741,315	226,033	330,308	541,454	
Massachusetts.....	1,715,769	777,345	603,093	773,720	
North Carolina.....	6,299,774	5,633,078	2,820,273	1,026,748	
Pennsylvania.....	10,193,075	9,449,354	11,004,108	13,202,089	
South Carolina.....	716,473	481,564	600,748	696,027	
Tennessee.....	3,953,330	1,970,865	961,230	849,330	
Virginia.....	690,861	315,000	399,570	229,004	
Wisconsin.....	2,977,780	1,216,112	1,390,954	809,596	
All other states.....	5,321,574	2,032,457	1,807,763	1,255,288	
Wool.....	15,306,870	1,017,050	1,085,833	2,227,961	
New Hampshire.....	556,901	1,152,309	493,565	601,105	
Pennsylvania.....	1,330,063	1,63,026	413,060	428,918	
Wisconsin.....	1,546,331	1,120,243	275,406	128,864	
All other states.....	1,954,875	1,710,572	501,202	670,017	
Merino.....	14,098,126	4,193,378	3,059,204	2,557,670	
New Hampshire.....	4,243,051	1,253,977	1,053,502	503,256	
All other states.....	10,755,075	2,930,401	2,005,792	2,351,414	
Silk.....	28,451,334	2,920,370	3,600,440	2,431,414	
Massachusetts.....	1,816,833	152,898	108,100	(*)	
New Jersey.....	1,735,515	98,380	308,103	(*)	
New York.....	1,300,337	101,301	195,392	(*)	
Pennsylvania.....	10,719,081	1,212,364	1,000,022	2,145,497	
Wisconsin.....	5,462,853	536,301	557,080	277,600	
All other states.....	6,880,695	820,945	440,741	211,317	

**TABLE 18.—COMPARATIVE SUMMARY OF THE PRODUCTS OF THE KNIT-GOODS INDUSTRY, BY STATES: 1919, 1914, AND 1909—Con.**

PRODUCT AND STATE.	VALUE,	QUANTITY.			
		1919	1914	1909	
Hosiery—Continued.					
Silk-mixed.....	\$99,674,215	14,275,459	5,049,769	405,295	(*)
Massachusetts.....	9,007,470	2,496,236	119,372	.....	.....
New Jersey.....	11,96,972	1,488,466	1,570,682	11,610	.....
Pennsylvania.....	63,831,934	8,469,165	4,068,978	2,289,023	144,297
Wisconsin.....	2,289,023	370,952	999,958	302,217	.....
All other states.....	6,556,843	999,958	.....	.....	.....
Artificial silk.....	5,614,316	1,587,149	(*)	.....	(*)
Pennsylvania.....	2,691,441	749,333	(*)	.....	(*)
All other states.....	5,352,905	837,716	(*)	.....	(*)
Shirts and drawers.....	8,286,403	17,130,404	Dozens.	21,758,775	Dozens.
Connecticut.....	4,674,795	339,968	505,219	471,708	
Georgia.....	283,037	35,291	185,600	314,893	
Massachusetts.....	10,115,392	1,313,023	1,354,538	1,667,482	
Michigan.....	1,570,563	719,170	833,089	720,202	
New Hampshire.....	1,203,767	213,761	135,359	260,703	
New Jersey.....	1,086,351	146,734	181,999	178,150	
New York.....	47,416,624	6,929,699	9,203,882	12,474,922	
North Carolina.....	3,559,166	417,219	686,519	409,635	
Ohio.....	213,135	33,727	70,176	120,305	
Pennsylvania.....	15,844,883	5,171,882	6,524,131	6,721,569	
Rhode Island.....	1,050,359	165,038	145,275	199,997	
Vermont.....	871,424	107,084	145,453	158,019	
Virginia.....	2,036,780	347,391	838,050	725,509	
All other states.....	8,282,124	1,203,917	949,479	908,655	
Cotton.....	72,564,633	14,655,963	19,735,898	22,567,121	
Connecticut.....	373,115	44,062	131,938	113,603	
Georgia.....	283,037	35,291	185,600	314,893	
Massachusetts.....	5,610,905	920,583	1,142,782	1,415,227	
Michigan.....	1,413,178	695,514	816,900	692,266	
New Jersey.....	814,505	109,726	150,908	133,992	
New York.....	37,411,523	6,041,257	8,466,807	11,238,711	
North Carolina.....	3,559,166	417,219	686,519	409,635	
Pennsylvania.....	14,557,505	5,035,035	6,340,104	6,552,364	
Rhode Island.....	504,970	77,356	133,809	110,443	
Virginia.....	2,036,780	347,391	838,056	725,509	
All other states.....	5,969,950	921,729	842,305	880,478	
Wool.....	1,3,055,521	1,315,642	373,045	178,163	
Connecticut.....	1,342,361	1,21,278	53,360	17,381	
Massachusetts.....	(*)	.....	32,095	35,354	
New York.....	1,154,093	101,794	161,424	61,424	
All other states.....	1,455,442	1,139,371	125,196	64,004	
Merino.....	19,621,684	1,848,803	1,434,504	2,536,473	
Connecticut.....	3,883,483	268,043	315,804	339,580	
Massachusetts.....	8,452,849	694,855	145,731	182,903	
New York.....	7,717,550	630,355	484,268	182,148	
Pennsylvania.....	986,875	110,088	163,755	161,888	
All other states.....	3,581,201	545,542	324,800	690,950	
Silk.....	1,404,231	85,852	69,788	2,56,022	
New York.....	783,081	29,090	53,602	12,639	
All other states.....	620,550	56,102	16,183	43,383	
Silk-mixed.....	9,164,054	274,084	43,118	(*)	
Massachusetts.....	725,638	92,141	25,260	.....	.....
All other states.....	913,416	181,943	17,888	.....	.....
All other.....	.....	.....	102,424	.....	.....
Union suits.....	105,243,880	9,211,032	6,272,515	2,473,103	
Massachusetts.....	8,980,031	525,187	408,445	183,175	
Michigan.....	3,228,941	263,431	182,304	77,002	
New York.....	38,267,304	3,127,856	2,639,635	990,841	
Ohio.....	5,362,351	223,757	291,401	191,932	
Pennsylvania.....	14,712,349	2,250,825	1,415,583	430,275	
Wisconsin.....	3,046,424	166,335	132,744	43,913	
All other states.....	33,145,580	2,633,641	1,253,313	549,065	
Cotton.....	71,122,336	7,518,510	5,468,730	2,047,637	
Massachusetts.....	3,300,380	202,626	238,256	100,024	
Michigan.....	908,396	88,946	103,588	50,062	
New York.....	29,205,961	2,731,093	2,528,302	938,554	
Ohio.....	658,638	54,745	219,704	131,186	
Pennsylvania.....	13,074,126	2,172,792	1,388,036	412,567	
All other states.....	23,074,428	2,203,314	080,944	415,244	
Wool.....	1,3,053,011	1,76,701	147,221	50,102	

## MANUFACTURES.

TABLE 18.—COMPARATIVE SUMMARY OF THE PRODUCTS OF THE KNIT GOODS INDUSTRY, BY STATES: 1919, 1914, AND 1909—Con.

PRODUCT AND STATE.	VALUE.	QUANTITY.		
		1919	1914	1909
Union suits—Continued.				
Silk.....	\$1,313,131	Dozens. 49,388	Dozens. 31,714	Dozens. 2,10,977
Silk-mixed.....	9,389,705	432,677	29,805	(*)
Massachusetts.....	4,192,733	189,513	18,651	.....
All other states.....	5,196,972	243,134	11,244	.....
All other.....	.....	108,827	(*)	
Leggings.....	62,510	4,635	74,901	65,326
New York.....	62,031	4,603	65,029	52,107
All other states.....	470	32	9,872	13,219
Gloves and mittens.....	19,530,411	3,571,123	2,470,183	2,527,889
Michigan.....	157,017	24,652	120,419	243,797
New York.....	14,061,935	2,502,380	1,340,479	1,195,140
Ohio.....	336,345	142,876	253,137	319,522
Pennsylvania.....	2,669,452	380,319	310,939	284,931
Wisconsin.....	1,458,981	323,442	251,820	368,157
All other states.....	846,681	137,454	193,359	114,342
Bathing suits.....	6,644,906	301,393	274,454	(*)
California.....	1,247,027	34,757	15,512	(*)
Massachusetts.....	907,620	42,079	6,328	(*)
New York.....	2,184,669	96,267	123,553	(*)
Ohio.....	210,000	5,400	3,285	(*)
Pennsylvania.....	1,248,143	77,608	117,944	(*)
All other states.....	847,447	45,282	8,732	(*)
Knitted headwear (except infants').....	3,996,398	557,732	987,178	888,223
New York.....	917,624	91,936	177,235	124,301
Ohio.....	1,872,642	310,924	537,175	272,478
Wisconsin.....	932,505	113,783	181,236	322,688
All other states.....	273,627	32,080	91,532	168,766
Sweaters, sweater coats, jerseys, cardigan jackets, etc.....	61,094,341	2,132,581	2,240,142	2,221,410
Illinois.....	1,720,040	32,350	25,556	22,236
Massachusetts.....	2,092,021	108,729	94,857	40,544
New Jersey.....	2,051,686	34,234	68,098	70,772
New York.....	32,980,487	1,248,952	1,464,605	1,656,336
Ohio.....	4,974,242	165,414	150,295	115,457
Pennsylvania.....	9,559,785	288,064	304,550	221,700
Wisconsin.....	4,131,154	103,746	88,439	54,292
All other states.....	2,075,920	151,092	55,741	40,023
Scarfs and shawls.....	4,054,859	298,237	63,264	218,923
New York.....	2,027,853	187,017	8,837	9,800
Ohio.....	890,030	32,130	41,443	122,080
All other states.....	1,136,976	70,090	12,084	87,043

TABLE 18.—COMPARATIVE SUMMARY OF THE PRODUCTS OF THE KNIT-GOODS INDUSTRY, BY STATES: 1919, 1914, AND 1909—Con.

PRODUCT AND STATE.	VALUE.	QUANTITY.		
		1919	1914	1909
All other fancy knit goods.....	\$16,321,888	.....	.....	.....
New York.....	7,189,093	.....	.....	.....
Ohio.....	953,435	.....	.....	.....
Pennsylvania.....	7,103,078	.....	.....	.....
All other states.....	1,075,687	.....	.....	.....
Fleece lining (shoe and glove).....	2,521,369	Sq. yards. 6,581,183	Sq. yards. 6,221,601	Sq. yards. 9,726,770
Rhode Island.....	557,755	.....	.....	.....
All other states.....	1,965,614	5,420,439	5,331,268	6,586,112
Eider down.....	1,174,592	941,017	1,076,995	1,298,322
Jersey cloth and stockinetto.....	28,690,935	30,344,402	10,593,988	3,111,272
New York.....	12,153,590	11,484,910	8,507,954	2,053,563
Pennsylvania.....	7,893,118	3,985,284	1,223,689	177,766
All other states.....	8,644,227	14,904,190	862,343	870,943
Tricolette.....	17,172,431	5,051,630	(*)	(*)
New York.....	14,531,058	4,369,064	(*)	(*)
Pennsylvania.....	109,619	38,000	(*)	(*)
All other states.....	2,531,754	644,575	(*)	(*)
Other knitted cloth.....	9,788,418	26,889,695	1,854,851	410,207
Yarns for sale:			Pounds.	Pounds.
Cotton.....	9,834,118	17,493,355	17,052,510	7,457,412
Georgia.....	1,947,573	3,462,853	3,340,124	276,504
New York.....	3,404,985	6,338,475	8,235,253	2,499,483
All other states.....	4,481,500	7,602,027	5,477,133	4,681,325

<sup>1</sup> Includes worsted.<sup>2</sup> Includes silk-mixed goods.<sup>3</sup> Included in "All other states" to avoid disclosure of individual operations.<sup>4</sup> Included with silk.<sup>5</sup> Includes "All other half-hose" to avoid disclosure of individual operations.<sup>6</sup> Not reported separately.<sup>7</sup> Included in merino to avoid disclosure of individual operations.<sup>8</sup> Includes woolen to avoid disclosure of individual operations.<sup>9</sup> Includes some linen to avoid disclosure of individual operations.

Principal products, by geographic divisions.—A distribution of the quantity and value of the principal products for the industry are shown, by geographic divisions, in the United States in Table 19.

## KNIT GOODS.

15

TABLE 19.—PRINCIPAL PRODUCTS OF THE KNIT-GOODS INDUSTRY, BY GEOGRAPHIC DIVISIONS: 1919, 1914, 1909, AND 1904.

DIVISION AND YEAR.	Number of estab- lish- ments.	PRODUCTS.							Value of all other products.	
		Total value.	Principal products.							
			Value.	Hosiery (dozen pairs).	Shirts and drawers (dozens).	Union suits (dozens).	Sweaters, cardigan jackets, etc. (dozens).	Gloves and mittens (dozen pairs).		
United States:										
1919.....	2,051	\$713,130,680	\$592,817,412	84,645,757	17,180,404	9,211,032	2,132,581	3,571,123	\$120,322,277	
1914.....	1,622	258,912,903	227,932,290	75,164,911	21,758,775	6,272,515	2,249,142	2,470,183	30,980,613	
1909.....	1,374	200,143,527	182,895,882	62,825,060	25,337,779	2,473,103	2,221,410	2,527,889	17,247,045	
1904.....	1,144	137,076,484	121,452,636	44,186,063	19,723,141	1,440,420	811,629	2,260,508	15,623,758	
New England:										
1919.....	149	87,778,875	70,013,725	9,009,563	2,170,074	1,003,528	174,448	67,594	17,765,150	
1914.....	101	33,425,513	29,997,133	8,366,560	2,287,144	720,076	111,774	38,164	3,428,380	
1909.....	137	30,390,884	27,884,676	8,409,837	2,753,230	447,005	46,051	50,542	3,106,208	
1904.....	130	24,807,979	20,008,978	6,222,109	2,336,507	170,992	17,446	81,159	4,739,001	
Middle Atlantic:										
1919.....	1,370	407,490,516	327,800,924	32,820,346	12,243,315	5,887,507	1,571,250	2,972,012	79,590,592	
1914.....	1,043	150,232,240	129,994,040	30,983,811	15,910,012	4,120,264	1,837,254	1,673,332	20,238,200	
1909.....	861	120,598,043	111,280,584	29,039,220	19,374,641	1,436,323	1,948,808	1,480,071	9,317,459	
1904.....	676	79,681,620	72,000,422	21,662,943	14,575,705	987,082	707,619	903,376	7,012,207	
East North Central:										
1919.....	203	101,858,213	89,453,023	12,779,873	1,076,153	789,062	307,802	526,364	12,405,190	
1914.....	197	38,295,010	33,031,736	10,223,443	1,147,069	664,933	268,232	758,656	4,663,274	
1909.....	183	20,633,881	22,641,245	7,782,722	1,091,844	329,004	201,925	991,076	3,992,636	
1904.....	150	18,435,357	15,073,180	5,331,986	821,134	115,684	70,635	1,276,973	3,362,177	
West North Central:										
1919.....	18	15,132,058	14,523,123	322,925	286,918	675,738	7,731	2,643	609,835	
1914.....	18	5,097,860	4,924,509	313,625	209,428	424,110	5,915	.....	173,351	
1909.....	18	2,607,647	2,418,496	302,880	106,735	100,066	14,037	200	189,151	
1904.....	10	1,202,586	1,050,253	128,210	150,954	.....	7,814	.....	122,333	
South Atlantic:										
1919.....	183	56,796,893	51,559,075	18,736,065	868,886	497,406	.....	1,547	5,237,818	
1914.....	129	21,235,420	19,579,953	18,209,105	1,806,345	106,035	5,830	10	1,655,407	
1909.....	119	13,770,901	13,423,965	13,070,504	1,585,542	134,858	90	.....	346,936	
1904.....	100	9,213,065	9,028,126	7,739,948	1,558,064	155,159	50	.....	215,539	
East and West South Central:										
1919.....	79	39,496,057	38,504,674	10,970,424	500,483	798,977	.....	.....	2,991,393	
1914.....	36	8,989,952	8,551,051	7,072,247	391,632	141,999	1,805	.....	433,901	
1909.....	33	4,581,408	4,405,383	4,213,253	408,439	4,000	.....	.....	176,115	
1904.....	24	2,084,069	2,084,949	2,204,093	273,471	3,750	.....	.....	3,120	
Mountain and Pacific:										
1919.....	40	4,586,107	2,872,808	5,961	34,575	58,814	71,350	63	1,713,299	
1914.....	38	1,036,908	1,253,808	6,120	7,145	15,098	18,272	21	388,040	
1909.....	23	960,673	841,533	6,653	14,339	21,847	10,499	.....	119,140	
1904.....	14	683,301	550,224	7,285	6,679	7,047	7,876	.....	127,167	
Production in states which can not be distributed by geographic divisions without disclosing individual operations:										
1904.....	26	933,778	801,564	889,480	627	100	189	.....	42,214	
Per cent of total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
New England:										
1919.....	7.3	12.3	11.8	10.6	12.0	10.9	8.2	1.9	14.8	
1914.....	0.9	12.9	13.2	11.1	10.5	11.5	5.0	1.5	11.1	
1909.....	10.0	15.5	15.2	13.4	10.9	18.1	2.1	2.2	18.0	
1904.....	11.0	18.1	10.5	14.1	11.8	11.9	2.1	3.6	30.3	
Middle Atlantic:										
1919.....	67.2	57.1	55.3	38.8	71.2	58.5	73.7	83.3	66.2	
1914.....	44.3	58.0	57.0	41.2	73.1	55.7	81.7	67.7	65.3	
1909.....	62.7	60.3	60.8	46.2	76.5	58.1	87.7	58.5	54.0	
1904.....	59.1	58.1	59.8	49.0	73.9	68.6	87.2	40.0	44.9	
East North Central:										
1919.....	9.0	14.3	15.1	15.1	6.3	8.6	14.4	14.7	10.3	
1914.....	12.1	14.8	14.8	13.6	5.3	10.4	11.9	30.7	15.1	
1909.....	13.3	13.3	12.4	12.4	4.3	13.3	9.1	39.2	23.1	
1904.....	13.0	13.4	12.4	12.1	4.2	8.0	8.7	56.4	21.5	
West North Central:										
1919.....	0.9	2.1	2.4	0.4	1.7	7.3	0.4	0.1	0.5	
1914.....	1.1	2.0	2.2	0.4	1.0	6.8	0.3	.....	0.6	
1909.....	1.3	1.3	1.3	0.5	0.4	4.0	0.6	(1)	1.1	
1904.....	0.9	0.9	0.9	0.3	0.8	.....	1.0	.....	0.8	
South Atlantic:										
1919.....	8.9	8.0	8.7	22.1	5.1	5.4	.....	(1)	4.4	
1914.....	8.0	8.2	8.6	24.2	8.3	3.1	0.3	(1)	5.3	
1909.....	8.7	6.9	7.3	20.8	6.3	5.5	(1)	.....	2.0	
1904.....	8.7	6.7	7.4	17.5	7.9	10.8	(1)	.....	1.4	
East and West South Central:										
1919.....	3.9	5.5	6.2	13.0	2.9	8.7	.....	.....	2.5	
1914.....	2.3	3.5	3.7	9.4	1.8	2.3	0.1	.....	1.4	
1909.....	2.4	2.3	2.4	6.7	1.6	0.2	(1)	.....	1.0	
1904.....	2.1	1.5	1.7	5.0	1.4	0.3	.....	(1)	.....	
Mountain and Pacific:										
1919.....	1.0	0.7	0.5	(1)	0.2	0.6	3.3	(1)	1.4	
1914.....	2.3	0.6	0.6	(1)	0.1	0.2	0.8	(1)	1.2	
1909.....	1.7	0.5	0.5	(1)	0.1	0.9	0.5	.....	0.7	
1904.....	1.2	0.5	0.5	(1)	0.1	0.5	1.0	.....	0.8	
Production in states which can not be distributed by geographic divisions without disclosing individual operations:										
1904.....	2.2	0.7	0.7	2.0	(1)	(1)	(1)	.....	0.3	

<sup>1</sup> Less than one-tenth of 1 percent.

## MANUFACTURES.

Production of men's, women's, and children's knit goods.—Table 20 gives the quantity and value of the various kinds of knit goods manufactured within the industry for men's, women's, and children's wear.

TABLE 20.—PRODUCTS OF THE KNIT-GOODS INDUSTRY, FOR MEN'S, WOMEN'S, AND CHILDREN'S WEAR: 1919.

PRODUCTS.	Total.	Men.	Women.	Children.
Total value.....	\$623,897,973	\$243,683,348	\$288,704,288	\$91,510,337
Hosiery:				
Dozen pairs.....	84,645,757	34,494,417	30,704,335	19,447,005
Value.....	\$308,682,377	\$85,601,925	\$186,307,184	\$46,753,268
Hose—				
Dozen pairs.....	51,425,340	3,364,661	30,282,287	17,778,302
Value.....	\$216,651,365	\$11,404,581	\$102,431,428	\$42,815,359
Cotton, not mercerized—				
Dozen pairs.....	29,208,182	2,223,127	13,585,993	13,300,062
Value.....	\$72,705,310	\$1,684,396	\$38,420,376	\$29,600,588
Cotton, mercerized—				
Dozen pairs.....	7,627,420	416,841	4,096,355	3,114,224
Value.....	\$32,912,535	\$2,391,162	\$21,975,221	\$8,570,153
Woolen—				
Dozen pairs.....	315,836	109,785	32,251	83,800
Value.....	\$1,809,141	\$1,303,283	\$230,414	\$275,444
Worsted—				
Dozen pairs.....	79,482	17,451	8,518	53,463
Value.....	\$330,810	\$73,831	\$64,053	\$102,935
Merino—				
Dozen pairs.....	1,029,371	216,285	223,430	580,647
Value.....	\$4,156,430	\$1,212,525	\$1,146,245	\$2,097,600
Silk—				
Dozen pairs.....	1,548,554	74,061	1,761,314	13,179
Value.....	\$21,599,428	\$570,766	\$20,938,574	\$81,088
Artificial silk—				
Dozen pairs.....	10,575,741	217,111	9,853,613	505,017
Value.....	\$70,070,053	\$1,159,618	\$70,018,024	\$1,891,511
Half hose—				
Dozen pairs.....	740,804	720,804	20,000	
Value.....	\$3,737,621	\$3,637,621	\$100,000	
Cotton, not mercerized—				
Dozen pairs.....	33,220,417	31,129,756	422,048	1,668,613
Value.....	\$92,011,000	\$84,197,344	\$3,875,756	\$3,987,909
Woolen—				
Dozen pairs.....	19,496,330	19,205,160	3,000	278,170
Value.....	\$30,975,182	\$30,472,525	\$4,050	\$498,607
Cotton, mercerized—				
Dozen pairs.....	4,201,410	2,960,513	—	1,330,897
Value.....	\$10,874,428	\$7,726,248	—	\$3,148,182
Worsted—				
Dozen pairs.....	428,238	426,043	—	1,295
Value.....	\$1,016,838	\$1,042,487	—	\$4,351
Merino—				
Dozen pairs.....	223,544	210,518	13,026	
Value.....	\$1,310,072	\$1,221,501	\$88,568	—
Silk—				
Dozen pairs.....	3,164,007	3,164,007	—	—
Value.....	\$10,541,696	\$10,541,696	—	—
Artificial silk—				
Dozen pairs.....	3,699,893	3,281,068	368,937	46,888
Value.....	\$20,604,774	\$17,073,797	\$3,316,537	\$214,440
Dozen pairs.....	846,170	846,170	—	—
Value.....	\$2,906,113	\$2,906,113	—	—
Shirts and drawers:				
Dozens.....	17,180,404	7,371,403	7,050,070	2,752,321
Value.....	\$59,288,403	\$57,701,424	\$20,082,811	\$10,922,168
Cotton, not mercerized—				
Dozens.....	14,033,831	6,104,693	6,709,611	1,824,530
Value.....	\$72,332,933	\$10,459,330	\$23,008,975	\$5,910,660
Cotton, mercerized—				
Dozens.....	17,129	1,450	15,372	307
Value.....	\$181,050	\$78,300	\$100,601	\$2,749
Woolen—				
Dozens.....	268,248	197,701	3,974	66,573
Value.....	\$2,428,191	\$2,013,304	\$76,887	\$308,000
Worsted—				
Dozens.....	47,394	44,255	25	3,114
Value.....	\$527,330	\$807,504	\$1,675	\$18,151
Merino—				
Dozens.....	1,848,863	935,582	108,244	714,857
Value.....	\$19,621,964	\$14,060,388	\$1,670,052	\$3,885,527
Silk—				
Dozens.....	85,852	425	84,947	480
Value.....	\$1,404,231	\$26,675	\$1,370,237	\$7,310
Union suits:				
Dozens.....	9,211,032	3,426,527	3,710,610	2,073,886
Value.....	\$105,243,880	\$51,470,404	\$37,308,787	\$16,370,680
Cotton, not mercerized—				
Dozens.....	7,492,628	2,524,012	3,229,797	1,788,819
Value.....	\$70,658,381	\$3,1,438,460	\$20,801,927	\$12,414,994

<sup>1</sup> Includes "All other" to avoid disclosure of individual operations.

TABLE 20.—PRODUCTS OF THE KNIT-GOODS INDUSTRY, FOR MEN'S, WOMEN'S, AND CHILDREN'S WEAR: 1919—Con.

PRODUCTS.	Total.	Men.	Women.	Children.
Union suits—Continued.				
Cotton, mercerized—				
Dozens.....	25,888	9,613	16,275	
Value.....	\$464,005	\$277,682	\$180,343	
Woolen—				
Dozens.....	52,837	49,719	1,482	1,638
Value.....	\$1,177,648	\$1,130,947	\$20,613	\$10,988
Worsted—				
Dozens.....	23,364	20,577	3,287	
Value.....	\$825,403	\$748,120	\$77,343	
Merino—				
Dozens.....	1,133,750	630,513	202,031	301,206
Value.....	\$21,415,047	\$14,175,223	\$3,860,144	\$3,371,280
Silk—				
Dozens.....	40,388	402	48,086	
Value.....	\$1,313,131	\$41,245	\$1,271,886	
Silk-mixed—				
Dozens.....	432,677	191,691	208,761	32,225
Value.....	\$9,389,705	\$3,655,747	\$5,166,531	\$567,427
Sweaters, sweater coats, jerseys, cardigan jackets, etc.:—				
Dozens.....	2,132,581	934,199	730,139	468,243
Value.....	\$61,094,341	\$23,913,246	\$28,667,727	\$8,513,368
Cotton, not mercerized—				
Dozens.....	350,562	235,640	28,180	97,742
Value.....	\$1,276,334	\$2,757,119	\$502,532	\$928,683
Cotton, mercerized—				
Dozens.....	15,746	460	15,286	
Value.....	\$341,342	\$0,352	\$331,090	
Woolen—				
Dozens.....	284,771	80,130	121,297	54,335
Value.....	\$10,146,322	\$3,785,332	\$4,968,985	\$1,391,995
Worsted—				
Dozens.....	575,725	199,065	258,559	117,501
Value.....	\$17,079,750	\$5,894,023	\$8,389,771	\$2,795,056
Merino—				
Dozens.....	781,951	408,440	181,143	189,388
Value.....	\$21,841,147	\$11,407,281	\$7,233,348	\$3,233,518
Silk—				
Dozens.....	14,857	—	14,823	231
Value.....	\$1,562,877	—	\$1,558,197	\$1,680
Silk-mixed—				
Dozens.....	89,771	855	87,808	1,108
Value.....	\$3,980,782	\$50,230	\$3,875,425	\$46,118
Artificial silk—				
Dozens.....	14,817	—	14,817	
Value.....	\$877,066	—	\$877,066	
Other—				
Dozens.....	18,381	—	10,426	7,955
Value.....	\$935,721	—	\$820,403	\$115,318
Bathing suits:				
Dozens.....	301,393	167,507	98,222	35,681
Value.....	\$6,614,906	\$3,528,938	\$2,535,413	\$530,555
Cotton, not mercerized—				
Dozens.....	98,078	52,837	24,066	21,175
Value.....	\$1,133,652	\$535,930	\$391,547	\$206,166
Cotton, mercerized—				
Dozens.....	9,101	3,821	5,280	
Value.....	\$205,439	\$88,664	\$176,775	
Woolen—				
Dozens.....	44,752	21,912	16,130	6,680
Value.....	\$1,241,493	\$533,762	\$613,221	\$94,510
Worsted—				
Dozens.....	78,615	50,546	25,456	2,613
Value.....	\$2,253,031	\$1,496,388	\$893,082	\$63,561
Merino—				
Dozens.....	69,058	38,322	25,540	5,196
Value.....	\$1,593,987	\$872,020	\$554,746	\$166,315
Silk—				
Dozens.....	71	36	35	
Value.....	\$2,336	\$1,269	\$1,077	
Silk-mixed—				
Dozens.....	1,715	—	1,715	
Value.....	\$154,365	—	\$154,365	
Sueded cotton gloves:				
Dozens.....	163,086	18,231	139,828	10,027
Value.....	\$1,061,856	\$73,200	\$918,377	\$70,189
Knitted gloves and mittens (except sueded):				
Dozen pairs.....	3,408,037	432,579	1,778,194	1,197,261
Value.....	\$18,408,555	\$2,312,990	\$13,822,973	\$2,802,583
Cotton, not mercerized—				
Dozen pairs.....	132,777	19,767	59,269	53,741
Value.....	\$190,771	\$70,440	\$273,075	\$138,256
Cotton, mercerized—				
Dozen pairs.....	1,191	478	713	
Value.....	\$1,046	—	\$1,835	\$2,211
Woolen—				
Dozen pairs.....	191,601	77,903	77,369	39,239
Value.....	\$1,030,673	\$352,218	\$450,414	\$210,041
Worsted—				
Dozen pairs.....	45,383	11,611	7,891	25,351
Value.....	\$201,467	\$45,858	\$18,825	\$110,084
Merino—				
Dozen pairs.....	726,280	306,440	105,372	314,465
Value.....	\$2,823,277	\$1,327,270	\$556,609	\$939,993
Silk—				
Dozen pairs.....	1,522,460	16,768	742,470	763,222
Value.....	\$7,077,475	\$538,213	\$5,616,669	\$893,593
Silk-mixed—				
Dozen pairs.....	785,345	—	785,345	
Value.....	\$6,837,816	—	\$6,837,816	

## KNIT GOODS.

17

TABLE 20.—PRODUCTS OF THE KNIT-GOODS INDUSTRY, FOR MEN'S, WOMEN'S, AND CHILDREN'S WEAR: 1919—Con.

PRODUCTS.	Total.	Men.	Women.	Children.
Scarfs and shawls:				
Dozens.....	298,237	166,227	86,909	45,100
Value.....	\$4,054,859	\$1,037,007	\$2,899,195	\$117,757
Cotton, not mercerized—				
Dozens.....	1,600	800	1,000	.....
Value.....	\$100,791	\$85,701	\$15,000	.....
Woolen—				
Dozens.....	2,574	123	2,411	40
Value.....	\$78,394	\$2,400	\$75,409	\$585
Worsted—				
Dozens.....	72,221	600	26,700	44,801
Value.....	\$1,025,480	\$20,700	\$906,057	\$80,723
Merino—				
Dozens.....	32,198	75	31,123	1,000
Value.....	\$912,114	\$1,806	\$882,799	\$27,419
Silk—				
Dozens.....	12,255	10,001	2,251	.....
Value.....	\$455,674	\$100,695	\$51,979	.....
Silk-mixed—				
Dozens.....	31,201	10,828	20,373	.....
Value.....	\$1,120,698	\$267,455	\$859,143	.....
Artificial silk—				
Dozens.....	144,000	141,000	.....	.....
Value.....	\$250,000	\$250,000	.....	.....
Other—				
Dozens.....	2,188	.....	2,188	.....
Value.....	\$105,808	.....	\$105,808	.....
Knitted headwear (except infants):				
Dozens.....	557,732	71,083	352,074	133,075
Value.....	\$3,996,398	\$582,813	\$2,100,505	\$1,223,050
Cotton, not mercerized—				
Dozens.....	29,169	.....	20,160	.....
Value.....	\$104,152	.....	\$104,152	.....
Cotton, mercerized—				
Dozens.....	18,611	.....	18,611	.....
Value.....	\$223,330	.....	\$223,330	.....
Woolen—				
Dozens.....	66,090	28,753	925	39,021
Value.....	\$199,871	\$203,020	\$11,060	\$285,185
Worsted—				
Dozens.....	49,090	21,180	14,616	10,261
Value.....	\$651,013	\$200,710	\$302,306	\$141,958
Merino—				
Dozens.....	326,072	21,050	203,716	41,306
Value.....	\$2,125,173	\$172,408	\$1,580,054	\$372,651
Silk—				
Dozens.....	500	.....	500	.....
Value.....	\$0,000	.....	\$0,000	.....
Silk-mixed—				
Dozens.....	63,981	.....	42,718	21,263
Value.....	\$362,759	.....	\$185,933	\$176,826
Other—				
Dozens.....	3,010	.....	1,500	2,110
Value.....	\$21,100	.....	\$7,000	\$14,100
Neckties:				
Dozens.....	517,631	514,031	3,000	.....
Value.....	\$5,100,917	\$5,070,917	\$30,000	.....
Cotton, not mercerized—				
Dozens.....	35,773	35,773	.....	.....
Value.....	\$172,442	\$172,442	.....	.....
Cotton, mercerized—				
Dozens.....	1,425	1,425	.....	.....
Value.....	\$6,700	\$6,700	.....	.....

TABLE 20.—PRODUCTS OF THE KNIT-GOODS INDUSTRY, FOR MEN'S, WOMEN'S, AND CHILDREN'S WEAR: 1919—Con.

PRODUCTS.	Total.	Men.	Women.	Children.
Neckties—Continued.				
Worsted—				
Dozens.....	76,714	76,714	.....	.....
Value.....	\$496,465	\$496,465	.....	.....
Silk—				
Dozens.....	120,508	120,508	.....	.....
Value.....	\$1,938,314	\$1,938,314	.....	.....
Silk-mixed—				
Dozens.....	293,183	290,183	3,000	.....
Value.....	\$2,273,784	\$2,273,484	\$30,000	.....
Artificial silk—				
Dozens.....	20,028	20,028	.....	.....
Value.....	\$213,242	\$213,212	.....	.....
All other fancy knit goods, value.....	\$11,283,451	\$2,353,425	\$4,223,318	\$4,706,710

## EQUIPMENT.

Cards and spindles used in the industry, for the United States.—A comparison by census years of the number of cards and spindles used in the industry is given in Table 21.

TABLE 21.—CARDS AND SPINDLES USED IN THE KNIT-GOODS INDUSTRY: 1919, 1914, 1909, AND 1904.

CLASS.	NUMBER.				PER CENT OF TOTAL.			
	1919	1914	1909	1904	1919	1914	1909	1904
Sets of cards.....	3,317	3,074	2,671	1,977	100.0	100.0	100.0	100.0
Woolen and shoddy	1,909	863	844	977	27.2	28.1	31.6	49.4
Cotton.....	2,438	2,211	1,827	1,000	72.8	71.9	68.4	50.6
Spindles.....	885,681	866,494	736,774	603,180	100.0	100.0	100.0	100.0
Producing.....	859,202	848,729	729,935	596,362	97.0	97.9	99.1	93.9
Woolen and shoddy.....	234,353	254,157	244,458	286,661	26.5	29.3	33.2	47.5
Worsted.....	4,458	2,585	2,360	9,664	0.5	0.3	0.3	1.6
Cotton.....	620,391	591,987	483,117	300,037	70.0	68.3	65.6	49.7
Doubling and twisting.....	26,479	17,765	6,839	6,818	3.0	2.1	0.9	1.1

<sup>1</sup> Includes 4 worsted cards.

Cards and spindles used in the industry, by states.—A distribution, by states, is shown in Table 22 for the number of cards and spindles used in the industry during 1919 and 1914.

## MANUFACTURES.

TABLE 22.—CARDS AND SPINDLES USED IN THE KNIT-GOODS INDUSTRY, BY STATES: 1919 AND 1914.

STATE.	Census year.	SETS OF CARDS.			SPINDLES.						Doubling and twisting.	
		Total.	Woolen and shoddy.	Cotton.	Aggregate.	Producing.			Frame.			
						Total.	Mule.	Cotton.				
United States.....	1919	3,347	900	2,438	885,081	859,202	359,628	222,880	133,768	499,574	29,479	
	1914	3,074	863	2,211	866,494	848,729	443,402	256,374	187,028	405,327	17,765	
Alabama.....	1919	21	.....	21	18,408	18,408	.....	.....	.....	18,408	.....	
	1914	21	.....	21	6,144	6,144	.....	.....	.....	6,144	.....	
Connecticut.....	1919	132	116	16	35,274	34,230	29,724	25,584	4,160	4,506	1,044	
	1914	125	86	39	37,356	37,152	37,012	22,112	14,900	140	204	
Georgia.....	1919	218	.....	218	40,387	38,022	2,400	.....	2,400	35,822	2,365	
	1914	181	.....	181	23,852	23,758	2,500	.....	2,500	21,256	98	
Illinois.....	1919	18	14	4	7,934	6,800	6,860	6,860	.....	.....	1,124	
	1914	9	8	1	5,904	5,136	5,136	5,133	.....	.....	763	
Massachusetts.....	1919	547	48	499	176,296	176,236	78,338	14,538	63,803	97,928	.....	
	1914	545	28	517	162,600	158,952	74,428	8,456	65,972	81,524	3,648	
Michigan.....	1919	66	18	48	22,980	21,020	3,020	2,500	520	18,000	1,969	
	1914	70	22	48	19,503	17,957	4,304	4,304	.....	13,683	1,516	
New Hampshire.....	1919	73	71	2	19,618	18,458	18,631	18,631	.....	827	160	
	1914	85	71	14	26,898	26,874	24,050	22,898	1,152	2,824	24	
New York.....	1919	1,416	493	923	357,571	350,471	168,263	114,631	53,632	182,208	7,100	
	1914	1,285	479	806	373,245	367,171	193,267	140,691	52,570	173,904	6,074	
North Carolina.....	1919	363	4	359	97,288	90,316	12,256	.....	.....	12,256	.....	
	1914	300	.....	300	62,065	62,056	43,440	.....	43,440	78,060	6,972	
Ohio.....	1919	14	14	.....	4,722	4,722	4,722	4,722	.....	.....	.....	
	1914	15	15	.....	5,138	5,138	5,138	5,138	.....	.....	.....	
Pennsylvania.....	1919	69	52	17	20,945	20,593	12,570	12,570	.....	8,023	352	
	1914	74	34	40	26,210	22,476	14,232	10,050	4,232	8,194	3,764	
South Carolina.....	1919	20	.....	20	5,616	5,616	.....	.....	.....	5,616	.....	
	1914	16	.....	16	5,616	5,616	.....	.....	.....	5,616	.....	
Tennessee.....	1919	252	.....	252	38,764	38,544	.....	.....	.....	28,544	220	
	1914	186	.....	186	31,686	31,644	.....	.....	.....	31,644	42	
Vermont.....	1919	22	22	.....	5,424	5,424	5,424	5,424	.....	.....	.....	
	1914	19	19	.....	5,364	5,364	5,364	5,364	.....	.....	.....	
Virginia.....	1919	12	12	.....	4,410	4,410	4,410	4,410	.....	.....	.....	
	1914	19	19	.....	7,050	7,050	7,050	7,050	.....	.....	.....	
Wisconsin.....	1919	28	28	2	8,384	6,510	6,270	6,270	.....	240	1,874	
	1914	27	25	2	9,161	7,777	7,777	7,777	.....	.....	1,334	
All other states.....	1919	76	17	50	21,040	18,332	6,740	6,740	.....	11,592	3,308	
	1914	97	57	40	58,672	58,436	10,654	17,398	2,256	38,782	238	

Distribution of establishments and spindles, by states.—Table 23 gives the relation between the number of establishments and spindles in the industry, by states, for 1919 and 1914.

TABLE 23.—DISTRIBUTION OF ESTABLISHMENTS AND SPINDLES, BY STATES: 1919 AND 1914.

STATE.	Cen-sus year.	ESTABLISHMENTS IN THE INDUSTRY.					
		Total number.	With producing spindles.		Having 4,000 spindles or over.		Total.
			Num-ber.	Number of spindles.	Num-ber.	Number of spindles.	
United States.....	1919	2,050	1,870	180	859,202	50	700,280
	1914	1,622	1,478	144	848,729	49	600,313
Alabama.....	1919	10	8	2	18,408	2	18,408
	1914	5	4	1	6,144	1	6,144
Connecticut.....	1919	21	11	10	34,230	2	8,360
	1914	25	15	10	37,152	4	18,392
Georgia.....	1919	28	23	5	38,022	5	38,022
	1914	22	16	6	23,786	4	21,218
Illinois.....	1919	58	57	1	6,800	1	6,800
	1914	43	45	1	5,136	1	5,136
Louisiana.....	1919	3	2	1	7,944	1	7,944
	1914	3	2	1	4,502	1	4,502
Massachusetts.....	1919	77	66	11	176,266	4	163,940
	1914	77	69	8	158,952	3	147,896
Michigan.....	1919	31	25	6	21,020	1	18,000
	1914	34	26	8	17,987	1	13,680
New Jersey.....	1919	90	90	3	7,303	1	7,264
	1914	62	59	3	7,303	1	7,264
New York.....	1919	682	586	96	350,471	20	280,354
	1914	483	425	58	307,171	22	307,010
North Carolina.....	1919	121	110	5	90,310	4	88,644
	1914	74	70	4	62,056	3	50,248
Pennsylvania.....	1919	603	595	11	20,593	2	14,500
	1914	493	493	5	22,476	2	18,664
South Carolina.....	1919	14	13	1	5,616	1	5,616
	1914	6	5	1	5,616	1	5,616
Tennessee.....	1919	63	59	4	38,544	4	38,544
	1914	20	22	4	31,644	3	30,396
All other states.....	1919	246	210	27	50,012	3	33,088
	1911	261	227	34	98,834	2	44,559

Knitting machines used in the industry, for the United States.—The number and kind of knitting

machines used in the industry since 1904 are shown in Table 24.

TABLE 24.—KNITTING MACHINES USED IN THE KNIT-GOODS INDUSTRY: 1919, 1914, 1909, AND 1904.

CLASS.	1919	1914	1909	1904
Total.....	172,363	142,240	115,019	88,374
Power.....	169,319	138,167	110,630	81,870
Flat.....	17,436	12,243	10,423	6,964
Full-fashioned flat.....	9,420	5,852	3,388	3,542
Circular.....	57,481	64,050	48,142	39,409
Circular hosiery, automatic.....	79,382	59,894	44,676	31,961
All other.....	5,597	6,128	4,001	(1)
Hand (Lamb and other varieties).....	3,044	4,073	4,389	2,6,498
Spring needle.....	24,217	16,376	17,680	13,899
Power.....	23,798	16,138	17,308	13,564
Flat.....	3,223	3,477	2,351	2,211
Ribbed.....	1,194	1,105	964	1,455
Plain.....	2,029	2,372	1,387	756
Full-fashioned flat.....	3,660	3,052	2,177	1,455
Ribbed.....	280	251	209	280
Plain.....	3,380	2,801	1,088	1,195
Circular.....	9,994	7,125	8,260	8,250
Ribbed.....	3,487	2,015	2,188	1,087
Plain.....	6,507	5,110	6,068	7,163
Circular hosiery, automatic.....	5,715	1,773	3,815	1,648
All other.....	1,197	711	700	(1)
Hand (Lamb and other varieties).....	428	238	372	385
Latch needle.....	148,146	125,864	97,339	74,475
Power.....	145,530	122,029	93,322	68,312
Flat.....	14,213	8,766	8,072	4,753
Ribbed.....	8,323	3,529	2,516	2,343
Plain.....	5,390	5,237	5,556	2,410
Full-fashioned flat.....	5,760	2,800	1,211	2,087
Ribbed.....	995	1,239	902	770
Plain.....	4,765	1,561	300	1,317
Circular.....	47,487	40,925	39,886	31,159
Ribbed.....	35,115	35,326	30,080	24,452
Plain.....	11,772	11,599	9,806	6,707
Circular hosiery, automatic.....	73,070	58,121	40,861	30,313
All other.....	4,4,400	5,417	3,292	(4)
Hand (Lamb and other varieties).....	2,616	3,835	4,017	6,163
Per cent of total.....	100.0	100.0	100.0	100.0
Power.....	98.2	97.1	96.2	92.6
Flat.....	10.1	8.6	9.1	7.9
Full-fashioned flat.....	5.5	4.1	2.9	4.0
Circular.....	33.3	38.0	41.9	44.6
Circular hosiery, automatic.....	46.1	42.1	38.8	36.2
All other.....	3.2	4.3	3.5	—
Hand (Lamb and other varieties).....	1.8	2.9	3.8	7.4
Spring needle.....	14.0	11.5	15.4	15.7
Latch needle.....	86.0	88.5	84.6	84.3

<sup>1</sup> Not reported.

<sup>2</sup> Not including machines used by manufacturers employing hand machines exclusively, which were not reported in 1904.

<sup>3</sup> Includes 244 traverse-loom and 620 warp knitting machines.

<sup>4</sup> Includes 318 traverse-loom and 520 warp knitting machines.

Knitting machines used in the industry, by states.—Table 25 relates to the number of different kinds of knitting machines employed in the industry according to location, by states, in 1919 and 1914.

## MANUFACTURES.

TABLE 25.—KNITTING MACHINE EQUIPMENT IN THE KNIT-GOODS INDUSTRY, BY STATES: 1919 AND 1914.

CLASS AND STATE.	Cen-sus year.	Total.	KNITTING MACHINES EMPLOYED IN THE INDUSTRY.									
			Power.									
			Flat.		Full-fashioned flat.		Circular.		Circular hosiery, automatic.	All other.	Hand (Lamb and other varieties).	
			Ribbed.	Plain.	Ribbed.	Plain.	Ribbed.	Plain.				
<b>ALL CLASSES.</b>												
United States.....	1919	172,365	10,019	7,419	1,275	8,145	39,202	18,279	79,385	15,597	3,044	
	1914	142,240	4,634	7,609	1,480	4,362	37,341	16,709	59,894	6,123	4,073	
Alabama.....	1919	1,257	.....	.....	.....	.....	730	90	437	.....	.....	
	1914	635	.....	.....	.....	.....	217	32	338	43	.....	
California.....	1919	490	47	48	1	24	100	208	2	18	44	
	1914	360	36	93	14	22	46	60	13	10	66	
Connecticut.....	1919	1,478	120	85	30	140	377	361	307	8	50	
	1914	2,139	148	105	136	382	284	606	363	90	25	
Delaware.....	1919	222	.....	.....	.....	.....	222	.....	.....	.....	.....	
	1914	1,010	255	.....	.....	.....	184	.....	401	80	.....	
Georgia.....	1919	5,834	708	135	.....	.....	599	541	3,851	.....	.....	
	1914	4,699	8	238	.....	.....	1,005	52	3,292	14	.....	
Illinois.....	1919	8,261	1,082	74	225	2,471	789	519	1,300	1,721	80	
	1914	6,948	48	837	223	515	843	111	944	2,088	439	
Indiana.....	1919	2,073	2	34	10	398	700	58	859	.....	12	
	1914	1,516	8	50	20	203	511	24	614	.....	13	
Iowa.....	1919	585	.....	.....	.....	.....	147	.....	438	.....	.....	
	1914	383	.....	.....	.....	.....	116	.....	267	.....	.....	
Maine.....	1919	11	.....	.....	1	.....	.....	1	1	1	8	
	1914	140	45	3	3	25	.....	.....	45	12	7	
Maryland.....	1919	1,066	.....	.....	.....	.....	297	169	600	.....	.....	
	1914	1,255	7	.....	.....	.....	241	132	714	100	3	
Massachusetts.....	1919	10,735	377	127	48	164	1,970	1,321	6,207	434	107	
	1914	10,209	447	1,180	220	183	1,459	978	5,314	130	28	
Michigan.....	1919	2,656	45	10	.....	1	1,076	127	1,071	137	190	
	1914	2,872	189	120	211	1	904	190	915	93	249	
Minnesota.....	1919	808	47	22	1	5	544	36	427	.....	26	
	1914	651	66	27	0	8	372	7	62	80	20	
New Hampshire.....	1919	3,531	8	45	2	.....	841	26	2,609	.....	80	
	1914	3,600	5	2	76	1,156	18	2,163	100	100	80	
New Jersey.....	1919	4,623	127	305	58	420	403	214	2,868	33	192	
	1914	3,496	241	149	14	473	1,025	143	1,023	244	184	
New York.....	1919	23,746	3,709	3,518	506	1,962	6,262	4,728	573	1,058	1,340	
	1914	17,252	1,216	2,190	174	411	6,973	3,775	298	705	1,450	
North Carolina.....	1919	14,234	489	329	.....	346	2,268	2,150	8,150	453	40	
	1914	10,959	287	111	100	.....	1,791	1,269	6,903	498	.....	
Ohio.....	1919	2,043	212	134	2	10	1,587	350	407	147	94	
	1914	2,780	53	190	50	4	1,296	182	412	264	329	
Pennsylvania.....	1919	57,508	1,736	1,559	230	1,789	12,458	6,219	32,634	604	270	
	1914	51,422	1,020	1,729	211	1,750	12,532	6,158	26,401	1,233	298	
Rhode Island.....	1919	1,742	19	190	2	92	438	377	598	26	8	
	1914	1,861	42	7	4	107	570	503	525	98	8	
South Carolina.....	1919	1,085	262	154	.....	.....	235	50	1,284	.....	.....	
	1914	1,015	3	.....	.....	.....	246	140	620	.....	.....	
Tennessee.....	1919	12,086	417	316	.....	.....	4,060	493	6,975	725	.....	
	1914	6,749	.....	.....	.....	.....	2,875	865	2,896	113	.....	
Vermont.....	1919	506	16	8	14	42	283	20	183	.....	.....	
	1914	471	35	.....	.....	.....	250	30	156	.....	.....	
Virginia.....	1919	2,043	.....	54	.....	.....	585	94	1,150	160	.....	
	1914	1,678	.....	.....	.....	.....	440	194	1,038	6	.....	
Wisconsin.....	1919	8,367	400	207	34	275	1,828	108	4,882	70	473	
	1914	6,820	444	535	62	102	1,511	1,214	2,451	59	442	
All other states.....	1919	2,595	106	67	13	6	403	10	1,872	.....	118	
	1914	2,217	36	36	25	4	379	26	1,540	3	168	
SPRING NEEDLE.												
United States.....	1919	24,217	1,194	2,029	280	3,380	3,487	6,507	5,715	21,197	428	
	1914	16,376	1,105	2,372	261	2,801	2,015	5,110	1,773	711	238	
Connecticut.....	1919	853	47	76	6	138	165	359	60	8	.....	
	1914	1,123	100	75	6	364	68	454	.....	48	.....	
Georgia.....	1919	2,643	450	75	.....	.....	.....	.....	2,118	.....	.....	

<sup>1</sup> Includes 1,140 warp and 562 traverse-loom knitting machines.<sup>2</sup> Includes 620 warp and 244 traverse-loom knitting machines.

TABLE 25.—KNITTING MACHINE EQUIPMENT IN THE KNIT-GOODS INDUSTRY, BY STATES: 1919 AND 1914—Con.

CLASS AND STATE.	Cen-sus year.	Total.	KNITTING MACHINES EMPLOYED IN THE INDUSTRY.									Hand (Lamb and other varie-ties).	
			Power.										
			Flat.		Full-fashioned flat.		Circular.		Circular hosiery, automatic.	All other.			
			Ribbed.	Plain.	Ribbed.	Plain.	Ribbed.	Plain.					
<b>SPRING NEEDLE—continued.</b>													
Illinois.....	1919	320	8	9	33	175	3	84	9	11	11	15	
	1914	52	7	7	7	3	9	11					
Indiana.....	1919	584	34	10	398	142	6						
	1914	408	1	58	29	263	111						
Massachusetts.....	1919	1,842	103	89	16	120	252	1,009	101	144	8	20	
	1914	1,957	125	1,137	39	170	158	291	1	16			
Michigan.....	1919	133	1	10			42	84		4	2		
	1914	316	91				36	114	54		11		
New Hampshire.....	1919	324			2	11	105	5	212				
	1914	128			2	15				100			
New Jersey.....	1919	546	9	9	26	406	17	21		35	23		
	1914	623	14	20	14	423	55		23	29	39		
New York.....	1919	7,007	350	1,230	42	258	1,600	2,830	199	773	316		
	1914	5,154	305	836	44	246	682	2,459	176	303	103		
North Carolina.....	1919	531	10				105	26	330				
	1914	286	66				36	156	12	16			
Ohio.....	1919	408	3	38		10	175	142	40				
	1914	210	16	26		115	10	43					
Pennsylvania.....	1919	6,074	162	200	148	1,583	557	1,326	2,453	213	32		
	1914	4,407	233	167	104	1,181	400	818	1,344	136	24		
Rhode Island.....	1919	633	3	180	2	92	25	311		20			
	1914	780	15		3	98	100	452	50	62			
Tennessee.....	1919	280					96	80	63				
Vermont.....	1919	70	16	8			26	20					
	1914	108	35				133	30					
Virginia.....	1919	148		54			9	94					
	1914	203					194						
Wisconsin.....	1919	340	20	6	1	199	53	31	1		29		
	1914	385	94	28	3	38	72	80	53		17		
All other states.....	1919	322	3	21		1	67	85	138	6	7		
	1914	86	10	9		22	22	37		1	1		
<b>LATCH NEEDLE.</b>													
United States.....	1919	148,146	8,823	5,390	905	4,765	35,715	11,772	73,670	34,400	2,616		
	1914	125,804	3,520	5,237	1,239	1,561	35,326	11,599	58,121	5,417	3,835		
Alabama.....	1919	1,187					700	50	437				
	1914	603					217		338	48			
California.....	1919	415	44	25	1	24	98	164	2	18	39		
	1914	354	36	91	14	22	46	57	13	10	65		
Connecticut.....	1919	625	73	9	30	2	212	2	247		50		
	1914	1,016	48	30	130	18	216	152	363	42	17		
Delaware.....	1919	222					222						
	1914	1,010	255				184		401	80			
Georgia.....	1919	3,191	258	60			599	541	1,733				
	1914	4,600	8	238			1,095	52	3,292	14			
Illinois.....	1919	7,041	1,074	65	192	2,206	789	435	1,300	1,721	69		
	1914	5,996	48	837	216	508	840	102	933	2,088	424		
Indiana.....	1919	1,480	2				558	58	859		12		
	1914	1,048	2	1			400	18	614		13		
Iowa.....	1919	585					147		438				
	1914	383					116		267				
Maine.....	1919	8					23		39	12	8		
	1914	132	45	3							7		
Maryland.....	1919	1,050	7				58	281	169	600			
	1914	1,239						225	132	714	100	3	
Massachusetts.....	1919	8,913	274	38	32	44	1,718	312	6,106	290	99		
	1914	8,252	322	43	187	13	1,301	687	5,313	114	272		
Michigan.....	1919	2,523	44	10		1	1,034	43	1,071	133	188		
	1914	2,590	98	110	211	1	868	76	861	93	238		
Minnesota.....	1919	787	47	22	1	5	532	36	120		24		
	1914	638	58	27	9	8	368	7	62	79	20		

<sup>3</sup> Includes 520 warp and 318 traverse-loom knitting machines.

## MANUFACTURES.

TABLE 25.—KNITTING MACHINE EQUIPMENT IN THE KNIT-GOODS INDUSTRY, BY STATES: 1919 AND 1914—Con.

CLASS AND STATE.	Con-sus- year.	KNITTING MACHINES EMPLOYED IN THE INDUSTRY.								
		Total.	Power.						Hand (Lamb and other varieties).	
			Flat.		Full-fashioned flat.		Circular.		Circular hosiery, automatic.	
<b>LATCH NEEDLE—continued.</b>										
New Hampshire.....	1919	3,207	8	45	.....	65	736	21	2,397	.....
	1914	3,472	5	.....			1,141	18	2,163	.....
New Jersey.....	1919	4,077	118	206	32	14	386	193	2,868	1
	1914	2,873	227	123	.....	50	970	143	1,000	215
New York.....	1919	16,139	3,350	2,288	554	1,704	4,662	1,898	374	285
	1914	12,098	911	1,354	130	165	6,201	1,316	122	462
North Carolina.....	1919	13,703	470	320	.....	346	2,103	2,133	7,820	453
	1914	10,673	221	111	100	.....	1,755	1,113	6,891	482
Ohio.....	1919	2,535	209	96	2	.....	1,412	208	367	94
	1914	2,570	37	104	50	4	1,181	172	360	264
Pennsylvania.....	1919	50,834	1,574	1,359	91	206	11,901	4,803	30,181	391
	1914	47,015	787	1,562	107	560	12,132	5,340	25,147	1,097
Rhode Island.....	1919	1,109	16	10	.....	9	413	66	598	6
	1914	1,084	27	7	1	0	470	51	475	36
South Carolina.....	1919	1,855	262	154	.....	.....	235	50	1,154	.....
	1914	1,015	3	.....			246	140	626	.....
Tennessee.....	1919	12,747	417	310	.....	.....	3,964	413	6,912	725
	1914	6,749	.....				2,875	865	2,396	113
Vermont.....	1919	496	.....	.....	14	42	257	.....	183	.....
	1914	273	.....				117	.....	156	.....
Virginia.....	1919	1,895	.....	.....	.....	.....	585	.....	1,150	180
	1914	1,475	.....				431	.....	1,038	6
Wisconsin.....	1919	8,027	470	201	33	76	1,775	77	4,881	70
	1914	6,435	350	507	59	64	1,439	1,184	2,398	425
All other states.....	1919	2,586	104	67	13	6	396	10	1,872	118
	1914	2,206	34	29	25	4	379	24	1,540	168

Sewing machines, active and idle, by states.—The number of active and idle sewing machines, includ-

ing loopers, is shown for the industry, by states, in Table 26.

TABLE 26.—SEWING MACHINES, INCLUDING LOOPERS: 1919 AND 1914.

STATE.	1919			1914 <sup>1</sup>	STATE.	1919			1914 <sup>1</sup>
	Total.	Active.	Idle.			Total.	Active.	Idle.	
United States.....	77,330	72,448	4,882	65,328	New Jersey.....	1,886	1,810	76	1,272
Alabama.....	309	308	1	185	New York.....	25,753	23,595	2,158	25,280
California.....	426	406	20	187	North Carolina.....	3,241	3,046	195	2,077
Connecticut.....	1,203	1,110	183	1,221	Ohio.....	2,090	2,010	80	2,021
Delaware.....	85	85	.....	171	Oregon.....	18	18	.....	21
Georgia.....	1,086	981	155	780	Pennsylvania.....	20,042	18,831	1,211	15,417
Illinois.....	1,993	1,871	122	1,615	Rhode Island.....	785	747	18	900
Indiana.....	670	670	.....	811	South Carolina.....	335	307	28	193
Iowa.....	86	86	.....	77	Tennessee.....	3,003	2,954	49	1,347
Louisiana.....	149	137	12	36	Utah.....	262	253	9	174
Maryland.....	270	264	6	325	Vermont.....	561	524	37	493
Massachusetts.....	4,993	4,828	165	4,338	Virginia.....	700	686	23	854
Michigan.....	1,767	1,571	196	1,633	Washington.....	69	69	.....	89
Minnesota.....	1,677	1,673	4	1,021	West Virginia.....	200	200	.....	175
Mississippi.....	37	37	.....	37	Wisconsin.....	2,494	2,442	52	1,537
New Hampshire.....	917	835	82	953	All other states.....	48	48	.....	88

<sup>1</sup> Active and idle machinery not reported separately.

# KNIT GOODS.

23

## SECTION 2.

The purpose of this section will be found by reference to the foregoing pages under "General character of the industry."

**Summary of materials.**—Statistics are presented in

**BUREAU OF THE BUDGET LIBRARY**

Table 27 with respect to the quantity and cost of the different kinds of materials used in the industry by establishments whose chief product according to value in 1919 was hosiery, underwear, fancy knit goods, knitted cloth, or contract work.

TABLE 27.—QUANTITY AND COST OF PRINCIPAL MATERIALS USED IN KNIT-GOODS ESTABLISHMENTS, CLASSIFIED ACCORDING TO VALUE OF PRIMARY PRODUCT: 1919.

KIND OF MATERIAL.	TOTAL.		ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—									
			Hosiery.		Underwear.		Fancy knit goods.		Knitted cloth.		Contract work.	
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
	Pounds.	\$	Pounds.	\$	Pounds.	\$	Pounds.	\$	Pounds.	\$	Lbs.	\$
Total.....	3367,450,358		161,608,310		109,664,872		58,084,269		37,908,737		40,170	
Cotton (raw).....	93,050,318	30,003,276	21,269,705	6,011,734	64,743,417	21,900,107	2,144,309	761,384	4,892,887	1,390,051	.....	.....
Domestic.....	92,446,380	30,387,905	21,040,452	6,540,583	64,415,740	21,721,205	2,140,575	765,804	4,849,613	1,367,103	.....	.....
Foreign.....	603,938	276,281	220,233	70,851	327,677	178,902	3,734	2,580	43,274	22,948	.....	.....
Open cotton fiber, dyed, bleached, or otherwise treated, purchased.....	329,605	113,147	52,018	13,259	201,591	95,531	6,056	1,357	10,000	3,000	.....	.....
Cotton waste, not made in these mills.....	24,832,027	4,857,149	2,005,400	864,489	9,841,361	2,150,070	5,531,957	1,030,850	7,453,300	1,311,740	.....	.....
Cotton card laps, roping, sliver, and roving, purchased.....	509,088	149,625	152,178	41,019	248,493	74,375	77,295	23,961	31,122	10,270	.....	.....
Wool (raw).....	4,518,008	5,000,852	707,980	694,024	1,905,972	2,402,041	748,281	757,212	1,155,835	1,207,575	.....	.....
Domestic.....	3,706,825	4,125,884	487,837	431,408	1,445,367	1,842,085	631,288	652,935	1,142,333	1,169,466	.....	.....
Foreign.....	811,243	934,068	220,143	262,616	400,005	559,056	116,993	104,277	13,502	8,119	.....	.....
Equivalent scouring.....	4,116,305	.....	652,900	1,801,876	.....	.....	612,829	1,048,964	.....	.....	.....	.....
All other animal fiber and hair (except silk).....	705,830	339,577	6,918	4,228	593,005	257,574	90,090	66,739	15,766	11,036	.....	.....
Tops, not made in these mills.....	146,812	240,434	24,750	41,692	122,053	198,742	.....	.....	.....	.....	.....	.....
Wool waste and noils, not made in these mills.....	5,025,522	8,852,710	1,008,028	692,187	2,104,686	1,782,186	1,071,643	774,585	780,235	603,752	.....	.....
Recovered wool fiber (shoddy, mungo, and wool extract), not made in these mills.....	5,367,065	2,066,168	920,685	372,736	1,803,971	605,611	1,742,041	694,140	840,358	493,681	.....	.....
Silk.....	1,265,608	9,340,768	612,254	4,449,649	36,422	293,285	552,524	3,898,922	64,388	998,913	.....	.....
Yarn, not made in these mills:												
Cotton, not mercerized.....	186,892,109	120,701,157	65,714,607	44,511,383	96,871,423	60,029,333	10,014,555	7,094,705	14,291,434	9,155,730	.....	.....
Cotton, mercerized.....	30,510,234	40,403,009	26,824,800	44,342,614	2,429,342	2,074,307	1,032,404	1,691,421	232,082	394,697	.....	.....
Woolen (except merino).....	5,383,026	8,806,287	880,040	920,531	139,340	206,813	3,033,654	6,587,701	700,736	1,090,792	150	450
Worsted (except merino).....	12,635,031	32,148,041	1,457,302	3,033,008	935,394	2,528,778	8,071,775	20,275,417	2,171,010	5,710,923	150	450
Merino.....	9,965,256	10,278,050	1,892,401	2,610,712	3,313,049	5,106,155	1,745,555	2,533,334	14,251	27,799	.....	.....
Silk (organzine and tram).....	5,073,854	44,228,372	3,050,393	32,318,257	132,856	1,130,710	642,052	5,530,297	648,553	5,259,108	.....	.....
Spun silk.....	637,250	4,083,080	507,996	4,018,576	68,258	446,077	53,636	312,231	24,306	203,205	.....	.....
Artificial silk.....	4,153,540	24,101,514	2,110,404	9,840,416	228,087	1,147,028	508,741	3,327,720	1,307,714	9,780,344	.....	.....
Linen, jute, or other yarns of vegetable fiber.....	288,009	182,774	1,000	286	18,912	46,906	200,446	121,844	7,051	13,648	.....	.....
Sewing thread, cotton.....	2,520,680	3,820,700	103,957	191,299	2,073,305	2,973,390	274,729	541,123	61,720	98,088	15,879	25,803
Sewing thread, silk.....	65,832	563,024	12,072	114,494	20,493	152,205	10,453	237,098	7,120	59,027	85	200
Gross.....												
Buttons, pearl.....	5,351,520	2,200,295	12,300	6,000	4,912,797	2,007,589	289,589	223,082	129,827	45,743	7,010	6,381
Buttons, other than pearl.....	1,479,107	873,136	4,700	2,218	781,004	261,162	646,498	555,461	44,588	11,349	2,657	2,946
Chemicals and dyestuffs.....		8,222,817	.....	5,872,839	.....	834,147	.....	1,102,720	.....	408,255	.....	3,850

**Summary of products.**—An itemized summary of quantity and value of products for the industry is given in Table 28, for the year 1919. This table illustrates how strictly the majority of establishments

engaged in the manufacture of knit goods confine their production to a single commodity, like hosiery, underwear, fancy knit goods, knitted cloth, or contract work.

## MANUFACTURES.

TABLE 28.—DISTRIBUTION OF PRODUCTS OF KNIT-GOODS ESTABLISHMENTS, CLASSIFIED ACCORDING TO VALUE OF PRIMARY PRODUCT: 1919.

	Total.	ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—					Total.	ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—			
		Hosiery.	Under-wear.	Fancy knit goods.	Knitted cloth.			Hosiery.	Under-wear.	Fancy knit goods.	Knitted cloth.
Products, total value.....	\$713,139,689	\$309,926,970	\$215,147,294	\$121,780,440	\$59,676,049	Union suits—Con.					
Hosiery:						Silk—					
Dozen pairs.....	\$4,645,757	\$3,006,122	1,330,764	270,047	37,924	Dozens.....	40,388		46,898		2,490
Value.....	\$308,602,377	\$208,922,785	\$4,234,059	\$4,740,088	\$764,845	Value.....	\$1,313,131		\$1,230,288		\$82,843
Hose—						Silk mixed—					
Dozen pairs.....	51,425,340	50,258,396	983,351	145,609	37,924	Dozens.....	432,677		18,000	327,951	86,726
Value.....	\$216,651,368	\$208,845,121	\$3,289,520	\$3,751,882	\$764,845	Value.....	\$9,389,705		\$200,000	\$6,782,178	\$2,308,527
Cotton—						Bathing suits:					
Dozen pairs.....	36,835,602	36,824,113	11,470	.....	19	Dozens.....	301,393		500	20,822	205,959
Value.....	\$105,647,876	\$105,602,616	\$40,234	.....	\$20	Value.....	\$6,644,906		\$44,991	\$230,701	\$5,699,623
Wool—						Loggings:					
Dozen pairs.....	395,268	386,122	372	3,869	4,905	Dozen pairs.....	4,635		3	4,632	.....
Value.....	\$2,139,900	\$2,104,912	\$4,140	\$20,821	\$10,037	Value.....	\$62,610		\$122	\$62,388	.....
Merino—						Gloves and mittens:					
Dozen pairs.....	1,020,371	1,028,304	.....	.....	077	Dozen pairs.....	3,571,123		97,040	42,524	3,264,433
Value.....	\$4,456,430	\$4,440,722	.....	.....	\$9,705	Value.....	\$10,530,411		\$400,153	\$348,551	\$17,602,383
Silk—						Knitted headwear (except infants'):					
Dozen pairs.....	2,580,358	2,556,358	.....	.....	33,000	Dozen pairs.....	557,732		18,727	52,561	486,444
Value.....	\$25,337,049	\$24,582,317	.....	.....	\$754,732	Value.....	\$3,906,398		\$233,889	\$398,185	\$3,364,224
Silk-mixed—						Cardigan jackets, sweaters and jerseys:					
Dozen pairs.....	10,575,741	9,463,400	071,509	140,823	.....	Dozens.....	2,132,581		2,408	50,400	1,888,449
Value.....	\$79,070,053	\$72,108,554	\$3,210,146	\$3,721,355	.....	Value.....	\$61,094,341		\$130,156	\$913,418	\$57,830,911
Half hose—						Scarfs and shawls:					
Dozen pairs.....	33,220,417	32,747,726	347,413	125,278	.....	Dozens.....	298,237		11,488	402	142,347
Value.....	\$92,011,009	\$90,077,684	\$045,139	\$988,206	.....	Value.....	\$4,054,859		\$330,244	\$14,491	\$3,454,124
Cotton—						All other fancy knit goods, value.....	\$10,321,888		\$405,250	\$1,209,353	\$14,850,142
Dozen pairs.....	23,777,740	23,375,920	344,238	57,582	.....	Fleece lining (shoe and glove):					
Value.....	\$47,849,610	\$46,630,476	\$024,251	\$244,883	.....	Square yards.....	6,581,183		179,406	411,932	5,990,383
Wool—						Value.....	\$2,521,360		\$132,287	\$117,364	\$2,271,718
Dozen pairs.....	651,782	631,342	559	19,881	.....	Eider down:					
Value.....	\$3,256,910	\$3,129,015	\$5,949	\$121,916	.....	Square yards.....	941,017		.....	.....	941,017
Merino—						Value.....	\$1,174,502		.....	.....	\$1,174,502
Dozen pairs.....	3,164,007	3,154,124	.....	9,883	.....	Jersey cloth and stockinette:					
Value.....	\$10,541,690	\$10,507,552	.....	\$34,144	.....	Square yards.....	30,344,402		37,268	1,098,618	2,072,165
Silk—						Value.....	\$28,690,935		\$200,676	\$1,192,000	\$3,224,055
Dozen pairs.....	1,926,995	1,914,900	2,616	9,390	.....	Tricolette:					
Value.....	\$9,758,019	\$9,426,873	\$14,939	\$316,207	.....	Square yards.....	5,051,639		27,875	911,688	4,112,076
Silk mixed—						Value.....	\$17,172,431		\$114,407	\$3,042,248	\$14,015,776
Dozen pairs.....	3,699,893	3,671,341	.....	28,552	.....	All other knitted cloth:					
Value.....	\$20,604,774	\$20,333,718	.....	\$271,056	.....	Square yards.....	20,880,095		3,482,426	447,267	22,960,023
Shirts and drawers:						Value.....	\$9,788,418		\$1,704,206	\$704,793	\$7,379,419
Dozons.....	17,180,404	15,105	16,524,718	309,002	292,921	Yarns for sale:					
Value.....	\$98,286,403	\$736,137	\$03,486,096	\$1,720,203	\$2,343,877	Cotton—					
Cotton—						Pounds.....	17,493,355		7,941,718	9,513,756	.....
Dozens.....	14,655,963	.....	14,147,304	283,305	225,264	Value.....	\$9,334,118		\$1,064,325	\$6,132,046	37,781
Value.....	\$72,504,633	.....	\$69,700,001	\$1,570,324	\$1,195,305	Woolen—					
Wool—						Pounds.....	451,804		31,089	.....	235,710
Dozens.....	315,642	22,080	283,300	172	.....	Value.....	\$937,407		\$22,185	.....	\$586,762
Value.....	\$8,055,521	\$264,964	\$2,786,442	\$4,115	.....	Worsted—					
Merino—						Pounds.....	22,833		.....	.....	22,833
Dozens.....	1,848,863	17,925	1,787,028	25,783	17,227	Value.....	\$61,202		.....	.....	\$61,202
Value.....	\$10,321,064	\$341,173	\$18,903,135	\$118,574	\$250,092	Merino—					
Silk—						Pounds.....	324,038		324,038	.....	
Dozens.....	85,852	.....	35,287	135	50,430	Value.....	\$242,767		\$242,767	.....	
Value.....	\$1,404,231	.....	\$503,441	\$11,300	\$889,490	Cotton waste:					
Silk-mixed—						Pounds.....	15,451,924		3,761,585	10,020,280	391,673
Dozens.....	274,084	13,100	200,717	267	.....	Value.....	\$1,490,933		\$335,309	\$1,051,143	\$31,515
Value.....	\$1,840,054	\$130,000	\$1,503,074	\$6,980	.....	Old bagging and ties, value.....	\$54,823		\$15,232	\$28,607	\$9,730
Union suits:						Contract work, value.....	\$8,771,094		\$1,392,498	\$335,114	\$317,077
Dozens.....	9,211,032	18,000	8,837,069	225,202	130,761	All other products, value.....	\$8,501,477		\$1,083,140	\$4,983,237	\$806,525
Value.....	\$105,243,880	\$239,000	\$99,395,904	\$4,277,707	\$1,271,269						\$1,007,117
Cotton—											
Dozens.....	7,518,516	.....	7,258,980	135,026	123,910						
Value.....	\$71,122,336	.....	\$68,170,950	\$1,839,402	\$1,166,028						
Wool—											
Dozens.....	76,701	.....	76,555	146	.....						
Value.....	\$2,003,011	.....	\$1,992,851	\$10,160	.....						
Merino—											
Dozens.....	1,133,750	.....	1,126,685	2,704	4,361						
Value.....	\$21,415,647	.....	\$21,213,631	\$110,618	\$82,398						

<sup>1</sup> Includes \$6,608,927 received for contract work, of which \$410 was classified under "Cotton waste," and \$21,458 under "All other products," not shown separately in the table.

Number of establishments and value of products, by states.—Table 29 gives the distribution of the number of establishments and value of products, by states, in 1919, for the industry by groups of primary product.

The accompanying diagram illustrates by definite proportion the value of products shown in the table.

Production of yarn and sewing thread, for own consumption.—The production of yarn and sewing thread for own consumption is given in Table 30 for the industry, according to the several specialized branches.

Cards and spindles used in the industry.—The number of cards and spindles used in the industry is shown for the different branches in Table 31 for 1919.

# KNIT GOODS.

25

TABLE 29.—DISTRIBUTION OF VALUE OF PRODUCTS AND NUMBER OF ESTABLISHMENTS REPORTED BY THE KNIT-GOODS INDUSTRY ARRANGED IN THE ORDER OF IMPORTANCE ACCORDING TO VALUE OF PRODUCTS, BY STATES, AND BY PRIMARY PRODUCT FOR THE UNITED STATES: 1919.

STATE.	KNIT GOODS, TOTAL.		ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—									
			Hosiery.		Underwear.		Fancy knit goods.		Knitted cloth.		Contract work.	
	Number of establishments.	Value of all products.	Number of establishments.	Value of all products.	Number of establishments.	Value of all products.	Number of establishments.	Value of all products.	Number of establishments.	Value of all products.	Number of establishments.	Value of all products.
United States.....	2,050	\$713,130,080	608	\$300,026,979	341	\$215,147,294	693	\$121,780,440	112	\$59,676,049	206	\$6,608,927
New York.....	682	195,376,641	21	4,442,303	99	83,955,1924	354	69,669,534	73	34,076,512	135	3,233,095
Pennsylvania.....	606	183,260,800	320	126,382,238	134	33,400,259	113	17,199,493	16	10,403,231	23	875,574
Massachusetts.....	77	52,424,235	18	17,907,818	19	24,940,940	28	5,240,275	10	1,4,275,202	2	(2)
Wisconsin.....	72	40,777,704	19	30,096,089	6	3,392,033	44	7,168,719	.....	.....	3	119,603
Tennessee.....	63	32,052,340	42	22,402,003	8	8,427,716	.....	.....	1	(3)	12	4,122,025
North Carolina.....	121	29,833,568	113	21,681,638	5	7,835,100	1	5,316,830	1	1,944,602	1	(6)
New Jersey.....	90	23,853,075	23	10,853,091	5	1,270,746	43	3,734,636	1	1,944,602	18	(2)
Illinois.....	58	20,460,300	18	14,423,894	4	3,045,576	34	1,2,990,890	.....	.....	2	(6)
Ohio.....	34	18,778,844	8	2,361,307	8	6,397,395	17	4,017,152	1	(6)	.....	.....
Minnesota.....	16	13,984,944	4	445,704	2	7,13,539,210	10	.....	.....	.....	.....	.....
Georgia.....	28	12,506,787	24	11,829,425	3	7,737,362	1	.....	.....	.....	.....	.....
Michigan.....	31	12,039,377	8	4,812,661	7	4,130,105	11	1,152,148	3	1,944,463	2	(6)
Rhode Island.....	28	11,836,313	15	3,470,253	4	2,170,009	2	1,237,663	4	6,055,388	1	(10)
Indiana.....	8	9,801,928	5	9,801,928	2	.....	.....	.....	.....	.....	.....	.....
Connecticut.....	21	9,332,776	3	769,780	11	7,411,083	4	.....	2	1,151,907	1	(6)
New Hampshire.....	16	9,015,583	11	6,098,301	3	2,317,282	2	.....	.....	.....	.....	.....
Vermont.....	7	5,063,201	3	1,071,625	4	3,991,570	.....	.....	.....	.....	.....	.....
All other states.....	94	26,081,204	43	16,825,669	17	6,420,925	29	3,248,880	.....	.....	5	185,721

NOTE.—In presenting this table certain combinations had to be made to avoid disclosing operations of individual establishments, as follows:

1 Includes "Contract work."  
2 Included in "Knitted cloth."  
3 Included in "Contract work."  
4 Included in "Hosiery."  
5 Includes "Fancy knit goods."

6 Includes "Hosiery" and "Contract work."  
7 Included in "Fancy knit goods."  
8 Included in "Underwear."

9 Includes "Underwear" and "Contract work."  
10 Included in "Hosiery."  
11 Includes "Fancy knit goods" and "Contract work."

## KNIT GOODS—VALUE OF PRODUCTS, BY STATES: 1919.

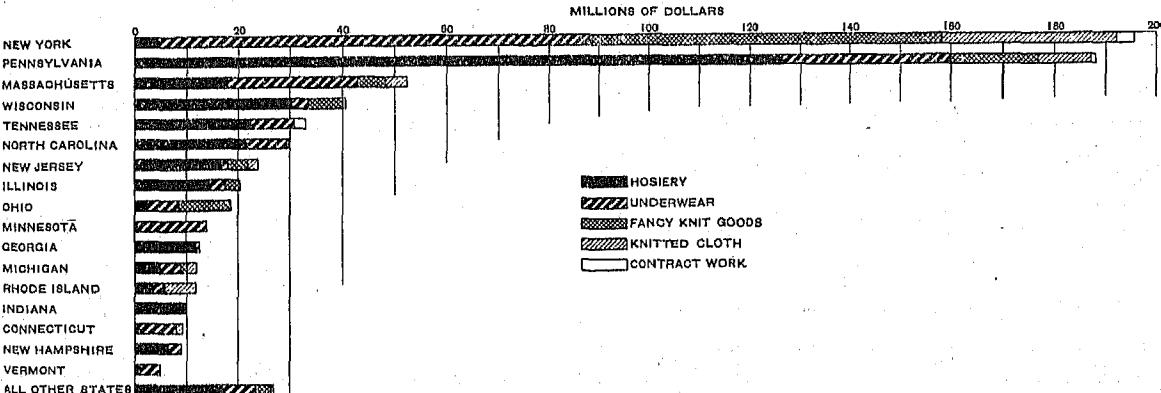


TABLE 30.—QUANTITY OF YARN AND SEWING THREAD MANUFACTURED FOR OWN CONSUMPTION IN KNIT-GOODS ESTABLISHMENTS, CLASSIFIED ACCORDING TO VALUE OF PRIMARY PRODUCT: 1919.\*

KIND OF YARN OR THREAD.	Total.	ESTABLISHMENTS ENGAGED PRIMARILY IN MANUFACTURING—			
		Hosiery.	Underwear.	Fancy knit goods.	Knitted cloth.
Yarn (pounds).....	112,973,413	27,363,280	64,652,084	10,087,376	10,839,704
Cotton.....	87,003,037	21,386,958	52,077,747	3,958,343	9,639,089
Woolen.....	5,861,147	1,058,989	1,077,203	1,745,992	473,963
Worsted.....	532,694	94,061	201,800	230,773	.....
Merino (cotton-mixed).....	17,239,895	3,020,740	8,754,020	4,144,314	720,812
All other.....	2,270,640	632,532	1,042,154	1,954	.....
Thread (pounds).....	135,308	843	101,864	7,298	25,303
Cotton.....	134,715	843	101,271	7,298	25,303
Silk.....	593	593	.....	.....	.....

TABLE 31.—DISTRIBUTION OF CARDS AND SPINDLES USED IN KNIT-GOODS ESTABLISHMENTS, CLASSIFIED ACCORDING TO VALUE OF PRIMARY PRODUCT: 1919.

KIND OF CARDS AND SPINDEL.	Total.	ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—				
		Hosiery.	Underwear.	Fancy knit goods.	Knitted cloth.	Contract work.
Sets of cards.....	3,347	658	2,270	188	221	10
Woolen and shoddy.....	1,909	176	505	154	64	10
Cotton.....	2,438	482	1,765	34	157	.....
Spindles.....	885,681	192,233	552,903	50,985	54,313	26,247
Producing.....	859,202	178,051	544,015	53,287	52,702	26,087
Woolen and shoddy.....	234,353	40,520	119,687	49,051	21,340	2,865
Worsted.....	4,458	2,900	.....	176	1,382	.....
Cotton.....	620,391	134,631	424,323	8,180	30,040	23,232
Doubling and twisting.....	20,479	14,182	8,888	1,698	1,551	100

\* Includes 4 worsted cards.

## MANUFACTURES.

**Knitting machines used in the industry.**—The different kinds of knitting machines used in the industry during 1919 are accounted for in Table 32, arranged according to the primary products of the establishments reporting.

TABLE 32.—DISTRIBUTION OF KNITTING MACHINES USED IN KNIT-GOODS ESTABLISHMENTS, CLASSIFIED ACCORDING TO VALUE OF PRIMARY PRODUCT: 1919.

CLASS.	Total.	ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—				
		Hosiery.	Under-wear.	Fancy knit goods.	Knit-cloth.	Contract work.
		Total.				
Total.....	172,363	117,759	22,726	22,045	4,242	5,501
Power.....	169,319	117,605	22,056	19,544	4,222	5,292
Flat.....	17,436	4,957	3,241	8,359	429	450
Full-fashioned flat.....	9,420	5,907	546	2,917	1	49
Circular.....	57,481	29,504	16,362	6,803	3,451	1,361
Circular hosiery, automatic.....	79,385	73,769	1,771	478	34	3,303
All other.....	5,597	3,438	736	987	307	129
Hand (Lamb and other varieties).....	3,044	154	70	2,501	20	200
Spring needle.....	24,217	10,458	7,870	2,907	2,208	705
Power.....	23,789	10,448	7,870	2,031	2,208	572
Flat.....	3,223	773	1,605	514	324	7
Ribbed.....	1,194	585	372	229	8	
Plain.....	2,029	188	1,233	285	316	7
Full-fashioned flat.....	3,860	2,767	375	480	—	38
Ribbed.....	280	199	39	42	—	
Plain.....	3,380	2,568	336	438	—	38
Circular.....	9,994	1,453	5,618	936	1,704	283
Ribbed.....	3,487	699	2,152	235	207	104
Plain.....	6,507	754	3,466	701	1,407	179
Circular hosiery, automatic.....	5,715	5,324	3	108	34	186
All other <sup>1</sup> .....	1,197	131	269	533	206	58
Hand (Lamb and other varieties).....	428	10	9	276	—	133
Latch needle.....	148,146	107,301	14,847	19,133	1,974	4,880
Power.....	145,530	107,157	14,780	16,913	1,954	4,720
Flat.....	14,213	4,184	1,636	7,845	105	443
Ribbed.....	8,823	2,570	1,231	4,922	72	28
Plain.....	5,390	1,614	405	2,923	33	415
Full-fashioned flat.....	5,700	3,140	171	2,437	1	11
Ribbed.....	995	116	94	783	—	2
Plain.....	4,765	3,024	77	1,054	1	9
Circular.....	47,487	23,051	10,744	5,807	1,747	1,078
Ribbed.....	35,715	20,508	9,400	3,568	1,190	989
Plain.....	11,772	7,543	1,284	2,299	557	89
Circular hosiery, automatic.....	73,670	68,475	1,768	310	—	3,117
All other <sup>2</sup> .....	4,400	3,307	467	454	101	71
Hand (Lamb and other varieties).....	2,616	144	61	2,225	20	106
Per cent distribution:						
Total.....	100.0	68.3	13.1	12.8	2.5	3.3
Power.....	100.0	69.5	13.4	11.5	2.5	3.1
Flat.....	100.0	28.4	18.6	47.9	2.5	2.6
Full-fashioned flat.....	100.0	62.7	5.8	31.0	(8)	0.5
Circular.....	100.0	51.3	28.5	11.8	6.0	2.4
Circular hosiery, automatic.....	100.0	93.0	2.2	0.6	(3)	4.2
All other.....	100.0	61.4	13.2	17.6	5.5	2.3
Hand (Lamb and other varieties).....	100.0	5.1	2.3	82.2	0.6	9.8

<sup>1</sup> Includes 244 traverse-loom and 620 warp knitting machines.

<sup>2</sup> Includes 318 traverse loom and 520 warp knitting machines.

<sup>3</sup> Less than one-tenth of 1 per cent.

**Sewing machines, active, by states.** Table 33 gives the number of sewing machines, by states, for the industry and its branches in 1919.

**Number of spinners, knitters, etc., by sex and age.**—The wage earners for the industry are shown in Table 34 for selected occupations in the several branches for 1919.

TABLE 33.—DISTRIBUTION OF ACTIVE SEWING MACHINES, INCLUDING LOOPERS, IN KNIT-GOODS ESTABLISHMENTS, CLASSIFIED ACCORDING TO VALUE OF PRIMARY PRODUCT: 1919.

STATE.	Total.	ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—				
		Hosiery.	Under-wear.	Fancy knit goods.	Knitted cloth.	Contract work.
United States.....	72,448	20,663	32,721	12,710	2,887	3,467
Alabama.....	398	152	161	—	—	85
California.....	406	2	81	323	—	—
Connecticut.....	1,110	40	1,018	45	3	4
Delaware.....	85	85	—	—	—	—
Georgia.....	931	773	83	75	—	—
Illinois.....	1,871	1,051	238	511	—	71
Indiana.....	670	345	325	—	—	—
Iowa.....	86	86	—	—	—	—
Louisiana.....	137	137	—	—	—	—
Maryland.....	264	135	129	—	—	—
Massachusetts.....	4,828	1,029	3,107	604	26	2
Michigan.....	1,571	332	739	177	219	104
Minnesota.....	1,673	39	1,558	76	—	—
Mississippi.....	37	37	—	—	—	—
New Hampshire.....	835	538	285	12	—	—
New Jersey.....	1,810	1,103	203	367	47	—
New York.....	23,595	232	13,484	5,722	1,586	2,571
North Carolina.....	3,046	2,085	942	15	—	4
Ohio.....	2,016	135	945	932	4	—
Oregon.....	18	—	—	18	—	—
Pennsylvania.....	18,831	8,416	6,223	3,022	895	275
Rhode Island.....	747	195	361	42	149	—
South Carolina.....	307	275	32	—	—	—
Tennessee.....	2,954	1,670	983	—	5	266
Utah.....	253	—	199	54	—	—
Vermont.....	524	43	481	—	—	—
Virginia.....	636	176	502	—	—	8
Washington.....	69	—	—	69	—	—
West Virginia.....	200	200	—	—	—	—
Wisconsin.....	2,442	1,214	582	640	—	—
All other states.....	48	48	—	—	—	—

TABLE 34.—DISTRIBUTION OF SPINNERS, KNITTERS, STITCHERS, LOOPERS, AND FINISHERS IN KNIT-GOODS ESTABLISHMENTS, ARRANGED ACCORDING TO VALUE OF MOST IMPORTANT PRODUCT: 1919.

	Total.	ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—				
		Ho-siery.	Under-wear.	Fancy knit goods.	Knit-cloth.	Contract work.
Aggregate.....	110,125	47,936	34,807	17,372	3,411	6,599
Spinners.....	3,438	504	2,330	274	250	14
Male.....	2,428	300	1,695	236	192	5
16 years and over.....	2,356	285	1,642	232	192	5
Under 16 years.....	72	15	53	4	—	—
Female.....	1,010	204	641	38	58	9
16 years and over.....	944	247	597	38	53	9
Under 16 years.....	66	17	44	—	5	—
Knitters.....	42,397	28,194	4,181	6,655	1,321	2,046
Male.....	14,880	6,809	2,382	3,914	988	796
16 years and over.....	14,500	6,500	2,344	3,876	988	794
Under 16 years.....	389	309	38	38	2	2
Female.....	27,508	21,385	1,799	2,741	333	1,217
16 years and over.....	25,898	19,887	1,772	2,689	338	1,217
Under 16 years.....	1,610	1,498	27	52	—	—
Stitchers, loopers, and finishers.....	64,290	19,178	28,290	10,443	1,840	4,539
Male.....	6,184	1,551	1,249	763	65	2,556
16 years and over.....	5,956	1,386	1,223	726	65	2,556
Under 16 years.....	228	105	26	37	—	—
Female.....	58,106	17,627	27,041	9,680	1,775	1,983
16 years and over.....	50,526	16,743	26,747	9,571	1,501	1,964
Under 16 years.....	1,580	884	294	100	274	19

# KNIT GOODS.

27

**TABLE 34.—DISTRIBUTION OF SPINNERS, KNITTERS, STITCHERS, LOOPERS, AND FINISHERS IN KNIT-GOODS ESTABLISHMENTS, CLASSIFIED ACCORDING TO VALUE OF PRIMARY PRODUCT: 1919—Continued.**

	Total.	ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—				
		Hosiery.	Underwear.	Fancy knit goods.	Knitted cloth.	Contract work.
<b>PER CENT DISTRIBUTION.</b>						
Aggregate.....	100.0	43.5	31.6	15.8	3.1	6.0
Spinners.....						
Male.....	100.0	16.4	67.9	8.0	7.3	0.4
16 years and over.....	100.0	12.4	69.8	9.7	7.9	0.2
Under 16 years.....	100.0	12.1	69.7	9.8	8.2	0.2
Female.....	100.0	20.8	73.6	5.6	5.7	0.9
16 years and over.....	100.0	26.1	63.5	3.8	4.0	1.0
Under 16 years.....	100.0	26.2	63.2	4.0	5.6	0.4
Knitters.....	100.0	65.5	9.9	15.7	3.1	4.8
Male.....	100.0	45.7	16.0	20.3	6.6	5.4
16 years and over.....	100.0	44.8	16.2	20.7	6.8	5.5
Under 16 years.....	100.0	79.4	9.8	9.8	0.5	0.5

**TABLE 34.—DISTRIBUTION OF SPINNERS, KNITTERS, STITCHERS, LOOPERS, AND FINISHERS IN KNIT-GOODS ESTABLISHMENTS, CLASSIFIED ACCORDING TO VALUE OF PRIMARY PRODUCT: 1919—Continued.**

	Total.	ESTABLISHMENTS ENGAGED PRIMARILY IN THE MANUFACTURE OF—				
		Hosiery.	Underwear.	Fancy knit goods.	Knitted cloth.	Contract work.
<b>PER CENT DISTRIBUTION—CON.</b>						
Knitters—Continued.						
Female.....	100.0	77.7	6.5	10.0	1.2	4.6
16 years and over.....	100.0	76.8	6.8	10.4	1.3	4.7
Under 16 years.....	100.0	93.0	1.7	3.2	.....	2.1
Stitchers, loopers, and finishers.....	100.0	29.8	44.0	16.2	2.9	7.1
Male.....	100.0	25.1	20.2	12.3	1.1	41.3
16 years and over.....	100.0	23.3	20.5	12.2	1.1	42.0
Under 16 years.....	100.0	72.4	11.4	16.2	3.1	3.4
Female.....	100.0	30.3	46.5	16.7	2.7	3.5
16 years and over.....	100.0	29.6	47.3	16.9	2.7	3.5
Under 16 years.....	100.0	56.0	18.6	6.9	17.3	1.2

## GENERAL TABLES.

**Comparative summary, by states.**—Table 35 gives, for 1919, 1914, and 1909, in totals for the United States, and for all states that can be shown, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the knit-goods industry.

**Detailed statement.**—Table 36 presents, for 1919, statistics in detail for the industry as a whole, and for each branch separately, for each state that can be shown without disclosing the operations of individual establishments.

**TABLE 35.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.**

STATE.	Cen-	Num-	Wage	Primary	Wages.	Cost of	Value	STATE.	Cen-	Num-	Wage	Primary	Wages.	Cost of	Value	
United States.....	1919	2,050	172,572	151,601	\$125,200	\$427,096	\$713,140	New York.....	1919	682	41,372	48,206	\$34,001	\$114,966	\$195,377	
	1914	1,622	150,520	125,842	59,758	148,687	258,913		1914	483	40,095	41,127	17,814	48,860	78,229	
	1909	1,374	120,275	108,700	44,740	110,241	200,144		1909	380	35,950	35,882	14,889	38,677	67,130	
Alabama.....	1919	10	1,055	1,555	723	3,275	4,787	North Carolina.....	1919	121	10,216	11,649	5,991	17,582	29,834	
	1914	5	731	738	176	447	764		1914	74	7,787	7,579	2,045	6,410	8,892	
	1909	6	611	750	124	314	501		1909	62	5,151	4,024	1,080	3,012	5,152	
California.....	1919	21	605	267	490	1,517	2,878	Ohio.....	1919	34	4,407	2,688	3,033	11,079	18,779	
	1914	16	405	146	107	424	902		1914	38	3,411	2,740	1,502	5,633	8,654	
	1909	6	268	44	112	200	462		1909	39	3,149	1,613	1,072	3,851	6,483	
Connecticut.....	1919	21	2,040	4,594	2,227	5,849	9,333	Pennsylvania.....	1919	606	44,158	28,359	30,692	118,697	188,261	
	1914	25	2,904	8,865	1,206	2,727	5,222		1914	498	41,120	28,381	15,382	37,766	64,153	
	1909	21	3,840	3,540	1,363	3,049	5,801		1909	464	38,206	21,797	11,750	27,218	40,658	
Georgia.....	1919	28	3,808	4,325	2,321	6,815	12,567	Rhode Island.....	1919	26	1,983	1,281	1,561	7,889	11,936	
	1914	23	3,408	3,886	905	3,063	4,803		1914	23	2,080	887	2,405	4,102	4,102	
	1909	22	2,743	2,948	719	1,872	3,233		1909	17	1,774	1,626	635	2,444	3,866	
Illinois.....	1919	58	5,095	3,844	3,800	11,701	20,460	South Carolina.....	1919	14	781	787	425	1,246	2,076	
	1914	46	3,555	2,681	1,546	4,087	7,387		1914	6	771	689	187	499	749	
	1909	43	2,913	3,452	1,116	3,282	5,947		1909	7	839	597	152	334	665	
Indiana.....	1919	8	2,675	1,786	2,220	5,615	9,802	Tennessee.....	1919	63	10,303	7,080	5,553	20,845	32,952	
	1914	11	2,338	1,085	1,022	2,029	3,748		1914	26	5,690	4,754	1,527	4,399	7,523	
	1909	5	1,933	1,393	687	915	2,381		1909	22	3,117	2,758	724	2,120	3,565	
Maryland.....	1919	7	749	606	367	1,773	2,687	Utah.....	1919	10	198	82	104	787	1,156	
	1914	10	1,077	443	344	644	1,116		1914	11	183	47	66	288	528	
	1909	11	1,022	400	234	697	1,172		1909	11	174	80	53	202	419	
Massachusetts.....	1919	77	12,751	16,574	11,304	31,173	52,424	Vermont.....	1919	7	1,105	978	916	3,095	5,063	
	1914	76	10,686	12,300	4,737	9,287	17,419		1914	7	903	870	484	1,404	2,165	
	1909	65	9,941	9,113	3,855	6,972	14,786		1909	8	946	982	411	1,059	1,746	
Michigan.....	1919	31	8,170	3,078	2,114	6,700	12,039	Virginia.....	1919	10	1,578	1,459	1,002	2,902	4,085	
	1914	34	2,714	3,373	1,006	2,610	5,233		1914	13	2,272	1,343	751	2,108	3,516	
	1909	35	2,645	3,201	769	2,047	4,020		1909	11	1,715	1,079	503	1,467	2,463	
Minnesota.....	1919	16	3,564	1,480	2,298	7,487	13,985	Washington <sup>1</sup> .....	1919	8	105	33	71	160	401	
	1914	13	2,088	2,149	892	2,526	4,665		1914	10	60	28	27	74	167	
	1909	10	1,052	853	348	1,086	2,243									
New Hampshire.....	1919	16	2,979	2,781	1,983	5,118	9,016	Wisconsin.....	1919	72	8,736	5,413	5,777	24,217	40,778	
	1914	20	3,328	2,722	1,303	2,379	4,283		1914	68	6,244	3,629	2,448	7,025	13,292	
	1909	21	3,129	2,315	1,143	2,036	4,744		1909	61	4,282	2,312	1,579	3,887	7,843	
New Jersey.....	1919	90	4,883	3,016	4,476	15,350	23,883	All other states.....	1919	14	2,984	1,975	1,076	4,668	8,041	
	1914	62	4,025	2,516	2,444	3,385	7,850		1914	24	2,558	1,510	880	1,913	3,391	
	1909	37	2,506	1,477	903	1,826	3,810		1909	30	1,980	1,343	569	1,004	2,055	

<sup>1</sup> Included in "All other states" in 1909.

## MANUFACTURES.

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.			Salaries and wages.		
				Male.	Female.	Average number.	Number, 15th day of—	Male.		Male.	Female.	Male.	Female.		Officials.	Clerks, etc.	
							Maximum month.	Minimum month.									
United States	2,050	186,673	1,488	5,210	3,718	3,685	172,572	De 186,423	Mh 160,438	187,746	52,134	125,440	2,938	7,234	Dollars. 516,437,991	Dollars. 20,165,899	Dollars. 12,160,713
Alabama	10	1,696	1	28	8	4	1,655	Oc 1,691	Jy 1,621	1,657	562	1,040	20	26	3,105,635	101,133	14,942
California	21	919	16	49	103	56	905	De 875	Ja 604	802	110	688	2	2	2,316,252	171,938	152,406
Connecticut	21	2,448	5	75	47	72	2,649	Jy 2,738	Ja 2,500	2,718	912	1,624	53	129	10,621,377	312,500	153,264
Georgia	28	4,021	4	107	74	28	3,808	De 4,196	Mh 3,512	4,197	1,533	2,351	135	178	9,380,339	342,508	77,391
Illinois	58	5,338	31	147	104	161	5,095	No 5,213	Ap 4,940	5,148	1,441	3,520	59	128	16,469,583	592,216	490,012
Indiana	8	2,968	1	77	136	79	2,675	De 2,753	Jy 2,627	2,752	879	1,685	80	108	6,321,581	307,120	241,651
Maryland	7	509	3	43	6	8	749	De 873	Ap 643	873	152	689	9	23	1,035,487	89,686	26,930
Massachusetts	77	13,596	41	235	255	314	12,751	De 13,075	My 11,970	13,963	3,862	9,447	184	470	38,665,842	1,117,126	887,331
Michigan	31	3,437	8	89	98	72	3,170	De 3,416	Je 2,971	3,542	835	2,638	17	52	9,122,918	324,152	324,895
Minnesota	16	4,034	9	56	117	288	3,564	Mh 4,171	De 3,026	3,033	527	2,505	1	.....	11,014,213	306,420	615,916
New Hampshire	16	3,093	9	67	16	27	2,979	De 3,228	Jy 2,648	3,229	969	2,183	36	41	7,349,092	204,012	119,812
New Jersey	90	5,202	73	153	69	54	4,853	No 5,184	Ja 4,545	5,164	1,190	3,706	30	238	12,757,149	654,073	207,069
New York	682	45,161	614	1,226	925	1,024	41,372	De 45,567	Mh 37,408	46,340	16,357	29,510	140	330	165,822,395	5,459,905	2,902,589
North Carolina	121	10,773	48	307	127	75	10,216	De 10,908	Mh 9,669	10,947	3,987	5,682	242	1,056	29,390,930	801,088	264,534
Ohio	34	4,824	13	128	158	118	4,407	De 5,149	Fe 3,586	5,122	1,008	4,000	31	23	13,504,745	903,914	572,307
Pennsylvania	606	47,077	559	1,538	747	677	44,150	No 48,132	Fe 39,464	48,357	10,485	34,019	1,181	2,072	110,359,419	5,274,701	2,451,761
Rhode Island	26	2,136	14	88	19	32	1,983	De 2,138	Mh 1,835	2,130	506	1,493	23	117	6,578,245	386,352	83,250
South Carolina	14	832	1	35	7	8	781	Oc 837	Je 723	842	327	460	10	36	2,272,750	75,259	31,154
Tennessee	63	10,778	3	278	100	89	10,308	De 11,014	Mh 9,545	11,016	2,849	7,616	160	301	10,446,256	910,986	421,377
Utah	10	295	1	26	49	21	198	Se 244	Ja 120	245	24	216	1	4	704,065	48,930	37,980
Vermont	7	1,165	2	25	16	17	1,105	Au 1,198	Se 949	1,108	355	761	.....	2	3,648,779	95,175	40,875
Virginia	10	1,649	2	40	18	11	1,578	No 1,831	Fe 1,207	1,785	499	1,165	58	63	3,870,341	134,537	56,193
Washington	8	136	3	10	14	4	105	De 104	Ap 64	166	31	135	.....	27	208,611	26,039	26,861
Wisconsin	72	9,934	25	305	465	403	8,736	De 9,308	Mh 8,278	9,530	2,015	6,249	392	874	25,672,325	1,147,088	1,811,463
All other states <sup>1</sup>	14	3,147	2	78	40	43	2,984	.....	.....	3,065	719	2,001	74	271	6,118,053	309,033	88,088

STATE.	EXPENSES—continued.						Value added by manufacturer.	POWER.						Electric horsepower generated in establishments reporting.		
	Salaries and wages—con.	Rent and taxes.		For materials.				Primary horsepower.								
		For contract work.	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. <sup>2</sup>	Rent-ed. <sup>3</sup>			
United States	Dollars. 125,199,820	Dollars. 8,495,082	Dollars. 2,272,445	Dollars. 23,694,134	Dollars. 421,630,358	Dollars. 5,465,202	Dollars. 713,139,689	Dollars. 286,044,129	151,601	88,569	7,431	814	12,941	61,843	31,457	
Alabama	722,816	2,583	60,959	3,218,346	50,619	4,757,008	1,482,043	1,555	400	.....	.....	.....	.....	1,155	170	
California	496,284	15,677	16,248	62,187	1,506,303	10,836	2,878,226	1,361,087	267	.....	.....	.....	.....	267	.....	
Connecticut	2,226,926	10,006	474,605	5,236,385	122,835	9,332,776	3,983,556	4,594	2,545	35	.....	.....	813	397	.....	
Georgia	2,321,090	952,539	5,414	295,671	0,672,905	142,021	12,566,787	5,751,771	4,325	1,559	18	.....	.....	2,748	45	
Illinois	3,808,741	488,017	118,662	766,128	11,526,862	174,171	20,460,300	8,759,328	3,644	1,447	30	.....	.....	2,167	765	
Indiana	2,220,459	.....	1,020	176,577	5,546,136	60,216	9,801,028	4,186,576	1,786	1,155	.....	.....	415	210	933	
Maryland	366,857	40,321	30,023	27,371	1,744,356	28,181	2,687,496	914,959	606	200	.....	.....	406	106	180	
Massachusetts	11,364,030	147,789	70,929	2,317,856	30,730,778	441,785	52,424,235	21,251,072	16,574	7,270	1,214	38	2,719	5,333	2,055	
Michigan	2,114,308	220,860	408,524	658,361	6,655,330	135,056	12,039,377	5,248,901	3,073	1,460	15	.....	1,598	807	807	
Minnesota	2,297,950	60	33,186	422,443	7,408,285	78,325	13,984,944	6,498,334	1,480	1,200	.....	.....	280	1,462	.....	
New Hampshire	1,982,887	133,307	2,838	522,093	5,047,034	71,020	9,015,583	3,897,520	2,731	400	100	.....	447	322	.....	
New Jersey	4,476,305	261,371	66,415	664,445	15,219,580	130,318	23,853,075	8,503,177	3,016	1,200	125	16	80	1,535	1,027	
New York	34,000,707	3,674,770	704,593	6,346,249	113,260,713	1,705,125	195,376,641	80,410,803	48,206	19,918	5,130	101	3,701	8,494	8,494	
North Carolina	5,991,164	101,330	20,926	603,594	17,202,673	379,729	20,833,568	12,251,166	11,649	4,083	750	221	2,915	3,630	1,317	
Ohio	3,032,899	14,393	116,651	992,939	10,990,123	89,117	18,778,844	7,699,004	2,088	1,165	85	.....	1,438	5,833	5,833	
Pennsylvania	30,691,815	1,206,936	719,050	4,555,205	115,655,139	1,041,634	188,260,800	71,504,027	20,359	14,008	80	203	304	11,644	5,016	
Rhode Island	1,560,596	70,086	23,993	7,331,113	11,936,313	4,547,197	1,063,201	1,968,559	1,201	500	5	35	631	631	53	
South Carolina	424,780	22,853	6,749	77,072	1,212,093	34,093	2,076,036	820,850	737	525	.....	.....	262	53	.....	
Tennessee	5,553,414	942,995	34,278	1,384,133	20,082,090	203,145	32,952,349	12,607,114	7,060	3,234	.....	2	3,824	357	357	
Utah	103,593	7,545	16,651	781,721	1,780	5,780	1,156,389	360,367	82	.....	.....	.....	82	.....	.....	
Vermont	916,438	35,218	183,721	3,047,498	47,144	5,063,201	1,968,559	978	558	.....	.....	135	285	285	285	
Virginia	1,002,361	42,451	29,829	62,606	2,843,134	59,006	4,684,504	1,782,364	1,459	1,044	.....	.....	415	3	3	
Washington	71,375	100	12,410	5,409	157,340	2,280	400,902	241,282	33	.....	.....	33	33	33	33	
Wisconsin	5,776,028	77,646	116,249	1,964,839	23,988,227	228,341	40,777,704	16,580,836	5,413	3,920	.....	1,493	2,193	1,493	1,493	
All other states <sup>1</sup>	1,675,397	30,550	7,624	224,372	4,576,583	91,114	8,040,043	3,372,046	1,975	508	20	40	1,407	18	18	

<sup>1</sup> All other states embrace: Delaware, 2 establishments; Iowa, 2; Kentucky, 2; Louisiana, 3; Maine, 2; Mississippi, 1; Oregon, 1; and West Virginia, 1.<sup>2</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).<sup>3</sup> Chiefly electric motors operated by rented (or purchased) current; other rented 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

THE LEATHER INDUSTRY

INCLUDING

	PAGES
LEATHER, TANNED, CURRIED, AND FINISHED . . . . .	6
BOOTS AND SHOES . . . . .	19
BOOT AND SHOE CUT STOCK . . . . .	32
BOOT AND SHOE FINDINGS . . . . .	35
LEATHER GLOVES AND MITTENS . . . . .	38
SADDLERY AND HARNESS . . . . .	46
LEATHER BELTING . . . . .	50
TRUNKS AND VALISES . . . . .	53
POCKETBOOKS . . . . .	56
LEATHER GOODS, NOT ELSEWHERE SPECIFIED . . . . .	59

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



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1923

## 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 calcu-

late 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.

## CONTENTS.

	Page.		Page.
<b>EXPLANATION OF TERMS.....</b>	2	<b>LEATHER GLOVES AND MITTENS.</b>	
<b>THE LEATHER INDUSTRY.</b>		<b>GENERAL STATISTICS.</b>	
Scope of the report.....	5	General character of the industry.....	38
Principal statistics for leather and its finished products.....	5	Comparative summary.....	39
<b>LEATHER, TANNED, CURRIED, AND FINISHED.</b>		Principal states, ranked by value of products.....	39
<b>GENERAL STATISTICS.</b>		Comparative summary for Fulton County, N. Y.....	40
Comparative summary.....	7	Persons engaged in the industry.....	40
Principal states, ranked by value of products.....	7	Wage earners, by months, for selected states.....	40
Persons engaged in the industry.....	7	Average number of wage earners, by prevailing hours of labor per week, by states.....	41
Wage earners, by months, for selected states.....	8	Size of establishments, by average number of wage earners, by states.....	41
Average number of wage earners, by prevailing hours of labor per week, for selected states.....	8	Size of establishments, by value of products.....	41
Size of establishments, by average number of wage earners, for selected states.....	9	Character of ownership.....	42
Size of establishments, by value of products.....	9	Number and horsepower of types of prime movers.....	42
Character of ownership, by states.....	10	Fuel consumed, by states.....	42
Number and horsepower of types of prime movers.....	10	<b>SPECIAL STATISTICS.</b>	
Fuel consumed, by states.....	11	Comparative statistics of products.....	43
<b>SPECIAL STATISTICS.</b>		Distribution, by classes and kind of leather.....	43
Number of hides and skins treated.....	11	Products, in detail, by states.....	43
Materials.....	11	<b>GENERAL TABLES.</b>	
Hides and skins, by states.....	12	Comparative summary, by states.....	45
Tanning materials—cost, by states.....	12	Detailed statement, by states.....	45
Work done under contract.....	13	<b>SADDLERY AND HARNESS.</b>	
Products.....	13	<b>GENERAL STATISTICS.</b>	
Principal products, by states.....	14	General character of the industry.....	46
Detailed statistics of materials and products.....	15	Comparative summary.....	46
<b>GENERAL TABLES.</b>		Wage earners, by months.....	47
Comparative summary, by states.....	17	Average number of wage earners, by prevailing hours of labor per week, for selected states.....	47
Detailed statement, by states.....	18	Size of establishments, by average number of wage earners, for selected states.....	47
<b>BOOTS AND SHOES.</b>		Character of ownership.....	47
<b>GENERAL STATISTICS.</b>		<b>GENERAL TABLE.</b>	
General character of the industry.....	19	Detailed statement, by states.....	48
Comparative summary.....	20	<b>LEATHER BELTING.</b>	
Principal statistics for the industry, by classes of establishments.....	21	<b>GENERAL STATISTICS.</b>	
Principal states, ranked by value of products.....	21	General character of the industry.....	50
Statistics for principal cities.....	21	Comparative summary.....	50
Persons engaged in the industry.....	22	Wage earners, by months.....	51
Wage earners, by months, for states.....	22	Average number of wage earners, by prevailing hours of labor per week, for selected states.....	51
Average number of wage earners, by prevailing hours of labor, per week, for selected states.....	23	Size of establishments, by average number of wage earners, for selected states.....	51
Size of establishments, by average number of wage earners, for selected states.....	23	Character of ownership.....	51
Size of establishments, by value of products.....	24	<b>GENERAL TABLE.</b>	
Character of ownership, by states.....	24	Detailed statement, by states.....	52
Number and horsepower of types of prime movers.....	25	<b>TRUNKS AND VALISES.</b>	
Fuel consumed, by states.....	25	<b>GENERAL STATISTICS.</b>	
<b>SPECIAL STATISTICS.</b>		General character of the industry.....	53
Comparative statistics, by classes.....	26	Comparative summary.....	53
Products, by states.....	26	Wage earners, by months.....	54
Infants' shoes and slippers.....	27	Average number of wage earners, by prevailing hours of labor per week, for selected states.....	54
Miscellaneous kinds of footwear.....	27	Size of establishments, by average number of wage earners, for selected states.....	54
Method of manufacture.....	28	Character of ownership.....	54
Method of manufacture, by states.....	28	<b>GENERAL TABLE.</b>	
Stitchdown footwear.....	29	Detailed statement, by states.....	55
Shoes of canvas and other textile fabrics.....	29	<b>POCKETBOOKS.</b>	
<b>GENERAL TABLES.</b>		<b>GENERAL STATISTICS.</b>	
Comparative summary, by states.....	30	General character of the industry.....	56
Detailed statement, by states.....	31	Comparative summary.....	56
<b>BOOT AND SHOE CUT STOCK.</b>		Wage earners, by months.....	57
<b>GENERAL STATISTICS.</b>		Average number of wage earners, by prevailing hours of labor per week.....	57
General character of the industry.....	32	Size of establishments, by average number of wage earners.....	57
Comparative summary.....	32	Character of ownership.....	57
Wage earners, by months.....	33	<b>GENERAL TABLE.</b>	
Average number of wage earners, by prevailing hours of labor per week, for selected states.....	33	Detailed statement, by states.....	58
Size of establishments, by average number of wage earners, for selected states.....	33	<b>LEATHER GOODS, NOT ELSEWHERE SPECIFIED.</b>	
Character of ownership.....	33	<b>GENERAL STATISTICS.</b>	
<b>GENERAL TABLE.</b>		General character of the industry.....	59
Detailed statement, by states.....	34	Comparative summary.....	59
<b>BOOT AND SHOE FINDINGS.</b>		Wage earners, by months.....	60
<b>GENERAL STATISTICS.</b>		Average number of wage earners, by prevailing hours of labor per week, for selected states.....	60
General character of the industry.....	35	Size of establishments, by average number of wage earners, for selected states.....	60
Comparative summary.....	36	Character of ownership.....	60
Wage earners, by months.....	36	<b>GENERAL TABLE.</b>	
Average number of wage earners, by prevailing hours of labor per week, for selected states.....	36	Detailed statement, by states.....	61
Size of establishments, by average number of wage earners, for selected states.....	36	<b>GENERAL TABLE.</b>	
Character of ownership.....	37	Detailed statement, by states.....	61
<b>GENERAL TABLE.</b>			
Detailed statement, by states.....	37		

# THE LEATHER INDUSTRY.

## SUMMARY AND ANALYSIS.

**Scope of the report.**—This report presents the statistics for the manufacture of leather and for several industries in which leather is the chief material, and comprises the industries classified as (1) Leather, tanned, curried, and finished; (2) Boots and shoes; (3) Boot and shoe cut stock; (4) Boot and shoe findings; (5) Leather gloves and mittens; (6) Saddlery and harness; (7) Leather belting; (8) Trunks and valises; (9) Pocketbooks; and (10) Leather goods, not elsewhere specified.

In addition to the general statistics for these industries, detailed data are presented concerning materials and products for leather, tanned, curried, and finished, and concerning products for boots and shoes and leather gloves and mittens.

**Principal statistics for leather and its finished products.**—Table 1 gives the number of establishments, average number of wage earners, wages, cost of materials, and value of products for the industry group as a whole, and for the several component industries for 1919, 1914, and 1909. This industry group represents approximately 4.2 per cent of the value of all products for all industries for 1919, as compared with 4.6 per cent for 1914 and 4.8 per cent for 1909. Some establishments in the "leather, tanned, curried, and finished" industry worked on a contract basis, the hides or skins being furnished by other tanners or dealers in the industry, and the value of the product reported was the amount received for the work done, and not the value of the manufactured leather.

TABLE 1.—PRINCIPAL STATISTICS FOR LEATHER AND ITS FINISHED PRODUCTS: 1919, 1914, AND 1909.

INDUSTRY.	Census year.	Number of establish- ments.	WAGE EARNERS.		Cost of materials.	Value of products.
			Average number.	Wages.		
Total.....	1919	6,397	349,302	\$363,453,419	\$1,713,807,336	\$2,610,230,727
	1914	6,758	307,000	169,357,560	753,135,354	1,104,594,557
	1909	5,728	309,766	155,110,878	669,874,518	992,713,322
Leather, tanned, curried, and finished.....	1919	680	72,476	88,205,473	646,521,527	928,591,701
	1914	741	55,938	31,914,497	284,245,420	387,201,705
	1909	919	62,202	32,102,845	248,278,933	327,874,187
Boots and shoes.....	1919	1,449	211,049	210,734,610	715,269,315	1,155,041,436
	1914	1,355	191,555	105,695,404	310,356,588	501,760,458
	1909	1,343	185,116	92,359,152	277,467,743	442,630,726
Boot and shoe cut stock.....	1919	252	9,715	9,124,778	133,887,276	161,203,310
	1914	236	7,819	4,052,123	51,450,498	59,964,523
	1909	232	6,663	3,156,460	36,919,919	44,661,497
Boot and shoe findings.....	1919	427	8,941	8,187,196	40,428,347	62,825,408
	1914	369	6,714	3,225,633	20,304,183	28,303,186
	1909	343	6,488	2,947,083	18,350,551	23,505,419
Saddlery and harness.....	1919	1,823	10,411	10,849,066	52,442,907	83,713,010
	1914	2,551	12,969	7,995,612	33,086,442	53,558,612
	1909	1,347	14,632	8,071,484	33,177,937	54,224,602
Trunks and valises.....	1919	597	11,470	12,463,767	33,222,432	63,932,266
	1914	661	9,911	5,640,157	18,625,457	26,471,527
	1909	524	11,122	5,537,329	14,629,085	28,027,964
Gloves and mittens, leather.....	1919	355	10,685	8,150,784	26,286,129	46,940,511
	1914	352	10,668	4,558,380	12,170,694	21,614,109
	1909	377	11,354	4,793,830	13,208,001	23,630,598
Belting, leather.....	1919	172	2,765	3,260,439	28,156,711	40,480,654
	1914	151	2,951	2,069,545	15,480,110	23,035,951
	1909	130	3,066	1,860,880	15,622,603	22,691,887
Pocketbooks.....	1919	139	2,905	3,061,903	7,557,155	14,549,659
	1914	64	1,466	702,314	1,783,940	3,350,532
	1909	79	1,472	688,615	1,929,327	3,028,161
Leather goods, not elsewhere specified.....	1919	503	8,945	9,415,403	30,035,537	52,952,772
	1914	378	7,071	3,603,865	10,632,124	19,333,934
	1909	425	7,681	3,623,200	10,290,439	18,638,281

## LEATHER, TANNED, CURRIED, AND FINISHED.

### GENERAL STATISTICS.

**Comparative summary.**—Table 2 summarizes the general statistics for the industry for each census from 1879 to 1919 inclusive, with percentages of increase for the census periods.

**Principal states, ranked by value of products.**—Table 3 presents the statistics for the number of establishments, average number of wage earners, value of products, and value added by manufacture, by states, ranked according to value of products, 1919.

**Persons engaged in the industry.**—The age classification of the average number of wage earners in Table 4 is estimated by the method described in the "Explanation of terms." Figures for states will be found in Table 23.

**Wage earners, by months.**—The statistics for wage earners, Table 5, are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions existing during the year. Females constituted 8.2 per cent of the wage earners in 1919. The range between the minimum and maximum months was somewhat greater in 1919 than in 1914 and 1909; the number reported for the minimum month, February, being 82.9 per cent of the maximum month, December. The greatest variation was in Delaware, minimum 42.9 per cent of maximum, and the least variation in Wisconsin, minimum 96.1 per cent of maximum.

**Prevailing hours of labor.**—The statistics presented in Table 6 show a marked movement toward shortening the working day. In 1909, 49.8 per cent of the wage earners were employed in establishments where the prevailing hours of labor per week were 60 and over, in 1914 this proportion was reduced to 34.4 per cent, and in 1919 to 7.3 per cent. On the other hand, in 1909 only 3.5 per cent of the wage earners were employed in establishments where the prevailing hours of labor were fewer than 54 per week, whereas in 1914 this proportion increased to 7.4 per cent, and in 1919 to 75.3 per cent. In 1919, 46.1 per cent of all wage earners were in establishments where the prevailing hours of labor per week were 48 and under, a marked change over the small percentage for this class in prior census years, namely, 1.6 per cent in 1914, and less than 1 per cent in 1909. In Massachusetts and Pennsylvania, which reported practically 40 per cent of the wage earners, the changes are notably marked.

**Size of establishments, by average number of wage earners.**—In 1919 the average number of wage earners for all establishments was 107 and in 1914, 75. Table 7 shows that the industry includes a number of large units; in 1919, 61 establishments, or 9 per cent of the total number, accounted for 50.6 per cent of all wage earners and in 1914, 39 establishments, or 5.3 per cent of the total number, reported 38.3 per cent of all wage earners.

**Size of establishments, by value of products.**—The average value of products per establishment was \$357,000 in 1909, \$496,000 in 1914, and \$1,366,000 in 1919. The increase from 1914 to 1919 is essentially due to the increase in prices and this accounts to a large degree for the changes from lower to higher groups, as shown in Table 8. On a wage-earner basis, although there was an increase in average number during this period, the increase was only 29.6 per cent, and on a quantity-production basis, the increase in volume of business, measured by number of hides and skins, was but 22.1 per cent.

**Character of ownership.**—Table 9 presents statistics concerning the character of ownership, or the legal organization, of the establishments for 1919, 1914, and 1909. Comparative figures are given, by states, for 1919 and 1914. Although the industry includes a relatively large number of plants owned by individuals and by firms or other forms of ownership, not incorporated, the growth has been in the corporations, which represented 89.3 per cent of the value of all products in 1919 as compared with 78.2 per cent in 1914 and 76.3 per cent in 1909.

**Number and horsepower of types of prime movers.**—Table 10 presents the statistics concerning power. Of the total primary power, 27 per cent was purchased or rented electric power in 1919 compared with 13.1 per cent in 1914 and 5.3 per cent in 1909. Not only has the use of electric rented power increased but a large part of the owned power was transformed into electric power, this proportion representing 53.6 per cent of the total owned power reported in 1919. The horsepower statistics represent the rated power capacity of equipment, whether utilized all or part time.

**Fuel consumed.**—Table 11 presents the statistics for fuel, by kind and by states, for 1919 and 1914. The figures for gas include both natural and manufactured gas.

# LEATHER, TANNED, CURRIED, AND FINISHED.

7

TABLE 2.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	680	741	919	1,049	1,300	1,787	5,628	-8.2	-10.4	-12.4	-19.7	-26.9	(2)
Persons engaged.....	79,292	60,780	67,100	61,602	56,024	(3)	(3)	30.5	-9.4	8.9	10.0	.....	.....
Proprietors and firm members.....	308	506	784	1,112	1,473	(3)	(3)	-29.7	-27.8	-29.5	-24.5	.....	.....
Salaried employees.....	6,418	4,278	4,114	3,261	2,442	(3)	(3)	50.0	4.0	26.5	33.1	.....	.....
Wage earners (average number).....	72,476	55,936	62,202	57,239	52,109	42,302	40,282	20.6	-10.1	8.7	9.8	22.9	(2)
Primary horsepower.....	218,238	172,712	148,140	117,450	88,880	60,031	(3)	26.4	16.6	26.1	32.2	48.0	.....
Capital.....	\$671,341,553	\$332,180,085	\$332,720,052	\$242,581,254	\$173,977,421	\$80,088,698	\$73,883,911	102.1	-0.2	37.2	39.4	77.4	33.7
Salaries and wages.....	108,384,445	39,290,725	88,816,481	31,501,058	25,749,933	23,985,879	16,503,828	175.9	1.1	23.3	22.3	7.4	45.3
Salaries.....	20,178,072	7,376,228	6,743,036	4,451,906	3,158,842	(3)	(3)	173.6	9.4	51.5	40.9	.....	.....
Wages.....	88,205,473	31,014,407	32,102,815	27,049,152	22,691,061	(3)	(3)	176.4	-0.6	18.7	19.7	.....	.....
Paid for contract work.....	2,337,011	1,152,642	473,880	881,168	53,396	(3)	(3)	102.8	143.3	-46.2	1,550.3	.....	.....
Rent and taxes.....	27,236,301	2,206,023	1,570,446	1,020,263	4,864,300	(3)	(3)	134.6	39.7	.....	.....	.....	.....
Cost of materials.....	646,621,527	284,245,420	248,278,033	191,170,073	155,000,004	122,946,721	156,381,117	127.5	14.5	29.9	23.3	26.1	(1)
Value of products.....	928,601,701	367,201,705	327,874,187	252,620,988	204,038,127	172,136,092	200,264,944	152.9	12.0	29.8	23.8	18.5	(2)
Value added by manufacture <sup>b</sup> .....	282,070,174	82,956,285	78,595,254	61,441,913	40,038,123	48,180,371	43,880,827	240.0	4.2	29.5	25.3	-0.3	(2)

<sup>1</sup> A minus sign (—) denotes decrease.  
<sup>2</sup> Figures not strictly comparable.  
<sup>3</sup> Figures not available.

<sup>a</sup> Exclusive of internal revenue.  
<sup>b</sup> Value of products less cost of materials.

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

STATE.	Number of establish- ments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribu- tion.	Rank.	Amount (expressed in thousands).	Per cent distribu- tion.	Rank.	Amount (expressed in thousands).	Per cent distribu- tion.	Rank.
United States.....	680	72,476	100.0	.....	\$928,592	100.0	.....	\$282,070	100.0	.....
Pennsylvania.....	92	13,749	19.1	2	211,389	22.8	1	64,984	23.0	1
Massachusetts.....	131	15,180	20.9	1	129,595	14.0	2	47,578	16.8	2
New York.....	94	7,050	9.7	3	98,095	10.6	3	27,808	9.8	3
Wisconsin.....	25	6,826	9.1	4	94,762	10.2	4	26,256	9.0	5
New Jersey.....	73	5,499	7.0	5	78,012	8.4	5	25,426	9.0	4
Illinois.....	29	4,434	6.1	6	60,324	8.5	6	17,671	6.3	7
Delaware.....	18	4,251	5.9	7	50,138	5.4	7	21,797	7.7	6
Michigan.....	28	3,464	4.8	8	45,801	4.9	8	13,349	4.7	8
Ohio.....	24	1,665	2.2	10	25,008	2.7	9	6,190	2.2	9
West Virginia.....	17	1,620	2.1	11	23,827	2.6	10	4,748	1.7	12
Virginia.....	21	1,666	2.3	9	21,591	2.3	11	5,375	1.9	10
California.....	21	1,453	2.0	12	21,416	2.3	12	4,945	1.8	11
North Carolina.....	11	1,385	1.9	13	17,849	1.9	13	3,567	1.3	13
Kentucky.....	10	661	0.9	15	8,748	0.9	14	2,957	1.0	14
New Hampshire.....	7	700	1.0	14	7,309	0.8	15	1,343	0.5	17
Tennessee.....	10	608	0.8	16	6,710	0.7	16	1,682	0.6	16
Maryland.....	7	517	0.7	17	6,263	0.7	17	1,907	0.7	15
Indiana.....	9	396	0.5	18	4,730	0.5	18	1,274	0.5	18
Missouri.....	7	266	0.4	21	3,770	0.4	19	824	0.3	20
Maine.....	9	306	0.4	19	3,359	0.4	20	684	0.2	21
Georgia.....	3	301	0.4	20	3,242	0.3	21	813	0.3	19
All other states.....	31	666	0.9	.....	6,651	0.7	.....	2,092	0.7	.....

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

CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.	CLASSES.			Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.					
						Male.	Fe- male.	Rank.										
All classes.....	1910	79,292	71,905	7,297	90.8	9.2	.....	.....	1910	3,560	2,267	1,293	63.7	36.3				
Proprietors and officials.....	1914	60,780	58,289	2,491	95.0	4.1	.....	.....	1914	2,843	2,298	545	80.8	19.2				
Proprietors and firm members....	1900	67,100	64,430	2,661	96.0	4.0	.....	.....	1900	2,567	2,092	475	81.5	18.5				
Proprietors and firm members....	1910	3,256	3,187	69	97.0	2.1	Clerks and other subordinate sal- aried employees.	.....	1910	72,476	66,541	5,935	91.8	8.2				
Proprietors and firm members....	1914	2,001	1,945	56	97.2	2.8	.....	.....	1914	55,936	54,046	1,890	96.6	3.4				
Proprietors and firm members....	1900	2,331	2,203	38	98.4	1.6	.....	.....	1900	62,202	60,054	2,148	96.5	3.5				
Salaried officers of corporations....	1910	308	373	25	93.7	6.3	16 years of age and over.....	.....	1910	72,042	66,208	5,834	91.9	8.1				
Salaried officers of corporations....	1914	506	528	38	93.3	6.7	.....	.....	1914	55,774	53,926	1,848	96.7	3.3				
Salaried officers of corporations....	1900	784	759	26	96.8	3.2	.....	.....	1900	61,753	59,674	2,079	96.6	3.4				
Superintendents and managers...	1910	816	704	22	97.3	2.7	Under 16 years of age.....	.....	1910	434	333	101	76.7	23.3				
Superintendents and managers...	1914	864	850	4	99.5	0.5	.....	.....	1914	162	120	42	74.1	25.9				
Superintendents and managers...	1900	918	916	2	99.8	0.2	.....	.....	1900	449	380	69	84.6	15.4				

## MANUFACTURES.

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

[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.....	72,476	65,519	<b>65,515</b>	65,979	67,423	60,655	72,725	72,902	77,202	77,586	77,855	78,341	79,010	82.9
Males.....	66,541	60,032	<b>60,324</b>	60,925	62,231	64,104	66,821	66,995	70,678	71,008	71,291	71,703	72,380	82.9
Females.....	5,935	5,487	<i>5,191</i>	<i>5,054</i>	5,102	5,551	5,934	5,907	6,524	6,578	6,604	6,638	6,620	76.1
1914.....	55,936	55,250	<b>58,455</b>	58,743	58,001	57,009	56,530	55,216	54,294	53,715	53,491	53,703	53,735	91.1
1909.....	62,202	62,063	62,373	61,726	60,095	<i>60,075</i>	60,559	61,039	61,166	62,049	63,383	65,174	66,694	90.1
California.....	1,453	1,455	1,423	1,408	1,428	<b>1,401</b>	1,438	1,503	1,506	1,483	1,487	1,438	1,466	93.0
Delaware.....	4,251	2,681	<b>2,390</b>	2,526	3,093	3,573	4,297	5,023	5,328	5,568	5,494	5,540	5,501	42.9
Illinois.....	4,434	4,144	4,189	4,235	4,264	4,241	4,363	4,578	4,680	4,573	4,633	4,694	4,614	88.3
Kentucky.....	661	636	646	644	659	665	679	690	701	676	652	628	658	84.6
Maryland.....	517	405	457	460	440	504	576	538	574	581	555	547	567	66.7
Massachusetts.....	15,180	13,878	13,861	13,598	13,058	14,375	15,195	<b>18,241</b>	16,355	16,736	16,701	17,093	17,379	76.2
Michigan.....	3,464	<i>3,302</i>	3,366	3,393	<i>3,547</i>	3,408	3,302	3,527	<b>3,622</b>	3,511	3,518	3,525	3,549	91.2
New Hampshire.....	709	601	590	582	619	631	622	744	819	706	731	805	988	60.1
New Jersey.....	5,499	4,850	5,001	5,059	5,365	5,563	5,714	5,607	5,701	5,920	5,802	5,583	5,757	82.0
New York.....	7,056	6,307	<b>5,980</b>	6,252	6,358	6,545	6,933	7,335	7,538	7,684	7,755	7,980	8,025	74.5
North Carolina.....	1,385	1,461	1,391	1,360	1,360	1,405	1,442	1,420	1,412	1,370	1,347	1,322	1,340	91.1
Ohio.....	1,565	1,363	1,419	1,402	1,424	1,520	1,562	1,610	1,663	1,530	1,791	1,764	1,726	76.1
Pennsylvania.....	13,749	12,287	12,538	12,648	12,818	13,316	14,026	14,313	14,431	14,520	14,577	14,727	14,787	83.1
Tennessee.....	608	668	597	610	646	606	625	643	655	620	589	584	573	84.0
Virginia.....	1,668	<b>1,494</b>	1,498	1,557	1,540	1,647	1,756	1,791	1,819	1,716	1,708	1,729	1,728	82.1
West Virginia.....	1,520	1,489	1,511	1,577	1,642	1,512	1,568	1,579	1,513	1,528	1,519	1,476	1,426	90.3
Wisconsin.....	6,825	6,780	6,851	<b>6,946</b>	6,862	6,022	6,676	6,810	6,803	6,784	6,812	6,836	6,818	66.6

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. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.	
United States.....	1919	72,476	2,505	2,503	28,393	21,153	7,617	5,028	4,342	935	
	1914	55,936	(2)	(2)	909	5,241	10,355	22,205	19,209	17	
	1909	62,202	(2)	(2)	572	1,578	4,380	24,682	30,981		
California.....	1919	1,453	(2)	(2)	1,436	2	11	6			
	1914	1,361	(2)	(2)	2		1,314	45			
Delaware.....	1919	4,251	1,468	1,779	800	143		61			
	1914	2,382				1,093	36	324	929		
Illinois.....	1919	4,434			1	8,287	246	82	187	631	
	1914	2,678				102	78	2,138	360		
Kentucky.....	1919	661	(2)	(2)	12	228	310	25	98		
	1914	600	(2)	(2)		66	254	40	228		
Maryland.....	1919	517	1			278	71	66	101		
Massachusetts.....	1919	15,180	288	68	11,240	2,829	298	462			
	1914	10,164	(2)	(2)	244	283	4,071	5,043	523		
Michigan.....	1919	3,464			674	1,021	1,641				
	1914	2,773			11	972	568	1,227			
New Hampshire.....	1919	709			373	331	5				
New Jersey.....	1919	5,499	104		2,220	2,183	253	480	280		
	1914	5,108	(2)	(2)	110	341	283	3,592	782		
New York.....	1919	7,056	131	636	2,403	1,837	1,553	421	75		
	1914	6,360	(2)	(2)	194	282	1,398	2,404	1,022		
North Carolina.....	1919	1,385			95	242		149	595		
	1914	877						139	738		
Ohio.....	1919	1,595				680	322	197	366		
	1914	1,605					603	290	812		
Pennsylvania.....	1919	13,749	512		7,146	3,142	1,434	1,253	262		
	1914	11,088	(2)	(2)	174	649	856	5,250	5,050		
Tennessee.....	1919	608				1		92	515		
Virginia.....	1919	1,666						187	794		
	1914	1,205	(2)	(2)	25	321	339	94	1,089		
West Virginia.....	1919	1,520				20			191		
	1914	1,072					80	139	853		
Wisconsin.....	1919	6,825	(2)	(2)		591	4,564	97	985	588	
	1914	5,809	(2)	(2)		20		67	1,319	4,448	15

<sup>1</sup> Includes 48 and under for 1914 and 1909.

\* Corresponding figures not available.

\* Not shown separately in 1914.

LEATHER, TANNED, CURRIED, AND FINISHED.

9

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.	Establishments.	Establishments.	Establishments.	Establishments.	Establishments.	Establishments.	Establishments.	Establishments.	Establishments.	Establishments.	Establishments.	Establishments.	Wage earners.		
United States:																
1919.....	680	72,476	23	75	190	124	1,586	131	4,368	126	19,687	37	13,003	19	12,662	
1914.....	741	55,936	18	113	280	152	1,982	141	4,677	175	12,229	24	8,655	12	7,708	
California.....	21	1,453				5	65	6	224	6	401	1	309			
Delaware.....	18	4,251				3	26	4	139	6	476	1	377	2	1,347	
Illinois.....	29	4,434	1	2	5	3	37	5	134	6	421	6	945	3	1,177	
Kentucky.....	10	661				1	10	4	130	2	146	2	356		1,775	
Maryland.....	7	517				2	2	1	7		280		1	278		
Massachusetts.....	131	15,180	1	10	25	32	431	37	1,203	20	1,533	22	3,354	3	2,560	
Michigan.....	28	3,464	1	2	6	2	18	3	95	8	611	12	2,010	2	730	
New Hampshire.....	7	709									2	142	2	253	1	308
New Jersey.....	78	5,499	1	8	26	15	164	22	753	12	854	10	1,534	3	972	
New York.....	94	7,056	2	20	51	18	227	17	541	18	1,112	15	2,336	3	1,041	
North Carolina.....	11	1,385	1	1	2					4	343	4	736	1	304	
Ohio.....	24	1,565	1	3	10	7	102	5	149	4	289	2	291	2	724	
Pennsylvania.....	92	13,749	4	3	8	14	180	11	425	19	1,323	24	3,860	12	4,247	
Tennessee.....	10	608	1	1	1	2	21			4	308	2	278			
Virginia.....	21	1,600	3	3	3	1	11	2	58	4	282	8	1,312			
West Virginia.....	17	1,520	2	2	5	1	12	2	95	4	230	5	761	1	417	
Wisconsin.....	25	6,825				2	28	3	91	7	496	4	541	3	1,241	
															2,087	
															1	2,339

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
	680	741	919	72,476	55,936	62,202	\$928,591,701	\$867,201,705	\$327,874,187	\$282,070,174	\$82,956,285	\$79,595,254
All classes.....												
Less than \$5,000.....	33	69	121	11	98	132	73,939	180,367	276,306	44,854	88,269	135,748
\$5,000 to \$20,000.....	42	63	117	137	355	573	469,397	640,153	1,242,071	296,420	330,471	580,276
\$20,000 to \$100,000.....	105	161	193	1,408	2,997	8,652	5,790,209	8,238,478	9,875,058	3,076,169	3,288,078	8,806,722
\$100,000 to \$500,000.....	175	257	410	{ 6,886 } 6,997	22,031	28,682	{ 46,759,832 } 73,571,900	{ 75,079,776 } 63,903,259	{ 158,569,294 } 157,911,458	{ 18,559,062 } 21,311,457	{ 32,427,786 } 39,1	{ 37,676,527 } 47,3
\$500,000 to \$1,000,000.....	103	88					801,926,424	218,259,672	157,911,458	238,782,212	46,820,081	37,415,981
\$1,000,000 and over.....	222	103	78	57,037	30,455	29,163						
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.....	4.9	9.3	13.2	(1)	0.2	0.2	(1)	(1)	0.1	(1)	0.1	0.2
\$5,000 to \$20,000.....	6.2	8.5	12.7	0.2	0.6	0.9	0.1	0.2	0.4	0.1	0.4	0.7
\$20,000 to \$100,000.....	15.4	21.7	21.0	1.9	5.4	5.9	0.6	2.2	3.0	1.1	4.0	4.8
\$100,000 to \$500,000.....	25.7	34.7	{ 44.6 }	{ 9.5 }	39.4	46.1	{ 5.0 }	{ 20.4 }	{ 48.4 }	{ 6.6 }	39.1	47.3
\$500,000 to \$1,000,000.....	15.1	11.9		78.7	54.4	46.9	86.4	59.7	48.2	84.7	56.4	47.0
\$1,000,000 and over.....	32.6	13.9	8.5									

<sup>1</sup> Less than one-tenth of 1 per cent.

## MANUFACTURES.

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

STATE.	Cen-	SUS year.	NUMBER OF ESTABLISHMENTS OWNED BY—	AVERAGE NUMBER OF WAGE EARNERS.						VALUE OF PRODUCTS.											
				In establishments owned by—			Per cent of total.			Of establishments owned by—			Per cent of total.								
				Individ-	Corpo-	All	Individ-	Corpo-	All	Individ-	Corpo-	All	Individ-	Corpo-	All						
United States....	1919	114	453	113	72,476	2,353	64,824	5,499	3.2	89.2	7.6	\$928,591,701	\$22,513,661	\$828,803,606	\$77,274,434	2.4	89.3	8.3			
	1914	162	414	165	55,936	3,321	43,349	8,766	6.8	77.5	15.7	367,201,705	16,369,359	287,158,754	63,673,592	4.5	78.2	17.3			
	1909	259	454	206	62,202	4,326	46,394	11,482	7.0	74.6	18.5	327,874,187	10,745,360	250,200,374	60,832,453	5.1	76.3	18.6			
California.....	1919	2	16	5	1,453	—	—	1,289	104	—	88.7	11.3	21,416,302	—	18,783,500	2,632,802	—	87.7	12.3		
	1914	—	21	6	1,361	—	—	1,192	1189	—	87.6	12.4	10,020,739	—	8,610,500	1,410,233	—	85.9	14.1		
Delaware.....	1919	—	16	2	4,251	—	—	4,251	201	611	8.4	65.9	25.7	50,138,251	9,188,205	50,138,251	5,835,910	2,844,407	5.5	63.5	31.0
Illinois.....	1919	1	19	9	4,434	—	—	3,941	1,493	—	88.9	11.1	60,823,659	17,509,256	53,013,152	1,731,057	13.0	87.9	12.1		
	1914	4	15	9	2,678	283	—	2,064	331	10.6	77.1	12.3	—	2,285,422	13,142,836	2,080,998	75.1	11.9	—		
Kentucky.....	1919	1	9	—	661	—	—	1,661	—	—	100.0	—	8,747,872	—	1,874,872	—	100.0	—	—		
	1914	2	9	—	600	—	—	1,600	—	—	100.0	—	4,198,575	—	1,498,575	—	100.0	—	—		
Maryland <sup>4</sup> .....	1919	1	4	2	517	—	—	8517	—	—	100.0	—	6,263,468	—	8,263,468	—	100.0	—	—		
Massachusetts.....	1919	30	75	26	15,180	1,028	13,098	1,054	6.8	86.3	6.9	120,594,902	8,500,681	114,746,520	6,347,752	6.6	88.5	4.9			
	1914	39	61	26	10,164	1,228	7,742	1,194	12.1	76.2	11.7	45,265,434	2,428,279	38,741,662	4,095,493	5.4	85.6	9.0			
Michigan.....	1919	1	27	—	3,464	—	—	1,3464	—	—	100.0	—	45,800,786	—	1,45,800,786	—	100.0	—	—		
	1914	—	21	2	2,773	—	—	2,773	—	—	100.0	—	25,503,573	—	8,25,503,573	—	100.0	—	—		
New Hampshire <sup>4</sup> .....	1919	—	7	—	709	—	—	709	—	—	100.0	—	7,309,472	—	7,309,472	—	100.0	—	—		
New Jersey.....	1919	16	51	6	5,499	316	4,829	354	5.8	87.8	6.4	78,012,101	3,914,744	68,789,265	5,308,092	5.0	88.2	6.8			
	1914	23	48	13	5,108	470	3,784	854	9.2	74.1	16.7	31,651,831	2,480,572	23,120,483	6,041,776	7.9	73.0	19.1			
New York.....	1919	26	47	21	7,056	476	5,647	933	6.8	80.0	13.2	98,094,503	4,329,537	82,793,776	10,986,190	4.4	84.4	11.2			
	1914	30	32	36	5,360	816	2,604	1,940	15.2	48.6	36.2	36,018,342	3,234,642	17,003,237	15,780,463	9.0	47.2	45.8			
North Carolina.....	1919	2	7	2	1,385	—	—	1,082	1,303	—	78.1	21.9	17,848,526	—	12,281,314	1,5,567,212	—	68.8	31.2		
	1914	5	6	6	877	—	—	613	1,264	—	69.9	30.1	7,182,400	—	4,241,239	1,2,941,161	—	59.1	40.9		
Ohio.....	1919	2	17	5	1,565	—	—	1,488	177	—	95.1	4.9	25,008,070	—	24,052,918	1,955,152	—	96.2	3.8		
	1914	4	19	5	1,605	25	1,504	76	1.6	93.7	4.7	11,627,916	189,889	10,840,933	597,094	1.6	93.2	5.1			
Pennsylvania.....	1919	9	64	19	13,749	386	11,559	1,824	2.7	84.0	13.3	211,380,849	3,771,932	173,044,274	34,573,143	1.8	81.8	16.4			
	1914	14	77	29	11,988	191	9,708	2,091	1.6	81.0	17.4	88,252,532	802,688	65,781,277	18,668,567	0.9	77.2	21.9			
Tennessee <sup>4</sup> .....	1919	2	6	2	608	—	—	586	122	—	96.4	3.6	6,709,970	—	6,546,070	1,163,900	—	97.6	2.4		
Virginia.....	1919	6	15	—	1,666	3	1,663	—	0.2	99.8	—	21,500,902	9,300	21,581,512	(*) 100.0	0.1	86.1	13.8			
	1914	4	13	4	1,205	4	1,080	141	0.3	88.0	11.7	9,884,439	5,378	8,472,385	1,356,676	—	—	—			
West Virginia.....	1919	2	13	2	1,520	—	—	1,515	15	—	99.7	0.3	23,827,131	—	1,92,348	—	99.6	0.4	—		
	1914	3	12	3	1,072	—	—	986	187	—	91.9	8.1	11,014,540	—	10,003,088	1,921,452	—	91.6	8.4		
Wisconsin.....	1919	1	21	3	6,826	—	—	6,706	129	—	99.6	0.4	94,762,230	—	94,580,612	1,201,618	—	99.8	0.2		
	1914	2	18	9	5,889	—	—	5,087	1782	—	86.7	13.3	42,204,202	—	37,214,155	1,4,980,047	—	88.2	11.8		

<sup>1</sup> Includes the group "Individuals."<sup>2</sup> Includes the group "All others."<sup>3</sup> Includes the groups "Individuals" and "All others."<sup>4</sup> Not shown separately in 1914.<sup>5</sup> Less than one-tenth of 1 per cent.

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

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.			Per cent distribution.		
	1919	1914	1909	Amount.			1919	1914	1909
				1919	1914	1909			
Primary power, total.....	5,603	2,908	2,065	218,238	172,712	148,140	100.0	100.0	100.0
Owned.....	1,334	1,332	1,590	159,207	150,164	140,238	73.0	88.9	94.7
Steam <sup>1</sup> .....	1,239	1,210	1,440	150,800	140,299	131,451	69.1	81.2	88.7
Engines.....	1,116	(2)	(2)	124,891	(2)	(2)	57.2	—	—
Turbines.....	123	(2)	(2)	25,909	(2)	(2)	11.9	—	—
Internal-combustion engines.....	69	91	104	6,488	7,987	7,231	3.0	4.6	4.9
Water wheels, turbines, and motors.....	26	31	46	2,229	1,808	1,556	0.9	1.1	1.1
Rented.....	4,329	1,576	475	58,971	22,548	7,902	27.0	13.1	5.3
Electric.....	4,329	1,576	475	58,494	21,570	6,487	26.8	12.5	4.4
Other.....	—	—	477	477	978	1,415	0.2	0.6	0.9
Electric.....	10,001	4,838	2,340	143,935	73,424	35,919	100.0	100.0	100.0
Rented.....	4,329	1,576	475	58,494	21,570	6,487	40.6	29.4	18.1
Generated by establishments reporting.....	6,272	3,262	1,865	85,441	51,854	29,432	59.4	70.6	81.9

<sup>1</sup> Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.<sup>2</sup> Not reported separately in 1914 and 1909.

# LEATHER, TANNED, CURRIED, AND FINISHED.

11

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

STATE.	Cen-sus-year.	COAL.			Gas-o-line and other volatile oils (barrels).	Gas (1,000 cubic feet).	STATE.	Cen-sus-year.	COAL.			Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).	
		Anthra-cite <sup>1</sup> (tons, 2,240 pounds).	Bitumi-nous (tons, 2,000 pounds).	Coke (tons, 2,000 pounds).					Anthra-cite <sup>1</sup> (tons, 2,240 pounds).	Bitumi-nous (tons, 2,000 pounds).	Coke (tons, 2,000 pounds).				
United States....	1919	80,722	1,448,106	3,740	78,415	10,817	211,404	New Hampshire.....	1919	1,230	5,258	.....	.....	.....	.....
	1914	89,140	1,124,444	2,480	67,252	(2)	527,057	New Jersey.....	1910	15,033	76,704	2,302	49	12	130
California.....	1910	.....	804	.....	60,278	.....	.....		1914	25,966	63,329	71	1,394	(2)	558
	1914	.....	1,209	.....	65,088	(2)	.....	New York.....	1910	5,733	149,319	5	38	1,883	18,155
Connecticut.....	1910	.....	2,112	.....	.....	.....		1914	14,331	90,782	369	3	(2)	18,032	
Delaware.....	1910	.....	26,939	.....	5,131	10	(2)	North Carolina.....	1910	.....	41,413	.....	.....	.....	.....
	1914	201	25,373	.....	.....	.....		1914	.....	17,504	510	1	(2)	.....	
Georgia.....	1910	.....	3,832	.....	.....	7	.....	Ohio.....	1910	.....	42,087	1,228	216	11,178	.....
Illinois.....	1910	351	100,851	.....	.....	10	.....		1914	.....	48,001	271	10	(2)	9,091
	1914	.....	64,146	.....	.....	(2)	.....	Pennsylvania.....	1910	31,366	366,324	55	134,614	.....	.....
Indiana.....	1910	.....	12,477	.....	.....	.....		1914	23,153	333,819	111	284	(2)	405,411	
Kentucky.....	1910	.....	30,812	.....	.....	14,578	.....	Tennessee.....	1910	.....	14,382	.....	443	.....	.....
	1914	.....	27,009	.....	.....	86,920	.....	Texas.....	1910	.....	55	.....	50	.....	.....
Maine.....	1910	392	2,107	.....	.....	.....	.....	Virginia.....	1910	.....	37,964	7	133	.....	.....
Maryland.....	1910	2	13,577	.....	.....	.....		1914	.....	25,419	211	(2)	133	.....	
Massachusetts.....	1910	35,421	145,000	152	25	8,188	723	West Virginia.....	1910	10	64,716	.....	7,215	.....	.....
	1914	24,176	100,311	082	154	(2)	355		1914	.....	40,016	1	(2)	5,174	
Michigan.....	1910	.....	128,837	.....	31	2	23,518	Wisconsin.....	1910	113	164,233	47	958	.....	.....
	1914	63	84,275	.....	41	(2)	.....		1914	42	129,946	7	7	(2)	825
Missouri.....	1910	.....	7,499	6	1,044	.....	.....	All other states.....	1910	12	10,744	2,184	4	155	.....
									1914	1,118	64,305	468	38	(2)	.....

<sup>1</sup> Includes some semianthracite.

<sup>2</sup> Included in figures for fuel oils.

## SPECIAL STATISTICS.

**Number of hides and skins treated.**—The statistics for number of hides and skins treated during the census years 1919, 1914, and 1909 are given in Table 12.

TABLE 12.—HIDES AND SKINS TREATED: 1919, 1914, AND 1909.

MATERIAL AND CENSUS YEAR.	Aggregate.	BY ESTABLISHMENTS ASSIGNED TO THE INDUSTRY "LEATHER, TANNED, CURRIED AND FINISHED."			By establish-ments as-signed to other industries.
		Total.	Purchased.	Treated under contract for others.	
Hides and skins:					
1919.....	169,166,788	169,052,160	123,326,726	45,725,443	114,619
1914.....	138,547,692	137,839,303	113,841,035	23,908,328	708,320
1909.....	146,328,580	145,881,151	116,040,988	28,840,165	447,435
Hides:					
1919.....	31,808,641	31,787,526	24,478,825	7,308,701	21,115
1914.....	20,867,820	20,434,344	18,598,637	1,835,707	433,476
1909.....	20,510,332	20,203,693	18,360,415	1,903,278	252,639
Skins:					
1919.....	137,358,147	137,204,043	98,847,001	38,410,742	93,504
1914.....	117,870,872	117,405,019	95,242,998	22,162,621	274,853
1909.....	125,812,254	125,617,458	97,680,571	27,936,887	194,796

<sup>1</sup> The number of hides and skins treated in 1919 contains duplications to the extent that the hides and skins treated under contract were those treated by "tanners" for other "tanners."

**Materials.**—Table 13 shows for 1919, 1914, and 1909 the number of establishments represented, the number and cost of hides and skins treated, by kinds, and the cost of other materials used. The figures cover all establishments for which information is avail-

able, including establishments assigned to other industries, but which do some tanning, currying, or finishing. The total cost of all materials used can not be given, as the cost of hides and skins treated under contract for others who were not tanners, curriers, or finishers, was not reported. The total cost of materials used in 1919, so far as reported, was \$647,339,238, or 123 per cent more than in 1914, the figures for 1914 showing an increase of 14.3 per cent with respect to 1909.

The number of cattle hides treated in 1919 increased by 4,414,874 hides, or 24.8 per cent, as compared with 1914, while their value increased \$153,478,390, or 101.2 per cent. The number of horsehides tanned increased by 1,044,063, or 83.5 per cent, while the cost increased \$8,917,640, or 220.9 per cent. The number of calf and kip skins tanned in 1919 was 3,173,519, or 19.8 per cent, less than in 1914, and 6,841,275, or 34.7 per cent, less than in 1909. The cost of the skins, however, more than doubled during the period from 1914 to 1919. Purchased rough leather used and all other materials both show a large increase over previous censuses. All other skins include cabretta, kangaroo, wallaby, deer, elk, pig, hog, colt, ass, and mule skins. All other raw stock includes buffalo hides, skivers, fleshers, etc.

## MANUFACTURES.

TABLE 13.—MATERIALS: 1919, 1914, AND 1909.

	1919	1914	1909
Number of establishments.....	689	708	953
Classified as "Leather, tanned, curried, and finished".....	680	741	919
Assigned to other industries, but producing leather for use in further manufacture in the same establishment.....	9	27	34
Materials, total cost.....	\$647,339,238	\$289,807,774	\$253,457,030
The classified industry.....	\$646,521,527	\$284,245,420	\$248,278,933
Establishments assigned to other industries.....	\$817,711	\$5,562,354	\$5,178,097
Hides and skins, aggregate number.....	100,100,788	138,547,602	140,328,586
Hides, total number.....	131,808,641	20,867,820	20,516,332
Cattle—			
Number.....	22,101,432	17,776,558	18,613,054
Cost.....	\$305,087,931	\$151,609,541	\$121,260,814
Horse—			
Number.....	2,204,308	1,250,245	(*)
Cost.....	\$12,954,273	\$4,030,033	(*)
Treated for others, number.....	17,322,901	1,841,017	1,903,278
Skins, total number.....	137,358,147	117,670,872	125,812,254
Calf and kip—			
Number.....	12,894,274	16,067,793	19,735,549
Cost.....	\$74,334,355	\$33,117,713	\$31,798,203
Goat and kid—			
Number.....	55,428,830	37,755,367	48,193,848
Cost.....	\$82,500,845	\$23,910,905	\$27,928,019
Sheep and lamb—			
Number.....	22,859,751	40,364,926	26,148,336
Cost.....	\$29,541,840	\$19,330,258	\$12,208,437
All other skins—			
Number.....	7,758,550	1,328,540	3,797,034
Cost.....	\$9,370,633	\$1,385,701	\$3,802,491
Treated for others, number.....	38,416,742	22,162,746	27,936,887
All other raw stock, cost.....	\$8,305,603	\$2,991,795	-----
Purchased rough leather used, cost.....	\$16,026,430	\$8,051,051	\$12,329,841
Tanning materials:			
Vegetable, cost.....	\$46,010,202		
Chemicals, cost.....	\$20,955,000		
Fats, oils, and other greases, cost.....	\$11,342,260	\$44,750,117	\$44,003,115
All other materials, cost.....	\$29,073,785		

<sup>1</sup> This contains duplications to the extent that the hides or skins treated for others were those treated by "tanners" on contract for other "tanners."

<sup>2</sup> Not reported separately.

*Hides and skins, by states.*—Table 14 presents by states the statistics for hides and skins. Figures for quantity and cost are given for 1919, with the quantity for 1914 and 1909. Materials in this table do not include the hides and skins treated by tanners, curriers, or finishers for those who were not tanners, curriers, or finishers, nor the hides and skins treated by establishments assigned to other industries.

TABLE 14.—MATERIALS—HIDES AND SKINS, BY STATES: 1919, 1914, AND 1909.

MATERIAL AND STATE.	NUMBER.			Cost, 1919.	
	1919	1914	1909		
	1919	1914	1909		
Cattle hides, total.....	22,184,517	17,457,591	18,360,415	\$304,994,752	
California.....	734,800	541,049	611,421	11,189,410	
Illinois.....	2,023,824	892,256	663,928	22,769,561	
Indiana.....	104,532	240,008	180,485	2,408,538	
Kentucky.....	240,044	230,684	285,938	4,426,632	
Maryland.....	186,714	207,128	184,648	3,449,849	
Massachusetts.....	1,634,538	764,036	1,251,036	18,958,033	
Michigan.....	1,269,741	1,708,952	1,430,885	17,295,185	
Missouri.....	160,732	176,382	100,318	2,183,868	
New Hampshire.....	375,882	111,831	(*)	3,652,916	
New Jersey.....	1,286,141	699,084	771,193	20,326,491	
New York.....	2,679,077	2,050,403	1,639,467	29,588,884	
North Carolina.....	604,936	435,527	364,768	10,579,192	
Ohio.....	594,193	460,521	514,226	11,096,508	
Pennsylvania.....	5,058,843	4,657,239	5,449,826	73,196,302	
Tennessee.....	216,647	164,180	195,164	3,704,283	
Virginia.....	688,246	660,526	626,712	12,509,507	

<sup>1</sup> Included in "All other states."

TABLE 14.—MATERIALS—HIDES AND SKINS, BY STATES: 1919, 1914, AND 1909—Continued.

MATERIAL AND STATE.	NUMBER.			Cost, 1919.
	1919	1914	1909	
Cattle hides—Continued.				
West Virginia.....	969,702	816,240	1,038,368	\$15,140,103
Wisconsin.....	2,664,982	2,185,178	2,471,848	34,671,573
All other states.....	598,983	449,797	550,188	7,831,716
Calf and kip skins, total.....	12,804,274	16,067,793	19,732,638	74,334,355
Illinois.....	1,136,318	1,855,276	5,008,616	5,959,289
Massachusetts.....	5,112,790	5,030,003	5,439,226	22,021,470
New York.....	2,032,919	2,060,023	2,107,584	11,573,365
Wisconsin.....	3,718,508	4,650,803	6,986,073	24,016,327
All other states.....	1,693,739	1,841,028	2,190,539	10,763,904
Goat and kid skins, total.....	55,428,830	37,755,867	48,077,664	82,500,845
Delaware.....	14,147,615	6,778,462	11,121,120	22,087,787
Massachusetts.....	5,739,256	5,137,413	6,299,952	10,260,366
New Jersey.....	6,152,040	4,910,279	8,733,704	8,650,388
Pennsylvania.....	27,769,243	20,019,153	23,117,712	38,298,645
All other states.....	1,020,676	910,570	1,165,176	3,203,177
Sheep and lamb skins, total.....	22,766,247	40,090,198	26,082,000	29,415,744
California.....	991,498	1,577,740	1,328,712	1,472,823
Illinois.....	1,005,368	1,069,914	1,562,628	1,365,076
Massachusetts.....	9,006,655	16,912,063	8,730,084	9,237,327
New Jersey.....	1,110,001	5,833,064	2,045,040	1,547,326
New York.....	5,951,181	8,309,020	6,491,352	8,451,388
Pennsylvania.....	3,032,412	3,756,551	2,445,024	5,807,450
All other states.....	1,602,232	3,111,846	2,878,620	1,833,216

*Tanning materials—cost, by states.*—The expense for tanning materials used, distributed by states, is given in Table 15. The figures are segregated to show the the cost of vegetable tanning materials; chemicals, including acids, alkalies, chromates, dyes and dye-stuffs, etc.; and fats, oils, and greases.

TABLE 15.—TANNING MATERIALS—COST, BY STATES: <sup>1</sup> 1919.

STATE.	VEGETABLE TANNING MATERIALS.			Chemicals, <sup>2</sup>	Fats, oils, and greases.		
	Total cost.	Woods, barks, etc.	Tanning extracts.				
			Liquid.				
United States.	\$46,564,536	\$12,043,633	\$23,134,710	\$11,386,193	\$20,985,006 \$11,342,269		
Pennsylvania.....	13,503,928	2,969,238	6,204,640	4,330,050	3,853,565 1,729,403		
Michigan.....	5,051,690	618,141	2,395,730	1,037,819	902,948 932,097		
New York.....	3,888,366	548,340	1,978,556	1,371,470	2,746,565 1,516,445		
Massachusetts.....	3,542,646	751,913	1,721,217	1,069,516	4,171,832 1,740,008		
West Virginia.....	2,800,000	498,411	1,570,381	731,817	217,831 323,571		
New Jersey.....	2,514,780	162,073	2,052,785	200,022	2,015,640 910,924		
Virginia.....	2,444,753	1,222,400	1,108,727	53,626	208,732 170,767		
Wisconsin.....	2,352,378	527,502	733,520	1,091,347	2,069,426 1,060,924		
Ohio.....	1,515,783	177,428	1,235,244	103,111	505,037 423,806		
Kentucky.....	1,360,074	177,835	983,413	108,826	64,906 198,230		
California.....	1,335,411	1,002,185	133,448	109,778	243,317 499,333		
Tennessee.....	848,726	348,967	385,882	110,387	26,393 20,643		
Illinois.....	744,294	132,006	370,810	241,469	1,791,764 724,434		
Maryland.....	565,212	195,246	121,183	248,778	109,895 75,835		
Missouri.....	430,879	142,874	214,217	70,788	27,843 113,318		
Maine.....	374,980	126,293	236,427	12,266	57,105 33,567		
Indiana.....	325,536	55,065	246,624	23,907	43,203 141,123		
Georgia.....	269,634	201,066	55,637	12,931	16,309 49,867		
New Hampshire.....	203,933	26,095	165,161	72,677	255,100 121,453		
All other states..	2,414,912	1,075,625	1,161,579	177,708	1,507,929 556,592		

<sup>1</sup> Not including materials used by establishments assigned to other industries.

<sup>2</sup> Comprise: Acids, \$1,835,955; alkalies, \$3,460,302; chromates, \$3,082,915; dyes and dyestuffs, \$6,249,361; and other chemicals, \$7,356,473.

*Tanning materials, by kinds.*—Tables 16 and 17 present detailed statistics for 1919 in regard to quantities and cost of tanning materials by kinds of woods, barks, extracts, etc.

# LEATHER, TANNED, CURRIED, AND FINISHED.

13

TABLE 16.—TANNING MATERIALS—WOOD, BARKS, ETC., BY KINDS: 1919.

	Quantity.	Cost.
Woods:		
Chestnut.....	32,526	\$306,681
Spruce.....	156	1,593
Barks:		
Hemlock.....	284,323	4,389,863
Logwood.....	955	110,020
Mangrove.....	2,078	125,750
Oak.....	227,602	4,427,345
Quebracho.....	2,342	252,065
Miscellaneous:		
Blended (chestnut oak).....	33,817	656,487
Divi-divi.....	4,985	381,008
Gambier.....	189	51,034
Myrobalans.....	8,354	488,982
Sumac.....	2,328	203,458
Valonia.....	303	22,303
Sulphite cellulose.....	60	2,400
Other, including not specified.....	9,268	623,364

TABLE 17.—TANNING MATERIALS—EXTRACTS, BY KINDS; 1919.

KIND.	Total cost.	LIQUID.		SOLID.	
		Pounds.	Cost.	Pounds.	Cost.
Total.....	\$34,520,003	619,510,490	\$23,134,710	173,466,585	\$11,386,193
Chestnut.....	16,273,035	388,302,354	13,203,454	43,150,856	3,070,181
Oak.....	1,092,870	21,231,270	1,053,426	4,708,102	39,444
Blended (chestnut-oak).....	1,210,044	20,041,087	1,140,105	1,998,922	70,479
Divi-divi.....	511,794	1,458,381	62,066	11,314,412	449,128
Gambier.....	646,847	654,562	75,663	3,467,054	571,184
Hemlock.....	874,142	10,076,684	731,635	12,958,221	142,507
Larch.....	221,544	5,077,251	109,208	298,765	22,246
Logwood.....	288,397	520,025	50,493	1,052,896	225,904
Mangrove.....	266,437	3,060,316	171,088	1,908,124	94,749
Myrobalans.....	96,000	710,857	44,444	2,256,449	51,556
Quebracho.....	10,718,399	78,858,533	4,710,881	80,100,705	5,998,518
Spruce.....	750,049	46,962,837	683,204	1,098,450	72,845
Sumac.....	380,923	2,203,477	115,013	4,488,165	271,910
Valonia.....	10,021	151,234	9,427,777	147,023	174,504
Sulphite cellulose.....	1,51,234	0,427,777	147,023	75,649	3,611
All other.....	1,018,967	10,712,103	727,057	4,331,541	201,910

Work done under contract.—Table 18 gives the number of hides and skins, sides and splits, treated under contract in 1919, 1914, and 1909 by establishments in the industry. The table carries the estimated value of the products after being tanned, curried, or finished, as the case may be. The quantity and cost of the raw stock is reported in each case by the owners, and the amount received for the contract work was reported by the tanners and included in the general statistics for products.

TABLE 18.—WORK DONE UNDER CONTRACT—KIND, QUANTITY, AND VALUE: 1919, 1914, AND 1909.

CLASS OF WORK.	Number.	Estimated value.
Hides tanned:		
1919.....	3,172,719	\$56,154,763
1914.....	1,958,407	19,165,887
1909.....	2,208,068	19,365,901
Skins tanned:		
1919.....	18,122,453	37,047,942
1914.....	14,815,436	12,069,273
1909.....	12,323,117	8,009,512
Sides curried or finished:		
1919.....	8,271,903	77,043,146
1914.....	3,804,792	15,610,184
1909.....	2,971,000	11,777,449
Splits curried or finished:		
1919.....	3,343,872	5,544,177
1914.....	2,005,471	2,174,602
1909.....	1,907,659	1,880,537
Skins curried or finished:		
1919.....	20,294,280	47,633,938
1914.....	16,188,445	14,933,416
1909.....	22,038,052	18,197,438

Products.—Table 19 presents for 1919, 1914, and 1909 comparative statistics for products in detail, inclusive of production reported by establishments assigned to other industries but producing leather for use in further manufacture in the same establishment. The increase in total value of products in 1919, with respect to 1914, was 148.3 per cent and in the value of the leather, which amounted to \$849,356,028 in 1919, 143.4 per cent, the abnormal increase being due to the higher price of hides and skins, materials, and labor expense.

TABLE 19.—PRODUCTS: 1919, 1914, AND 1909.

	1919	1914	1909
Products, total value.....	\$929,785,619	\$374,512,936	\$334,105,561
The classified industry, value of all products.....	\$928,591,701	\$367,201,705	\$327,874,187
Establishments assigned to other industries, value of leather products.....	\$1,193,918	\$7,311,231	\$6,231,374
Leather, value.....	\$849,356,028	\$348,956,872	\$312,571,826
Sole—			
Sides.....	19,715,821	18,097,665	17,857,708
Value.....	\$218,829,831	\$116,347,196	\$88,481,147
Hemlock—			
Sides.....	1,731,545	5,626,696	7,970,200
Value.....	\$16,179,504	\$31,007,435	\$32,283,692
Oak—			
Sides.....	10,086,228	5,275,936	3,850,595
Value.....	\$117,522,076	\$38,432,618	\$26,178,886
Union—			
Sides.....	7,314,834	6,588,799	5,756,227
Value.....	\$79,917,866	\$42,457,755	\$28,375,815
Chrome—			
Sides.....	583,214	606,234	280,686
Value.....	\$5,210,325	\$1,449,388	\$1,642,754
Belting—			
Butts.....	1,503,467	973,591	817,838
Value.....	\$33,348,522	\$12,876,554	\$10,647,078
Harness—			
Sides.....	1,720,764	2,943,720	3,968,703
Value.....	\$24,217,646	\$21,746,808	\$24,930,284
Case, bag, and strap—			
Sides.....	1,225,577	1,004,581	(*)
Value.....	\$11,880,766	\$5,388,255	(*)
Upholstery leather (automobile, furniture, and carriage)—			
Whole hide grains—			
Number.....	934,943	654,053	
Value.....	\$18,277,694	\$8,172,698	1,398,842
Whole hide splits—			
Number.....	1,511,128	1,104,561	\$14,266,742
Value.....	\$13,998,142	\$6,155,600	
Upper leather (other than patent)—			
Cattle—			
Sides.....	16,693,073	8,257,645	8,053,357
Value.....	\$120,897,283	\$33,003,690	\$24,661,614
Horse—			
Sides.....	1,720,507	490,068	(*)
Value.....	\$10,561,999	\$1,615,084	(*)
Skins—			
Number.....	79,663,981	66,288,840	(*)
Value.....	\$266,547,194	\$83,009,160	(*)
Patent (other than upholstery)—			
Sides.....	2,716,980	2,827,031	(*)
Value.....	\$23,447,147	\$9,564,110	(*)
Skins.....	828,870	4,371,588	(*)
Value.....	\$3,179,650	\$5,512,449	(*)
Glove—			
Skins.....	5,806,398	4,277,636	(*)
Value.....	\$11,537,821	\$3,031,683	(*)
Sides.....	5,369,969	614,447	(*)
Value.....	\$8,893,024	\$1,582,578	(*)
Finished splits (not elsewhere specified), value.....	\$16,461,933	\$8,558,424	(*)
Sold in the rough, value.....	\$3,712,687	\$4,511,251	\$6,351,439
All other, value <sup>a</sup> .....	\$63,566,689	\$27,698,412	\$143,233,522
All other products, value.....	\$28,629,954	\$13,269,324	\$8,767,566
Amount received for tanning, currying, or finishing for others, value.....	\$51,799,637	\$12,286,740	\$12,766,169

<sup>a</sup> Excluding estimated value of hides and skins tanned, curried, or finished for others, not tanners, curriers, or finishers, included in figures published at prior censuses.

\* Figures not available.

<sup>b</sup> Includes the value of kinds shown separately, where quantities were not reported.

Under an act of Congress, approved June 5, 1920, a monthly census of leather production is taken, but 1921 is the first calendar year covered by this census,

## MANUFACTURES.

and the following tabular statement, which has been compiled from the monthly reports for 1921, is given as a matter of interest. The figures in some respects are not strictly comparable with the data furnished by the census of manufactures, 1919. Consideration should be given to the difference in business conditions as they existed in 1919 compared with 1921.

	PRODUCTION OF LEATHER IN 1921. <sup>1</sup>	
	Unit.	Quantity.
Sole and belting leather:		
Sole.....	Backs, bends, and sides.	18,063,093
Belting.....	Butts.....	1,195,116
Offal.....	Pounds.....	100,103,807
Harness leather.....	Sides.....	811,424
Case, bag, and strap leather.....	Sides.....	820,855
Skirting and collar leather.....	Sides.....	410,474
Latigo leather.....	Sides.....	24,906
Lace leather.....	Sides.....	150,591
Welting leather:		
Cattle sides.....	Number.....	76,498
Pigskin strips.....	Pounds.....	1,573,766
Upholstery leather:	Hides.....	1,039,837
Upper leather:		
Cattle (including foreign tanned).....	Sides.....	12,595,982
Calf.....	Sides.....	12,667,607
Kip (exclusive of foreign tanned).....	Skins.....	2,159,518
Goat and kid (including foreign tanned).....	Skins.....	34,355,968
Cabretta.....	Skins.....	2,890,859
Sheep and lamb (including foreign tanned).....	Skins.....	13,358,885
Deer and elk.....	Skins.....	555,355
Kangaroo and wallaby.....	Skins.....	962,958
Horse (including colt, ass, and mule)—		
Hides.....	Number.....	56,263
Half fronts.....	Number.....	250,518
Whole fronts.....	Number.....	40,369
Butts.....	Number.....	469,708
Shanks.....	Number.....	187,448
Other upper leather.....	Pieces.....	16,559
Patent leather (other than upholstery):		
Cattle (including foreign tanned).....	Sides.....	2,277,007
Calf and kip (exclusive of foreign tanned).....	Skins.....	37,407
Goat and kid.....	Skins.....	488,648
Sheep and lamb.....	Skins.....	117,198
Horse and colt—		
Half fronts.....	Number.....	182,027
Wholefronts.....	Number.....	6,586
Glove leather:		
Cattle (including foreign tanned kips) —		
Grains.....	Sides.....	16,507
Splits.....	Sides.....	2,689,518
Calf and kip (exclusive of foreign tanned).....	Skins.....	4,892
Horse—		
Hides.....	Number.....	32,291
Whole fronts.....	Number.....	226,550
Butts.....	Number.....	36,174
Shanks.....	Number.....	575,630
Pig and hog.....	Skins.....	101,713
Goat and kid.....	Skins.....	47,886
Cabretta.....	Skins.....	559,900
Sheep and lamb.....	Skins.....	3,812,622
Deer and elk.....	Skins.....	309,646
Other glove leather.....	Pieces.....	1,376
Splits, not elsewhere specified:		
Cattle and kip—		
Sides.....	Number.....	7,457,416
Whole hides.....	Number.....	319,785
Horse—		
Butts.....	Number.....	36,368
Fronts.....	Number.....	97,668
Fancy and bookbinders' leather:		
Cowhide.....	Sides.....	79,864
Buffings.....	Hides.....	73,606
Goat and kid.....	Skins.....	105,114
Cabretta.....	Skins.....	4,625
Sheep and lamb.....	Skins.....	1,989,897
Calf and kip.....	Skins.....	110,036
Pig and hog.....	Skins.....	17,623
Seal.....	Skins.....	147,635
Alligator.....	Skins.....	82,586
All other.....	Pieces.....	7,981
Chamois.....	Skins.....	2,932,060
Shearlings.....	Skins.....	1,242,877
Roller leather.....	Skins.....	511,224
Hat sweats.....	Skins.....	1,144,517
Skivvers.....	Pieces.....	2,478,018
Fleathers.....	Pieces.....	370,314
Rough leather, equivalent.....	Sides.....	60,643
Rough grains (splits), equivalent.....	Sides.....	44,006
Rough splits:		
Sides.....	Number.....	2,452,180
Whole splits.....	Number.....	174,303
Butt splits.....	Butts.....	178,832
All other leather.....	Pieces.....	21,139

<sup>1</sup> Taken under the act approved June 5, 1920.

Principal products, by states.—Table 20 presents, by states, the quantity statistics for the principal

kinds of leather, with values for 1919. The state figures are confined to states where the number of establishments involved is sufficient to permit of the figures being published. With respect to the kinds of leather for which quantity figures are not given, for example, upholstery leather, patent leather, and glove leather, etc., values are given for all three census years. The products shown in this table do not include the value of the leather made on contract by tanners, curriers, or finishers for those who were not tanners, curriers or finishers, or the leather made in establishments assigned to other industries.

TABLE 20.—PRINCIPAL PRODUCTS, BY STATES: 1919, 1914, AND 1909.

PRODUCT AND STATE.	1919		1914	1909
	Value.	Quantity.	Quantity.	Quantity.
Sole leather, total.....	\$218,829,831	19,715,821	18,075,482	17,805,252
California.....	8,702,496	683,420	402,780	472,236
Michigan.....	11,646,441	1,149,381	1,871,940	1,603,512
New York.....	22,353,884	2,005,045	1,355,240	1,138,461
Pennsylvania.....	101,041,783	9,139,971	8,475,584	9,207,352
Virginia.....	8,687,212	586,464	936,781	673,757
West Virginia.....	20,429,088	1,701,796	1,426,584	1,933,037
Wisconsin.....	13,247,813	1,187,545	1,122,044	839,371
All other states.....	32,721,114	2,572,199	2,481,517	1,937,502
Hemlock, total.....	16,179,564	1,731,545	5,626,696	7,963,728
Michigan.....	7,655,320	821,890	1,520,296	1,372,968
Pennsylvania.....	6,714,229	718,761	3,524,274	4,752,308
All other states.....	1,780,015	190,885	582,126	1,838,452
Oak, total.....	117,522,070	10,086,228	5,267,936	3,803,801
California.....	8,102,849	625,070	391,502	429,716
New York.....	16,401,366	1,910,614	(1)	(1)
Pennsylvania.....	47,334,599	4,093,311	899,753	730,222
Virginia.....	8,687,212	586,464	845,073	673,757
West Virginia.....	6,584,355	549,523	276,524	153,495
All other states.....	30,371,698	2,317,246	2,855,084	1,818,671
Union, total.....	79,917,806	7,314,834	6,588,790	5,750,227
Michigan.....	1,403,525	134,663	(1)	(1)
Pennsylvania.....	46,902,955	4,327,889	8,945,085	3,675,902
West Virginia.....	13,804,736	1,247,273	1,150,080	1,066,360
Wisconsin.....	12,435,812	1,100,446	694,474	(1)
All other states.....	5,220,888	504,553	789,180	1,014,065
Chrome, total.....	5,210,325	583,214	592,051	270,436
Upper leather (other than patent):				
Cattle, total.....	120,897,283	16,603,073	8,245,964	7,946,769
California.....	3,027,052	400,230	290,866	24,268
Illinois.....	30,274,607	3,647,664	1,196,277	932,482
Massachusetts.....	11,036,255	1,637,765	989,809	1,509,745
Michigan.....	5,755,845	854,772	(1)	(1)
New Jersey.....	5,207,045	597,239	(1)	(1)
New York.....	21,775,075	3,340,478	2,255,504	1,509,290
Wisconsin.....	31,165,645	4,457,524	2,292,832	2,741,257
All other states.....	11,067,069	1,745,401	1,220,626	1,229,763
Horse, total.....	10,561,099	1,720,507	406,741	(2)
Illinois.....	4,928,863	756,853	249,123	(3)
All other states.....	5,633,136	903,834	157,618	(4)
Skins, total.....	207,775,879	79,683,981	66,280,290	(2)
Delaware.....	41,170,484	13,019,389	7,282,766	(2)
Illinois.....	7,317,282	1,170,849	2,195,944	(3)
Massachusetts.....	55,931,646	17,999,231	17,587,553	(3)
New Jersey.....	22,537,327	8,210,564	6,539,632	(3)
New York.....	20,192,652	6,557,243	6,256,521	(4)
Pennsylvania.....	67,530,756	20,009,403	10,225,129	(3)
Wisconsin.....	32,362,215	4,130,590	5,309,662	(4)
All other states.....	14,733,537	2,596,662	1,923,083	(4)
Butts.				
Belting leather, total.....	32,776,904	1,483,070	647,224	521,035
North Carolina.....	8,772,755	424,710	203,812	123,478
Virginia.....	8,923,631	359,995	167,046	176,356
All other states.....	15,380,608	698,365	276,366	221,201
Sides.				
Harness leather, total.....	24,171,047	1,717,154	2,777,312	3,946,235
California.....	3,473,741	253,268	289,728	383,264
Michigan.....	3,285,618	239,588	403,346	214,879
New York.....	3,526,979	100,811	252,133	237,198
Ohio.....	3,157,361	219,455	335,127	363,981
Wisconsin.....	3,045,044	308,103	631,787	1,331,925
All other states.....	8,873,304	595,929	885,191	1,414,983

<sup>1</sup> Included in "All other states" to avoid disclosure.

<sup>2</sup> Figures not available.

<sup>3</sup> Includes upper leather to the value of \$1,228,685, for which the number of skins was not reported.

# LEATHER, TANNED, CURRIED, AND FINISHED.

15

TABLE 20.—PRINCIPAL PRODUCTS, BY STATES: 1919, 1914, AND 1909—Continued.

PRODUCT AND STATE.	VALUE.		
	1919	1914	1909
Upholstery leather, total.....	\$32,224,644	\$14,328,358	\$14,266,742
New Jersey.....	18,873,643	8,344,416	8,336,740
Ohio.....	7,820,189	3,404,500	3,734,827
All other states.....	5,530,012	2,579,352	1,695,175
Patent leather (other than upholstery), total.....	26,827,083	15,600,812	(1)
Delaware.....	1,625,375	(2)	(1)
Massachusetts.....	11,320,708	6,302,820	(1)
New Jersey.....	4,641,860	2,897,178	(1)
Pennsylvania.....	4,933,817	4,188,035	(1)
Wisconsin.....	3,266,236	1,175,508	(1)
All other states.....	1,039,078	1,020,371	(1)
Glove leather, total.....	21,022,964	4,284,655	4,913,543
Illinois.....	6,275,666	373,404	588,823
Michigan.....	865,623	(2)	(1)
New York.....	9,290,870	1,687,474	2,074,701
Pennsylvania.....	488,359	(2)	(1)
Wisconsin.....	2,947,680	776,707	1,358,618
All other states.....	1,154,786	1,487,070	893,401
Bookbinders' leather, total.....	3,403,841	1,302,673	2,450,155
New Jersey.....	1,717,405	740,661	1,502,657
All other states.....	1,746,376	622,012	947,498
Rough leather sold, total.....	3,712,687	4,494,985	6,335,599
New Jersey.....	603,260	1,423,908	1,234,065
Ohio.....	758,899	143,458	(2)
Pennsylvania.....	617,351	750,686	1,182,142
Wisconsin.....	184,871	75,808	226,960
All other states.....	1,488,300	2,101,155	3,692,442
All other leather, including offal, total.....	85,045,310	38,843,699	124,806,677
California.....	3,300,442	1,400,471	1,427,497
Connecticut.....	827,795	392,272	388,169
Delaware.....	140,204	394,875	10,086,201
Illinois.....	6,409,059	2,911,080	8,705,701
Indiana.....	1,848,786	1,183,061	523,253
Maine.....	652,432	426,901	359,123
Maryland.....	1,078,322	(2)	(1)
Massachusetts.....	11,974,770	4,087,907	24,317,598
Michigan.....	3,361,104	3,095,754	3,502,715
Missouri.....	448,143	262,852	178,348
New Hampshire.....	1,167,480	295,220	(2)
New Jersey.....	10,266,504	6,282,331	12,226,087
New York.....	9,078,892	4,285,800	9,349,454
North Carolina.....	2,180,198	(2)	(1)
Ohio.....	2,437,409	776,460	1,077,432
Pennsylvania.....	19,956,794	9,947,241	27,971,706
Virginia.....	2,383,024	200,517	697,592
Wisconsin.....	4,048,303	2,074,812	19,938,886
All other states.....	2,423,480	2,605,145	2,686,701

<sup>1</sup> Figures not available.

<sup>2</sup> Included in "All other states" to avoid disclosure.

**Detailed statistics of materials and products, 1919.**—Table 21 is a detailed statement of the special statistics for the leather industry, materials and products, for the census of 1919. It includes the information as reported by the establishments that constitute the classified industry, and also the establishments in other industries, that manufactured leather for their own use in further manufacture.

TABLE 21.—DETAILED STATEMENT OF MATERIALS AND PRODUCTS: 1919.

MATERIALS.	Unit of measure.	Quantity.	Cost.
Total cost.....			\$646,521,527
Tanning (raw stock used during year).			521,780,602
Cattle hides (all kinds)—			
Dry (12 pounds and over).....	Number.....	4,041,999	30,539,083
Green or green salted (25 pounds and over).....	Number.....	18,142,518	268,455,669
Horsehides—			
Dry.....	Number.....	370,378	1,248,953
Green or pickled.....	Number.....	376,552	3,947,094
Butts, equivalent hides.....	Number.....	890,295	2,905,703
Fronts, equivalent hides.....	Number.....	657,083	4,849,433
Calf and kid skins—			
Dry (under 12 pounds).....	Number.....	2,914,907	13,066,577
Green or pickled (under 25 pounds).....	Number.....	9,979,277	60,667,778
Goat and kid skins—			
Dry.....	Number.....	51,102,706	75,474,563
Green or pickled.....	Number.....	3,027,923	4,886,705
Tanned, but unfinished (imported).....	Number.....		
Sheep and lamb skins—			
Dry.....	Number.....	4,200,257	6,315,200
Green or pickled.....	Number.....	18,565,990	23,100,544
Cabrilla skins.	Number.....	5,404,613	6,269,905
Kangaroo and wallaby skins.....	Number.....	900,445	1,018,260
Deer and elk skins.....	Number.....	853,809	1,131,147
Pig and hog skins.....	Number.....	544,409	689,939
Skivers, pieces.....	Number.....	2,709,884	3,086,100
Fleshers, pieces.....	Number.....	1,807,948	873,257
Other raw stock			4,522,015
Currying (purchased rough leather used during the year).....			16,166,339
Rough leather.....	Sides.....	457,676	4,030,003
Rough grains (split leather).....	Sides.....	582,191	2,321,140
Rough splits, whole sides.....	Sides.....	1,015,983	1,868,757
Butt splits.....	Butts.....	112,058	454,504
All other rough leather.....			7,491,935
Vegetable materials used for tanning or finishing, total.....			46,564,536
Chemicals, total.....			20,985,006
Acids.....			1,835,955
Alkalies.....			3,460,302
Chromates.....			3,082,915
Dyes and dyestuffs.....			5,249,361
Other chemicals.....			7,366,473
Fats, oils, and greases.....			11,342,260
All other materials, including fuel and rent of power.....			29,673,785
PRODUCTS.			Value.
Total value.....			928,501,701
Rough leather, for sale in the rough.....	Equivalent sides.	206,370	1,592,145
Rough grains (split leather), for sale in the rough.....	Equivalent sides.	95,528	499,098
Rough splits, for sale in the rough:			
Whole side splits.....	Sides.....	1,050,008	1,370,505
Butt splits.....	Butts.....	172,385	250,849
Sole leather:			
Hemlock.....	Equivalent sides.	1,731,545	16,179,564
Union.....	Equivalent sides.	7,314,834	79,917,866
Oak.....	Equivalent sides.	10,086,228	117,522,076
Chrome.....	Equivalent sides.	583,214	5,210,325
Offal.....	Pounds.....	24,996,770	8,979,905

## MANUFACTURES.

TABLE 21.—DETAILED STATEMENT OF MATERIALS AND PRODUCTS: 1919—Continued.

	Unit of measure.	Quantity.	Value.
<b>PRODUCTS—continued.</b>			
Belting leather:			
Oak.....	Butts.....	1,431,010	\$31,615,032
Chrome.....	Butts.....	52,060	1,161,062
Offal.....	Pounds.....	14,734,854	4,498,674
Saddlery leather.....	Equivalent sides.....	102,594	986,012
Skirting and collar leather.....	Equivalent sides.....	581,410	5,998,656
Harness leather:			
Hemlock.....	Sides.....	423,389	5,448,733
Union.....	Sides.....	378,051	5,160,140
Oak.....	Sides.....	915,714	13,502,174
Latigo leather.....	Sides.....	20,631	219,757
Case, bag, and strap leather.....	Sides.....	1,225,577	11,880,766
Lace leather.....	Sides.....	401,077	2,532,074
Welting leather.....	Sides.....	206,699	1,929,846
Upholstery leather (auto, furniture, and carriage):			
Whole-hide grains.....	Hides.....	938,921	18,262,372
Whole-hide splits.....	Hides.....	1,507,741	13,962,272
Upper leather (other than patent):			
Cattle—			
Chrome.....	Sides.....	14,675,106	106,152,033
Combination (chrome and vegetable tannage).....	Sides.....	1,069,152	8,017,702
Vegetable.....	Sides.....	948,755	6,727,548
Horse.....	Sides.....	1,720,507	10,561,009
Calf and kid.....	Skins.....	11,697,427	92,600,678
Goat and kid.....	Skins.....	51,608,673	143,600,682
Sheep and lamb.....	Skins.....	10,039,005	16,499,703
Cabréta.....	Skins.....	5,197,446	10,584,907
Other upper leather, not elsewhere specified.....			4,580,909
Patent leather (other than upholstery):			
Cattle.....	Sides.....	2,563,603	21,379,305
Horse.....	Sides.....	182,873	2,062,802
Calf and kid.....	Skins.....	44,951	568,919
Goat and kid.....	Skins.....	729,063	2,286,858
All other.....			529,199
Glove leather:			
Cattle (grains).....	Sides.....	43,169	312,298
Cattle (splits).....	Sides.....	4,357,984	3,566,702
Horse.....	Sides.....	968,816	5,014,024
Calf and kid.....	Skins.....	5,580	27,323
Pig and hog.....	Skins.....	217,122	334,137
Goat and kid.....	Skins.....	123,397	297,003
Sheep and lamb.....	Skins.....	4,972,351	9,179,619
Deer and elk.....	Skins.....	324,273	1,027,511
Other glove leather, not elsewhere specified.....			1,264,347
Fancy and bookbinders' leather:			
Whole hide.....	Hides.....	327,390	2,467,486
Calf and kid.....	Skins.....	276,935	1,888,245
Goat and kid.....	Skins.....	336,037	985,949
Sheep and lamb.....	Skins.....	1,754,751	3,141,227
Seal, alligator, pig and hog.....	Skins.....	125,968	608,070
Other fancy leather, not elsewhere specified.....			287,157
Finished splits, not elsewhere specified:			
Cattle—			
Whole sides.....	Sides.....	9,923,150	12,671,088
Butts.....	Butts.....	875,208	1,028,410
Horse—			
Butts.....	Butts.....	485,274	2,509,036
Fronts.....	Fronts.....	599,319	251,131
Skivers.....	Pieces.....	6,847,119	9,374,475
Fleshers.....	Pieces.....	5,968,230	2,160,373
Roller and chamois leather.....	Skins.....	2,092,904	3,012,344
Shearlings.....	Skins.....	544,440	1,338,838

<sup>1</sup> Includes "chrome" to avoid disclosure of individual operations.

## GENERAL TABLES.

**Comparative summary, by states.**—Table 22 gives comparative statistics for the principal items: Number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and

TABLE 21.—DETAILED STATEMENT OF MATERIALS AND PRODUCTS: 1919—Continued.

	Unit of measure.	Quantity.	Value.
<b>PRODUCTS—continued.</b>			
Textile leather.....	Sides.....	263,060	\$666,762
Pig and hog leather, not elsewhere specified.....	Skins.....	333,763	781,521
Hat sweats.....	Skins.....	1,351,528	2,712,512
All other leather.....			6,438,346
Miscellaneous by-products:			
Wool.....	Pounds.....	7,392,440	3,318,575
Hair (equivalent washed and dried).....	Pounds.....	80,452,155	2,753,181
Glue stock.....	Pounds.....	360,798,412	7,228,103
Fertilizer materials.....	Pounds.....	31,209,841	295,381
All other products and by-products.....			15,024,635
Amount charged for tanning, currying, or finishing for others.....			51,762,235
Establishments assigned to other industries but producing leather for use in further manufacture.			
<b>MATERIALS.</b>			
Total cost.....			<i>Cost.</i>
Tanning (raw stock used during year):			
Cattle hides (all kinds)—			
Dry (12 pounds and over).....	Number.....	2,953	31,229
Green or green salted (25 pounds and over).....	Number.....	3,962	61,950
Sheep and lamb skins—			
Dry.....	Number.....	36,000	54,500
Green or pickled.....	Number.....	57,504	71,622
Skivers, pieces.....	Number.....	14,500	20,803
Other raw stock.....			65,870
Currying (purchased rough leather used during the year):			
Rough splits, whole sides.....	Sides.....	756	3,241
All other rough leather.....			456,850
Vegetable materials used for tanning or finishing, total.....			51,666
<b>PRODUCTS.</b>			
Total value.....			<i>Value.</i>
Sole leather, offal.....	Pounds.....	309,729	132,962
Belting leather, oak.....	Butts.....	20,397	571,528
Saddlery leather.....	Equivalent sides.....	990	15,840
Skirting and collar leather.....	Equivalent sides.....	990	12,000
Harness leather, union.....	Sides.....	3,610	46,599
Latigo leather.....	Sides.....	2,560	20,480
Lace leather.....	Sides.....	4,480	35,840
Upholstery leather (auto, furniture, and carriage):			
Whole-hide grains.....	Hides.....	1,022	15,322
Whole-hide splits.....	Hides.....	3,387	33,870
Patent leather (other than upholstery), cattle.....	Sides.....	504	5,040
Glove leather, sheep and lamb.....	Skins.....	3,504	2,708
Finished splits, not elsewhere specified, cattle, whole side.....	Sides.....	756	2,268
Hat sweets.....	Skins.....	101,000	252,000
Miscellaneous by-products:			
Hair.....	Pounds.....	39,050	594
Glue stock.....	Pounds.....	623,274	9,465
Amount charged for tanning, currying, and finishing for others.....			37,402

value of products for the census years 1919, 1914, and 1909.

**Detailed statement, by states.**—Table 23 is a detailed statement, by states, for the census of 1919.

## LEATHER, TANNED, CURRIED, AND FINISHED.

17

TABLE 22.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse power.	Wages.	Cost of mate- rials.	Value of prod- ucts.		STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse power.	Wages.	Cost of mate- rials.	Value of prod- ucts.		
					Expressed in thousands.								Expressed in thousands.					
United States.....	1919	680	72,470	218,238	\$88,205	\$640,522	\$928,592		New Hampshire.....	1919	7	709	4,750	\$754	\$5,906	\$7,300		
	1914	741	55,936	172,712	31,914	284,245	367,202			1914	8	452	3,174	263	2,251	2,864		
	1909	919	62,203	148,140	32,103	248,279	327,874			1909	4	284	114	114	1,169	1,581		
California.....	1919	21	1,453	5,714	1,897	16,472	21,416		New Jersey.....	1919	73	5,499	13,239	7,297	52,587	78,012		
	1914	29	1,361	3,676	1,007	7,558	10,021			1914	84	5,108	12,306	8,260	22,081	31,652		
	1909	40	1,398	3,534	988	7,039	9,367			1909	86	5,560	9,243	3,473	20,198	28,431		
Connecticut.....	1919	7	168	510	189	1,000	1,569		New York.....	1919	94	7,056	20,134	8,420	70,487	98,095		
	1914	7	185	340	100	636	906			1914	98	5,380	20,039	2,955	27,912	30,018		
	1909	8	150	356	95	805	1,047			1909	109	5,088	14,265	2,912	20,941	27,642		
Delaware.....	1919	18	4,251	7,977	5,812	28,341	50,138		North Carolina.....	1919	11	1,385	6,916	1,096	14,281	17,849		
	1914	20	2,382	5,103	1,187	6,474	9,183			1914	17	877	2,806	355	5,545	7,182		
	1909	16	3,045	4,417	1,367	8,147	12,070			1909	39	832	2,672	290	4,156	5,415		
Illinois.....	1919	29	4,434	14,626	5,247	42,652	60,324		Ohio.....	1919	24	1,565	5,063	2,172	18,818	25,008		
	1914	28	2,678	7,920	1,538	13,917	17,509			1914	28	1,605	4,450	1,054	8,506	11,628		
	1909	29	3,001	6,769	1,582	12,131	14,912			1909	36	1,884	4,244	1,083	7,720	10,128		
Indiana.....	1919	9	396	1,206	343	3,455	4,720		Oregon.....	1919	5	39	203	49	236	315		
	1914	10	434	1,127	226	2,326	2,928			1914	5	34	163	20	148	188		
	1909	10	398	1,028	205	1,713	2,311			1909	8	49	224	34	181	244		
Kentucky.....	1919	10	661	2,478	670	5,791	8,748		Pennsylvania.....	1919	92	13,749	42,961	17,252	146,405	211,389		
	1914	11	600	2,276	329	3,242	4,190			1914	120	11,988	39,984	6,492	68,309	85,253		
	1909	18	630	2,660	308	3,224	4,241			1909	163	14,008	37,440	6,801	59,113	77,926		
Maine.....	1919	9	306	1,740	299	2,675	3,359		Virginia.....	1919	21	1,666	5,341	1,573	16,216	21,501		
	1914	10	358	1,905	182	2,001	2,410			1914	21	1,205	3,648	525	8,218	9,834		
	1909	17	430	1,467	208	1,452	1,905			1909	39	1,590	4,223	589	6,445	8,267		
Maryland.....	1919	7	517	1,030	479	4,357	6,203		West Virginia.....	1919	17	1,520	5,510	1,742	19,070	23,827		
	1914	10	440	1,458	220	2,020	3,485			1914	18	1,072	4,887	615	8,695	11,015		
	1909	13	466	1,321	211	2,114	2,661			1909	20	1,571	5,305	775	10,383	12,451		
Massachusetts.....	1919	131	15,180	34,150	19,211	82,017	129,595		Wisconsin.....	1919	25	6,825	24,808	8,011	69,506	94,762		
	1914	126	10,104	26,534	8,918	33,194	45,265			1914	27	5,869	20,142	3,404	33,053	42,204		
	1909	132	10,252	19,231	5,444	28,760	40,002			1909	32	7,548	17,112	3,988	34,829	44,668		
Michigan.....	1919	28	3,404	12,243	4,103	32,452	45,801		All other states.....	1919	35	1,368	6,076	1,234	10,723	14,722		
	1914	23	2,773	6,787	1,739	20,982	25,504			1914	31	764	8,157	360	4,166	5,372		
	1909	24	2,201	6,719	1,133	12,121	15,331			1909	67	921	4,492	357	4,033	5,230		
Missouri.....	1919	7	265	948	290	2,946	3,770											
	1914	10	227	700	156	2,042	2,573											
	1909	9	220	510	140	1,699	2,036											

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## MANUFACTURES.

TABLE 23.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.			Wage earners.			Total.	16 and over.		Under 16.		Salaries and wages.	
					Male.	Female.	Average number.	Number, 15th day of—	Maximum month.	Minimum month.		Male.	Female.	Male.	Female.		
United States.	680	79,292	398	2,858	2,267	1,293	72,476	De 79,010	Fe 65,515	79,205	72,257	6,507	330	111	\$671,341,553	\$14,382,409	\$5,796,563
California.....	21	1,630	11	76	55	35	1,453	Au 1,506	My 1,401	1,509	1,400	46	2	1	15,004,030	331,557	201,539
Connecticut.....	7	195	1	19	6	1	168	De 229	Fe 114	224	207	13	4	1	1,106,864	87,390	9,248
Delaware.....	18	4,458	5	78	69	55	4,251	Se 5,566	Fe 2,390	5,521	3,914	1,533	42	32	34,982,894	661,007	193,861
Georgia.....	3	321	2	13	5	—	301	Au 327	De 290	290	268	22	—	—	774,793	79,912	9,703
Illinois.....	29	4,801	25	150	137	56	4,434	No 4,694	Ja 4,144	4,017	4,046	536	13	22	38,060,464	1,082,667	419,945
Indiana.....	9	442	2	28	9	7	396	Jy 414	Ap 358	388	386	2	—	—	4,786,039	120,402	26,587
Kentucky.....	10	727	1	30	18	8	661	Au 701	No 628	654	652	2	—	—	7,011,821	157,195	42,538
Maine.....	9	337	2	21	3	5	306	De 374	My 270	376	363	13	—	—	2,507,111	65,833	6,379
Maryland.....	7	574	5	31	15	6	517	Se 581	Ja 405	566	563	3	—	—	5,547,285	187,700	32,650
Massachusetts.....	131	16,877	92	634	530	441	15,180	De 17,370	Jy 13,241	17,378	15,759	1,440	147	32	92,548,853	2,779,770	1,117,083
Michigan.....	28	3,748	1	158	81	44	3,464	Au 3,022	Ja 3,302	3,528	3,356	172	—	—	32,886,376	626,698	302,105
Missouri.....	7	331	2	17	41	6	265	De 303	Ja 235	303	300	3	—	—	4,408,610	68,440	35,897
New Hampshire.....	7	830	—	46	35	40	709	De 968	Mh 582	968	906	61	1	—	4,188,458	100,755	89,371
New Jersey.....	73	6,012	31	277	132	73	5,499	Se 5,920	Ja 4,856	5,907	5,279	624	4	—	55,771,911	1,681,744	424,921
New York.....	94	7,723	80	258	210	110	7,056	De 8,025	Fe 5,980	8,033	7,687	330	18	—	67,523,416	1,540,610	578,658
North Carolina.....	11	1,474	6	45	25	13	1,385	Ja 1,451	No 1,322	1,340	1,340	—	—	—	12,301,050	206,720	64,852
Ohio.....	24	1,738	17	80	44	32	1,665	Oc 1,791	Ja 1,363	1,733	1,702	31	—	—	20,995,409	342,072	139,647
Oregon.....	5	46	4	3	—	—	39	Ja 40	No 37	38	38	—	—	—	242,998	5,400	—
Pennsylvania.....	92	14,745	57	452	334	153	13,749	De 14,787	Ja 12,287	14,772	13,646	1,040	68	23	146,280,214	2,423,118	750,998
Tennessee.....	10	656	6	18	12	12	608	Au 655	Ja 563	578	564	14	—	—	4,891,775	64,221	41,070
Texas.....	3	27	2	5	1	1	18	De 38	Fe 6	38	31	7	—	—	92,226	8,940	1,425
Virginia.....	21	1,875	6	57	114	32	1,066	Au 1,819	Ja 1,494	1,729	1,718	10	1	—	10,971,206	249,902	275,647
West Virginia.....	17	1,617	8	39	33	17	1,520	Jy 1,570	De 1,426	1,433	1,431	2	—	—	18,047,995	121,284	90,170
Wisconsin.....	25	7,609	14	291	352	127	6,825	Mh 6,946	Je 6,676	6,814	6,212	565	37	—	69,779,705	1,297,005	902,357
All other states <sup>1</sup> .....	19	499	18	23	6	11	441	—	—	408	429	38	—	1	3,730,360	92,058	22,890
EXPENSES—continued.																	
STATE.	Salaries and wages—Continued.	EXPENSES—continued.							Value of products.	Value added by manufacture.	POWER.						
		Rent and taxes.		For materials.			Primary horsepower.				Owned.				Electric horsepower generated in establishments reporting.		
		For contract work.	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. <sup>2</sup>	Rent-ed. <sup>3</sup>	—	—	—
United States.	\$88,205,473	\$2,337,011	\$738,408	\$26,497,983	\$636,698,271	\$0,823,256	\$928,591,701	\$282,070,174	218,238	124,891	25,000	6,438	2,029	58,971	85,441		
California.....	1,896,537	—	411,555	16,250,583	221,132	21,416,302	4,944,807	5,714	1,828	50	—	—	—	3,836	304		
Connecticut.....	180,386	2,052	9,600	13,886	1,039,740	20,404	1,585,933	508,819	510	300	30	30	3,299	462			
Delaware.....	5,811,722	6,425	10,587	4,491,848	28,105,589	235,222	50,183,261	21,797,440	7,977	4,528	150	—	—	802			
Georgia.....	235,805	—	—	42,963	2,396,483	32,927	3,242,494	813,084	1,077	275	—	—	—	3,242	9,396		
Illinois.....	5,246,980	411,113	30,248	1,233,875	42,129,911	512,322	60,328,659	17,671,426	14,626	8,494	2,890	—	—	—	—		
Indiana.....	343,075	—	8,052	102,367	8,410,089	45,209	4,729,538	1,274,240	1,206	425	—	—	—	781	140		
Kentucky.....	660,593	—	78	180,296	9,686,435	104,281	8,747,872	2,957,156	2,478	1,057	30	86	—	1,306	577		
Maine.....	293,162	—	1,800	22,392	2,576,482	98,137	3,358,638	684,019	1,740	1,540	—	60	—	146			
Maryland.....	470,115	—	—	112,116	4,282,995	73,446	6,203,468	1,007,027	1,630	1,024	—	606	—	606			
Massachusetts.....	19,211,106	1,142,633	316,402	3,692,229	80,083,207	1,934,048	120,594,902	47,577,707	34,159	15,165	5,404	200	362	13,028	11,147		
Michigan.....	4,162,546	—	1,270	1,916,186	31,685,075	766,723	45,800,736	18,348,988	12,243	8,278	520	1,110	—	2,335	6,549		
Missouri.....	296,198	2,005	144,888	2,890,087	55,880	2,769,580	823,613	948	420	—	—	—	—	528			
New Hampshire.....	754,295	308	1,300	89,361	5,849,472	116,953	7,309,472	1,343,047	4,750	835	—	200	3,715	—			
New Jersey.....	7,298,585	449,744	166,436	1,333,730	51,885,463	751,058	78,012,101	25,425,580	13,239	8,235	283	203	16	6,721	4,493		
New York.....	8,410,616	158,434	81,598	3,001,263	69,573,640	913,349	98,094,503	27,607,514	20,134	9,420	3,465	752	404	6,087	11,459		
North Carolina.....	1,096,246	—	130,010	14,043,567	237,357	17,848,526	3,567,602	6,916	3,920	75	8	425	—	2,488	1,140		
Ohio.....	2,171,888	4,005	550,846	18,624,763	193,028	28,008,070	6,190,279	5,063	2,612	667	170	—	—	1,614	1,972		
Oregon.....	49,177	—	1,005	281,861	4,451	314,567	78,255	203	—	—	16	—	—	187			
Pennsylvania.....	17,252,410	41,191	72,733	4,828,934	144,433,316	1,972,061	211,389,349	64,983,972	42,961	34,681	550	3,578	435	3,717	13,173		
Tennessee.....	480,952	—	300	182,202	4,045,012	82,603	6,700,970	1,682,355	2,877	1,860	—	100	917	318			
Texas.....	18,404	—	240	94	57,608	1,020	90,297	31,060	127	—	8	—	119	—			
Virginia.....	1,573,237	73,814	3,000	380,371	16,030,069	185,965	21,590,902	5,374,868	5,341	4,104	135	10	1,092	1,583			
West Virginia.....	1,741,717	—	288,430	18,809,118	260,947	23,827,181	4,748,068	5,610	4,970	490	—	—	50	1,839			
Wisconsin.....	8,011,138	49,338	9,676	3,794,719	63,559,370	916,658	94,762,230	25,286,202	24,808	11,762	11,650	—	1,396	15,149			
All other states <sup>1</sup> .....	480,683	1,959	18,478	92,477	3,128,388	79,075	4,680,070	1,472,637	1,995	1,136	40	7	3	809	1,325		

<sup>1</sup> All other states embrace: Alabama, 1 establishment; Colorado, 1; Louisiana, 1; Minnesota, 6; North Dakota, 2; Rhode Island, 2; South Dakota, 1; Vermont, 2; Washington, 2; and Wyoming, 1.

<sup>2</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

<sup>3</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

## BOOTS AND SHOES.

### GENERAL STATISTICS.

**General character of the industry.**—This industry includes the manufacture of boots, shoes, sandals, slippers, moccasins, leggings, overgaiters, and allied footwear, chiefly of leather, though it is inclusive of canvas and other textile fabrics. It includes establishments doing such special work as crimping, stitching, buttonhole making, as well as those doing contract work on materials furnished by the boot and shoe trade. Establishments making rubber boots, shoes, and sandals are not included.

In 1919 there were 1,449 establishments in the industry, and the value of products amounted to \$1,155,041,436, and in addition there were 9 establishments engaged primarily in other lines of manufacture which reported products within the scope of the industry to the value of \$894,201.

**Comparison with earlier censuses.**—Table 24 shows the principal statistics for the industry for 1919, and for each census year since 1879. A comparison of the figures for 1919 with those for 1914, though showing large increases in financial items, due to industrial conditions since the World War, show small gains in quantity production and in number of wage earners employed. The decrease in number of proprietors and firm members, the only item showing a decrease, was probably due to the incorporation of small establishments.

**Specialization in the industry.**—Table 25 presents the principal statistics for establishments grouped according to class of work. The regular factories formed 92.3 per cent of the total number, employed 99 per cent of the wage earners, and the value of their products constituted 99.2 per cent of the aggregate value. The number of establishments doing contract work or special kinds of work is greatly decreasing. The establishments doing contract work only were in Massachusetts, New York, New Jersey, and Ohio, and those doing special kinds of work were in Massachusetts, New Hampshire, New York, and Pennsylvania. Establishments in the class "overgaiters, moccasins, and leggings," also reported sandals, lumbermen's and miners' boots, and other footwear not entirely of leather.

**Principal states, ranked by value of products.**—Table 26 presents the statistics relating to number of establishments, wage earners, value of products, and value added by manufacture, by states, ranked according to value of products. The 11 states having highest rank held respectively the same rank in 1914. Though the proportion of the total value of products reported by

Massachusetts was less in 1919 than formerly, the actual increase over 1914 amounted to 120.6 per cent. The increase for New York was 183.1 per cent, and for Missouri 170.9 per cent.

The combined products of three New England states—Maine, Massachusetts, and New Hampshire—represented 48.9 per cent of the total for the United States. These states, and New York and Pennsylvania, the important Middle Atlantic boot-and-shoe states, together represented 71 per cent of the total. Ohio, Illinois, Wisconsin, and Missouri, the leading boot-and-shoe states in the Middle West, reported 22.9 per cent of the total.

**Summary for leading cities.**—Table 27 gives the statistics for 1919, 1914, and 1909 for the 14 ranking cities, according to value of products in 1919. New York advanced from fifth place in 1909 to fourth in 1914 and to second place in 1919. Brockton, Lynn, Haverhill, and Boston represented in 1919, as in 1914, one-fifth of the total value of products for all establishments in the industry.

**Persons engaged in the industry.**—The age classification of the average number of wage earners, as presented in Table 28, is an estimate obtained by the method described in the "Explanation of terms." Statistics for states will be found in Table 45.

**Wage earners, by months.**—Table 29 gives the total number of wage earners by months and the number of females so employed for states having an average of 500 wage earners or more. These figures reflect the steadiness of employment, or the reverse, during the year. The fluctuation in employment during 1919 did not differ materially from 1914. For the six leading states in the industry, each employing more than 10,000 wage earners, the variation ranged from 90.2 per cent, minimum of maximum, in Pennsylvania, to 81.6 per cent in New Hampshire. The greatest difference in number employed in any state during the year was in Indiana, the minimum number being 50.9 per cent of the maximum number. The proportion of females employed in the six leading states ranged from 30.9 per cent of the state total in New York to 42.9 per cent in Missouri. Kentucky showed the largest percentage for females, 55.6 per cent.

**Prevailing hours of labor.**—Table 30 shows that only three-tenths of 1 per cent of the wage earners in 1909 were employed in establishments where the prevailing hours of labor were 48 per week or less. In 1914 this percentage was 2.6 but in 1919 it was 62.8 per cent. On the other hand, 15.6 per cent of all wage earners

## MANUFACTURES.

in 1909 were in establishments where the prevailing hours of labor per week were 60 or more. This dropped to 3 per cent in 1914, and in 1919 only four-tenths of 1 per cent were in this group. For Massachusetts and New York, the leading states in the industry, the wage earners in establishments having working hours of 48 or less per week formed 85.8 per cent and 84.3 per cent of the respective totals in 1919, compared with 1.4 per cent and 1.2 per cent, respectively, in 1914. In Missouri, the next state in importance, 55.9 per cent of the wage earners worked these hours in 1919 compared with eight-tenths of 1 per cent in 1914. In Ohio 87.3 per cent of the wage earners were in establishments reporting working hours per week "Between 48 and 54."

**Size of establishments, by average number of wage earners.**—The industry contains a considerable number of large establishments, and, as a whole, averaged 146 wage earners per establishment in 1919 compared with 141 in 1914 and 138 in 1909. In 1919 there were 87 establishments that employed over 500 wage earners, these establishments constituting 6 per cent of the total number with 39.1 per cent of all wage earners. In 1914 the establishments of this class, those with over 500 wage earners, represented 6.3 per cent of the establishments and 39.7 per cent of the wage earners, and in 1909, 5.8 per cent of the establishments and 36.3 per cent of the wage earners. The statistics therefore, as presented in Table 31, do not show a marked change in size, based upon number of wage earners.

**Size of establishments, by value of products.**—In Table 32 the grouping by value of products reflects general increases in values. The average value of products per establishment increased from \$330,000 in 1909 to \$370,000 in 1914 and to \$797,000 in 1919, the increase from 1914 to 1919 being essentially due to high prices, for on a quantity-production basis and

on an employee basis the growth was relatively small. This condition accounts for the changes from lower to higher groups when classified according to value of products.

**Character of ownership.**—Table 33 shows a classification of the establishments according to ownership. In 1919 and 1914 a majority of the establishments were incorporated, 62 per cent and 50.6 per cent, respectively; in 1909 but 45.4 per cent. The average value of products per establishment in 1919 was \$1,134,000 for the corporation group, \$174,000 for "Individuals" and \$359,000 for "All others," most of the latter being firms. In 1914 the figures were \$575,000, \$73,000, and \$280,000, respectively. The average number of wage earners per establishment in 1919 was 205 for corporations, 35 for individuals, and 69 for the "All others" group.

In Massachusetts, 57.6 per cent of the establishments were corporations; and in New York 50 per cent. Maine, another important Eastern state, reported 33 of the 39 establishments, or 84.6 per cent, as incorporated. In Missouri practically all were corporations. Ohio reported 83.3 per cent corporations, Wisconsin, 79 per cent, and Illinois, 72.5 per cent.

**Power used.**—Table 34 shows that primary power reported by the establishments increased 20.4 per cent in horsepower rating between 1914 and 1919. Owned power decreased 7.5 per cent, but rented power increased 71.8 per cent, mostly electric power. A large proportion of the power is utilized as electric, either current purchased or generated by the establishment. In 1909 electric power in the aggregate was equal to 34 per cent of the total primary power; in 1914, 54 per cent; and in 1919, 69.5 per cent.

**Fuel used.**—Table 35 shows the consumption of fuels, by kinds and states. Figures for gas include both natural and manufactured gas.

TABLE 24.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE <sup>1</sup>							
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1904	1879-1904	1889-1889	1879-1889
Number of establishments.....	1,449	1,355	1,343	1,316	1,599	2,082	1,959	6.9	0.9	2.1	-17.7	-23.2	6.3		
Persons engaged.....	237,107	210,348	200,847	160,159	(*)	(*)	(*)	12.7	4.7	25.4	5.6				
Proprietors and firm members.....	883	1,090	1,218	1,424	(*)	(*)	(*)	-19.0	-10.5	-14.5					
Salaried employees.....	25,175	17,703	14,513	8,811	7,779	(*)	(*)	42.2	22.0	64.7	13.3				
Wage earners (average number).....	211,049	191,555	185,116	149,924	141,830	133,600	111,152	10.2	3.5	23.5	5.7	(*)	(*)		
Primary horsepower.....	120,632	100,232	85,896	56,220	49,444	30,686	11,574	20.4	16.7	52.8	13.7	61.1	165.1		
Capital.....	\$580,626,075	\$254,590,832	\$107,080,344	\$122,526,093	\$99,810,233	\$95,282,311	\$42,994,028	128.1	29.2	60.9	22.7	4.8	121.6		
Salaries and wages.....	\$268,859,576	\$128,623,475	\$109,646,165	\$77,766,362	\$66,110,832	\$66,375,076	\$43,001,493	109.0	17.3	41.0	17.6	-0.4	54.4		
Salaries.....	\$58,124,966	\$22,928,071	\$17,287,013	\$8,706,682	\$7,669,949	(*)	(*)	153.5	32.6	98.5	13.5				
Wages.....	\$210,734,610	\$105,696,404	\$92,359,152	\$69,059,680	\$58,440,883	(*)	(*)	99.4	14.4	33.7	18.2				
Paid for contract work.....	\$1,030,544	\$1,500,381	\$1,811,706	\$1,471,980	\$1,751,948	(*)	(*)	28.7	-17.2	23.1	-16.0				
Rent and taxes.....	\$25,160,589	\$3,571,773	\$2,436,145	\$1,573,585	\$1,380,615	(*)	(*)	604.4	46.6						
Cost of materials.....	\$715,269,315	\$810,356,586	\$277,467,743	\$197,363,495	\$163,632,654	\$118,755,881	\$102,442,442	130.2	11.9	40.6	17.0	42.0	16.0		
Value of products.....	\$1,155,041,436	\$501,780,458	\$442,630,726	\$320,107,458	\$258,969,580	\$220,649,358	\$166,050,354	130.2	13.4	38.3	23.6	17.4	32.9		
Value added by manufacture <sup>2</sup> .....	\$436,778,121	\$191,403,872	\$166,162,983	\$122,743,063	\$90,380,926	\$101,868,527	\$68,607,912	129.8	15.9	34.6	35.9	-11.3	60.1		
Number of pairs of boots and shoes, all kinds.....	331,224,628	292,666,468	285,017,181	242,110,035	217,965,419	179,400,388	125,478,511	13.2	2.7	17.7	11.1	21.5	41.0		

<sup>1</sup> A minus sign (−) denotes decrease.

<sup>2</sup> Figures not available.

<sup>3</sup> Figures not strictly comparable.

<sup>4</sup> Exclusive of internal revenue.

<sup>5</sup> Value of products less cost of materials.

## BOOTS AND SHOES.

21

TABLE 25.—PRINCIPAL STATISTICS FOR THE INDUSTRY, BY CLASSES OF ESTABLISHMENTS: 1919, 1914, AND 1909.

	Census year	Number of establish-ments.	Wage earners (average number).	Capital.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
Total.....	1919	1,449	211,049	\$580,625,075	\$210,734,610	\$715,260,315	\$1,155,041,436	\$439,772,121
	1914	1,355	191,555	254,590,832	105,695,404	310,356,586	501,760,458	191,403,872
	1909	1,343	185,116	197,090,344	92,359,152	277,467,743	442,630,726	165,162,983
Establishments engaged in:								
Regular factory production.....	1919	1,337	208,854	575,094,289	208,787,565	710,607,817	1,146,137,272	435,529,455
	1914	1,248	189,774	253,116,682	104,856,829	309,240,548	499,144,745	189,904,197
	1909	1,228	182,642	195,034,177	91,284,239	275,298,510	438,443,370	163,144,880
Contract work.....	1919	17	206	125,981	206,094	43,985	392,215	348,230
	1914	18	364	52,711	209,128	64,538	354,945	290,407
	1909	23	382	239,337	231,211	391,510	778,022	387,403
Stitching.....	1919	19	351	121,839	273,082	83,100	457,807	374,707
	1914	24	571	92,608	262,826	48,405	382,209	332,804
	1909	30	866	107,682	363,692	59,988	530,104	470,176
Crimping.....	1919	3	3	4,563	3,560	188	10,658	10,470
	1914	4	6	9,218	3,732	203	9,732	9,529
	1909	5	10	8,272	6,495	716	17,384	16,688
Making buttonholes.....	1919	3	7	2,150	6,098	3,681	14,896	11,215
	1914	8	50	16,229	24,460	5,616	50,540	44,924
	1909	4	34	5,547	15,943	4,921	30,456	25,635
Making overgaiters, moccasins, and leggings.....	1919	70	1,568	4,376,253	1,397,311	4,530,544	8,028,588	3,498,044
	1914	53	790	1,303,384	338,429	997,276	1,818,287	821,011
	1909	53	1,182	1,695,329	457,872	1,712,089	2,830,430	1,118,341

TABLE 26.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of estab-lishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribu-tion.	Rank.	Amount (expressed in thousands).	Per cent distribu-tion.	Rank.	Amount (expressed in thousands).	Per cent distribu-tion.	Rank.
United States.....	1,449	211,049	100.0	.....	\$1,155,041	100.0	.....	\$439,772	100.0	.....
Massachusetts.....	493	80,166	38.0	1	442,466	38.3	1	173,115	39.4	1
New York.....	340	34,710	16.4	2	190,476	16.5	2	82,312	18.7	2
Missouri.....	54	17,458	8.3	3	100,193	9.5	3	32,268	7.3	3
New Hampshire.....	52	12,336	5.9	6	73,871	6.4	4	22,815	5.2	6
Ohio.....	60	14,062	6.7	4	71,355	6.2	5	30,552	6.9	4
Pennsylvania.....	128	13,317	6.3	5	65,412	5.7	6	24,440	5.6	5
Maine.....	39	9,919	4.7	7	48,059	4.2	7	17,840	4.1	7
Wisconsin.....	62	7,598	3.6	9	44,374	3.8	8	16,672	3.8	8
Illinois.....	51	7,684	3.6	8	39,402	3.4	9	14,184	3.2	9
New Jersey.....	34	2,835	1.3	10	12,864	1.1	10	5,058	1.1	10
Minnesota.....	16	2,152	1.0	11	12,645	1.1	11	4,902	1.1	11
Michigan.....	15	1,120	0.5	13	6,046	0.5	13	1,862	0.4	13
Maryland.....	13	986	0.5	15	4,662	0.4	14	1,555	0.4	15
Connecticut.....	8	905	0.5	14	8,765	0.3	15	1,585	0.4	14
Kentucky.....	7	630	0.3	17	3,574	0.3	16	1,475	0.3	16
California.....	14	616	0.3	19	3,247	0.3	17	1,278	0.3	17
Iowa.....	6	653	0.3	16	3,047	0.3	18	777	0.2	19
Indiana.....	5	620	0.3	18	2,854	0.2	19	948	0.2	18
Louisiana.....	4	300	0.1	20	1,136	0.1	20	403	0.1	20
Washington.....	9	146	0.1	21	846	0.1	21	402	0.1	21
Texas.....	11	88	(1)	22	361	(1)	22	212	(1)	22
All other states.....	28	2,627	1.2	.....	15,386	1.3	.....	5,122	1.2	.....

<sup>1</sup> Less than one-tenth of 1 per cent.

TABLE 27.—STATISTICS FOR PRINCIPAL CITIES: 1919, 1914, AND 1909.

CITY.	1919					1914		1909	
	Number of estab-lishments.	Average number of wage earners.	Cost of materials.	Value of products.	Rank.	Value of products.	Rank.	Value of products.	Rank.
Brockton, Mass.....	39	12,878	\$52,594,784	\$81,543,541	1	\$35,032,665	1	\$32,484,288	2
New York, N. Y.....	248	12,880	30,789,206	66,478,600	2	23,859,062	4	16,699,108	3
Lynn, Mass.....	105	12,128	37,898,415	66,487,349	3	30,066,815	2	34,620,870	1
St. Louis, Mo.....	27	9,779	39,553,048	53,857,853	4	(1)	5	(1)	3
Haverhill, Mass.....	137	11,520	33,245,787	59,690,812	5	25,319,953	3	20,977,540	4
Rochester, N. Y.....	48	6,934	20,565,641	35,012,227	6	13,519,755	7	11,990,137	8
Manchester, N. H.....	13	4,986	23,070,294	33,318,317	7	(1)	9	(1)	7
Cincinnati, Ohio.....	22	6,668	18,963,535	31,223,081	8	14,525,078	6	14,080,755	6
Milwaukee, Wis.....	26	4,917	18,433,989	30,007,235	9	11,665,824	10	7,431,884	12
Boston, Mass.....	14	6,140	16,154,408	27,526,886	10	13,253,410	8	8,816,284	10
Philadelphia, Pa.....	41	3,823	12,230,101	20,534,339	11	8,761,494	.....	(1)	13
Auburn, Me.....	8	4,071	11,360,283	20,379,476	12	10,236,020	12	6,232,520	11
Chicago, Ill.....	31	3,344	10,479,803	17,595,506	13	10,247,250	11	8,212,087	11
Columbus, Ohio.....	9	1,872	6,151,504	10,198,185	14	5,224,348	.....	(1)	.....

<sup>1</sup> Figures not published for the censuses of 1914 and 1909.<sup>2</sup> Figures not available.

## MANUFACTURES.

TABLE 28.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Cen-sus year.	Total.	Male.	Fe-male.	PER CENT OF TOTAL.		CLASS.	Cen-sus year.	Total.	Male.	Fe-male.	PER CENT OF TOTAL.	
					Male.	Female.						Male.	Female.
All classes.....	1919	237,107	147,065	90,042	62.0	38.0	Clerks and other subordinate salaried employees.	1919	17,558	8,494	9,064	48.4	51.6
	1914	210,348	136,388	73,960	64.8	35.2		1914	13,620	7,780	5,840	57.1	42.9
	1909	200,847	130,398	70,449	64.9	35.1		1909	11,053	6,428	4,625	58.2	41.8
Proprietors and officials.....	1919	8,500	7,961	530	93.7	6.3	Wage earners (average number)...	1919	211,049	130,610	80,430	61.9	38.1
	1914	5,173	4,928	245	95.3	4.7		1914	191,555	123,680	67,875	64.6	35.4
	1909	4,678	4,407	211	95.5	4.5	16 years of age and over.....	1919	177,500	115,119	62,381	64.9	35.1
Proprietors and firm members.....	1919	883	836	47	94.7	5.3		1914	204,346	126,561	77,785	61.9	38.1
	1914	1,090	1,051	39	96.4	3.6	Under 16 years of age.....	1919	187,976	121,738	68,238	64.8	35.2
	1909	1,218	1,163	55	95.6	4.4		1914	185,116	119,503	65,613	64.6	35.4
Salaried officers of corporations.....	1919	1,747	1,704	43	97.5	2.5		1909	6,703	4,040	2,654	60.4	39.6
	1914	1,020	1,000	20	98.0	2.0			3,570	1,942	1,637	54.3	45.7
	1909	890	875	15	98.3	1.7			7,616	4,384	3,232	57.6	42.4
Superintendents and managers.....	1919	5,870	5,421	449	92.4	7.6							
	1914	3,063	2,877	186	93.9	6.1							
	1909	2,570	2,427	143	94.4	5.6							

TABLE 29.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

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

STATE.	Average number em-ployed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.											Per cent min-imum is of maximum.	
		January.	Febru-ary.	March.	April.	May.	June.	July.	August.	Septem-ber.	Octo-ber.	Novem-ber.	Decem-ber.	
United States:														
1919.....	211,049	202,905	204,440	201,295	199,026	201,710	208,502	211,811	215,596	217,031	219,604	224,197	228,412	87.1
Males.....	130,610	124,353	126,228	124,255	123,408	125,348	128,509	131,005	133,174	134,061	135,824	138,549	141,388	87.3
Females.....	80,439	78,952	78,212	77,940	75,557	76,362	77,993	80,206	82,422	82,970	83,780	85,618	87,026	86.8
1914.....	191,555	200,739	203,135	198,772	189,856	188,934	191,110	193,354	191,036	180,740	183,053	183,212	183,119	90.2
California.....	616	636	552	508	595	593	605	608	632	639	677	680	707	75.8
Connecticut.....	995	793	806	874	916	1,004	1,041	1,094	1,105	1,110	1,056	1,098	71.4	
Illinois.....	7,684	7,503	7,761	7,806	5,609	6,163	7,431	7,933	7,976	8,200	8,453	8,576	8,737	84.2
Indiana.....	620	710	743	737	636	540	578	537	561	580	649	662	657	50.9
Iowa.....	653	628	648	653	674	668	701	688	659	633	621	610	658	87.0
Kentucky.....	630	449	473	462	454	460	464	688	724	758	775	821	842	53.3
Louisiana.....	300	287	289	295	293	297	308	308	297	307	310	307	302	92.6
Maine.....	9,019	9,345	9,854	9,459	8,730	8,528	8,728	8,997	9,904	10,593	11,018	11,509	11,885	71.9
Maryland.....	986	853	885	901	911	913	948	959	1,030	1,093	1,121	1,101	1,117	76.1
Massachusetts.....	80,166	77,871	78,498	78,698	77,018	77,523	77,620	79,047	80,737	81,388	82,235	84,653	86,704	88.8
Michigan.....	1,120	1,061	1,090	1,088	1,104	1,090	1,087	1,120	1,155	1,121	1,151	1,181	1,192	89.0
Minnesota.....	2,153	2,026	2,078	2,002	2,089	2,086	2,057	2,102	2,057	2,204	2,231	2,248	2,340	88.6
Missouri.....	17,458	16,315	16,290	16,452	16,954	17,259	17,721	17,859	17,945	17,820	18,055	18,340	18,467	88.2
New Hampshire.....	12,336	12,403	12,198	11,636	11,459	11,300	12,173	12,468	12,166	12,517	12,639	13,226	13,849	81.6
New Jersey.....	2,835	2,675	2,778	2,813	2,825	2,842	2,886	2,840	2,812	2,808	2,765	2,052	2,017	88.7
New York.....	34,710	32,691	33,324	30,758	32,065	33,558	34,057	35,987	36,627	36,747	36,671	36,631	36,804	83.6
Ohio.....	14,092	13,654	13,846	13,588	13,478	13,805	14,061	14,202	14,449	14,279	14,236	14,478	14,963	90.0
Pennsylvania.....	18,317	18,508	12,617	12,787	13,027	13,193	13,344	13,598	13,600	13,613	13,768	13,811	13,871	90.2
Wisconsin.....	7,598	7,169	7,172	7,105	7,193	7,345	7,527	7,697	7,843	7,793	8,048	8,148	8,133	87.2
States showing a large proportion of females.														
California.....	234	208	207	210	221	217	224	234	250	251	266	258	267	38.0
Connecticut.....	598	395	406	463	483	557	553	611	601	638	582	575	594	54.1
Illinois.....	3,499	3,479	3,505	3,512	2,876	2,775	3,229	3,005	3,686	3,768	3,848	3,906	3,905	45.5
Indiana.....	293	329	343	345	313	260	175	259	272	278	317	316	309	47.3
Iowa.....	321	315	320	325	333	317	331	325	318	311	313	308	336	49.2
Kentucky.....	350	266	288	277	276	279	361	378	394	398	390	437	447	55.6
Maine.....	3,883	3,047	3,887	3,649	3,480	3,803	3,465	3,529	3,825	4,212	4,325	4,461	4,533	39.1
Maryland.....	389	327	336	338	335	338	358	358	408	418	410	418	37.4	
Massachusetts.....	29,977	29,309	29,429	29,505	28,616	28,740	28,508	20,205	30,247	30,434	30,917	32,044	32,770	37.4
Michigan.....	485	455	481	472	473	470	464	483	505	492	503	510	512	43.3
Minnesota.....	917	901	904	880	870	893	906	871	941	946	957	975	980	42.6
Missouri.....	7,481	7,002	6,052	6,094	7,224	7,275	7,591	7,875	7,755	7,687	7,668	7,904	7,945	42.9
New Hampshire.....	4,786	4,837	4,747	4,555	4,489	4,445	4,622	4,716	4,727	4,871	4,925	5,162	5,356	38.5
New Jersey.....	1,152	1,080	1,119	1,116	1,136	1,148	1,149	1,163	1,162	1,168	1,179	1,213	1,201	46.6
New York.....	10,740	10,173	10,344	9,082	9,874	10,291	10,676	11,078	11,473	11,532	11,375	11,187	11,215	30.9
Ohio.....	5,805	5,843	5,907	5,699	5,506	5,708	5,846	6,005	6,077	5,950	5,785	5,927	6,127	41.5
Pennsylvania.....	5,336	5,102	5,116	5,149	5,193	5,259	5,350	5,436	5,446	5,380	5,501	5,510	5,581	40.1
Wisconsin.....	3,085	2,962	2,906	2,890	2,933	2,988	3,060	3,103	3,143	3,113	3,270	3,315	3,337	40.6

## BOOTS AND SHOES.

23

TABLE 30.—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. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States.....	1910	211,049	18,511	25,580	88,406	47,431	20,898	9,466	755	2
	1914	191,555	(2)	(2)	4,906	23,263	79,699	77,854	5,773	
	1900	185,116	(2)	(2)	543	8,034	44,109	105,554	28,533	233
California.....	1910	610		62	512	228	36		6	
	1914	617	(2)	(2)	7		374		8	
Connecticut.....	1910	995	120		668	202	5			
	1914	507					183	377	2	
Illinois.....	1910	7,684	573	148	3,117	2,075	821	950		
	1914	6,071	(2)	(2)	18	195	1,175	4,503	180	
Indiana <sup>2</sup> .....	1910	620			56	564				
Iowa <sup>2</sup> .....	1910	653				146	265	242		
Kentucky <sup>2</sup> .....	1910	630	20			73	423	105		
Maine.....	1910	9,919			628	2,153	7,138			
	1914	8,815				73	461	8,028	252	
Maryland.....	1910	986	67			736		183		
	1914	595				68		270	257	
Massachusetts.....	1910	80,166	4,326	23,955	40,506	8,088	3,137	156		
	1914	76,944	(2)	(2)	1,089	12,224	42,064	21,292	275	
Michigan.....	1910	1,120			101	14	556	145		
	1914	2,035	(2)	(2)		115	20	1,402	232	206
Minnesota.....	1910	2,153	5		400	1,299		449		
	1914	2,012	(2)	(2)		39		432	779	762
Missouri.....	1910	17,458	3,274	34	6,443	4,216	3,195	296		
	1914	13,160	(2)	(2)		110	819	5,783	6,033	304
New Hampshire.....	1910	12,336	231	31	7,239	4,223	441	171		
	1914	12,937	(2)	(2)		346	310	318	11,902	61
New Jersey.....	1910	2,835	600	85	471	1,149		530		
	1914	8,834	(2)	(2)		245		4	3,310	13
New York.....	1910	34,710	8,924	676	19,659	4,785	486	169	1	
	1914	26,193	(2)	(2)		318	7,396	14,361	4,098	20
Ohio.....	1910	14,092	15		17	12,309	257	1,470	24	
	1914	14,461	(2)	(2)		810	103	6,089	7,201	258
Pennsylvania.....	1910	13,317	205	66	2,675	3,515	3,638	2,876	342	
	1914	13,184	(2)	(2)		1,312	1,413	5,929	4,473	57
Wisconsin.....	1910	7,698	15	304	4,187	1,282	243	1,261	246	
	1914	5,772	(2)	(2)		308	16	528	2,412	2,508

<sup>1</sup> Includes 48 and under for 1914 and 1909.

<sup>2</sup> Corresponding figures not available.

<sup>3</sup> Not shown separately in 1914.

TABLE 31.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATES.	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.								
United States. 1919.	1,449	211,049	24	105	519	228	2,705	244	8,485	233	17,374	153	53,010	66	45,787	21	36,711		
1914.	1,355	101,555	32	214	579	231	2,887	198	6,800	203	14,919	140	48,947	67	45,964	18	30,149		
1909.	1,348	185,116	26	206	598	236	2,839	208	7,045	199	14,673	239	38,796	151	54,003	62	43,248	16	23,014
California.....	14	616	1	2	6	4	37	2	73	4	281	1	219	—	283	—	—	—	
Connecticut.....	8	905	—	2	9	1	18	—	—	7	537	4	685	1	—	—	—	—	
Illinois.....	51	7,684	1	8	21	8	96	4	155	10	1,666	10	3,335	3	1,874	—	—		
Indiana.....	5	620	—	—	—	1	10	—	—	2	115	1	237	—	258	—	—		
Iowa.....	6	653	—	—	—	1	11	1	43	1	60	2	274	1	265	—	—		
Kentucky.....	7	630	—	—	—	1	11	2	75	1	73	3	471	—	—	—	—		
Maine.....	39	9,910	—	—	2	3	4	32	1	22	7	573	16	2,894	4	1,454	2	1,231	
Maryland.....	13	986	—	—	—	3	34	3	87	5	867	1	124	—	374	—	—		
Massachusetts.....	493	80,100	6	48	130	62	783	93	3,205	89	6,715	103	17,074	57	20,097	26	17,292		
Michigan.....	15	1,120	1	1	1	4	54	2	53	2	139	4	483	1	390	—	—		
Minnesota.....	16	2,153	—	—	2	6	2	31	1	43	3	225	5	718	2	542	1	588	
Missouri.....	54	17,458	—	—	2	4	4	61	5	175	97	2,532	19	6,946	6	4,044	3	3,599	
New Hampshire.....	52	12,330	—	—	2	2	5	64	4	152	8	624	16	2,684	11	4,057	5	3,644	
New Jersey.....	34	2,835	3	1	1	5	48	9	319	7	560	6	981	3	936	—	—		
New York.....	340	34,710	10	85	227	76	888	65	2,149	42	2,888	33	5,152	16	5,278	10	7,289	3	10,829
Ohio.....	60	14,092	—	4	10	6	72	3	79	8	681	8	3,819	7	2,860	1	5,012	1	1,559
Pennsylvania.....	128	13,317	—	12	28	20	271	33	1,269	25	1,809	23	3,485	12	3,958	3	2,497	—	—
Wisconsin.....	62	7,598	2	11	32	6	72	10	400	13	1,046	13	1,811	3	880	3	2,266	1	1,091

## MANUFACTURES.

TABLE 32.—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			1910 1914 1900			1919 1914 1909			1919 1914 1909		
	1,449	1,355	1,343	211,049	191,555	185,110	\$1,155,041,436	\$601,760,458	\$442,630,726	\$439,772,121	\$191,403,872	\$165,162,933
All classes.....	1,449	1,355	1,343	211,049	191,555	185,110	\$1,155,041,436	\$601,760,458	\$442,630,726	\$439,772,121	\$191,403,872	\$165,162,933
Less than \$5,000.....	57	138	127	58	250	270	150,171	361,978	368,716	83,051	226,086	220,599
\$5,000 to \$20,000.....	159	210	228	612	1,556	1,032	1,821,963	2,226,096	2,636,777	99,357	1,233,593	1,486,348
\$20,000 to \$100,000.....	279	303	303	4,388	8,400	8,416	15,218,314	16,506,114	15,111,482	7,211,631	7,313,294	6,816,447
\$100,000 to \$500,000.....	440	429	{ 25,955 } 563	26,208	85,018	89,277	120,513,378	112,903,739	101,131,585	{ 40,949,546 }	81,835,420	78,024,182
\$500,000 to \$1,000,000.....	186	133	{ 26,208 } 563	26,208	85,018	89,277	134,020,114	204,736,816	204,736,816	{ 53,707,744 }	204,736,816	204,736,816
\$1,000,000 and over.....	328	137	122	152,828	96,271	85,212	883,317,496	219,776,835	219,776,835	327,820,792	100,795,479	78,615,437
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.....	3.9	10.2	9.5	(1)	0.1	0.2	(1)	0.1	0.1	(1)	0.1	0.1
\$5,000 to \$20,000.....	11.0	15.5	17.0	0.3	0.8	1.0	0.2	0.4	0.6	0.2	0.6	0.9
\$20,000 to \$100,000.....	19.3	22.4	22.6	2.1	* 4.4	4.5	1.3	3.8	3.4	1.6	3.8	4.1
\$100,000 to \$500,000.....	30.4	31.7	{ 41.0 }	{ 12.8 }	44.4	48.2	{ 10.4 }	22.5	20.2	{ 11.4 }	42.8	47.2
\$500,000 to \$1,000,000.....	12.8	10.1	{ 22.6 }	{ 12.4 }	50.3	46.0	76.5	53.5	49.0	74.5	52.7	47.6
\$1,000,000 and over.....	22.6	10.1	9.1	72.4	50.3	46.0						

<sup>1</sup> Less than one-tenth of 1 per cent.

TABLE 33.—CHARACTER OF OWNERSHIP, BY STATES: 1919 AND 1914.

STATE.	Cen-sus year.	NUMBER OF ESTABLISH-MENTS 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.	
United States.....	1910	328,898,223	211,049	11,580	184,167	15,302	5.5	87.3	7.2	\$1,155,041,436	\$56,083,920	\$1,017,908,259	\$80,140,257	4.9	88.1	7.0
	1914	387,686,282	191,555	12,460	148,887	30,199	6.5	77.7	15.8	561,760,458	28,188,732	394,709,381	78,862,345	5.6	78.7	15.7
	1909	435,610,298	185,116	14,199	135,336	35,581	7.7	73.1	19.2	442,630,726	30,649,572	329,375,572	82,605,181	6.9	74.4	18.7
California.....	1910	5 8 1	616	1 36	580	225	5.8	94.2	—	3,247,177	1 108,844	3,138,333	—	3.4	96.6	—
	1914	2 9 5	617	592	592	225	95.9	4.1	1,891,356	—	1,824,921	2 60,435	—	90.5	—	9.5
Illinois.....	1910	9 37 5	7,684	70	7,363	251	0.9	95.8	3.3	30,402,383	309,094	37,111,942	1,921,347	0.9	94.2	4.9
	1914	16 23 8	6,071	343	5,299	429	5.6	87.3	7.1	16,891,026	1,108,785	14,727,840	1,056,001	6.6	87.2	8.2
Maine.....	1910	3 33 3	9,919	133	9,354	432	1.3	91.3	4.4	48,050,388	487,295	45,311,436	2,280,657	1.0	94.3	4.7
	1914	6 38 6	8,815	36	8,257	522	0.4	93.7	5.0	22,830,073	143,356	20,912,085	1,780,632	0.6	91.6	7.8
Maryland.....	1910	— 10 3	986	—	854	132	—	86.6	13.4	4,662,351	—	3,068,903	603,448	—	85.1	14.9
Massachusetts.....	1910	127 284 82	80,166	7,185	65,294	7,687	9.0	81.4	9.6	442,466,236	35,885,805	305,672,087	40,908,344	8.1	82.6	9.2
	1914	147 188 129	76,944	6,662	58,082	13,700	8.5	73.7	17.8	200,520,858	15,762,303	149,231,773	35,535,782	7.0	74.4	17.7
Michigan.....	1910	3 11 1	1,120	1 24	1,006	2,016	2.1	97.9	—	6,040,310	1 69,804	5,976,506	—	1.2	98.8	—
	1914	4 18 2	2,035	—	2,016	2,19	—	99.1	0.9	5,367,151	—	5,328,416	2 28,735	—	99.5	0.5
Minnesota.....	1910	1 14 1	2,153	—	—	—	100.0	—	—	12,644,659	4 12,644,659	—	—	—	100.0	—
	1914	2 12 1	2,012	—	2,012	—	100.0	—	—	5,918,031	—	5,918,031	—	—	100.0	—
Missouri.....	1910	2 52 —	17,458	—	17,458	—	100.0	—	—	109,193,423	2 109,193,423	—	—	—	100.0	—
	1914	3 46 —	18,169	—	13,189	—	100.0	—	—	40,311,210	—	40,311,210	—	—	100.0	—
New Hampshire.....	1910	4 39 9	12,336	293	11,140	903	2.4	90.3	7.3	73,870,588	1,681,112	68,177,649	4,011,827	2.3	92.3	5.4
	1914	9 36 10	12,937	573	11,293	1,071	4.4	87.3	8.3	37,064,030	1,289,025	34,010,642	2,328,372	3.4	90.4	6.2
New Jersey.....	1910	6 22 6	2,835	217	2,400	218	7.7	84.7	7.7	12,834,038	1,376,617	10,600,137	887,284	10.7	82.4	6.9
	1914	9 21 12	3,834	168	2,760	897	4.4	72.2	23.4	8,288,710	292,513	6,140,774	1,805,423	3.6	74.5	21.9
New York.....	1910	112 170 58	34,710	2,469	29,929	2,312	7.1	86.2	8.7	190,475,939	12,631,933	165,976,739	11,867,267	6.6	87.1	8.2
	1914	103 87 45	26,103	2,388	14,517	9,288	9.1	55.4	35.5	67,288,809	4,913,834	35,428,906	20,916,069	7.3	52.7	40.0
Ohio.....	1910	7 50 3	14,092	400	13,448	244	2.8	95.4	1.7	71,354,850	1,613,538	68,477,612	1,263,700	2.3	96.0	1.8
	1914	6 52 4	14,461	371	13,910	180	2.6	98.2	1.2	32,773,092	591,948	31,658,520	520,457	1.8	96.6	1.6
Pennsylvania.....	1910	23 73 32	13,317	490	10,755	2,072	3.7	80.8	15.6	65,411,673	1,827,353	52,317,685	11,256,635	2.8	80.0	17.2
	1914	37 61 33	13,184	1,464	9,010	2,710	11.1	68.3	20.6	27,844,752	2,785,283	19,209,273	5,760,196	10.0	69.3	20.7
Wisconsin.....	1910	10 49 3	7,598	114	7,381	103	1.5	97.1	1.4	44,373,938	478,195	43,337,892	557,851	1.1	97.7	1.3
	1914	11 45 5	5,772	117	5,535	120	2.0	95.9	2.1	17,043,350	277,103	16,952,062	414,195	1.6	98.1	2.3

<sup>1</sup> Includes the group "All others."<sup>2</sup> Includes the group "Individuals."<sup>3</sup> Not shown separately in 1914.<sup>4</sup> Includes the groups "Individuals" and "All others."

## BOOTS AND SHOES.

25

TABLE 34.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	12,119	5,900	2,624	120,632	100,232	85,896	100.0	100.0	100.0
Owned.....	421	595	672	60,196	65,057	61,974	49.9	64.9	72.2
Steam.....	371	480	524	57,287	60,085	56,580	47.5	59.9	66.0
Engines.....	351	(1)	(1)	46,655	(1)	(1)	38.7	.....	.....
Turbines.....	17	(1)	(1)	10,612	(1)	(1)	8.8	.....	.....
Internal-combustion engines.....	36	91	122	908	3,421	3,235	0.8	3.4	3.8
Water wheels, turbines, and motors.....	14	24	20	2,021	1,551	2,059	1.7	1.6	2.4
Rented.....	11,698	5,305	1,952	60,436	35,175	23,922	50.1	35.1	27.8
Electric.....	11,698	5,365	1,952	55,690	30,900	14,553	46.2	30.8	16.9
Other.....	4,581	3,149	1,522	4,746	4,266	9,389	3.0	4.3	10.9
Electric.....	16,270	8,511	3,474	83,792	54,159	29,169	100.0	100.0	100.0
Rented.....	11,698	5,365	1,952	55,690	30,900	14,553	66.5	57.1	49.9
Generated by establishments reporting.....	4,581	3,149	1,522	28,102	23,250	14,616	33.5	42.9	50.1

<sup>1</sup> Not reported separately.

TABLE 35.—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 <sup>1</sup> (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States.....	1919	46,066	394,926	2,602	24,092	2,901	170,430
	1914	78,070	277,921	2,943	3,008	(*)	181,867
California.....	1919	36	1	—	—	—	548
	1914	—	155	—	1,785	(*)	1,403
Connecticut.....	1919	24	781	—	—	—	6
	1914	17	588	—	—	—	—
Illinois.....	1919	12	36,072	322	—	—	4,073
	1914	2,411	13,123	—	110	(*) 132	1,483
Indiana.....	1919	—	1,398	—	—	—	—
Iowa.....	1910	—	1,052	—	—	—	18
Kentucky.....	1919	—	936	—	—	—	58
Maine.....	1919	1,350	10,922	380	11	9	175
	1914	976	10,074	—	214	(*)	348
Maryland.....	1919	26	1,643	—	—	—	780
	1914	—	798	—	2	(*)	843
Massachusetts.....	1910	12,432	76,949	362	20,148	131	9,598
	1914	10,220	81,067	167	200	(*)	7,169
Michigan.....	1910	4	2,530	—	—	—	224
	1914	169	6,607	—	—	—	559
Minnesota.....	1919	71	2,105	—	—	—	2,891
	1914	915	3,380	—	3	(*)	535
Missouri.....	1919	343	41,133	1,172	10	138	9,572
	1914	6,560	39,770	—	18	(*)	4,162
New Hampshire.....	1919	8,028	20,497	—	250	183	138
	1914	1,642	21,949	—	76	(*)	2,215
New Jersey.....	1919	4,578	6,656	—	—	3	3,088
	1914	2,985	5,338	7	29	(*)	3,322
New York.....	1919	11,761	74,381	285	23	2,021	24,620
	1914	27,513	27,749	—	21	(*)	31,815
Ohio.....	1919	8	77,346	—	6	22	58,620
	1914	100	31,966	1,963	431	(*)	101,855
Pennsylvania.....	1919	12,072	15,902	—	155	114	46,356
	1914	12,406	12,151	656	455	(*)	4,355
Wisconsin.....	1919	314	17,484	81	1	41	2,060
	1914	3,120	10,833	115	151	(*)	2,709
All other states.....	1919	7	6,238	—	—	107	7,655
	1914	46	11,674	35	103	(*)	18,804

<sup>1</sup> Includes some semianthracite.<sup>2</sup> Included with figures for fuel oils.<sup>3</sup> Included with "All other states" in 1914.

## MANUFACTURES.

## SPECIAL STATISTICS.

**Comparative statistics, by classes.**—Table 36 gives the number and value of the different classes of products for 1919, 1914, and 1904. As value by classes was not reported in 1909, no figures for that year are given in this table, but quantity-production will be found in Table 37.

TABLE 36.—BOOTS AND SHOES, BY CLASSES:<sup>1</sup> 1919, 1914, AND 1904.

	1919	1914	1904
Total value <sup>2</sup> .....	\$1,155,041,436	\$501,700,458	\$320,107,458
Boots, shoes, slippers, etc.—			
Number of pairs.....	331,224,028	292,866,468	212,110,035
Value.....	\$1,128,286,743	\$489,053,124	\$315,987,387
Boots and shoes—			
Number of pairs.....	286,592,960	252,516,603	216,039,401
Value.....	\$1,070,322,232	\$455,308,112	\$298,658,565
Men's—			
Number of pairs.....	95,017,356	98,031,144	83,434,322
Value.....	\$429,740,467	\$219,994,422	\$142,038,032
Boys' and youths'—			
Number of pairs.....	26,503,432	22,895,719	21,717,236
Value.....	\$72,883,299	\$32,892,560	\$24,301,298
Women's—			
Number of pairs.....	104,812,505	80,916,230	69,470,876
Value.....	\$447,289,044	\$148,433,738	\$98,202,016
Misses' and children's—			
Number of pairs.....	48,538,203	48,322,395	41,416,967
Value.....	\$102,091,213	\$51,870,908	\$34,056,919
Fiber—			
Number of pairs.....	79,391	2,351,106	(3)
Value.....	\$106,302	\$2,246,484	(3)
Athletic and sporting shoes—			
Number of pairs.....	585,710	(3)	(3)
Value.....	\$2,083,402	(3)	(3)
Canvas and other textile fabrics—			
Number of pairs.....	11,050,363	(3)	(3)
Value.....	\$16,068,425	(3)	(3)
Slippers—			
Number of pairs.....	21,815,046	24,673,102	17,518,291
Value.....	\$33,409,101	\$20,082,238	\$18,996,832
Men's, boys', and youths'—			
Number of pairs.....	3,230,086	3,866,972	4,403,097
Value.....	\$5,308,089	\$3,450,302	\$3,464,561
Women's, misses', and children's—			
Number of pairs.....	5,284,235	14,066,717	13,115,194
Value.....	\$12,880,707	\$18,573,921	\$10,532,271
Infants' shoes and slippers—			
Number of pairs.....	16,068,912	15,476,763	(3)
Value.....	\$18,249,791	\$7,572,774	(3)
Sandals—			
Number of pairs.....	5,126,062	(3)	(3)
Value.....	\$5,128,402	(3)	(3)
Moccasins—			
Number of pairs.....	1,021,748	(3)	(3)
Value.....	\$1,177,157	(3)	(3)
All other kinds—			
Number of pairs.....	.....	8,552,343	\$3,331,000
All other products, including amount received for work done for others, value.....	\$26,754,693	\$12,707,334	\$4,120,071

<sup>1</sup> At the census of 1909 the value was not reported by classes. See Table 37 for quantity of production.

<sup>2</sup> Exclusive of the boot and shoe, etc., products of establishments engaged primarily in other lines of manufacture: 1919, 9 establishments, value \$894,201; 1914, \$835,532; and 1904, \$89,000.

<sup>3</sup> Not reported separately.

Although there was an increase of only 13.2 per cent in the total number of pairs of boots and shoes, slippers, etc., reported in 1919 as compared with 1914, the value increased 130.7 per cent. The increase in values is perhaps best shown by average unit values for the respective years. The average value per pair of men's shoes in 1919 was \$4.52 as compared with \$2.24 in 1914; women's shoes \$4.27 in 1919 and \$1.83 in 1914; and infants' shoes and slippers, \$1.09 in 1919 and 49 cents in 1914.

"Fiber boots and shoes" should be considered in conjunction with shoes of "canvas or other textile fabrics," as the establishments which manufactured a large majority of the shoes reported as "fiber" in 1914 returned their output as "canvas or other textile fabrics" in 1919. The large decrease in women's, misses', and children's slippers is due to the fact that in many cases production reported in 1914 as "slippers" was shown on the schedules for 1919 as low cut shoes.

Under "All other products" for 1919 is included the value of the product of establishments classified in the boot and shoe industry but making footwear which was not strictly boots and shoes. It also includes the value of such products made by establishments in connection with the manufacture of boots and shoes. Such footwear was in part reported by quantity and value without distinction as to class or type but for the most part the value only was reported. The following tabular statement gives the details for this item:

KIND.	Value.
All other products (Table 36).....	\$26,754,693
Overgaitsers.....	4,308,160
Canvas leggings.....	4,084,504
Leather leggings.....	246,257
Bathing shoes.....	201,749
Ballet slippers.....	199,588
Wooden-soled boots.....	380,365
Cowboy boots, wooden shoes, clogs, lumberman's pas, aluminum, rubber and steel soled boots, Alaskas, puttees, logonettes, etc.....	2,556,502
Army equipment.....	1,427,033
Cut stock.....	7,913,997
Boot and shoe fluidings.....	462,826
Revised for crimping, stitching, and buttonhole making, and contract work only.....	875,576
Other income, custom work and repairing, contract work, leather scraps, rags, remnants, waste offal, etc.....	4,098,078

**Products, by states.**—Table 37 shows quantity production, 1919, 1914, and 1909, by classes for the United States and the 10 leading states, ranked according to aggregate products in 1919. The unclassified group "All other footwear" for 1919 and 1914 includes boots, shoes and slippers not segregated as to men's, women's, and children's. For 1909 it was largely composed of infants' shoes and slippers, but also included carpet slippers, sandals, athletic and sporting shoes, etc., reported without classification.

Massachusetts shows no material change in aggregate production for the three census years though the state's proportion of the United States total decreased from 41.4 per cent in 1909 to 39.4 per cent in 1914 and to 35.3 per cent in 1919. New York increased from 10 per cent of the total for the United States in 1909 to 13.3 per cent in 1914 and to 19 per cent in 1919. Missouri, which in 1919 ranked third in production, superseded New Hampshire and Pennsylvania. Maine, Wisconsin, and Illinois show substantial increases in quantity of production, 22.1 per cent, 32.9 per cent, and 28.3 per cent, respectively, for the census period 1914-1919.

# BOOTS AND SHOES.

27

TABLE 37.—PRODUCTS, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Aggregate number of pairs.	BOOTS AND SHOES (NUMBER OF PAIRS).					SLIPPERS (NUMBER OF PAIRS).			All other footwear (number of pairs).
				Total.	Men's.	Boys' and youths'.	Women's.	Misses' and children's.	Total.	Men's, boys', and youths'.	Women's, misses', and children's.	
United States.	1919	1,449	331,224,628	1,274,871,496	95,017,356	26,503,432	104,812,505	48,588,203	1,8,494,321	3,230,086	5,244,235	1,47,858,811
	1914	1,355	292,666,468	1,250,165,497	98,031,144	22,895,710	80,916,239	48,322,395	1,17,733,689	3,666,972	14,066,717	1,24,767,282
	1909	1,343	285,017,181	247,043,197	93,888,892	23,838,628	56,596,314	43,320,365	17,507,834	4,802,841	12,704,903	19,866,150
Massachusetts.....	1919	493	116,992,912	102,389,856	39,610,259	5,517,399	45,251,383	12,010,815	5,620,573	2,364,668	3,255,905	8,982,483
	1914	404	115,224,383	98,000,176	44,750,716	8,318,252	32,295,781	12,644,427	11,799,532	3,061,796	8,737,736	5,415,675
	1909	469	118,009,026	102,826,648	45,155,939	9,019,124	36,778,432	11,873,153	10,155,324	3,369,808	6,785,516	5,027,954
New York.....	1910	340	62,773,081	42,740,908	14,200,008	6,571,423	14,272,275	7,631,207	957,024	263,408	692,616	19,075,059
	1914	235	38,798,158	29,108,742	9,923,483	2,500,175	12,021,725	4,573,354	1,301,509	108,531	1,192,978	8,387,907
	1909	219	28,538,451	20,105,346	3,863,855	745,527	10,141,133	5,364,631	2,518,469	701,356	1,317,113	5,914,036
Missouri.....	1919	54	28,362,397	25,457,052	8,309,403	2,294,733	10,256,064	4,506,852	(4)	(4)	(4)	(4)
	1914	49	20,808,352	20,444,240	8,840,878	748,018	6,758,611	4,096,733	102,422	27,551	588,678	(4)
	1909	52	25,931,107	24,657,160	8,303,028	2,087,258	8,642,965	4,623,900	616,229	.....	.....	.....
Pennsylvania.....	1910	128	23,817,362	17,900,498	2,117,080	1,192,017	3,869,766	10,730,035	817,240	128,000	689,240	4,890,624
	1914	131	22,184,502	17,717,591	1,007,809	1,230,664	3,672,662	11,116,356	312,334	(4)	(4)	4,154,577
	1909	124	17,588,474	11,031,320	942,959	1,105,348	3,288,815	6,297,207	1,165,117	127,944	1,037,173	4,792,028
New Hampshire.....	1919	52	22,700,894	21,873,826	10,586,597	3,651,085	4,491,754	3,143,790	(4)	(4)	352,498	(4)
	1914	55	24,659,886	22,708,540	11,048,926	4,010,136	3,773,648	3,875,830	1,674,374	150,872	1,514,502	276,966
	1909	52	25,534,114	25,060,572	11,698,985	4,176,479	4,587,874	4,606,234	282,124	.....	282,124	182,418
Maine.....	1919	39	19,175,387	10,444,825	3,310,890	1,235,043	5,343,009	546,883	(4)	(4)	(4)	8,680,943
	1914	50	15,709,277	12,704,966	4,476,245	572,930	4,256,166	3,399,575	(4)	(4)	667,239	(4)
	1909	47	9,275,102	9,066,454	4,786,134	665,270	2,886,923	728,127	(4)	(4)	.....	.....
Ohio.....	1910	60	17,870,148	17,571,593	898,507	1,804,690	12,157,284	2,711,103	.....	.....	.....	288,555
	1914	62	17,973,441	17,161,199	1,419,925	1,734,057	10,986,825	3,039,492	662,456	(4)	(4)	149,788
	1909	63	18,908,915	17,693,316	1,702,194	1,372,330	11,154,083	3,404,709	1,147,239	180,507	966,732	68,360
Wisconsin.....	1919	62	11,142,456	10,490,408	8,340,008	1,804,948	1,578,289	677,163	(4)	(4)	(4)	600,782
	1914	61	8,382,882	8,017,963	5,000,827	865,138	1,326,525	815,473	135,989	21,515	114,484	228,920
	1909	59	7,290,620	6,777,363	4,055,496	652,109	1,442,341	627,417	204,872	39,018	165,854	314,394
Illinois.....	1919	51	10,638,609	9,241,420	3,576,329	(4)	3,013,743	2,651,348	(4)	(4)	(4)	469,156
	1914	47	8,202,059	7,370,553	3,934,629	1,058,239	1,625,866	751,819	246,835	49,140	197,895	675,271
	1909	46	8,205,895	6,893,731	4,018,016	1,270,520	1,034,470	570,725	274,687	112,900	161,797	1,127,377
New Jersey.....	1910	34	4,280,060	2,678,474	580,137	(4)	436,200	1,662,137	(4)	(4)	(4)	(4)
	1914	42	6,112,074	3,738,459	596,830	4,438	611,980	2,525,211	196,842	17,882	178,960	2,177,673
	1909	40	6,164,954	4,943,451	602,075	137,012	755,486	3,448,278	663,476	125,181	538,295	548,027
All other states.....	1919	136	15,670,922	14,073,546	5,322,453	2,341,485	4,142,738	2,266,870	1,009,484	474,010	273,976	4,852,209
	1914	150	14,459,954	13,184,062	5,340,771	1,702,722	3,590,450	1,484,119	1,301,386	248,236	1,463,123	5,300,507
	1909	172	19,463,704	17,978,827	7,770,211	2,607,049	5,886,792	1,715,775	480,287	118,576	361,711	1,890,956

<sup>1</sup> For total number of boots and shoes or slippers, see Table 36. The kinds not reported by class are here included with "All other footwear."

<sup>2</sup> Includes athletic and sporting, canvas or other textile fabric, and fiber shoes; infants' shoes and slippers; felt or other fiber slippers; sandals; and moccasins. See Table 36 for details.

<sup>3</sup> Includes fiber shoes, felt or other fiber slippers, and infants' shoes and slippers. See Table 36 for details.

<sup>4</sup> Included in "All other states" to avoid disclosure of individual operations.

**Infants' shoes and slippers.**—The statistics for infants' shoes and slippers are shown in Table 38 for the 12 leading states for 1919, 1914, and 1909.

TABLE 38.—INFANTS' SHOES AND SLIPPERS: 1919, 1914, AND 1909.

STATE.	1919			1914			1909		
	Rank	Number of pairs.	Rank						
United States.....	16	16,688,912	15	15,476,703	15	15,000,721	14	14,998,912	14
New York.....	1	5,668,510	1	4,306,631	2	3,797,675	1	3,398,631	1
Pennsylvania.....	2	4,324,869	2	4,117,042	1	4,563,505	2	3,868,869	2
Massachusetts.....	3	2,559,373	3	3,100,511	3	3,610,576	3	3,100,511	3
New Jersey.....	4	1,388,478	4	2,093,634	6	312,398	4	2,093,634	4
Missouri.....	5	801,417	6	318,002	5	657,308	5	657,308	5
Maine.....	6	705,157	5	(1)	4	1,002,277	6	(1)	4
Illinois.....	7	330,980	5	549,180	4	1,002,277	7	(1)	4
Ohio.....	8	234,864	10	149,786	8	(1)	9	(1)	8
Indiana.....	9	168,000	10	(1)	10	(1)	9	(1)	9
Michigan.....	10	132,037	8	213,900	5	(1)	145,310	11	145,310
Wisconsin.....	11	58,968	9	170,332	8	145,310	12	145,310	12
New Hampshire.....	12	2,772	7	270,086	7	182,418	13	182,418	13
All other states.....	238,484	....	175,830	....	729,185	....	.....	.....	.....

<sup>1</sup> Included in "All other states."

**Miscellaneous kinds of footwear.**—Table 39 shows the production of felt or other fiber slippers, sandals,

moccasins, athletic and sporting shoes for 1919, by states.

TABLE 39.—MISCELLANEOUS CLASSES OF FOOTWEAR, BY STATES: 1919.

CLASS.	United States.	Massachusetts.	New York.	Pennsylvania.	Other states.
Felt or other fiber slippers:					
Number of establishments	51	15	28	.....	18
Quantity produced, number of pairs	18,320,725	3,409,318	9,064,315	.....	847,092
Value of product	\$15,240,245	\$3,477,752	\$10,804,258	.....	\$958,235
Sandals:					
Number of establishments	27	5	15	4	3
Quantity produced, number of pairs	5,125,962	327,820	3,383,733	429,842	984,567
Value of product	\$5,128,462	\$533,425	\$3,340,225	\$431,862	\$822,950
Moccasins:					
Number of establishments	20	7	9	.....	4
Quantity produced, number of pairs	1,021,748	335,729	629,187	.....	56,832
Value of product	\$1,177,157	\$360,576	\$605,495	.....	\$211,086
Athletic and sporting shoes:					
Number of establishments	14	4	.....	.....	10
Quantity produced, number of pairs	585,710	83,992	.....	.....	501,718
Value of product	\$2,033,402	\$278,129	.....	.....	\$1,805,273

<sup>1</sup> Includes establishments in Illinois, Iowa, Minnesota, New Jersey, and Wisconsin.

<sup>2</sup> Includes establishments in Connecticut, Minnesota, and Wisconsin.

<sup>3</sup> Includes establishments in Maine, Illinois, and Pennsylvania.

<sup>4</sup> Includes establishments in California, Illinois, Michigan, Minnesota, New York, Pennsylvania, and Wisconsin.

## MANUFACTURES.

**Method of manufacture.**—Table 40 groups the various classes of products by method of manufacture—"Welted," "Turned," "McKay," etc.

The "Stitchdown" type was first reported at the census of 1919. This was used for footwear of all classes but value was not reported for each class. Of the total number of the "Stitchdown" class 76.9 per cent were for misses and children, and sandals largely for children's wear.

The "Welted" class constituted 32.3 per cent of the total production in 1909, 36.5 per cent in 1914, and 38 per cent in 1919. The "Wood or metal fastened" type is the only group showing a decrease. This decrease, compared with 1914, was 48 per cent, and there was a decrease in the percentage of the total from 9.8 per cent in 1909 to 8.6 per cent in 1914 and to 4 per cent in 1919.

TABLE 40.—BOOTS AND SHOES, ETC., BY METHOD OF MANUFACTURE: 1919 AND 1914.

CLASS.	Census year.	Total.	NUMBER OF PAIRS.				
			Welted.	Turned.	McKay.	Wood or metal fastened.	Stitchdown.
Total.....	1919	331,224,628	125,722,127	61,748,202	120,050,877	13,143,915	10,553,507
	1914	292,666,468	106,714,700	55,378,961	105,309,744	26,203,083	(1)
Boots and shoes.....	1919	286,502,960	124,022,554	38,583,581	104,314,881	13,143,915	6,523,029
	1914	252,516,003	104,466,823	29,000,882	93,448,378	24,091,520	
Men's.....	1919	95,017,356	70,951,187	43,997	13,997,182	9,336,042	638,948
	1914	98,031,144	63,975,703	582,802	14,951,419	18,521,180	
Boys' and youths'.....	1919	26,503,482	8,354,305	(2)	14,574,282	3,209,346	365,499
	1914	22,895,719	4,229,480	41,210	13,451,250	5,173,760	
Women's.....	1919	104,812,505	35,406,913	21,547,923	40,607,780	270,860	888,995
	1914	80,916,239	28,319,295	15,060,037	36,738,405	792,442	
Misses' and children's.....	1919	48,538,203	7,984,950	14,621,897	21,314,657	182,116	4,434,583
	1914	48,322,395	7,803,807	11,837,713	28,178,753	502,122	
Fiber.....	1919	70,391	(8)	21,146	4,58,245	2,036	
	1914	2,351,106	138,468	2,082,120	128,482		
Athletic and sporting.....	1919	585,710	104,588	87,879	162,467	140,776	
Canvas and other textile fabrics .....	1919	11,050,363	1,040,581	2,260,739	7,600,208	4,775	150,000
Slippers.....	1919	21,815,046	745,613	8,154,488	6,12,089,945	(3)	225,000
	1914	24,673,102	1,333,802	12,642,955	10,550,342	195,913	
Men's, boys', and youths'.....	1919	3,230,088	230,558	1,434,413	1,422,115	(8)	128,000
	1914	3,660,972	290,078	1,503,428	1,753,623	53,843	
Women's, misses', and children's.....	1919	5,204,235	426,255	2,605,118	2,130,802		102,000
	1914	14,066,717	1,066,209	7,528,903	5,468,505	8,100	
Felt or other fiber.....	1919	13,320,725	88,800	4,114,957	9,116,968		
	1914	6,039,413	21,575	3,455,624	3,328,214	134,000	
Infants' shoes and slippers.....	1919	10,668,912	220,380	14,068,685	2,257,120		122,727
	1914	15,476,703	864,015	13,226,124	1,811,024	75,600	
Sandals .....	1919	5,125,062	540,000	388,715	513,400		3,677,751
Moccasins .....	1919	1,021,748	187,580	552,733	281,435		

<sup>1</sup> Not reported in 1914.<sup>2</sup> Includes "Turned" to avoid disclosure of individual operations.<sup>3</sup> Included in other classifications to avoid disclosure of individual operations.

**Method of manufacture, by states.**—The information given in Table 40, by classes, is shown in Table 41, for the most important states for 1919 and 1914. The "McKay" type in New York increased from 18.9 per cent of the state total in 1914 to 44.9 per cent in 1919; and in New Hampshire the proportion decreased

<sup>4</sup> Includes "Welted" to avoid disclosure of individual operations.<sup>5</sup> Not shown separately in 1914.<sup>6</sup> Includes "Wood or metal fastened" to avoid disclosure of individual operations.

from 55.8 per cent to 40.3 per cent. Maine and Wisconsin were the only States reporting "Wood and metal fastened" shoes which reported more than a negligible increase in number. The increase for Maine amounted to 129 per cent and for Wisconsin to 40 per cent.

## BOOTS AND SHOES.

29

TABLE 41.—PRODUCTION, BY METHOD OF MANUFACTURE, BY STATES: 1919 AND 1914.

CLASS.	Census year.	NUMBER OF PAIRS.					
		Total.	Welted.	Turned.	McKay.	Wood or metal fastened.	Stitchdown.
United States.....	1919	331,224,628	125,722,127	61,748,202	120,056,877	13,143,015	10,553,507
	1914	292,066,468	106,714,700	55,378,961	105,309,744	25,263,063	(1)
Massachusetts.....	1919	116,992,912	52,279,203	24,244,356	35,255,696	4,384,333	829,284
	1914	113,224,383	48,245,603	21,084,585	38,009,118	7,884,577	(1)
New York.....	1919	62,773,081	14,694,222	14,612,979	28,158,761	36,834	5,270,285
	1914	38,798,158	12,531,082	10,996,094	7,315,343	7,955,059	(1)
Missouri.....	1919	20,362,397	10,352,661	1,980,861	10,588,512	2,130,249	1,310,114
	1914	20,368,352	7,779,541	930,719	9,423,161	2,734,031	(1)
Pennsylvania.....	1910	23,617,362	7,165,740	10,523,847	4,898,129	259,162	770,484
	1914	22,184,502	4,943,311	11,107,454	5,605,405	528,332	(1)
New Hampshire.....	1919	22,700,694	10,494,583	1,015,310	9,153,088	2,022,549	15,164
	1914	21,659,886	8,767,503	(2)	13,750,567	(2)	(1)
Maine.....	1919	10,175,387	5,971,546	2,144,105	10,520,261	539,385	.....
	1914	15,709,277	5,925,381	3,330,532	6,217,774	235,500	.....
Ohio.....	1910	17,870,118	5,295,248	1,710,702	10,845,138	19,000	.....
	1914	17,973,411	6,075,020	(2)	10,384,742	(2)	.....
Wisconsin.....	1919	11,142,456	5,982,448	681,278	1,688,267	2,591,757	198,706
	1914	8,382,882	2,500,424	727,324	3,304,325	1,850,809	(1)
Illinois.....	1919	10,638,009	5,025,338	1,064,411	4,321,509	227,351	.....
	1914	8,292,650	3,988,692	(2)	3,780,123	(2)	.....
New Jersey.....	1919	4,280,660	986,693	2,389,809	902,068	2,000	.....
	1914	6,112,074	1,074,736	3,195,465	1,542,773	.....	.....
All other states.....	1919	15,070,922	7,474,355	1,380,304	3,725,448	931,295	2,159,520
	1914	14,459,954	4,882,216	859,407	5,976,413	2,740,828	.....

<sup>1</sup> Not reported.<sup>2</sup> Figures not shown separately in 1914.

**Stitchdown footwear.**—Table 42 gives in detail the number of pairs of "Stitchdown," by kinds and by states.

TABLE 42.—STITCHDOWN FOOTWEAR: 1919.

CLASS AND STATE.	Number of pairs.	CLASS AND STATE.	Number of pairs.
Total.....	10,553,507	Boots and shoes—Con. Misses—Continued.	
Connecticut.....	707,500	New York.....	113,945
Kentucky.....	52,267	Pennsylvania.....	112,536
Maryland.....	1,339,753	Wisconsin.....	50,314
Massachusetts.....	829,234	Children's—	
Missouri.....	1,310,114	Kentucky.....	26,137
New Hampshire.....	15,164	Maryland.....	278,350
New York.....	5,270,285	Massachusetts.....	391,897
Pennsylvania.....	770,484	Missouri.....	352,558
Wisconsin.....	198,706	New Hampshire.....	11,420
Boots and shoes:		New York.....	1,993,958
Men's—		Pennsylvania.....	225,060
Maryland.....	285,351	Wisconsin.....	107,304
Missouri.....	90,641	Canvas and other textile fabrics—	
New York.....	307,000	New York.....	150,000
Pennsylvania.....	25,056	Slippers:	
Boys' and youths'—		Men's—	
Maryland.....	265,350	Massachusetts.....	76,000
Missouri.....	63,547	New York.....	47,000
New York.....	36,802	Women's and chil- dren's—	
Women's—		New York.....	102,000
Kentucky.....	5,226	Sandals:	
Maryland.....	265,351	Connecticut.....	767,500
Missouri.....	443,239	Massachusetts.....	149,544
New York.....	161,605	New York.....	2,353,775
Wisconsin.....	13,078	Pennsylvania.....	406,932
Misses—		Infants' shoes and slippers:	
Kentucky.....	20,904	Massachusetts.....	8,541
Maryland.....	265,351	Missouri.....	91,276
Massachusetts.....	203,262	New York.....	4,500
Missouri.....	208,853	Wisconsin.....	18,410
New Hampshire.....	3,744		

**Shoes of canvas and other textile fabrics.**—Shoes of canvas and other textile fabrics were first reported separately in 1919, and the number formed 3.3 per cent of the total for all kinds and classes. Table 43 shows this class of products distributed by method of manufacture and by states.

TABLE 43.—SHOES OF CANVAS AND OTHER TEXTILE FABRICS: 1919.

STATE.	Number of establish- ments.	QUANTITY PRODUCED (NUMBER OF PAIRS).				Value.
		Total.	Welted.	McKay.	Turned.	
United States.....	54	11,056,363	1,190,581	7,000,268	2,260,739	\$16,068,425
Maine.....	4	7,945,154	851,213	6,848,433	245,508	10,038,571
Massachusetts.....	23	2,268,251	62,215	1,425,524	1,778,512	4,384,145
New Hampshire.....	5	311,793	194,930	116,803	650,648	.....
New York.....	9	266,162	228,393	.....	37,769	447,452
Pennsylvania.....	4	80,147	.....	.....	80,147	474,996
All other states <sup>1</sup> .....	9	1,186,856	48,760	131,321	2,000	266,613

<sup>1</sup> The total includes 4,775 pairs "Wood or metal fastened" not shown in the detail.<sup>2</sup> Includes "Stitchdown."<sup>3</sup> Includes Alabama, Minnesota, Missouri, New Jersey, Ohio, and Wisconsin.

## MANUFACTURES.

## GENERAL TABLES.

Comparative summary, by states.—Table 44 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.

Detailed statement, by states.—Table 45 presents, by states, for 1919 the detailed statistics for the industry.

TABLE 44.—COMPARATIVE SUMMARY, BY STATES, 1919, 1914, AND 1909.

STATE.	Cen-sus year.	Num-ber of estab-lishments.	Wage earners (aver-age num-ber).	Primary horse-power.	Wages.	Cost of mate-rials.	Value of products.	STATE.	Cen-sus year.	Num-ber of estab-lishments.	Wage earners (aver-age num-ber).	Primary horse-power.	Wages.	Cost of mate-rials.	Value of products.
United States...	1919	1,449	211,049	120,032	\$210,735	\$715,269	\$1,155,041	Minnesota.....	1919	16	2,153	1,738	\$1,917	\$7,743	\$12,645
	1914	1,355	101,555	100,232	105,605	310,357	501,760		1914	14	2,012	1,159	1,121	3,980	5,918
	1909	1,343	185,116	85,806	92,359	277,408	442,681		1909	18	2,064	1,411	1,290	4,935	7,508
California.....	1910	14	616	381	542	1,960	3,247	Missouri.....	1910	54	17,458	11,221	13,787	76,926	109,103
	1914	16	617	475	306	1,253	1,801		1914	49	13,169	8,911	6,113	25,046	40,211
	1909	18	605	369	402	1,120	1,024		1909	52	16,336	10,421	7,676	28,943	42,534
Connecticut.....	1910	8	995	288	824	2,170	3,765	New Hampshire.....	1910	52	12,336	7,077	11,173	51,056	73,871
	1914	9	507	227	252	1,338	1,957		1914	55	12,637	6,714	6,676	26,305	37,664
Illinois.....	1910	51	7,684	5,164	5,903	25,218	39,402		1909	52	13,042	7,744	6,418	23,937	34,027
	1914	47	6,071	3,286	3,185	10,983	16,892	New Jersey.....	1910	34	2,835	2,057	2,450	7,811	12,864
	1909	46	5,588	2,023	2,980	9,495	15,111		1914	42	3,534	1,814	1,935	4,767	8,239
Indiana.....	1910	5	620	426	464	1,005	2,854		1909	40	4,084	1,344	1,583	4,352	7,504
	1914	6	300	423	184	1,776	1,278	New York.....	1910	340	34,710	22,764	39,643	108,104	190,476
Iowa.....	1910	6	653	779	449	2,270	3,047		1914	235	26,193	14,458	15,195	40,188	67,239
	1914	9	389	427	244	501	845		1909	210	30,546	9,374	10,202	26,274	44,425
	1909	10	716	345	318	1,050	1,633	Ohio.....	1910	60	14,092	9,137	12,545	40,802	71,355
Kentucky.....	1910	7	630	403	357	2,090	3,574		1914	62	14,461	9,813	7,030	19,248	32,774
	1914	9	440	428	180	1,672	2,564		1909	63	15,693	8,800	6,532	18,148	39,529
	1909	10	410	282	107	2,439	3,235	Pennsylvania.....	1910	128	13,317	6,620	10,961	40,972	65,412
Louisiana.....	1910	4	300	167	107	733	1,136		1914	131	13,184	6,271	6,110	16,524	27,845
	1914	7	261	166	120	367	534		1909	124	10,576	4,218	4,181	11,455	19,402
Maine.....	1910	39	9,919	5,365	9,227	30,220	48,059	Texas.....	1910	11	88	56	93	140	301
	1914	50	8,815	4,269	4,948	14,743	22,836		1914	7	54	32	28	56	121
	1909	47	6,508	3,330	3,182	9,778	15,158		1910	9	146	175	153	445	865
Maryland.....	1910	13	986	582	794	3,107	4,662	Washington.....	1910	11	178	194	112	500	707
	1914	7	595	242	278	824	1,447		1914	11	170	148	88	460	599
	1909	11	589	250	237	901	1,412 <th data-kind="parent" data-rs="3">Wisconsin.....</th> <th>1910</th> <td>62</td> <td>7,598</td> <td>4,653</td> <td>6,032</td> <td>27,708</td> <td>44,374</td>	Wisconsin.....	1910	62	7,598	4,653	6,032	27,708	44,374
Massachusetts.....	1910	493	80,166	37,045	89,490	209,351	442,406	1914	61	5,772	3,888	2,095	11,989	17,643	
	1914	464	76,944	32,870	46,744	120,326	200,530	1909	59	5,081	2,665	2,131	8,494	13,114	
	1909	460	74,710	28,742	41,970	114,277	187,046 <th>All other states.....</th> <th>1910</th> <td>28</td> <td>2,027</td> <td>2,305</td> <td>2,204</td> <td>10,264</td> <td>15,386</td>	All other states.....	1910	28	2,027	2,305	2,204	10,264	15,386
Michigan.....	1910	15	1,120	660	921	4,184	6,040		1914	40	2,687	2,469	1,208	4,830	7,118
	1914	24	2,035	1,506	932	3,181	5,387		1909	73	5,245	3,000	1,818	8,064	12,134
	1909	23	2,465	786	936	3,347	5,256 <th data-kind="ghost"></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>								

## BOOTS AND SHOES.

31

TABLE 45.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY.						WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.					
		Total.	Salaried officers, superintendents, and firm members,		Clerks, etc.		Wage earners.		Total.	16 and over.		Under 16.		Capital.	Salaries and wages.				
			Male.	Female.	Male.	Female.	Average number.	Number, 15th day of—		Male.	Female.	Male.	Female.		Officials.	Clerks, etc.			
United States	1,449	237,107	883	7,617	8,404	9,064	211,049	De 228,412	Ap 109,025	230,457	138,497	84,641	4,434	2,885	580,025,075	Dollars.	Dollars.		
California	14	698	7	24	29	22	616	De 707	Ja 536	707	437	267	3	-----	1,776,427	105,253	83,307		
Connecticut	8	1,130	5	41	37	52	995	Se 1,110	Ja 793	1,581	573	573	418	17	1,878,655	120,381	98,607		
Illinois	51	8,903	22	207	643	347	7,684	De 8,737	Ap 5,609	8,746	4,686	3,793	143	124	21,466,979	854,821	1,095,603		
Indiana	5	802	1	36	97	48	620	Fe 743	Je 378	657	325	268	26	38	2,276,434	95,236	204,922		
Iowa	6	740	2	26	38	21	653	Je 701	No 610	658	312	332	10	4	1,752,067	62,249	95,074		
Kentucky	7	732	12	44	31	15	630	De 842	Ja 449	836	383	427	6	20	2,693,936	106,163	190,951		
Louisiana	4	346	7	12	17	10	300	De 310	Ja 287	302	194	84	17	7	774,290	31,974	32,963		
Maine	30	10,965	14	344	209	470	9,919	De 11,895	My 8,520	11,954	7,361	4,519	44	30	23,752,877	1,060,784	957,220		
Maryland	13	1,104	6	54	33	25	986	De 1,121	Ja 863	1,116	662	309	37	18	3,588,139	190,007	74,961		
Massachusetts	493	80,498	316	2,023	2,203	3,882	80,166	De 80,704	Ap 77,018	87,368	52,397	31,485	1,971	1,515	202,662,610	10,832,017	9,705,061		
Michigan	15	1,314	6	60	78	50	1,120	De 1,192	Ja 1,061	1,193	663	503	18	9	2,871,813	155,988	280,588		
Minnesota	16	2,614	4	86	233	108	2,153	No 2,340	Ja 2,026	2,314	1,322	983	8	1	10,617,683	361,479	692,048		
Missouri	54	20,811	2	472	1,851	828	17,458	De 18,437	Fe 16,290	18,504	10,427	7,854	110	104	53,836,904	1,353,831	4,634,690		
New Hampshire	52	13,384	26	444	197	381	12,336	De 13,849	My 11,300	13,739	60	173	98	90	20,395,880	1,406,555	770,697		
New Jersey	34	3,185	20	132	95	88	2,835	De 3,017	Ja 2,675	3,082	1,792	1,185	42	42	7,120,065	419,265	353,542		
New York	340	38,549	253	1,224	1,022	1,340	34,710	De 36,804	Mh 30,758	37,410	25,693	11,279	294	150	105,105,223	4,960,900	4,038,255		
Ohio	60	15,753	13	428	620	600	14,092	De 14,063	Ap 13,473	14,923	8,718	6,088	92	25	40,178,581	1,682,426	3,208,303		
Pennsylvania	128	14,730	115	571	374	353	13,317	De 13,871	Ja 12,506	14,050	7,912	5,287	505	375	36,631,318	1,812,607	1,230,028		
Texas	11	112	12	9	1	2	88	Oc 1	95	Ja 1	82	96	90	5	1	227,309	15,755	2,520	
Washington	9	189	4	22	11	6	146	Oc 1	150	Ja 1	140	164	113	46	4	2	727,570	53,845	24,166
Wisconsin	62	8,827	10	303	530	377	7,598	No 8,146	Mh 7,105	8,194	4,405	3,076	485	278	20,082,612	963,009	1,874,044		
All other states	28	2,890	18	95	115	35	2,627	-----	-----	2,868	1,724	1,035	73	36	7,236,493	301,180	265,242		

**EXPENSES—continued.**

EXPENSES—continued.							POWER.								
Salaries and wages—Con.	Rent and taxes.			For materials.		Value of products.	Primary horsepower.				Electric horse-power generated in established equipments reporting.				
	Wage earners.	For contract work.	Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.		Total.	Owned.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.				
Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Rented. <sup>4</sup>			
United States.	210,734,610	1,030,544	3,023,816	22,130,773	709,361,356	5,917,959	1,155,041,436	439,772,121	120,632	46,655	10,612	908	2,021	60,436	28,102
California.	542,010	400	15,311	128,571	1,958,366	10,904	3,247,177	1,277,817	381	115	—	—	—	266	—
Connecticut.	824,152	—	10,804	84,388	2,169,585	9,832	8,764,778	1,685,371	288	40	—	—	—	248	—
Illinois.	5,902,500	63,169	160,695	615,908	24,610,055	608,204	39,402,883	14,184,064	5,164	8,380	—	—	—	1,804	2,107
Indiana.	464,332	—	240	15,814	1,890,580	14,743	2,853,559	948,227	420	35	—	—	—	391	—
Iowa.	449,358	3,126	0,000	6,552	2,254,199	15,678	3,047,187	777,315	779	275	—	—	—	504	—
Kentucky.	356,716	121,901	3,402	206,163	2,089,662	9,090	3,574,371	1,475,010	463	70	—	—	—	393	40
Louisiana.	197,320	—	4,182	8,375	723,551	8,922	1,186,027	403,264	167	—	—	—	—	167	—
Maine.	9,226,804	101,486	36,772	1,079,809	30,004,881	215,070	48,059,388	17,839,487	5,365	801	—	—	—	40	4,524
Maryland.	793,700	2,988	24,349	103,422	3,085,084	21,949	4,602,351	1,555,318	582	70	12	—	—	500	70
Massachusetts.	89,489,715	840,033	1,209,829	8,025,857	267,787,050	1,563,845	442,468,236	173,115,341	37,945	13,389	2,070	20	40	22,426	1,814
Michigan.	920,703	—	19,485	70,978	4,153,194	30,787	6,046,810	1,892,329	660	132	—	—	—	523	70
Minnesota.	1,917,240	5,808	35,856	248,488	7,683,058	60,045	12,644,659	4,901,556	1,738	—	—	—	—	1,738	—
Missouri.	13,788,880	1,040	42,157	2,201,000	75,406,748	1,459,069	109,193,423	32,267,606	11,221	6,765	—	—	—	4,456	3,177
New Hampshire.	11,178,077	5,448	71,425	0,931,584	50,708,089	259,431	73,870,579	22,815,088	7,677	3,425	383	15	490	3,364	1,437
New Jersey.	2,459,177	30,457	30,801	175,837	7,733,971	77,020	12,864,068	5,053,077	2,057	1,389	—	—	—	594	409
New York.	30,642,597	447,722	787,504	3,657,197	107,414,042	749,885	190,475,039	82,312,032	22,764	4,845	8,000	296	1,360	8,263	10,755
Ohio.	12,545,100	92,931	130,409	1,772,248	40,521,016	281,465	71,354,350	30,552,368	9,137	4,188	155	343	—	4,451	2,288
Pennsylvania.	10,980,861	197,412	214,409	1,220,327	40,783,156	233,797	65,411,673	24,489,720	6,629	4,156	80	—	—	2,393	1,509
Texas.	93,084	—	5,220	51,904	146,806	2,424	360,927	211,897	56	—	—	—	—	56	—
Washington.	153,008	—	3,080	20,330	424,847	19,712	846,077	401,518	175	—	—	—	—	175	—
Wisconsin.	6,632,062	—	90,448	1,276,678	27,498,934	205,588	44,373,938	16,671,436	4,653	2,350	—	29	11	2,263	1,607
All other states. <sup>2</sup>	2,204,179	1,793	27,108	220,195	10,201,444	61,791	15,385,527	5,122,292	2,305	1,250	4	39	80	932	2,822

<sup>1</sup> Same number reported for one or more other months.

All other states embrace: Alabama, 1 establishment; Georgia, 3; Kansas, 3; Nebraska, 2; North Carolina, 2; Oklahoma, 2; Oregon, 2; Rhode Island, 1; Tennessee, 1; Utah, 1; Vermont, 1.

<sup>1</sup>Includes water wheels and turbines. <sup>2</sup>Excludes electric power companies.

Includes water wheels and turbines (irrespective of ownership of water supply), and water motors; includes electric motors operated by current supplied by power plants owned by others; includes electric motors operated by current supplied by power plants owned by others.

Electric motors operated by rented (or purchased) current; other power included (except as above)

# BOOT AND SHOE CUT STOCK.

## GENERAL STATISTICS.

**General character of the industry.**—The industry includes establishments engaged primarily in the manufacture of soles, top lifts, heels, tips, inner soles, etc., used in making boots, shoes, slippers, and similar footwear. In 1919 there were 252 establishments engaged in the industry, which reported products valued at \$161,203,310. In addition, there were 7 establishments engaged primarily in the manufacture of other products which made cut stock and findings to the value of \$2,159,572.

**Comparative summary.**—Table 46 presents the principal statistics for the industry for each census period from 1879 to 1919. The very large increases in the financial items in 1919 as compared with 1914 are largely due to the general rise in prices, on account of war conditions. The increase in number of wage earners, an indication of the growth of the industry, amounted to 24.2 per cent.

**Wage earners, by months.**—Table 47 shows the number of wage earners employed month by month, and indicates the steadiness of employment, or the reverse. The number for the month of minimum employment in 1919 was 88.8 per cent of the number for the maximum month, as compared with 84.5 per cent in 1914. At the previous censuses the month of maximum employment was February, but in 1919 it was November. The numbers for the latter months of the year indicate an improvement of business conditions. In Massachusetts, the leading state in the industry, the fluctuation in employment during 1919 amounted to only 9.3 per cent. In this state 24.6 per cent of the wage earners engaged in this industry were women.

**Pervailing hours of labor.**—Table 48 shows the classification of wage earners according to the prevailing hours of labor per week in the establishment in which

they were employed. In 1909 and 1914 a majority of the wage earners, 67.2 per cent and 52.2 per cent respectively, were employed in establishments where the prevailing hours of labor were more than 54; in 1919 only 6.4 per cent were in this group. On the other hand, at the earlier periods, only 1.5 per cent and 1.4 per cent respectively of the total number of wage earners were in establishments where the hours were 48 or less per week, but in 1919, 65.4 per cent were employed in such establishments.

**Size of establishments by average number of wage earners.**—Table 49 shows a classification of establishments according to the average number of wage earners employed. The industry is one of relatively small units. Considering the industry as a whole, the establishments having no wage earners or fewer than 21 contributed 66.7 per cent of the total number of establishments and employed 11.9 per cent of the wage earners in 1919, compared with 70.8 per cent of the establishments and 15.8 per cent of the wage earners in 1914. Only 7.5 per cent of the establishments employed more than 100 wage earners in 1919 and 5.1 per cent in 1914, the number of wage earners in these groups constituting 56.9 per cent and 49.5 per cent of the total number, respectively. In Massachusetts, the leading state, the changes in the groups are toward larger units.

**Character of ownership.**—Table 50 shows that the industry is one in which the majority of the establishments are unincorporated. The corporations are, however, the larger and more important establishments, the value of products averaging \$1,293,000 per establishment as compared with less than \$500,000 per establishment for either of the other classes, and the wage earners per establishment averaging 79, compared with less than 20 for the other classes.

TABLE 46.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	252	236	232	290	342	344	172	6.8	1.7	-20.0	-15.2	-0.6	100.0
Persons engaged.....	11,512	9,309	7,535	6,715	6,921	(2)	(2)	23.7	23.5	12.2	-3.0	.....	.....
Proprietors and firm members.....	234	231	255	362	424	(2)	(2)	1.3	-0.4	-29.6	-14.6	.....	.....
Salaried employees.....	1,563	1,259	587	417	342	(2)	(2)	24.1	114.5	40.8	21.0	.....	.....
Wage earners (average number).....	9,715	7,819	6,033	5,986	6,155	4,902	2,885	24.2	10.8	12.8	-3.6	(8)	(4)
Primary horsepower.....	9,003	6,829	4,769	4,519	3,202	2,758	(2)	31.8	43.2	5.5	41.1	14.8	.....
Capital.....	\$61,747,458	\$30,455,245	\$15,735,034	\$9,850,007	\$7,003,080	\$5,401,834	\$1,210,300	102.7	93.6	50.7	40.7	29.6	346.3
Salaries and wages.....	12,453,004	5,564,083	3,799,752	2,706,596	2,533,580	2,323,271	735,482	123.8	46.4	35.9	10.4	9.1	215.9
Salaries.....	3,328,226	1,511,960	643,292	432,387	302,889	(2)	(2)	120.1	135.0	48.8	42.8	.....	.....
Wages.....	9,124,778	4,052,123	3,186,460	2,364,209	2,230,691	(2)	(2)	125.2	28.4	33.5	6.0	18.0	157.1
Paid for contract work.....	24,808	12,522	5,425	5,636	17,589	(2)	(2)	98.1	130.8	-3.7	-68.0	.....	.....
Rent and taxes.....	1,753,692	388,478	241,709	4,192,948	173,703	(2)	(2)	351.4	60.7	25.3	11.0	.....	.....
Cost of materials.....	133,887,276	51,450,498	36,019,919	21,580,872	17,800,282	13,744,655	5,939,249	160.2	39.4	71.0	21.3	29.5	131.4
Value of products.....	161,203,310	59,064,523	44,661,497	27,673,815	23,242,802	17,903,846	7,531,035	168.8	34.3	61.4	19.1	29.8	137.7
Value added by manufacture .....	27,316,034	8,514,025	7,741,578	6,088,943	5,442,610	4,159,191	1,592,380	220.8	10.0	27.1	11.9	30.9	161.2

<sup>1</sup> A minus sign (−) denotes decrease.

<sup>2</sup> Figures not available.

<sup>3</sup> Figures not strictly comparable.

<sup>4</sup> Exclusive of internal revenue.

<sup>5</sup> Value of products less cost of materials.

# BOOT AND SHOE CUT STOCK.

33

TABLE 47.—WAGE EARNERS, BY MONTHS: 1919.

[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 of maximum.
		January.	Febr.- uary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	
United States:														
1919.....	9,715	9,293	9,328	9,361	9,190	9,370	9,857	9,943	9,659	9,760	10,193	10,354	10,272	88.8
Males.....	7,098	6,684	6,782	6,778	6,667	6,896	7,304	7,304	7,024	7,243	7,488	7,506	7,500	88.8
Females.....	2,617	2,600	2,546	2,582	2,523	2,474	2,553	2,630	2,635	2,517	2,705	2,848	2,772	86.9
1914.....	7,819	8,392	8,434	8,409	8,095	7,670	7,581	7,605	7,710	7,899	7,651	7,125	7,557	84.5
1909.....	6,693	6,704	6,972	6,934	6,636	6,599	6,582	6,615	6,651	6,623	6,538	6,723	6,814	93.4
Massachusetts.....	4,031	4,420	4,532	4,527	4,439	4,491	4,503	4,783	4,678	4,744	4,871	4,733	4,761	90.7
Missouri.....	1,593	1,303	1,386	1,520	1,573	1,608	1,640	1,565	1,541	1,645	1,808	1,850	1,727	70.4

TABLE 48.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							Over 60.
		44 and under.	Between 44 and 48.	48. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	60.	
United States.....	1919.....	9,715	(2)	161	1,152	5,041	1,719	1,019	520
	1914.....	7,819	(2)	(2)	(2)	106	1,246	2,383	211
	1909.....	6,693	(2)	(2)	(2)	101	283	1,813	656
Massachusetts.....		4,031		130	1,152	1,934	1,142	226	47
Missouri.....		1,593		.....	1,465	96	32	.....	.....

<sup>1</sup> Includes 48 and under for 1914 and 1909.

<sup>2</sup> Corresponding figures not available.

TABLE 49.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919 AND 1914.

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.	Over 500 wage earners.		
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.
United States.....	1919.....	252	9,715	11	73	208	84	949	42	1,302	23	1,666
	1914.....	236	7,819	8	71	211	88	1,027	37	1,211	20	1,496
Massachusetts.....		182	4,031	4	55	160	67	730	32	1,014	14	1,014
Missouri.....		7	1,593	.....	1	3	.....	2	68	2	154	.....

TABLE 50.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Cen-sus year.	Number of estab-lishments.	Average number of wage earners.	Value of products.	Value added by manu-fac-ture.	CHARACTER OF OWNERSHIP.	Cen-sus year.	Number of estab-lishments.	Average number of wage earners.	Value of products.	Value added by manu-fac-ture.
All classes.....	1919	252	9,715	\$161,203,310	\$27,316,034	Per cent distribution:					
	1914	236	7,819	59,964,523	8,514,025	Individual.....	1919	38.9	11.5	7.8	11.3
Individual.....	1919	98	1,113	12,314,937	3,074,040		1914	48.3	16.4	12.0	17.9
	1914	114	1,283	7,174,374	1,527,538	Corporation.....	1919	37.7	77.2	76.2	72.2
Corporation.....	1919	95	7,504	122,706,117	19,716,473		1914	28.0	68.6	64.5	60.0
	1914	66	5,362	38,685,147	5,110,849	All other.....	1919	23.4	11.3	16.2	16.6
All other.....	1919	59	1,098	20,092,256	4,525,521		1914	23.7	15.0	23.5	22.0
	1914	56	1,174	14,105,002	1,875,638						

## MANUFACTURES.

## GENERAL TABLE.

Detailed statement, by states.—Table 51 presents the detailed statistics for the industry, by states for 1919.

TABLE 51.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establish- ments.	PERSONS ENGAGED IN THE INDUSTRY.						WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.		
		Total.	Propri- tors and firm mem- bers.	Sala- ried offi- cers, super- in- tendents, and man- agers.	Clerks, etc.	Wage earners.				Total.	16 and over.		Under 16.		Capital.	
						Male.	Female.	Aver- age num- ber.	Number, 15th day of—		Male.	Female.	Male.	Female.		
United States.....	252	11,512	234	536	385	642	9,715	No 10,354	Ap 9,100	10,285	7,337	2,696	183	69	\$61,747,458	\$2,117,633 \$1,210,593
Massachusetts.....	182	5,331	183	220	141	147	4,631	Oc 4,871	Ja 4,420	4,782	3,488	1,095	151	48	31,739,180	1,101,345 489,408
Missouri.....	7	1,898	3	84	48	170	1,593	No 1,850	Ja 1,303	1,727	1,248	403	13	3	12,582,161	195,967 193,106
New York.....	18	445	17	21	10	10	378	Do 397	My 360	405	250	144	... 2	1,721,884	96,875 47,519	
Ohio.....	7	310	3	22	11	6	268	No 298	Ja <sup>1</sup> 243	289	196	93	... 2	813,262	52,701 15,540	
Pennsylvania.....	11	433	10	17	29	10	367	No 410	Jy 332	376	204	64	8	10	3,468,755	90,757 68,881
All other states <sup>2</sup> .....	27	3,095	18	163	137	299	2,478	.....	.....	2,706	1,852	837	11	6	11,422,210	579,898 396,040
EXPENSES—continued.																
STATE.	Salaries and wages— Continued.	For contract work.	Rent and taxes.			For materials.		Value of products.	Value added by manufacture.	POWER.						
			Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	.....			Total.	Steam engines (not tur- bines).	Inter- nal- com- bus- tion en- gines.	Water pow- er. <sup>3</sup>	Rent- ed. <sup>4</sup>	Electric horse- power gen- erated in estab- lish- ment; report- ing.	
United States.....	\$9,124,778	\$24,808	\$369,545	\$1,384,147	\$133,270,830	\$616,446	\$161,203,310	\$27,316,034	9,003	1,765	43	2	7,193	521		
Massachusetts.....	4,452,302	24,808	275,696	798,413	60,295,897	186,069	\$8,214,106	16,732,140	3,836	915	20	.....	2,901	114		
Missouri.....	1,565,344	.....	11,040	109,676	26,181,553	294,230	28,606,415	2,220,632	1,309	310	.....	.....	999	102		
New York.....	317,304	.....	21,204	20,200	2,434,032	11,955	3,288,113	841,526	330	75	.....	.....	255	.....		
Ohio.....	197,455	.....	6,984	21,509	1,092,014	18,896	1,015,003	504,093	326	18	5	.....	303	.....		
Pennsylvania.....	276,611	.....	7,063	202,446	8,510,765	18,808	11,073,502	2,534,039	495	300	2	193	45			
All other states <sup>2</sup> .....	2,815,672	.....	46,668	231,753	25,740,979	86,488	30,316,171	4,482,704	2,707	147	18	.....	2,542	200		

<sup>1</sup> Same number reported for one or more other months.<sup>2</sup> All other states embrace: Connecticut, 1 establishment; Illinois, 7; Kansas, 1; Maine, 2; Maryland, 1; Michigan, 2; Minnesota, 2; New Hampshire, 7; New Jersey, 2; Rhode Island, 1; and Virginia, 1.<sup>3</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).<sup>4</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

## BOOT AND SHOE FINDINGS.

### GENERAL STATISTICS.

**General character of the industry.**—Establishments classified in this industry are those engaged primarily in the manufacture of pegs, bows, clasps, tips, toe caps, buckles, rands, staples, backstays, shanks, heels, arch supporters, box toes, shoe tacks, and other findings for the boot and shoe trade. The establishments are exclusive of those which manufacture the same articles in connection with the manufacture of boots and shoes.

In addition to the 427 establishments in this industry in 1919, reporting products to the value of \$62,825,408, there were 16 establishments engaged primarily in the manufacture of other products which reported boot and shoe findings to the value of \$3,197,047.

**Comparative summary.**—Table 52 presents the principal statistics for the industry for each census year from 1879 to 1919. On account of the general increase in prices since 1914 the increases in the financial items can not be used to measure the progress of the industry. The increases in average number of wage earners employed and in power used show considerable growth.

**Wage earners, by months.**—The figures given in Table 53 show the steadiness of employment or the reverse during the year. There was slightly greater fluctuation in employment in 1919 than in 1914. In 1919 the number of wage earners for the month of minimum employment was 76.4 per cent of the number for the maximum month. The industry employs a fairly large number of female wage earners, 35.5 per cent of the wage earners being females.

**Size of establishments, by prevailing hours of labor per week.**—In Table 54 the average number of wage earners per week are classified according to the hours of labor prevailing in the establishments in which they were employed. At the censuses of 1909 and 1914, of the total number of wage earners, 70.1 per cent and 50.9 per cent, respectively, were in establishments where the working hours were over 54 per week, but

at the census of 1919 only 9.5 per cent of the total number worked these hours. In 1919, 59.5 per cent of the wage earners were in establishments where the prevailing hours were 48 or less, whereas the proportions were insignificant at the earlier censuses. In Massachusetts, which state employed 65.9 per cent of the wage earners in the industry, the largest group, or 44.4 per cent, of wage earners worked 48 hours and 68.2 per cent of the total for the state were in establishments where the prevailing hours were 48 or less.

**Size of establishments, by average number of wage earners.**—Table 55 classifies the establishments according to number of wage earners. Nearly three-fourths of the establishments in this industry either employed no wage earners or not more than 20. The average number of wage earners per establishment in 1914 was 18, and in 1919, 21. The proportion of establishments employing more than 50 wage earners increased slightly, from 8.4 per cent in 1914 to 9.8 per cent in 1919, and the wage earners in these groups formed 47.8 per cent of the total number in 1914 and 50.5 per cent in 1919. In Massachusetts, the leading state, nearly two-thirds of the establishments employed no wage earners or not more than 20.

**Character of ownership.**—Table 56 shows that the corporations represented about one-third of the establishments in this industry, but they reported more than one-half of the total value of products and of the total number of wage earners employed. The average value of products per establishment in 1919 was \$243,000 for the "Corporation" group, \$63,000 for the "Individual," and \$155,000 for the "All other" group, most of the last being firms. In 1914 the corresponding figures were \$154,000, \$36,000, and \$68,000, respectively. The average numbers of wage earners per establishment in 1919 were 35 for corporations, 10 for individuals, and 20 for the "All other" group.

## MANUFACTURES.

TABLE 52.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	427	369	343	289	312	455	216	15.7	7.6	18.7	-7.4	-31.4	110.6
Persons engaged.....	10,015	7,948	7,541	5,066	(2)	(2)	(2)	33.6	5.4	48.9	.....	.....	.....
Proprietors and firm members.....	424	381	365	342	(2)	(2)	(2)	11.3	4.4	6.7	.....	.....	.....
Salaried employees.....	1,250	853	688	290	227	(2)	(2)	46.5	24.0	137.2	27.8	.....	.....
Wage earners (average number).....	8,941	6,714	6,488	4,431	3,246	3,434	1,035	33.2	3.5	46.3	30.6	(4)	(4)
Primary horsepower.....	10,682	5,868	5,637	3,229	2,843	1,987	(2)	82.0	4.1	74.6	13.6	43.1	.....
Capital.....	\$28,988,416	\$12,562,864	\$9,498,870	\$4,425,610	\$3,540,839	\$3,009,149	\$980,004	130.7	32.3	114.6	25.0	17.7	207.0
Salaries and wages.....	10,805,794	4,258,527	3,046,109	1,920,713	1,438,317	1,670,273	621,500	153.7	16.8	89.8	33.5	-13.9	168.7
Salaries.....	2,618,598	1,032,844	699,116	272,836	185,826	(2)	(2)	153.5	47.7	156.2	46.8	.....	.....
Wages.....	8,187,196	3,225,683	2,947,083	1,647,877	1,252,491	(2)	(2)	153.8	3.5	78.8	31.6	.....	.....
Paid for contract work.....	840,302	111,582	144,528	81,830	(2)	(2)	(2)	633.1	-22.8	76.6	.....	.....	.....
Rent and taxes.....	1,473,089	322,910	239,141	4,118,290	(2)	(2)	(2)	356.2	35.0	102.2	.....	.....	.....
Cost of materials.....	40,428,347	20,304,183	18,350,551	6,337,810	5,022,591	3,868,099	1,636,921	99.1	10.6	180.5	26.2	26.8	136.3
Value of products.....	62,825,408	28,308,186	25,505,419	9,904,887	7,834,015	6,805,330	2,935,787	122.0	11.0	157.5	26.4	15.1	131.6
Value added by manufacture <sup>5</sup> .....	22,397,061	7,999,003	7,154,368	3,567,077	2,812,024	2,037,231	1,298,866	180.0	11.8	100.6	26.9	-4.3	126.1

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

TABLE 53.—WAGE EARNERS, BY MONTHS: 1919.

[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 of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	8,941	7,815	8,150	8,217	8,447	8,480	8,702	8,906	9,242	9,403	9,588	9,957	10,223	76.4
Males.....	5,763	4,974	5,174	5,208	5,350	5,385	5,627	5,721	5,963	6,153	6,272	6,527	6,791	73.2
Females.....	3,178	2,841	2,982	3,000	3,088	3,101	3,135	3,185	3,277	3,340	3,316	3,430	3,492	82.8
1914.....	6,714	7,617	7,476	7,169	6,825	6,631	6,309	6,272	6,440	6,268	6,336	6,496	6,736	92.1
1909.....	6,488	6,274	6,381	6,487	6,286	6,308	6,441	6,403	6,645	6,572	6,524	6,082	6,876	91.1
Massachusetts.....	5,896	5,291	5,495	5,538	5,030	5,565	5,772	5,848	6,036	6,184	6,326	6,457	6,601	80.2
Missouri.....	484	409	398	421	420	427	420	475	523	529	548	612	620	81.2
New York.....	675	687	649	618	656	651	647	664	700	707	747	780	783	76.3

TABLE 54.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919.

STATE,	Total	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—								80.
		44 and under.	Between 44 and 48.	48. <sup>1</sup>		Between 48 and 54.	54.	Between 54 and 60.		
United States.....	1919.....	8,941	773	1,342	3,209	2,203	565	489	360	
1914.....	6,714	(2)	(2)	392	616	2,257	3,252	167		
1909.....	6,488	(2)	(2)	52	199	1,080	4,248	300		
Massachusetts.....	5,896	269	1,134	2,610	1,234	226	130	284		
Missouri.....	484	278	99	94	13	2	57	.....		
New York.....	675	105	188	133	100	.....	.....	.....		

<sup>1</sup> Includes 48 and under for 1914 and 1909.<sup>2</sup> Corresponding figures not available.

TABLE 55.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—										Over 250 wage earners.			
	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.	501 to 1,000 wage earners.	1,000 or more wage earners.					
			Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.				
United States.....	1919.....	427	8,941	30	145	357	137	1,065	73	2,406	25	1,736	14	1,941	3	636
1914.....	369	6,714	26	146	395	106	1,212	60	1,895	22	1,474	7	1,054	2	584	
Massachusetts.....	254	5,896	10	67	174	92	1,132	61	1,966	14	958	9	1,382	1	283	
Missouri.....	12	484	5	16	3	35	1	31	2	139	.....	.....	1	233	1	
New York.....	77	675	14	36	81	20	237	5	196	2	161	.....	.....	.....	.....	

# BOOT AND SHOE FINDINGS.

37

TABLE 56.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Cen-sus year.	Num-ber of estab-lish-ments.	Average number of wage earners.	Value of products.	Value added by manu-fac-ture.	CHARACTER OF OWNERSHIP.	Cen-sus year.	Num-ber of estab-lish-ments.	Average number of wage earners.	Value of products.	Value added by manu-fac-ture.
All classes.....	1910	427	8,941	\$62,825,408	\$22,307,061	Per cent distribution:					
	1914	369	6,714	28,303,186	7,999,003	Individual.....	1919	40,7	18,9	17,5	17,3
Individual.....	1910	174	1,001	11,015,577	3,882,232	Corporation.....	1914	45,8	23,8	21,4	23,7
	1914	169	1,601	6,088,976	1,895,641	All other.....	1919	33,5	56,3	55,4	56,7
Corporation.....	1910	143	5,038	34,803,174	12,688,448		1914	27,4	49,3	54,9	46,8
	1914	101	3,311	15,541,430	3,740,246						
All other.....	1910	110	2,212	17,008,657	5,826,381						
	1914	99	1,802	6,992,730	2,363,116						

## GENERAL TABLE.

Detailed statement, by states.—Table 57 gives the detailed statistics for the industry, by states, for 1919.

TABLE 57.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.		
	Number of establish-ments.	Total.	Propri-ecors, super-intend-ents, and man-agers.	Clerks, etc.		Wage earners.		Total.	16 and over.		Under 16.		Capital.	Salaries and wages.	Expenses.	Salaries and wages.	
				Male.	Female.	Aver-age num-ber.	Number, 15th day of—		Male.	Female.	Male.	Female.			Capital.		
							Maximum month.	Minimum month.									
United States.....	427	10,615	424	522	344	384	8,941	De 10,223	Ja 7,815	10,188	6,545	3,315	172	156	\$28,988,416	\$1,733,472	\$885,126
Maine.....	6	317	1	17	7	13	279	De 424	Ja 211	368	249	117	...	...	955,503	57,877	21,510
Massachusetts.....	254	6,888	245	326	158	243	5,896	De 6,601	Ja 5,291	6,620	4,258	2,139	115	108	18,485,788	1,191,032	465,351
Michigan.....	3	15	6	1	8	8	...	Oc 13	Ap 3	13	10	3	...	...	41,009	1,500	...
Missouri.....	12	641	10	30	84	33	484	De 620	Fe 398	620	425	182	24	9	3,039,643	60,822	169,279
New Jersey.....	5	74	2	10	3	2	57	Jy 66	Ja 38	59	26	33	...	...	230,816	21,831	9,155
New York.....	77	888	81	62	30	31	675	De 780	Ja 587	784	588	188	6	2	1,673,503	101,517	58,017
Pennsylvania.....	10	224	27	11	10	18	158	No 192	Fe 124	194	129	62	1	2	626,708	18,358	36,003
Rhode Island.....	9	121	6	8	10	6	91	De 102	Jy 82	100	42	56	2	...	216,995	23,902	15,884
Wisconsin.....	9	264	6	10	6	4	238	De 257	Ja 211	258	134	74	20	30	947,730	22,988	9,766
All other states <sup>1</sup> .....	38	1,203	40	47	27	34	1,055	...	...	1,174	684	481	4	5	2,770,771	143,649	100,131

## EXPENSES—continued.

STATE.	EXPENSES—continued.								POWER.						Electric horse-power generated in establish-ments reporting.	
	Salaries and wages—Con.	For contract work.	Rent and taxes.		For materials.		Value of products.	Value added by manufac-ture.	Primary horsepower.						Owned.	Rented. <sup>4</sup>
			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. <sup>3</sup>	Rented.		
United States.....	\$8,187,106	\$840,302	\$403,588	\$1,060,501	\$10,017,475	\$10,872	\$62,825,408	\$22,307,061	10,682	3,507	115	40	460	6,500	1,053	
Maine.....	186,018	1,240	17,726	366,794	8,773	805,495	429,928	709	250	15	...	150	294	220		
Massachusetts.....	5,646,725	930,833	288,671	655,409	28,128,828	257,390	44,357,147	15,970,929	6,572	2,145	28	135	4,284	408		
Michigan.....	8,801	168	268	22	232	1,750	40,455	16,473	22	...	...	...	...	...	416	
Missouri.....	424,488	7,192	190,776	3,301,344	14,161	4,575,910	1,170,405	416	...	...	...	...	...	...	10	
New Jersey.....	40,065	12,026	1,897	24,983	156,361	3,991	360,097	199,745	72	62	...	...	50	743		
New York.....	698,613	29,302	87,678	35,155	2,513,006	32,368	4,464,140	1,918,766	798	5	...	...	10	188		
Pennsylvania.....	136,412	75,784	13,586	984	986,104	13,245	1,489,090	489,741	198	44	...	...	2	42		
Rhode Island.....	70,591	23,566	3,061	14,059	141,943	4,613	381,475	234,919	293	220	...	...	2	73		200
Wisconsin.....	187,114	3,912	17,625	954,143	14,065	1,324,961	356,753	5,026,638	1,609,402	1,558	825	100	...	125	508	225
All other states <sup>1</sup> .....	784,769	8,781	16,183	100,982	3,350,720	60,516	...	...	...	...	...	...	...	...	...	...

<sup>1</sup> Same number reported for one or more other months.

<sup>2</sup> All other states embrace: California, 1 establishment; Colorado, 1; Illinois, 5; Kentucky, 3; Maryland, 2; Minnesota, 2; New Hampshire, 13; Ohio, 6; Texas, 2; and Washington, 1.

<sup>3</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

<sup>4</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

## LEATHER GLOVES AND MITTENS.

### GENERAL STATISTICS.

**General character of the industry.**—This industry comprises establishments making gloves, mittens, and gauntlets of leather or of materials of which leather forms the larger part. There were 355 establishments which reported leather gloves, mittens, and gauntlets as the product of chief value in 1919, with products valued at \$46,940,511, including gloves, \$44,831,777 and allied or incidental products, \$2,108,734. In addition to this production, gloves valued at \$3,175,014 were made in 22 establishments, engaged primarily in the manufacture of other products. These are included in the detailed tables relating to products, but not in the general tables for the industry.

**Comparative summary.**—Table 58 presents the principal statistics for the industry for 1919, 1914, 1909, 1904, and 1899. Although the financial statistics for 1919 show large increases over previous censuses, they are largely the result of the general increase in prices. The increase in the average number of wage earners employed was insignificant and the increase in the quantity of output only moderate.

**Principal states, ranked by value of products.**—In Table 59 statistics are presented for value of products, average number of wage earners, and value added by manufacture for each state that can be shown, ranked according to value of products. New York, which has always been the leading state, reported 57.1 per cent of the total value of products, a slight decrease from 59.4 per cent in 1914 and from 60.7 per cent in 1909. The state of Wisconsin has ranked second in the industry since the census of 1904.

**Fulton County, New York.**—Fulton County, New York, has always been the center of the glove industry in the United States, and with a few exceptions the establishments are located in Gloversville and Johnstown. Table 60 shows the principal statistics for Fulton County and these cities. There has been a slight but gradual decrease in the proportion of the total for the United States. This loss shows for the county and for each city in the proportion of the quantity and value of the products for the three census years and also in the wage earners employed. Furthermore, the statistics for Fulton County show for the decade 1909-1919 in regard to quantity of output and wage earners employed, a decrease of 26.1 per cent in pairs of gloves and 12.7 per cent in the average number of wage earners.

**Persons engaged in the industry.**—The age classification of the average number of wage earners in Table 61 was found by the method described in the "Explanation of terms." The industry is one requiring

much machine sewing and women are generally employed in this capacity. More than half of the wage earners reported at each of the censuses shown were females. Statistics for persons engaged in the industry will be found for states in Table 73.

**Wage earners, by months.**—The figures given in Table 62, which shows the number of wage earners employed by months, reflect the steadiness of employment, or the reverse, during the census year. There was less fluctuation throughout the industry in 1919 than in 1914. The number employed in the minimum month in 1919 was 85.9 per cent of the maximum, and in 1914, 72.6 per cent. Of the states shown, Illinois reported the largest proportion of female wage earners, 66.1 per cent, and New York the smallest, 50.2 per cent.

**Prevailing hours of labor.**—Of the total number of wage earners in 1909, only 4.9 per cent were employed in establishments where the prevailing hours of labor per week were 48 or less, and in 1914, 9.7 per cent; but in 1919 the proportion was 33.7 per cent. On the other hand, Table 63 shows that the proportion of the total number of wage earners employed in establishments where the working hours per week were more than 54 decreased from 78.1 per cent in 1909 to 31.4 per cent in 1914 and to 15.2 per cent in 1919.

**Size of establishments, by average number of wage earners.**—Table 64 shows a classification of establishments according to the average number of wage earners employed. The figures show no marked change in size of establishments measured by the number of wage earners. In both 1919 and 1914 approximately one-third of the establishments employing no wage earners or not more than 5 per establishment, reported but 2.4 per cent of the wage earners, and 7.3 per cent of the establishments in 1919 and 7.1 per cent in 1914, each with over 100 wage earners, reported 41 per cent of the total in 1919 and 46.3 per cent in 1914.

**Size of establishments, by value of products.**—Table 65 shows a classification of establishments based upon value of products. In 1909 the average value of products was approximately \$62,700; in 1914, \$61,400; and in 1919, \$132,200 per establishment, the increase in 1919 being fundamentally due to the general advance in values. This accounts for the shifts to higher groups as compared with 1914.

**Character of ownership (Table 66).**—This industry is one in which the majority of the establishments are not incorporated, but the corporations constitute the more important establishments both in value of products and average number of wage earners per

establishment. The value of products per establishment for the corporations was \$216,121 compared with \$51,386 for establishments owned by individuals and \$156,261 for establishments under other forms of ownership, chiefly firms. The corporations reported an average of 53 wage earners per enterprise, the group "individual" 10, and the group "all other," 33. In New York, which dominates the industry, 50 of the 219 establishments, or 22.8 per cent, were corporations, but in Wisconsin, the second state, 57.1 per cent of the establishments were incorporated, in Illinois, 38.7 per cent, and in California, 40.7 per cent.

**Number and horsepower of types of prime movers.**—Table 67 gives the power statistics for the industry. The owned horsepower shows a decrease of 36.6 per cent as compared with 1914, offset in the main by rented power, chiefly electric power, which increased more than 50.5 per cent, the total primary power showing a small decrease. Of the total primary power, 62.8 per cent was utilized in the form of electric power, purchased or generated, in 1919; 45.1 per cent in 1914; and 34.6 per cent in 1909.

**Fuel consumed.**—Table 68 shows the quantity of fuel used, by kinds. The figures for gas include both manufactured and natural gas.

TABLE 58.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, AND 1899.

	1919	1914	1909	1904	1899 <sup>1</sup>	PER CENT OF INCREASE. <sup>2</sup>			
						1914-1919	1909-1914	1904-1909	1899-1904
Number of establishments.....	355	352	377	339	331	0.9	-6.6	11.2	-11.0
Persons engaged.....									
Proprietors and firm members.....	12,594	12,345	12,950	11,712	15,325	-2.0	-4.7	10.6	-23.6
405	405	417	458	427	508	-2.9	-9.0	7.3	-15.0
Salaried employees.....	1,504	1,230	1,138	1,040	1,037	19.4	10.7	77.8	0.5
Wage earners (average number).....	10,083	10,008	11,354	10,045	14,180	0.2	-0.0	0.7	(*)
Primary horsepower.....	3,288	3,357	2,889	2,725	2,114	-2.1	16.2	6.0	28.9
Capital.....	\$20,870,277	\$17,080,398	\$10,908,671	\$10,705,509	\$0,004,427	74.9	1.0	57.9	18.9
Salaries and wages.....	\$11,248,830	\$5,958,695	\$0,019,872	\$4,424,826	\$4,695,296	88.8	-1.0	36.0	-5.8
Salaries.....	\$3,098,046	\$1,400,335	\$1,256,042	\$584,573	\$544,170	121.2	11.5	114.9	7.4
Wages.....	\$8,150,784	\$4,558,360	\$4,703,830	\$3,840,253	4,151,128	73.8	-4.3	24.0	(*)
Paid for contract work.....	\$1,559,224	\$927,164	\$992,216	\$393,723	\$93,795	68.2	-6.6	152.0	(*)
Rent and taxes.....	\$1,004,330	\$193,769	\$167,417	\$106,351	\$100,354	418.3	15.7	57.4	-2.7
Cost of materials.....	\$93,280,120	\$12,170,694	\$13,208,901	\$10,000,889	\$9,382,102	116.0	-7.9	32.1	6.6
Value of products <sup>3</sup> .....	\$46,940,511	\$21,612,109	\$23,630,508	\$17,740,385	\$16,721,234	117.2	-8.5	33.2	6.1
Value added by manufacture <sup>4</sup> .....	\$20,054,382	\$8,443,415	\$10,422,597	\$7,739,490	\$7,330,132	118.7	-9.4	34.7	5.5
Gloves, mittens, and gauntlets, manufactured, dozen pairs.	3,015,703	3,082,376	3,368,655	3,370,140	2,895,661	17.3	-8.5	(*)	16.4

<sup>1</sup> Figures given for 1899 represent leather gloves and mittens only, and do not agree with the general statistics for that year.

<sup>4</sup> Exclusive of internal revenue.

<sup>2</sup> A minus sign (—) denotes decrease.

<sup>5</sup> Value of products less cost of materials.

<sup>3</sup> Figures not strictly comparable.

<sup>6</sup> Less than one-tenth of 1 per cent.

TABLE 59.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			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.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	355	10,685	100.0	....	\$46,941	100.0	....	\$20,054	100.0	....	Pennsylvania	6	112	1.0	9	\$345	0.7	9	\$95	0.5	13
New York	219	5,510	51.6	1	23,703	57.0	1	12,198	59.0	1	Virginia	4	62	0.6	14	252	0.5	11	61	0.3	16
Wisconsin	28	1,728	10.2	2	3,773	14.4	2	2,506	12.1	2	Washington	7	46	0.4	17	244	0.5	12	112	0.5	11
Illinois	31	1,230	11.6	3	5,423	11.6	3	2,349	11.4	3	Massachusetts	5	50	0.5	16	225	0.5	14	89	0.4	14
California	27	665	0.2	4	2,049	4.4	4	1,198	5.8	4	All other states <sup>1</sup>	18	770	7.2	....	2,759	5.9	....	1,073	5.2	...
Iowa	6	200	2.7	5	1,520	3.2	5	767	3.7	5											
Indiana	4	213	2.0	8	588	1.3	8	213	1.0	8											

<sup>1</sup> Includes New Hampshire and Minnesota ranking 6 and 7, respectively, Ohio 10 and Maryland 13, according to value of products.

## MANUFACTURES.

TABLE 60.—COMPARATIVE SUMMARY FOR FULTON COUNTY, NEW YORK: 1919 AND 1914.

	FULTON COUNTY, N. Y.						GLOVERSVILLE						JOHNSTOWN					
	1919		1914		Per cent of total for United States		1919		1914		Per cent of total for United States		1919		1914		Per cent of total for United States	
	1919	1914	1919	1914	1909		1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
Number of establishments.....	154	153	43.4	43.5	41.4		102	93	28.7	26.4	23.1		42	50	11.8	14.2	14.3	
Persons engaged.....	5,279	5,733	41.9	46.4	47.9		3,590	3,972	28.5	32.2	32.6		1,399	1,406	11.1	11.9	12.3	
Proprietors and firm members.....	72	207	17.8	49.0	49.3		51	122	12.6	20.3	25.5		16	70	4.0	16.8	16.6	
Salaried employees.....	457	553	30.4	43.9	47.2		417	375	27.7	29.8	35.2		183	155	12.2	12.3	10.5	
Wage earners (average number).....	4,750	4,073	41.5	46.0	47.9		3,122	3,475	29.2	32.6	32.6		1,200	1,241	11.2	11.6	12.3	
Primary horsepower.....	795	925	24.2	27.5	28.8		493	646	15.0	19.2	19.2		251	164	7.6	4.0	5.6	
Capital.....	\$16,291,210	\$8,452,501	54.5	49.5	57.4		\$11,271,204	\$5,800,533	37.7	34.0	38.1		\$4,058,463	\$2,170,372	13.0	12.7	16.1	
Salaries and wages.....	\$5,200,953	\$2,857,538	46.8	48.0	50.7		\$3,777,813	\$1,971,260	33.6	33.1	36.3		\$1,252,468	\$733,852	11.1	12.3	11.7	
Salaries.....	\$1,617,903	\$612,396	52.2	43.7	44.0		\$1,155,723	\$414,778	37.3	20.6	36.6		\$410,281	\$171,652	13.4	12.3	7.0	
Wages.....	\$3,640,050	\$2,245,142	44.8	49.3	52.3		\$2,622,080	\$1,556,481	32.2	34.1	36.3		\$836,237	\$562,200	10.3	12.3	12.9	
Paid for contract work.....	\$1,345,636	\$860,247	86.3	92.8	(1)		\$821,372	\$504,857	52.7	64.2	(1)		\$238,141	\$210,242	15.3	22.7	(1)	
Rent and taxes.....	\$183,860	\$45,934	18.3	23.7	(1)		\$132,501	\$27,915	13.2	14.4	(1)		\$42,750	\$16,523	4.3	8.5	8.5	
Cost of materials.....	\$12,582,133	\$6,103,502	47.9	50.1	55.3		\$8,451,095	\$4,080,043	32.2	33.5	37.5		\$3,380,118	\$1,535,922	12.9	12.6	14.2	
Value of products.....	\$22,829,210	\$11,010,247	48.0	50.9	54.7		\$15,797,811	\$7,309,017	33.7	33.8	37.5		\$7,739,867	\$2,914,250	12.2	13.5	13.8	
Value added by manufacture <sup>2</sup> .....	\$10,217,050	\$4,900,055	49.0	52.0	54.0		\$7,316,716	\$2,228,974	35.6	34.2	37.6		\$2,359,749	\$1,378,337	11.4	14.6	13.2	
Gloves, mittens, and gauntlets, manufactured, dozen pairs.....	1,203,631	1,282,027	33.3	41.6	48.3		788,318	781,081	21.8	25.3	29.3		308,230	348,851	8.5	11.3	12.2	

<sup>1</sup> Figures not available.<sup>2</sup> Value of products less cost of materials.

TABLE 61.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.		CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.		
					Male.	Fe- male.						Male.	Fe- male.	
												Male.	Fe- male.	
All classes.....	1919	12,594	6,088	6,506	48.3	51.7	Clerks and other subordinate salaried employees.....	1919	880	601	288	67.6	82.4	
	1914	12,345	6,045	6,300	49.0	51.0		1914	903	570	333	63.1	36.9	
	1909	12,950	6,219	6,731	48.0	52.0		1909	836	532	304	63.6	36.4	
Proprietors and officials.....	1919	1,020	938	82	92.0	8.0	Wage earners (average number).....	1919	10,685	4,549	6,136	42.6	57.4	
	1914	774	740	34	95.6	4.4		1914	10,668	4,735	5,933	44.4	55.6	
	1909	760	714	46	93.9	6.1		1909	11,354	4,973	6,381	43.8	56.2	
Proprietors and firm members.....	1919	405	391	14	98.5	5.5	16 years of age and over.....	1919	10,237	4,364	5,873	42.6	57.4	
	1914	417	399	18	95.7	4.3		1914	10,504	4,089	5,815	44.6	55.4	
	1909	458	436	22	95.2	4.8		1909	11,056	4,846	6,239	43.7	56.3	
Salaried officers of corporations.....	1919	212	201	11	94.8	5.2	Under 16 years of age.....	1919	448	185	263	41.3	58.7	
	1914	109	108	1	99.1	0.9		1914	164	46	118	28.0	72.0	
	1909	85	81	4	95.3	4.7		1909	260	127	142	47.2	52.8	
Superintendents and managers.....	1919	403	346	57	85.9	14.1								
	1914	248	233	15	94.0	6.0								
	1909	217	107	20	90.8	9.2								

TABLE 62.—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.	Aver- age num- ber em- ployed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent min- imum is of maxi- mum
		Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	Octo- ber.	Novem- ber.	Decem- ber.	
United States:														
1919.....	10,685	10,175	10,044	9,984	10,046	10,190	10,515	10,887	11,125	11,042	11,286	11,303	11,623	85.9
Males.....	4,549	4,161	4,199	4,207	4,257	4,374	4,534	4,670	4,780	4,700	4,879	4,842	4,995	83.1
Females.....	6,136	6,024	5,845	5,777	5,789	5,816	5,981	6,217	6,345	6,342	6,407	6,461	6,628	87.2
1914.....	10,668	11,702	11,745	11,791	11,573	11,379	11,348	11,012	11,050	9,788	9,417	8,561	8,581	72.6
1909.....	11,354	10,650	10,983	11,145	11,130	11,188	11,333	11,299	11,372	11,500	11,533	11,661	12,007	88.8
California.....	635	595	598	603	652	656	636	681	702	700	711	714	723	82.3
Illinois.....	1,239	1,278	1,245	1,189	1,192	1,152	1,160	1,244	1,281	1,252	1,266	1,241	1,428	79.3
New York.....	5,510	4,908	5,092	5,107	5,250	5,389	5,574	5,660	5,785	5,695	5,833	5,838	5,929	82.5
Wisconsin.....	1,723	1,972	1,748	1,694	1,626	1,010	1,073	1,092	1,099	1,706	1,764	1,770	1,770	81.4
States showing large proportion of females.														
California.....	397	370	370	378	401	400	381	406	411	418	407	408	414	59.7
Illinois.....	819	807	839	785	746	753	755	801	843	823	840	810	957	66.1
New York.....	2,764	2,520	2,590	2,023	2,655	2,701	2,794	2,816	2,879	2,857	2,870	2,914	2,943	50.2
Wisconsin.....	1,136	1,313	1,153	1,127	1,082	1,073	1,105	1,116	1,102	1,110	1,160	1,143	1,148	

# LEATHER GLOVES AND MITTENS.

41

TABLE 63.—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. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	60 and over.
United States.....	1910	10,685	1,190	1,111	1,295	3,357	2,108	1,461	163
	1914	10,668	(2) <sup>2</sup>	(2) <sup>2</sup>	1,030	2,229	4,063	3,044	302
	1909	11,354	(2) <sup>2</sup>	(2) <sup>2</sup>	555	1,017	917	7,743	1,122
California.....	1910	665	161	201	139	102	2	.....	.....
Illinois.....	1919	1,239	161	450	12	603	13	.....	.....
Illinois.....	1914	1,371	(2) <sup>2</sup>	(2) <sup>2</sup>	125	63	306	872	5
New York.....	1910	5,510	642	110	471	1,281	1,857	1,018	131
New York.....	1914	6,026	(2) <sup>2</sup>	(2) <sup>2</sup>	256	1,255	2,895	1,608	12
Wisconsin.....	1910	1,728	101	265	213	699	24	426	.....
Wisconsin.....	1914	1,711	(2) <sup>2</sup>	(2) <sup>2</sup>	224	384	551	381	171

<sup>1</sup> Includes 48 and under for 1914 and 1909.

<sup>2</sup> Corresponding figures not available.

TABLE 64.—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.		Over 250 wage earners.		
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	
United States.....	1910.	355	10,685	23	94	260	108	1,349	73	2,587	31	2,104	22	3,183	4	1,202
United States.....	1914.	352	10,668	24	106	257	107	1,233	53	1,706	37	2,537	21	3,293	4	1,642
California.....		27	665	1	9	20	5	62	11	372	.....	.....	1	211	.....	.....
Illinois.....		31	1,239	1	3	10	15	203	7	257	2	119	2	244	1	406
New York.....		210	5,510	18	64	174	67	822	40	1,417	17	1,089	11	1,498	2	642
Wisconsin.....		28	1,728	1	2	7	9	113	5	191	5	356	5	807	1	254

TABLE 65.—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.....	355	352	377	10,685	10,688	11,364	\$46,940,511	\$21,614,109	\$23,030,598	\$20,654,382	\$9,443,415	\$10,422,597
Less than \$5,000.....	29	67	77	16	72	131	75,280	162,783	201,786	43,523	89,311	111,969
\$5,000 to \$20,000.....	72	108	117	222	613	683	852,245	1,279,224	1,339,783	445,485	605,053	703,097
\$20,000 to \$100,000.....	130	115	123	1,802	2,913	3,089	6,902,001	5,205,684	5,751,826	3,247,985	2,408,240	2,657,434
\$100,000 to \$500,000.....	103	59	60	{ 5,072	{ 1,704	{ 7,451	{ 22,241,162	{ 14,968,418	{ 16,337,203	{ 9,572,471	{ 6,340,811	{ 6,950,097
\$500,000 to \$1,000,000.....	17	2	.....	{ 2,371	{ 1,704	{ 7,451	{ 11,622,163	{ 5,247,660	{ 11,202	{ 4,729,102	{ 2,615,816	{ 1,100,000
\$1,000,000 and over.....	4	1	.....	1,202	.....	.....	.....	.....	.....	.....	.....	.....
PER CENT OF 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.....	8.2	19.0	20.4	0.1	0.7	1.2	0.2	0.8	0.9	0.2	0.9	1.1
\$5,000 to \$20,000.....	20.3	30.7	31.0	2.1	5.7	6.0	1.8	5.9	5.7	2.2	6.4	6.7
\$20,000 to \$100,000.....	36.6	32.7	32.6	16.9	27.6	27.2	14.7	24.1	24.3	15.7	25.5	25.5
\$100,000 to \$500,000.....	29.0	16.7	15.9	{ 27.5	{ 66.0	{ 65.6	{ 24.8	{ 69.2	{ 69.1	{ 46.3	{ 67.1	{ 66.7
\$500,000 to \$1,000,000.....	4.8	0.6	15.9	{ 22.2	{ 11.2	{ 11.2	{ 11.2	{ 11.2	{ 11.2	{ 22.9	{ 12.7	{ 12.7
\$1,000,000 and over.....	1.1	0.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> Includes the group "\$1,000,000 and over."

## MANUFACTURES.

TABLE 66.—CHARACTER OF OWNERSHIP: 1919, 1914, AND 1909.

CHARACTER OF OWNERSHIP.	Cen-sus year.	Num-ber of estab-lishments.	Average number of wage earners.	Value of products.	Value added by manufac-ture.	CHARACTER OF OWNERSHIP.	Cen-sus year.	Num-ber of estab-lishments.	Average number of wage earners.	Value of products.	Value added by manufac-ture.
All classes.....	1919	355	10,685	\$46,940,511	\$20,654,382	Per cent distribution:					
	1914	352	10,668	21,614,109	9,443,415	Individual.....	1919	40.3	13.9	15.7	16.6
	1909	377	11,354	23,630,598	10,422,507		1914	48.3	17.8	16.3	17.7
Individual.....	1919	143	1,485	7,348,256	3,428,776		1909	50.4	18.8	17.9	18.6
	1914	170	1,889	3,518,008	1,672,280	Corporation.....	1910	30.4	53.9	40.7	50.3
	1909	190	2,133	4,222,329	1,936,560		1914	22.7	45.1	44.2	43.8
Corporation.....	1910	108	5,757	23,341,063	10,304,305	All other.....	1909	19.4	41.6	42.8	41.5
	1914	80	4,815	9,544,230	4,137,744		1919	29.3	32.2	34.6	33.1
	1909	73	4,723	10,106,657	4,325,226		1914	20.0	37.2	39.6	38.5
All other.....	1919	104	3,443	16,251,192	6,831,301		1909	30.2	39.6	39.4	39.9
	1914	102	3,964	8,551,871	3,633,301						
	1909	114	4,496	9,301,612	4,160,811						

TABLE 67.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	791	518	378	3,288	3,357	2,880	100.0	100.0	100.0
Owned.....	42	40	68	1,283	2,031	2,016	39.3	60.5	88.8
Steam engines.....	14	24	31	918	1,757	1,625	27.0	52.3	55.2
Turbines.....	14	(2)	(2)	918	(2)	(2)	27.9	.....	.....
Internal-combustion engines.....	17	13	25	73	82	141	2.2	2.4	4.9
Water wheels, turbines, and motors.....	11	3	12	302	192	250	9.2	5.7	8.7
Rental.....	749	478	310	1,905	1,326	873	60.7	39.5	30.2
Electric.....	749	478	310	1,095	1,277	850	60.7	38.0	29.4
Other.....				40	49	23	.....	1.5	0.8
Electric.....	767	508	330	2,004	1,515	1,000	100.0	100.0	100.0
Rented.....	749	478	310	1,095	1,277	850	96.7	84.3	85.0
Generated by establishments reporting.....	18	30	20	69	238	150	3.3	15.7	15.0

<sup>1</sup> Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.<sup>2</sup> Not reported separately.

TABLE 68.—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). <sup>1</sup>	Bituminous (tons, 2,000 pounds). <sup>1</sup>				
United States.....	1919	2,652	10,597	128	3	97	8,730
	1914	2,630	12,282	38	207	(*)	11,648
California.....	1919		2	2	3	33	581
	1914		4		60	(*)	1,591
Illinois.....	1919	191	2,413				1,082
	1914	69	5,827				524
Indiana.....	1919		556				33
	1914		302				
Iowa.....	1919	43	199				3,700
	1914	10	485				
Massachusetts <sup>2</sup> .....	1919	88					55
New York.....	1919	2,314	3,708				2,783
	1914	2,305	2,821	8	67	(*)	4,519
Pennsylvania <sup>2</sup> .....	1919	8	105				1,080
Virginia <sup>2</sup> .....	1919	10	27				.....
Washington <sup>2</sup> .....	1919		18				35
Wisconsin.....	1919	15	2,808	114			684
	1914	24	2,124	30	61	(*)	72
All other states.....	1919	33	761	12			2,430
	1914	122	699	11	(*)		1,209

<sup>1</sup> Includes some semianthracite.<sup>2</sup> Included in figures for fuel oils.<sup>2</sup> Included with "All other states" in 1919.

# LEATHER GLOVES AND MITTENS.

43

## SPECIAL STATISTICS.

**Comparative statistics of products.**—Table 69 presents statistics for the quantity and value of leather gloves, mittens and gauntlets for 1919, 1914, and 1909, by kinds, for men and boys and for women and children, subdivided as to unlined, lined, and part leather and part fabric. The totals are inclusive of the output of establishments classified under other industries, because of their chief products, but manufacturing very considerable quantities of leather gloves, mittens and gauntlets. These are not distributable by kind and hence are not represented in the groups and subgroups.

The average unit value for all men's and boys' gloves, mittens, and gauntlets increased from \$6.15 per dozen pairs in 1914 to \$11.35 in 1919, and for women's and children's from \$9.30 to \$17.95.

**Distribution, by classes and kinds of leather.**—Table 70 classifies the products (1) men's and boys' and women's and children's gloves, with subdivisions—unlined, lined, and part fabric; and (2) dress and working gloves, with subdivisions as to kind of leather. Of the aggregate quantity, 58.8 per cent were reported as unlined in 1919, and 16.5 per cent were made of part leather and part fabric. At the census of 1914 the unlined gloves formed 63.2 per cent of the total number and the part fabric and part leather gloves 6.5 per cent. Unlined gloves constituted 70.2 per cent of the class designated as dress gloves and 52.9 per cent of the working gloves.

TABLE 69.—PRODUCTS—QUANTITY AND VALUE, BY KINDS,  
1919, 1914, AND 1909.

KIND.	1919.	1914.	1909.
Number of establishments.....	377	368	303
Leather gloves and mittens industry.....	355	352	377
Manufacturing leather gloves and mittens as subsidiary products.....	22	16	16
Products, total value.....	\$50,115,525	\$22,256,571	\$23,895,559
Leather gloves and mittens industry, all products.....	\$46,940,511	\$21,614,109	\$23,630,598
Leather gloves and mittens, subsidiary products of other industries.....	\$3,175,014	\$642,462	\$264,961
Gloves, mittens, and gauntlets:			
Dozen pairs.....	1,450,412	1,328,703	1,3405,589
Value.....	\$48,006,791	\$20,939,020	\$22,790,822
Average unit value, doz. prs.....	\$11.55	\$6.35	\$6.70
Men's and boys':			
Dozen pairs.....	3,040,747	2,656,875	2,888,091
Value.....	\$34,498,656	\$16,333,388	\$18,135,438
Average unit value, doz. prs.....	\$11.35	\$6.15	\$6.30
Unlined—			
Dozen pairs.....	1,706,795	1,623,446	1,755,229
Value.....	\$23,053,857	\$11,486,491	\$12,209,929
Lined—			
Dozen pairs.....	767,801	832,695	1,133,762
Value.....	\$9,037,038	\$4,383,271	\$5,925,509
Part leather and part fabric—			
Dozen pairs.....	566,151	200,734	(*)
Value.....	\$2,407,761	\$463,626	(*)
Women's and children's:			
Dozen pairs.....	574,956	425,501	470,664
Value.....	\$10,333,121	\$3,983,170	\$4,390,423
Average unit value, doz. prs.....	\$17.95	\$9.30	\$9.15
Unlined—			
Dozen pairs.....	417,595	325,530	326,600
Value.....	\$8,596,567	\$3,196,761	\$3,375,560
Lined—			
Dozen pairs.....	126,294	99,971	152,974
Value.....	\$1,568,735	\$766,409	\$1,014,363
Part leather and part fabric—			
Dozen pairs.....	81,067	(*)	(*)
Value.....	\$167,819	(*)	(*)
All other products, value.....	\$2,108,734	\$1,317,551	\$1,104,737

<sup>1</sup> Includes for 1919, 534,709 dozen pairs, value \$3,175,014; 1914, 206,327 dozen, value \$642,462; and 1909, 36,944 dozen, value \$264,961, not distributed by kinds.

<sup>2</sup> Not reported separately.

TABLE 70.—LEATHER GLOVES, MITTENS, AND GAUNTLETS, LINED, UNLINED, AND PART LEATHER AND PART FABRIC, ACCORDING TO KIND OF SKIN USED: 1919.<sup>1</sup>

KIND OF LEATHER.	Total.	MEN'S AND BOYS'.			WOMEN'S AND CHILDREN'S.		
		Unlined.	Lined.	Part leather and part fabric.	Unlined.	Lined.	Part leather and part fabric.
Dress gloves, street gloves, mittens, and gauntlets:							
Dozen pairs.....	1,227,284	459,353	225,258	15,823	402,532	121,511	2,807
Value.....	\$24,563,017	\$10,017,571	\$4,561,518	\$119,212	\$8,312,289	\$1,532,301	\$20,126
Domestic lamb or sheep skin, dozen pairs.....	547,740	180,373	170,032	1,533	96,921	95,515	2,366
Imported lamb or sheep skin, dozen pairs.....	427,238	103,763	41,338	310	205,090	16,341	406
Mooh, dozen pairs.....	151,200	71,720	5,676	21	67,378	5,995	.....
Goat or "real" kid, dozen pairs.....	37,261	8,984	325	.....	27,742	210	.....
All other, dozen pairs.....	63,755	34,523	7,887	13,959	4,901	2,450	35
Working gloves, mittens, and gauntlets:							
Dozen pairs.....	2,388,419	1,247,442	542,543	550,328	15,063	4,783	28,260
Value.....	\$20,208,760	\$13,036,286	\$4,475,520	\$2,288,549	\$284,278	\$36,434	\$147,693
Sheep skin, dozen pairs.....	274,998	137,918	97,839	37,151	940	1,135	15
Horsehide, cattle hide, or calfskin, dozen pairs.....	1,510,895	710,986	338,286	452,375	1,100	648	7,500
Deer or elk skin, dozen pairs.....	51,408	70,533	4,691	100	84	.....	.....
All other, dozen pairs.....	521,118	322,005	101,727	60,702	12,939	3,000	20,745

<sup>1</sup> Not including 534,709 dozen pairs, value \$3,175,014, the product of establishments in other industries.

**Products, in detail, by states.**—Table 71 shows that dress and similar gloves formed 33.9 per cent of all gloves in 1919, and working gloves 66.1 per cent, working gloves being chiefly men's and boys'. In 1914 no working gloves were reported for women and children. In

regard to the leather used, domestic lamb and sheep skin was the leather used for 44.6 per cent of the dress gloves, and imported skins for 34.8 per cent. At the census of 1914 these proportions were 26.6 per cent and 48.3 per cent, respectively. The proportion of

## MANUFACTURES.

"Mocha" gloves among the dress gloves decreased from 19.2 per cent in 1914 to 12.3 in 1919. Horsehide, cattle hide, or calfskin was used for 63.3 per cent of the working gloves.

New York, which produced 40.1 per cent of all gloves, reported 90.6 per cent of the dress gloves, but

only a small proportion, 14.2 per cent, of the working gloves. Illinois and Wisconsin exceeded New York in working gloves, and this class constituted the bulk of the output for these states. Only 12.7 per cent of the production of California and 10 per cent of that of Wisconsin were dress gloves.

TABLE 71.—PRODUCTS—DETAILED STATISTICS, BY STATES: 1919.

CLASS AND KIND.	United States.	California.	Illinois.	New York.	Wisconsin.	All other states.
Products, total value.....	\$16,940,511	\$2,048,503	\$5,422,794	\$26,763,200	\$8,772,808	\$5,933,206
Gloves, mittens, and gauntlets:						
Dozen pairs.....	3,615,703	121,864	708,055	1,450,101	606,897	640,756
Value.....	\$14,831,777	\$2,010,603	\$4,670,095	\$25,889,646	\$8,635,072	\$5,593,201
Dress gloves, street gloves, mittens, and gauntlets:						
Dozen pairs.....	1,227,284	15,525	(1)	1,111,372	60,833	30,554
Domestic lamb or sheep skin.....	547,740	120		470,685	52,803	15,132
Imported lamb or sheep skin.....	427,238	4,244		408,559	7,770	6,665
Mocha.....	151,200	503		143,174	5,064	1,399
Goat or "real" kid.....	37,251	723		30,944	436	5,158
All other.....	63,755	9,875	(1)	49,010	2,890	2,010
Value.....	\$24,563,017	\$300,705	(1)	\$22,100,412	\$1,284,880	\$798,960
Men's and boys', lined and unlined—						
Dozen pairs.....	684,611	8,054	(1)	585,327	65,074	26,158
Domestic lamb or sheep skin.....	350,405	120		284,275	52,803	13,207
Imported lamb or sheep skin.....	205,001	2,086		180,492	7,615	5,298
Mocha.....	77,396	115		74,632	1,360	1,289
Goat or "real" kid.....	9,300	42,410		4,521	436	4,352
All other.....	42,410	5,133	(1)	32,407	2,860	2,010
Value.....	\$14,578,089	190,625	(1)	\$12,521,005	\$1,148,430	\$709,123
Women's and children's, lined and unlined—						
Dozen pairs.....	524,043	7,471		508,165	4,750	3,645
Domestic lamb or sheep skin.....	193,436			102,261		1,175
Imported lamb or sheep skin.....	221,431	1,558		218,351	155	1,367
Mocha.....	73,873	448		68,621	4,604	300
Goat or "real" kid.....	27,052	723		26,423		806
All other.....	7,351	4,742		2,000		
Value.....	\$9,844,500	\$170,140		\$0,458,810	\$136,444	\$78,187
Part leather and part fabric—						
Dozen pairs.....	18,630			17,880		750
Domestic lamb or sheep skin.....	3,899			3,149		750
Imported lamb or sheep skin.....	718			716		
Mocha.....	21			21		
Goat or "real" kid.....						
All other.....	13,994			13,994		
Value.....	\$130,338			\$128,688		\$10,650
Working gloves, mittens, and gauntlets:						
Dozen pairs.....	2,388,410	106,339	680,495	338,720	827,084	626,792
Sheepskin.....	274,998	3,364	46,933	171,302	25,090	29,219
Horsehide, cattle hide, or calfskin.....	1,510,895	58,709	387,737	110,880	492,275	461,294
Deer or elk skin.....	81,408	576	100	21,614	4,171	54,947
All other.....	521,118	43,600	255,725	34,843	105,528	81,332
Value.....	\$20,208,700	\$1,670,838	\$1,598,643	\$3,780,234	\$5,350,192	\$4,868,853
Men's and boys', lined and unlined—						
Dozen pairs.....	1,780,985	101,310	364,011	312,449	607,470	403,845
Sheepskin.....	235,757	2,620	36,533	104,628	24,025	7,961
Horsehide, cattle hide, or calfskin.....	1,049,272	58,024	125,370	109,832	478,046	278,000
Deer or elk skin.....	81,224	576	100	21,530	4,171	54,847
All other.....	423,732	40,000	202,908	16,450	101,228	63,047
Value.....	\$17,511,806	\$1,034,724	\$3,354,001	\$3,395,598	\$5,150,121	\$3,977,362
Women's and children's, lined and unlined—						
Dozen pairs.....	10,846	4,420		15,102	315	
Sheepskin.....	2,075	744		1,031	300	
Horsehide, cattle hide, or calfskin.....	1,748	685		1,048	15	
Deer or elk skin.....	84			84		
All other.....	15,939	3,000		12,939		
Value.....	\$320,712	\$32,714		\$283,228	\$4,770	
Part leather and part fabric—						
Dozen pairs.....	578,588	600	324,584	11,178	10,279	222,947
Sheepskin.....	37,186		9,400	5,733	765	21,281
Horsehide, cattle hide, or calfskin.....	450,875		262,397		14,214	183,244
Deer or elk skin.....	100					100
All other.....	81,447	600	2,52,817	5,445	4,300	18,835
Value.....	\$2,428,242	\$3,400	\$1,244,042	\$101,408	\$105,301	\$891,491
All other products, value.....	\$2,108,734	\$7,900	\$752,690	\$873,554	\$137,738	\$336,845

<sup>1</sup> Included in "All other states" to avoid disclosure of individual operations.

<sup>2</sup> The product of 3 establishments has been included in "All other states" to avoid disclosure of individual operations.

## GENERAL TABLES.

Comparative summary, by states.—Table 72 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 reported for the industry.

Detailed statement, by states.—Table 73 presents, for 1919, by states, the more detailed statistics of the industry.

# LEATHER GLOVES AND MITTENS.

45

TABLE 72.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen-sus year.	Num-ber of estab-lishments.	Wage earners (ave- rage num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.		STATE.	Cen-sus year.	Num-ber of estab-lishments.	Wage earners (ave- rage num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
					Expressed in thousands.									Expressed in thousands.		
United States.....	1919	355	10,685	3,288	\$8,151	\$26,286	\$46,941		New York.....	1919	219	5,510	1,462	\$4,388	\$14,567	\$26,763
	1914	352	10,668	3,357	4,558	12,171	21,614			1914	216	6,026	1,098	2,697	7,080	12,845
	1909	377	11,354	2,889	4,764	13,208	23,681			1909	225	6,257	1,003	2,841	8,023	14,336
California.....	1919	27	665	138	561	856	2,049		Pennsylvania.....	1919	6	112	44	60	249	345
	1914	24	422	58	203	458	951			1914	7	78	30	24	80	123
	1909	23	570	58	267	558	1,231			1909	3	42	7	12	33	54
Illinois.....	1919	31	1,239	376	1,024	3,074	5,423		Washington.....	1919	7	46	12	65	131	244
	1914	28	1,371	707	646	1,637	2,774			1914	6	52	17	29	79	148
	1909	29	1,309	657	519	1,478	2,523			1909	6	59	10	21	59	120
Indiana.....	1919	4	213	89	86	375	588		Wisconsin.....	1919	28	1,728	609	1,205	4,287	6,773
	1914	4	176	95	65	163	272			1914	24	1,711	670	589	1,746	2,922
	1909	3	153	44	48	152	225			1909	23	1,642	301	573	1,037	2,799
Iowa.....	1919	6	290	81	189	753	1,520		All other states.....	1919	22	832	459	524	1,878	3,011
	1914	8	195	94	85	359	626			1914	30	595	492	196	484	860
	1909	10	234	236	94	373	693			1909	47	949	552	337	852	1,515
Massachusetts.....	1919	5	50	18	49	136	225									
	1914	5	42	6	24	35	93									
	1909	8	100	21	52	43	135									

TABLE 73.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				EXPENSES.				
	Number of establish- ments.	Total.	Prop- rietors and firm mem- bers.	Salaried offi- cers, super- intend- ents, and manag- ers.	Clerks, etc.	Wage earners.		Number, 15th day of—	Total.	16 and over.		Under 16.		Capital.	Salaries and wages.		
						Male.	Female.			Male.	Female.	Male.	Female.		Officials.	Clerks, etc.	
United States.....	355	12,594	405	615	601	288	10,685	De 11,623	Mh 0,984	11,450	4,753	6,226	201	279	\$29,870,277	\$1,740,432	\$1,357,614
California.....	27	782	28	49	26	19	665	De 723	Ja 505	730	309	416	5	79	1,645,569	112,956	70,987
Illinois.....	31	1,379	27	49	38	26	1,239	De 1,428	Ap 1,182	1,284	358	772	75	79	2,241,681	164,867	80,809
Indiana.....	4	232	1	12	4	2	213	Oc 250	Mh 106	246	55	150	9	32	303,283	26,923	8,629
Iowa.....	6	415	5	25	71	24	290	Jy 311	Ja 263	310	125	170	7	8	1,316,008	89,379	135,809
Massachusetts.....	5	64	5	4	1	4	50	No 50	Ap 37	62	23	39	8	158,401	8,160	4,755	
New York.....	219	0,640	283	320	357	161	5,510	De 5,929	Ja 4,008	5,887	2,933	2,906	38	10	18,404,716	951,626	913,839
Pennsylvania.....	6	134	4	8	7	3	112	No 148	Mh 92	144	47	82	3	12	247,543	6,280	7,243
Virginia.....	4	81	8	7	3	1	62	No 74	Fe 49	69	24	40	1	4	123,274	12,876	3,011
Washington.....	7	50	7	1	2	2	46	Oc 50	Ja 43	51	27	24	18	138,340	1,680	2,300	
Wisconsin.....	28	1,915	22	101	38	26	1,728	Ja 1,072	My 1,016	1,781	576	1,023	58	124	3,765,616	252,303	61,785
All other states <sup>1</sup> .....	18	890	20	30	54	22	770	.....	.....	895	278	604	5	10	1,525,846	83,382	67,847

STATE.	EXPENSES—continued.					POWER.								
	Salaries and wages— Continued.	For contract work.	Rent and taxes.		For materials.		Value of products.	Value added by manufacture.	Primary horsepower.		Owned.		Electric horse- power gener- ated in estab- lish- ments report- ing.	
			Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines	Internal com- bus- tion en- gines	Water pow- er. <sup>2</sup>	Rent- ed. <sup>3</sup>	
United States.....	\$8,150,784	\$1,559,224	\$101,932	\$312,404	\$26,102,312	\$183,817	\$46,940,511	\$20,654,382	3,288	918	73	302	1,995	69
California.....	561,261	8,850	14,517	26,460	851,131	4,479	2,048,503	1,192,893	138	18	120	.....	.....	15
Illinois.....	1,023,855	1,547	18,910	146,765	8,047,167	20,882	5,422,794	2,348,745	376	50	326	.....	.....	.....
Indiana.....	80,117	.....	270	33,673	370,734	4,056	588,108	213,318	89	50	39	.....	.....	14
Iowa.....	188,826	180	2,970	14,115	748,799	4,052	1,510,893	767,042	81	30	51	.....	.....	.....
Massachusetts.....	49,192	1,464	4,020	1,609	134,098	1,969	225,255	89,188	18	18	18	.....	.....	.....
New York.....	4,388,213	1,499,007	101,025	143,331	14,472,927	94,247	26,763,200	12,196,026	1,462	363	152	947	947	947
Pennsylvania.....	60,310	1,028	1,050	1,732	247,036	2,364	344,794	95,394	44	27	17	.....	.....	.....
Virginia.....	31,181	2,618	1,320	607	190,404	548	262,118	61,171	13	13	13	.....	.....	.....
Washington.....	64,889	3,990	1,282	130,359	1,009	243,778	112,410	12	12	12	12	12	12	40
All other states <sup>1</sup> .....	1,208,175	41,585	20,065	330,555	4,235,724	31,026	6,772,808	2,506,058	609	275	28	806	806	40
	491,765	4,700	13,195	111,915	1,073,033	13,190	2,758,260	1,072,137	446	150	150	146	146	146

<sup>1</sup> Same number reported for one or more other months.

<sup>2</sup> All other states embrace: Colorado, 1 establishment; Maryland, 2; Michigan, 4; Minnesota, 2; New Hampshire, 2; New Jersey, 2; Ohio, 2; Oregon, 2; and Tennessee, 1.

<sup>3</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

<sup>4</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

## SADDLERY AND HARNESS.

### GENERAL STATISTICS.

**General character of the industry.**—This industry includes establishments engaged primarily in the manufacture of the various products pertaining to saddlery and harness, including horse collars, bridles, halters, horse boots, sweat pads, etc. In addition to the establishments constituting the classified industry in 1919, production was reported to the value of \$2,014,262 by 35 establishments engaged primarily in the manufacture of other products.

**Comparative summary.**—Table 74 presents the principal statistics for the census years 1879 to 1919, inclusive. The increase in financial items in 1919 as compared with 1914 was due to the general advance in prices, for there is a marked decrease in number of establishments and of persons engaged in the industry.

**Wage earners, by months.**—Table 75 reflects the steadiness of employment from month to month, or the reverse. There was relatively small variation in employment in 1919, the minimum-month number being 90.7 per cent of the maximum month as compared with 85.7 per cent in 1914.

**Prevailing hours of labor.**—Table 76 shows that in 1909 only 2 per cent and in 1914 but 3.6 per cent of the total number of wage earners were in establishments where the prevailing hours of labor per week were 48 or less. In 1919 this percentage increased to 31.7. On the other hand, in 1909, 36.2 per cent of the wage earners

were in establishments where the prevailing hours of labor were 60 or more per week; whereas in 1914 this percentage dropped to 25.8 and in 1919 to 12.9 per cent.

**Size of establishments, by average number of wage earners.**—The establishments averaged practically six wage earners per establishment in 1919 and five in 1914. The industry includes a large number of establishments owned by individuals and by firms in which the work is done by the proprietors, and as a result many establishments reported few or no wage earners. Table 77 shows that in 1919, 24.8 per cent of the establishments had no wage earners and 62.3 per cent from 1 to 5 per establishment and in 1914, 19.3 per cent had no wage earners and 67.3 per cent from 1 to 5.

**Character of ownership.**—The establishments owned by corporations, as presented in Table 78, constituted only 13.9 per cent of the total number in 1919, but they employed 71.4 per cent of the wage earners and reported 73.6 per cent of the products. The individual establishments constituted 69.9 per cent of the total number in 1919 with 16 per cent of the products. The decrease in number of establishments is distributed proportionately among the groups but the percentage of increase in the value of products reported is much the largest for the corporations.

**General table.**—The detailed statistics for the industry, by states, are given for 1919 in Table 79.

TABLE 74.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	1,823	2,551	1,347	1,076	873	7,931	7,999	-28.5	89.4	25.2	23.3	-89.0	-0.9
Persons engaged.....	14,863	18,383	19,014	18,354	(2)	(2)	(2)	-19.1	-3.3	3.6	.....	.....	.....
Proprietors and firm members.....	1,946	2,768	1,452	1,181	(2)	(2)	(2)	-20.7	90.6	22.9	.....	.....	.....
Salaried employees.....	2,506	2,646	2,930	2,141	1,737	(2)	(2)	-5.3	-9.7	36.9	23.3	.....	.....
Wage earners (average number).....	10,411	12,909	14,632	15,032	14,304	22,672	21,446	-19.7	-11.4	-2.7	4.7	(4)	(4)
Primary horsepower.....	8,212	10,397	17,234	7,370	8,018	2,347	(2)	-21.0	-39.7	133.8	22.5	156.4	.....
Capital.....	\$49,368,288	\$45,207,380	\$39,224,195	\$20,264,460	\$20,462,903	\$35,340,620	\$16,508,019	9.2	15.3	34.0	43.0	-42.1	114.1
Salaries and wages.....	15,238,761	11,154,740	11,002,925	9,653,458	7,682,974	16,030,845	7,997,752	36.6	1.4	14.0	25.6	-52.1	100.4
Salaries.....	4,389,685	3,159,128	2,931,441	2,019,147	1,428,512	(2)	(2)	30.0	7.8	45.2	41.3	.....	.....
Wages.....	10,849,086	7,905,612	8,071,484	7,634,311	6,254,462	(2)	(2)	35.7	-0.9	5.7	22.1	.....	.....
Paid for contract work.....	63,357	114,945	56,142	82,575	(2)	(2)	(2)	-44.9	104.7	-32.0	.....	.....	.....
Rent and taxes.....	3,202,434	1,185,232	826,854	4,655,759	(2)	(2)	(2)	170.2	43.3	26.1	.....	.....	.....
Cost of materials.....	52,442,907	33,086,442	33,177,937	23,774,239	19,770,574	24,674,225	19,968,716	58.5	-0.3	39.6	20.3	-19.9	23.6
Value of products.....	53,713,010	53,558,612	54,224,602	42,054,842	33,702,503	52,970,801	38,081,643	55.3	-1.2	28.9	24.8	-36.4	39.1
Value added by manufacture <sup>2</sup> .....	31,270,103	20,472,170	21,046,665	18,280,603	13,931,989	28,296,576	18,112,927	52.7	-2.7	15.1	31.2	-50.8	56.2

<sup>1</sup> A minus sign (—) denotes decrease.

<sup>2</sup> Figures not available.

<sup>3</sup> Figures not strictly comparable.

<sup>4</sup> Exclusive of internal revenue.

<sup>5</sup> Value of products less cost of materials.

## SADDLERY AND HARNESS.

47

TABLE 75.—WAGE EARNERS, BY MONTHS: 1919.

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.....	10,411	10,027	10,431	10,416	10,060	9,956	9,958	10,068	10,396	10,445	10,789	10,851	10,955	90.7
Male.....	9,532	9,686	9,502	9,569	9,248	9,161	9,180	9,255	9,498	9,538	9,846	9,887	10,014	91.1
Female.....	870	941	869	847	812	795	818	813	898	907	943	964	941	82.5
1914.....	12,909	13,705	13,854	13,653	13,399	13,135	12,884	12,436	12,105	11,876	12,401	12,679	13,491	85.7
1909.....	14,632	14,550	14,827	14,880	14,742	14,634	14,546	14,386	14,301	14,419	14,432	14,728	15,170	94.3
Georgia.....	563	558	554	566	525	535	519	580	615	580	558	568	592	84.4
Illinois.....	887	1,042	988	959	883	816	784	782	795	808	889	923	975	75.0
Indiana.....	453	506	504	498	443	430	423	404	438	412	472	457	443	79.8
Iowa.....	395	441	393	410	386	351	335	330	334	335	496	481	448	66.5
Kentucky.....	479	480	472	475	484	472	474	476	487	473	480	485	490	96.3
Minnesota.....	436	427	438	436	428	417	407	410	434	441	457	458	479	85.0
Missouri.....	1,215	1,120	1,113	1,103	1,124	1,155	1,201	1,233	1,271	1,290	1,291	1,334	1,345	82.0
Ohio.....	799	873	856	794	637	675	690	784	776	812	873	891	897	75.3
Tennessee.....	614	614	584	586	589	604	622	624	622	638	631	626	630	91.8
Texas.....	919	873	908	923	894	935	913	899	934	920	940	943	936	92.6
Wisconsin.....	441	401	408	439	441	444	438	430	454	453	465	458	455	86.2

TABLE 76.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—								
		44 and under.	Be- tween 44 and 48.	48, <sup>1</sup>	Be- tween 48 and 54.	54.	Be- tween 54 and 60.	60.			44 and under.	Be- tween 44 and 48.	48, <sup>1</sup>	Be- tween 48 and 54.	54.	Be- tween 54 and 60.	60.	Over 60.	
United States...1910..	10,411	110	140	3,050	1,093	1,922	2,138	1,333	15	Kentucky.....	479	1	...	106	19	61	151	137	4
1914..	12,960	(2)	(2)	464	598	4,040	4,518	3,823	26	Minnesota.....	426	1	...	143	6	4	257	25	
1909..	14,632	(4)	(3)	205	897	2,210	5,920	5,224	74	Missouri.....	1,215	20	2	743	22	303	90	35	
Georgia.....	563	11	...	52	64	11	356	69	...	Ohio.....	799	3	27	93	369	108	116	88	
Illinois.....	887	22	31	154	41	90	485	63	1	Tennessee.....	614	...	...	153	1	93	87	280	
Indiana.....	453	2	...	64	179	24	107	75	2	Texas.....	919	...	...	310	11	459	111	28	
Iowa.....	395	2	...	38	191	63	57	42	2	Wisconsin.....	441	...	17	78	267	65	2	22	

<sup>1</sup> Includes 48 and under for 1914 and 1909.

<sup>2</sup> Corresponding figures not available.

TABLE 77.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—													
	Estab- lish- ments.	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.		Over 251 wage earners.		
			Estab- lish- ments.	Estab- lish- ments.	Wage earners.	Estab- lish- ments.	Wage earners.	Estab- lish- ments.	Wage earners.	Estab- lish- ments.	Wage earners.	Estab- lish- ments.	Wage earners.	Estab- lish- ments.	Wage earners.	
United States....	1910.	1,823	10,411	453	1,135	1,740	121	1,449	68	2,257	32	2,333	11	1,705	3	927
	1914.	2,551	12,069	493	1,718	2,819	214	2,482	78	2,521	32	2,218	14	2,151	2	778
Georgia.....		20	503	.....	10	15	4	47	3	121	1	64	2	316		
Illinois.....		183	887	45	121	171	11	149	4	151	.....	.....	1	107	1	303
Indiana.....		114	453	22	79	102	7	92	5	141	.....	.....	1	118		
Iowa.....		110	395	23	76	99	5	63	5	173	1	60	.....	.....		
Kentucky.....		52	479	6	35	60	4	41	3	88	4	290	.....	.....		
Minnesota.....		51	436	7	36	47	1	19	4	127	3	243	.....	.....		
Missouri.....		88	1,215	14	56	87	9	141	1	48	6	491	2	448	1	351
Ohio.....		106	799	33	62	110	3	26	5	172	2	140	.....	.....	1	
Tennessee.....		43	614	7	23	46	3	27	7	246	2	140	1	155		
Texas.....		68	919	12	44	79	4	41	2	80	3	247	2	225	1	261
Wisconsin.....		43	441	10	24	20	5	73	2	52	1	58	1	229	.....	

TABLE 78.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Cen-sus year.	Num-ber of estab-lish-ments.	Aver-age number of wage earners.	Value of products.	Value added by manu-fac-ture.	CHARACTER OF OWNERSHIP.	Cen-sus year.	Num-ber of estab-lish-ments.	Aver-age number of wage earners.	Value of products.	Value added by manu-fac-ture.
All classes.....	1919	1,823	10,411	\$83,713,010	\$31,270,103	Per cent distribution:					
	1914	2,551	12,969	53,558,012	20,472,170	Individual.....	1919	69.9	18.0	16.0	17.
Individual.....	1919	1,275	1,878	13,357,900	5,402,839		1914	70.6	23.9	21.8	27.
	1914	1,802	3,105	11,651,293	5,542,360	Corporation.....	1919	13.9	71.4	73.6	72.
Corporation.....	1910	253	7,434	61,653,014	22,688,559		1914	12.7	63.7	64.8	59.
	1914	324	8,285	34,706,544	12,116,743	All other.....	1919	16.2	10.6	10.4	10.
All other.....	1919	295	1,099	8,702,096	3,178,705		1914	16.7	12.3	13.4	13.
	1914	425	1,599	7,200,775	2,810,067						

## MANUFACTURES.

TABLE 79.—DETAILED STATEMENT,

STATE	Number of establish- ments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						Capital,		
		Total.	Propri- tors and firm members.	Sala- ried officers, super- in- tendents, and manag- ers.		Clerks, etc.		Wage earners.				Total.	16 and over.		Under 16.			
				Male.	Fe- male.	Aver- age num- ber.		Number, 15th day of—	Total.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.			
1 United States.....	1,823	14,803	1,946	750	1,330	426	10,411	De 10,955	Je 9,938	11,099	10,078	960	52	9	\$19,368,288			
2 Alabama.....	8	105	9	2	1	.....	93	My 101	De 80	102	92	10	.....	.....	189,769			
3 Arizona.....	4	43	2	4	10	3	24	Oc 3	Ja 22	23	22	1	.....	.....	164,407			
4 Arkansas.....	20	161	29	4	24	4	100	Se 3	Ja 8	94	101	97	4	.....	469,490			
5 California.....	37	232	34	10	41	11	130	Ja 155	Au 122	159	151	8	.....	937,716				
6 Colorado.....	27	268	24	11	21	6	206	Do 230	Mh 188	242	226	16	.....	840,090				
7 Delaware.....	3	7	3	.....	.....	.....	4	Ja 3	Jy 3	3	3	3	.....	.....	22,885			
8 Georgia.....	20	642	22	17	37	3	503	Au 015	Je 519	596	500	85	8	3	1,154,300			
9 Idaho.....	18	46	18	3	3	.....	22	Au 3	Ja 17	22	20	2	.....	.....	176,928			
10 Illinois.....	183	1,241	206	46	39	33	887	Ja 1,042	Jy 782	906	939	56	1	.....	3,890,973			
11 Indiana.....	114	680	127	51	39	16	453	Ja 500	Jy 404	513	391	119	2	1	1,883,000			
12 Iowa.....	110	618	126	34	51	12	395	Oc 496	Jy 330	370	372	7	.....	.....	3,052,322			
13 Kansas.....	83	304	89	11	16	7	181	Mh 192	Au 172	190	185	5	.....	.....	959,861			
14 Kentucky.....	52	661	53	27	85	17	479	Do 490	Fe 3	472	490	437	50	3	1,944,984			
15 Louisiana.....	8	170	10	6	24	3	136	Au 145	Do 130	133	129	4	.....	.....	775,704			
16 Maine.....	9	17	9	.....	.....	.....	8	My 3	No 2	9	9	.....	.....	.....	24,644			
17 Maryland.....	26	220	26	5	30	.....	159	Ap 174	Ja 124	158	143	15	.....	.....	758,605			
18 Massachusetts.....	15	168	12	9	2	5	140	My 148	Po 132	138	121	16	1	.....	405,487			
19 Michigan.....	61	326	50	11	5	7	253	No 317	My 185	300	217	83	.....	.....	942,557			
20 Minnesota.....	61	633	49	42	81	30	436	Do 479	Je 407	489	454	34	1	.....	2,367,647			
21 Mississippi.....	5	34	6	1	.....	.....	27	Ja 3	No 2	16	16	4	10	1	33,002			
22 Missouri.....	88	1,063	85	106	202	55	1,215	De 1,345	Mh 1,103	1,344	1,231	109	4	.....	5,064,798			
23 Montana.....	11	57	10	5	6	.....	36	Jy 3	Ja 25	37	37	.....	.....	260,993				
24 Nebraska.....	53	226	58	15	24	2	127	Ja 3	Jy 117	131	131	.....	.....	1,066,108				
25 New Jersey.....	46	92	53	2	1	.....	38	Od 39	My 34	41	41	.....	.....	177,765				
26 New Mexico.....	4	24	4	1	1	.....	18	Do 22	Pe 15	21	21	.....	.....	44,266				
27 New York.....	91	350	92	20	14	10	223	Se 235	Ja 212	232	223	9	.....	.....	927,505			
28 North Carolina.....	30	164	32	10	8	1	113	Od 121	Ja 103	117	116	1	.....	.....	347,338			
29 North Dakota.....	14	96	13	8	7	3	65	Fe 70	Se 58	67	67	.....	.....	634,001				
30 Ohio.....	106	1,052	112	44	77	20	799	Da 897	My 675	906	831	74	1	.....	4,100,027			
31 Oklahoma.....	35	153	41	11	6	3	92	Se 115	Fe 67	111	107	3	1	.....	418,153			
32 Oregon.....	33	290	33	18	18	9	182	Ja 281	No 145	156	151	5	.....	.....	934,702			
32 Pennsylvania.....	117	407	129	7	37	9	225	Ap 232	Ja 215	226	222	4	.....	.....	1,265,136			
34 Rhode Island.....	3	5	2	1	.....	.....	2	(*)	2	2	2	.....	.....	2,743				
35 South Carolina.....	5	22	5	1	1	.....	15	(*)	15	15	15	15	.....	.....	19,135			
36 South Dakota.....	10	39	9	3	3	1	23	Se 25	Ja 22	24	24	.....	.....	154,301				
37 Tennessee.....	43	804	46	42	86	16	614	Se 636	Fe 584	634	550	64	20	.....	2,215,416			
38 Texas.....	68	1,269	84	64	159	43	919	No 943	Ja 873	934	863	71	.....	4,711,974				
39 Utah.....	18	111	21	9	11	3	67	Jy 73	Fe 59	70	70	.....	.....	321,050				
40 Vermont.....	10	26	9	.....	.....	.....	17	No 20	Jy 15	18	18	.....	.....	31,885				
41 Virginia.....	33	380	33	25	56	41	225	Do 248	Ja 210	250	232	18	.....	.....	1,705,654			
42 Washington.....	42	152	47	0	16	6	74	Mh 94	Se 56	68	68	.....	.....	580,216				
43 West Virginia.....	51	146	54	5	5	4	78	Je 83	Oc 71	73	66	7	.....	.....	504,275			
44 Wisconsin.....	43	600	45	30	52	32	441	Od 465	Ja 401	459	387	62	7	3	2,381,685			
45 Wyoming.....	18	43	16	6	.....	.....	21	Jy 23	Fe 19	20	20	.....	.....	117,744				
46 All other states <sup>b</sup> .....	8	117	9	8	4	8	88	.....	.....	84	73	9	1	1	308,291			

<sup>a</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).<sup>b</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).<sup>c</sup> Same number reported for one or more other months.

# SADDLERY AND HARNESS.

49

BY STATES: 1919.

EXPENSES.									POWER.							
Salaries and wages.			Rents and taxes.			For materials.			Value added by manufacturer.	Primary horsepower.			Electric horsepower generated in establishments reporting.			
Officials.	Clerks, etc.	Wage earners.	For contract work.	Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Total.	Owned.	Rent-ed. <sup>2</sup>	Steam engines (not turbines).	Internal-combustion engines.	Water power. <sup>1</sup>			
\$2,298,662	\$2,091,023	\$10,849,066	\$63,357	\$726,286	\$2,476,148	\$52,064,231	\$378,676	\$83,713,010	\$31,270,103	8,212	1,279	282	38	6,613	245	1
11,700	895	77,536	2,903	12,530	299,973	2,148	470,810	108,698	105	75	—	—	—	30	—	2
6,900	1,800	24,953	1,200	4,950	2,422	86,005	808	148,318	60,605	21	—	—	—	21	—	3
15,515	45,382	81,791	9,950	6,050	550,586	2,653	824,875	265,636	49	—	—	—	—	49	—	4
19,958	25,433	164,455	1,055	18,177	13,333	729,038	4,633	1,181,680	447,100	178	—	—	—	178	—	5
47,407	51,119	272,422	—	10,100	25,416	944,586	6,164	1,556,723	605,973	234	—	—	—	234	—	6
3,600	52	89	8,792	72	18,540	9,676	—	—	—	—	—	—	—	—	—	7
126,724	62,062	506,715	9,325	91,916	2,535,188	7,078	4,154,219	1,611,953	496	60	30	36	370	—	—	8
5,400	1,350	22,804	1,579	6,500	1,699	114,484	1,402	188,401	72,515	20	—	—	—	20	—	9
153,678	137,079	1,058,949	150	61,287	90,331	4,501,900	28,460	7,032,469	2,502,100	606	120	13	—	473	105	10
115,683	70,737	440,210	472	47,713	38,107	1,409,986	22,965	2,520,166	1,087,215	605	62	33	—	510	—	11
102,055	72,409	493,640	470	28,082	232,016	2,568,298	21,155	4,167,588	1,578,135	409	75	34	—	300	—	12
40,103	35,766	217,958	20,524	26,850	950,871	8,779	1,490,428	524,778	156	—	4	—	—	152	—	13
114,392	159,267	460,100	20,234	14,850	28,658	2,842,305	10,382	4,443,982	1,585,185	352	—	2	—	350	—	14
32,050	45,924	130,468	70	6,034	13,422	612,460	2,750	948,575	333,365	70	—	—	—	70	—	15
—	9,992	—	2,406	386	20,973	448	49,621	28,200	2	—	2	—	—	—	—	16
27,760	26,021	153,473	150	5,984	13,507	505,482	5,604	851,380	340,303	149	100	16	—	33	—	17
19,580	8,852	158,508	—	5,326	15,167	457,309	8,196	778,809	313,304	106	25	—	—	81	—	18
33,692	11,914	247,000	—	17,026	80,308	1,088,026	10,953	2,101,341	1,002,362	188	—	—	—	188	—	19
93,107	145,923	489,246	—	38,658	32,502	2,812,306	16,947	4,159,288	1,329,973	329	60	—	—	269	40	20
2,460	9,894	—	1,200	425	15,722	547	41,479	25,210	20	—	2	18	—	2	21	
316,884	279,681	1,250,103	—	74,024	183,239	6,260,481	77,033	9,449,706	3,111,592	1,082	292	17	—	773	55	22
12,335	9,260	45,155	—	4,388	4,906	203,376	1,633	318,734	113,725	22	—	6	—	16	—	23
23,036	51,761	159,362	—	13,792	18,270	893,564	7,165	1,434,118	533,389	134	—	6	—	128	—	24
2,000	1,040	37,720	—	10,242	2,002	78,605	2,173	191,473	110,695	20	—	—	—	20	—	25
1,250	1,022	22,336	—	2,520	1,467	48,681	664	90,904	41,569	8	—	—	—	8	—	26
28,741	23,878	249,899	—	31,093	4,535	808,239	7,993	1,435,448	619,216	126	—	—	—	126	—	27
14,744	6,990	94,217	4,501	7,895	4,684	501,666	3,856	733,427	227,905	185	115	25	—	45	—	28
15,500	11,280	65,099	503	3,066	7,297	499,478	4,640	676,300	172,182	80	—	—	—	80	2	29
132,548	125,248	605,807	921	29,107	457,444	3,019,719	16,558	5,142,703	2,106,426	567	110	24	—	433	30	31
34,142	9,979	133,035	—	13,478	7,218	647,182	2,747	1,042,107	392,178	50	—	2	48	—	31	
40,568	35,861	245,094	—	17,502	52,252	931,547	6,437	1,931,187	993,203	233	—	—	—	233	1	32
24,598	42,936	204,787	1,080	24,311	7,830	889,018	8,913	1,615,099	617,173	179	60	25	—	94	12	33
1,500	700	2,202	—	720	66	5,773	143	15,750	9,834	1	—	—	—	1	—	34
5,000	5,220	35,101	—	1,500	25	25,900	677	48,125	21,548	13	—	—	—	13	3	35
—	—	—	—	2,715	1,912	83,000	1,202	180,219	98,017	14	—	—	—	14	—	36
98,588	188,588	520,590	20,536	20,012	27,917	3,008,033	15,217	4,789,808	1,765,556	292	—	—	—	292	—	37
186,918	168,565	989,859	850	77,810	102,348	5,212,010	17,730	7,817,750	2,587,980	359	—	10	—	349	—	38
11,340	9,220	85,970	—	3,433	11,250	438,506	2,698	662,018	220,724	40	—	—	—	40	—	39
—	—	—	—	970	737	35,338	924	75,458	39,196	4	—	—	—	4	—	40
111,001	40,403	224,006	—	8,470	12,118	880,526	4,183	1,604,129	618,420	129	—	15	—	114	—	41
53,020	31,070	97,668	361	20,700	15,078	480,881	5,069	921,674	435,728	83	—	2	—	81	—	42
30,183	14,370	81,532	—	9,618	18,395	450,385	4,698	788,600	338,517	178	125	9	—	44	25	43
157,216	117,292	500,730	101	27,517	677,417	3,278,370	13,362	5,143,239	1,851,498	247	—	7	—	240	—	44
2,830	—	28,122	—	2,444	1,580	90,137	1,370	158,262	66,755	8	—	—	—	8	—	45
22,800	13,814	93,434	—	3,501	130,828	224,443	2,771	517,996	290,782	63	—	—	—	63	—	46

<sup>1</sup> Same number reported throughout the year.

<sup>2</sup> All other states embrace Connecticut, 4 establishments; Nevada, 2; and New Hampshire, 2.

## LEATHER BELTING.

### GENERAL STATISTICS.

**General character of the industry.**—This industry includes the establishments engaged primarily in the making of leather belting. Prior to 1914 it was inclusive of leather hose, but at the censuses of 1914 and 1919 no establishments were reported as engaged primarily in the manufacture of leather hose. In addition to the establishments constituting the classified industry in 1919, leather belting was reported to the value of \$4,947,610 by 9 establishments engaged primarily in the manufacture of other products and assigned to other industries, which included three of the leather industries—leather, tanned, curried, and finished (\$4,319,779); leather goods not elsewhere specified; and boot and shoe cut stock.

**Comparative summary.**—Table 80 presents the principal statistics for each census year from 1879 to 1919, the figures for the earlier censuses being inclusive of leather hose. The increase in financial items in 1919 as compared with 1914 was to a large degree due to the general advance in prices, for on the basis of persons engaged in the industry and power equipment, the figures show slight decreases.

**Wage earners, by months.**—Table 81 reflects the steadiness of employment from month to month, or the reverse. Female wage earners constituted but 6.3 per cent of the total number in 1919.

**Prevailing hours of labor.**—In 1909 only 4.5 per cent and in 1914 only 8.3 per cent of the total number of wage

earners, as shown in Table 82, were in establishments where the prevailing hours of labor were 48 per week or less. In 1919 the corresponding proportion was 15.9 per cent. On the other hand, in 1909, 64.8 per cent of the wage earners were in establishments where the hours were more than 54 per week, whereas in 1914 the proportion dropped to 57 per cent and in 1919 to 11.1 per cent.

**Size of establishments, by average number of wage earners.**—As shown in Table 83, the industry includes a large number of establishments with no wage earners or fewer than 6. In 1919, 90 such establishments, or 52.3 per cent of the total number, employed only 6.8 per cent of the wage earners while establishments with more than 50 wage earners formed only 7.6 per cent of the total number of establishments, but employed 52.4 per cent of the wage earners.

**Character of ownership.**—The majority of the establishments, as presented in Table 84, were under corporate ownership, 65.1 per cent in 1919 with 86 per cent of the wage earners, and with products representing 89.2 per cent of all products. Considering the industry as a whole, the establishments averaged \$235,000 in value of products per establishment in 1919 as compared with \$153,000 in 1914; the corporations averaged \$323,000 per establishment in 1919, the individuals \$74,000, and the "All other" group \$69,000, the latter being chiefly firms.

TABLE 80.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1904	1879-1889
Number of establishments.....	172	151	139	117	104	93	96	13.9	8.6	18.8	12.5	.....	.....
Persons engaged.....	4,010	4,263	4,370	2,800	(2)	(2)	(2)	-5.7	-2.4	55.1	.....	.....	.....
Proprietors and firm members.....	91	86	100	94	(2)	(2)	(2)	5.8	-14.0	6.4	.....	.....	.....
Salaried employees.....	1,163	1,226	1,204	614	443	(2)	(2)	-5.1	-3.0	105.9	38.6	.....	.....
Wage earners (average number).....	2,765	2,951	3,066	2,092	1,667	1,342	1,227	-0.3	-1.8	43.7	25.5	(4)	(6)
Primary horsepower.....	7,039	7,411	5,638	3,220	2,162	1,040	(2)	-5.0	31.4	75.1	48.9	107.9	.....
Capital.....	\$27,533,890	\$20,135,522	\$17,457,084	\$10,785,245	\$7,408,219	\$4,973,420	\$2,748,709	36.7	15.4	61.9	45.6	49.0	83.9
Salaries and wages.....	\$5,950,218	3,829,188	3,362,700	1,951,867	1,398,751	1,114,754	606,037	55.5	13.9	72.3	39.5	25.5	83.9
Salaries.....	2,695,770	1,759,643	1,501,820	787,319	484,874	(2)	(2)	53.2	17.2	90.8	62.4	.....	.....
Wages.....	3,260,439	2,068,645	1,860,880	1,164,548	913,877	(2)	(2)	57.5	11.2	59.8	27.4	.....	.....
Paid for contract work.....	114,526	57,722	6,592	16,958	(2)	(2)	(2)	98.4	775.6	-61.1	.....	.....	.....
Rent and taxes.....	954,470	839,233	208,280	174,715	(2)	(2)	(2)	181.4	62.9	19.2	.....	.....	.....
Cost of materials.....	28,156,711	15,480,110	15,622,003	9,317,206	7,406,952	6,182,704	5,019,853	81.9	-0.9	67.7	24.2	22.3	32.3
Value of products.....	40,480,654	23,038,951	23,601,887	14,220,306	10,622,522	8,633,634	6,525,737	75.7	-2.8	60.6	33.9	23.0	66.1
Value added by manufacture <sup>2</sup> .....	12,323,943	7,555,841	8,069,284	4,903,100	3,122,570	2,500,930	1,505,884	63.1	-6.4	64.6	57.0	24.9	.....

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where base is less than 100.

<sup>2</sup> Figures not available.

<sup>3</sup> Figures not strictly comparable.

<sup>4</sup> Exclusive of internal revenue.

<sup>5</sup> Value of products less cost of materials.

## LEATHER BELTING.

51

TABLE 81.—WAGE EARNERS, BY MONTHS: 1919.

[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 MONTH OR NEAREST REPRESENTATIVE DAY.												Percent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	2,765	2,830	2,084	2,683	2,586	2,567	2,586	2,651	2,782	2,870	2,914	2,976	3,071	83.6
Males.....	2,590	2,640	2,518	2,512	2,418	<i>2,399</i>	2,402	2,484	2,610	2,685	2,726	2,796	2,881	83.3
Females.....	175	181	166	171	168	168	167	167	172	185	188	180	190	86.3
1914.....	2,951	3,004	3,004	2,988	2,940	2,913	2,879	2,894	2,914	2,954	2,958	2,975	2,989	95.8
1909.....	3,006	2,980	2,952	2,943	2,877	<i>2,863</i>	2,889	2,915	3,052	3,092	3,106	3,184	3,210	89.2
Connecticut.....	247	301	232	234	225	206	226	227	241	239	253	288	292	68.4
Massachusetts.....	269	266	250	257	247	253	254	284	243	203	294	298	309	78.6
New York.....	600	702	668	653	<i>623</i>	629	636	645	666	672	671	679	676	88.7
Pennsylvania.....	414	417	414	413	407	387	352	378	410	438	457	443	452	77.0

TABLE 82.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
		44 and under.	Between 44 and 48.	48. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States.....	1919..	2,765	24	65	350	1,580	440	280	26
	1914..	2,051	(2)	(2)	245	528	495	1,558	122
	1909..	3,006	(2)		134	330	593	1,466	483
Connecticut.....		247				24	196	27	
Massachusetts.....		269	8		139	119	3		
New York.....		600	6	1	23	618	12		
Pennsylvania.....		414	3		6	386		19	

<sup>1</sup> Includes 48 and under for 1914 and 1909.<sup>2</sup> Corresponding figures not available.

TABLE 83.—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.		Over 100 wage earners.
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.
United States.....	1910..	172	2,765	8	82	180	50	529	10	597	7	473
	1914..	151	2,051	5	85	215	35	392	14	394	7	510
Connecticut.....		8	247	1	2	5	3	34	1	25		1
Massachusetts.....		20	269		9	25	7	98	3	81	1	65
New York.....		37	600	2	20	44	9	79	2	53	2	119
Pennsylvania.....		17	414	1	7	16	5	59	2	70		2
												269

TABLE 84.—CHARACTER OF OWNERSHIP: 1919, 1914, AND 1909.

CHARACTER OF OWNERSHIP.	Census year.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacturer.	CHARACTER OF OWNERSHIP.		Census year.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacturer.
						Per cent distribution:	Individual.....					
All classes.....	1919	172	2,765	\$40,480,654	\$12,323,943			1919	21.5	9.2	6.8	7.7
	1914	151	2,051	23,035,051	7,555,841			1914	29.8	8.5	7.4	8.0
Individual.....	1919	87	253	2,754,142	951,648			Corporation.....	65.1	86.0	89.2	88.4
	1914	45	250	1,711,244	602,625			1914	58.3	88.7	89.5	88.8
Corporation.....	1919	112	2,377	36,128,595	10,890,210			All other.....	13.4	4.9	3.9	3.9
	1914	88	2,617	20,628,404	6,708,207			1919	11.9	2.8	3.0	3.2
All other.....	1919	23	135	1,597,917	482,085							
	1914	18	84	606,303	244,919							

## MANUFACTURES.

## GENERAL TABLE.

Detailed statement, by states.—The detailed statistics for the industry for 1919 are given in Table 85, by states.

TABLE 85.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					EXPENSES,				
		Total.	Proprietors and firm members, and managers.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.		Total.	16 and over.		Under 16.		Capital.				
				Male.	Female.	Average number.	Number, 15 day of—			Male.	Female.	Male.	Female.					
							Maximum month.	Minimum month.										
United States..	172	4,019	91	342	538	283	2,765	De 3,071	Je 2,566	3,066	2,803	184	76	3	\$27,533,899	\$1,440,466	\$1,255,313	
California.....	7	111	3	15	8	5	80	De 85	Ja 75	85	69	16	2	1	671,667	42,785	43,888	
Connecticut.....	8	320	2	18	37	16	247	Ja 301	My 206	292	274	13	3	2	3,241,340	103,075	99,990	
Illinois.....	9	298	4	29	49	24	192	Se 208	Ja 175	213	206	5	1	1	2,004,687	158,244	109,748	
Massachusetts.....	20	364	7	30	37	21	200	De 309	Au 243	303	282	20	7	1	1,945,208	147,389	74,385	
Michigan.....	3	141	3	9	7	9	113	Au 135	Ja 98	133	116	17	17	1	1,085,702	40,585	22,321	
Minnesota.....	3	153	2	20	14	3	116	De 143	Ap 101	143	85	2	56	1	1,501,540	30,678	29,138	
Missouri.....	8	123	2	16	33	16	56	Oc 1	Fe 45	61	61	1	1	1	702,247	66,160	53,223	
New Jersey.....	10	130	10	7	22	9	82	My 85	Ap 1	81	64	16	1	1	630,402	67,023	45,504	
New York.....	37	934	27	54	142	51	660	Ja 702	Ap 623	677	642	34	1	1	6,501,653	246,459	354,880	
Ohio.....	10	184	4	26	42	14	102	De 118	Ja 94	109	107	2	1	1	1,072,209	89,623	44,593	
Pennsylvania.....	17	633	16	48	77	78	414	Oc 457	Je 352	448	413	34	1	1	4,151,003	213,911	182,985	
Rhode Island.....	6	38	1	7	5	5	25	De 28	Fe 1	23	28	28	1	1	176,653	32,260	5,492	
Tennessee.....	3	34	4	1	1	1	29	De 1	33	My 1	25	33	33	1	1	56,407	2,400	2,400
Washington.....	5	18	6	2	1	1	8	Se 1	9	Ja 1	7	8	8	1	1	90,730	2,500	882
All other states <sup>2</sup> .....	26	538	6	61	68	31	372	.....	.....	446	415	25	6	1	3,571,202	190,779	183,181	
EXPENSES—continued.																POWER.		
STATE.	Salaries and wages—Con.	Rent and taxes.				For materials.		Value added by manufacture.		Primary horsepower.					Electric horsepower generated in establishments reporting.			
		For contract work.	Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Value of products.	Total.	Owned.		Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. <sup>3</sup>	Rented. <sup>4</sup>			
									Total.									
United States..	\$3,260,439	\$114,526	\$306,764	\$647,700	\$27,899,058	\$257,653	\$40,480,654	\$12,323,943	7,030	3,907	450	87	55	2,480	320			
California.....	81,635	.....	4,505	21,755	732,094	6,722	1,083,208	344,302	261	.....	.....	.....	.....	.....	261	.....		
Connecticut.....	285,258	.....	14,735	68,907	2,777,684	17,821	3,080,487	1,135,282	377	155	.....	.....	.....	.....	222	3		
Illinois.....	257,144	.....	65,122	109,570	2,444,502	15,670	3,315,438	855,260	308	325	.....	.....	.....	.....	43	117		
Massachusetts.....	328,630	3,401	27,715	36,950	2,911,870	17,076	3,943,685	1,014,130	383	135	.....	.....	.....	.....	248	.....		
Michigan.....	127,198	.....	799	50,775	1,015,535	17,909	1,505,982	562,538	585	330	.....	.....	.....	.....	255	.....		
Minnesota.....	136,028	.....	11,240	33,758	1,189,164	6,584	1,808,535	612,787	120	40	.....	.....	.....	.....	80	.....		
Missouri.....	56,796	.....	6,407	20,697	763,822	4,689	1,040,500	272,015	133	.....	.....	.....	.....	.....	133	.....		
New Jersey.....	90,336	.....	6,030	7,148	706,573	8,904	1,001,526	286,040	104	7	.....	.....	.....	.....	97	57		
New York.....	854,000	.....	78,098	87,266	6,386,328	94,178	9,331,023	2,880,517	3,100	2,380	450	22	.....	.....	254	57		
Ohio.....	107,366	.....	13,367	14,263	1,132,842	5,032	1,549,695	411,821	108	.....	.....	55	111	.....	.....	.....		
Pennsylvania.....	475,205	111,125	44,712	75,928	3,547,550	30,513	5,574,106	1,906,042	597	400	.....	61	.....	.....	136	143		
Rhode Island.....	33,518	.....	3,775	2,080	206,602	2,380	315,131	106,140	98	75	.....	4	.....	.....	17	.....		
Tennessee.....	20,467	.....	270	502	37,550	1,357	79,076	40,160	28	15	.....	.....	.....	.....	13	.....		
Washington.....	11,685	.....	2,712	933	99,673	354	141,073	41,040	18	.....	.....	.....	.....	.....	18	.....		
All other states <sup>2</sup> .....	305,174	.....	27,097	111,106	3,977,269	28,184	5,771,184	1,705,731	607	105	.....	.....	.....	.....	592	.....		

<sup>1</sup> Same number reported for one or more other months.<sup>2</sup> All other states embrace: Colorado, 1 establishment; Delaware, 1; Georgia, 3; Indiana, 3; Louisiana, 3; Maine, 1; Maryland, 2; Mississippi, 1; New Hampshire, 1; North Carolina, 2; Oregon, 1; South Carolina, 1; Virginia, 3; and Wisconsin, 3.<sup>3</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).<sup>4</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

# TRUNKS AND VALISES.

## GENERAL STATISTICS.

**General character of the industry.**—This industry includes establishments engaged primarily in the manufacture of trunks and valises, including suit cases and similar manufactures, among which are hat boxes, luncheon kits, etc. The products are largely of leather, but imitation leather, canvas, and fiber board enter into their construction to a large degree. In addition to the establishments constituting the classified industry, production was reported in 1919 to the value of \$931,825 by eight establishments primarily engaged in other lines of manufacture.

**Comparative summary.**—Table 86 presents the principal statistics for the several census years from 1879 to 1919, inclusive. The increase in financial items in 1919 as compared with 1914 was to a large degree due to the general advance in prices; still, the industry shows a very material growth as measured by the number of establishments and persons engaged in the industry.

**Wage earners, by months.**—The figures in Table 87 reflect the steadiness of employment from month to month, or the reverse, the latter months of the year being the months of maximum employment as a rule, with January the minimum month. The industry employs a considerable number of female wage earners, 15.6 per cent in 1919.

**Prevailing hours of labor.**—Table 88 shows that in 1909 only 3.6 per cent, and in 1914, 4.7 per cent of the wage earners were in establishments where the prevailing hours of labor were 48 per week or less, but in 1919 this percentage increased to 39.3 per cent. On the

other hand, 27.2 per cent of the wage earners in 1909 were in establishments where the prevailing hours of labor were 60 or more per week; in 1914 the proportion was 18.1 per cent and in 1919, but 1.3 per cent.

**Size of establishments, by average number of wage earners.**—As shown in Table 89, the establishments in 1919 averaged 19 wage earners per establishment as compared with 18 in 1914.

The majority of the establishments were owned by individuals or firms, with work done by the proprietors, and as a result many establishments reported no wage earners or very few. In 1919, 54.1 per cent of the establishments, and in 1914, 54 per cent reported no wage earners or not exceeding 5 per establishment. The industry includes, however, a number of establishments employing a relatively large number of wage earners. There were 23 establishments in 1919, each with more than 100 wage earners, aggregating 43.1 per cent of the total number and in 1914, 21 establishments with 37.2 per cent of the total number of wage earners.

**Character of ownership.**—Table 90 shows that establishments owned by corporations represented but 32.5 per cent of the total number, but they employed 71.8 per cent of the wage earners, and accounted for 68.2 per cent of the products. The average value of products per establishment for the industry was approximately \$107,000 in 1919 as compared with \$47,000 in 1914. The corporations averaged \$225,000 per establishment in 1919, the individual establishments \$39,000, and the "All other" group, chiefly firms, \$72,000.

TABLE 86.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT INCREASE. <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	507	561	524	373	312	395	265	6.4	7.1	40.5	19.6	-21.0	49.1
Persons engaged.....	14,216	12,154	13,422	10,458	(2)	(2)	(2)	17.0	-9.4	28.3	.....	.....	.....
Proprietors and firm members .....	601	540	552	406	(2)	(2)	(2)	9.5	-0.5	36.0	.....	.....	.....
Salaried employees.....	2,145	1,694	1,748	961	708	(2)	(2)	26.6	-3.1	81.9	35.7	.....	.....
Wage earners (average number).....	11,470	9,911	11,122	9,001	6,984	6,032	4,534	16.7	-10.9	22.3	30.5	(4)	(4)
Primary horsepower.....	7,703	7,598	6,885	5,016	3,314	2,001	(2)	1.8	0.9	37.3	51.4	65.6	.....
Capital.....	\$34,258,034	\$18,570,817	\$18,308,037	\$11,018,937	\$6,929,044	\$6,900,756	\$2,792,256	84.5	1.4	66.2	59.0	0.4	147.1
Salaries and wages.....	17,735,544	7,708,448	7,652,587	5,150,005	3,469,173	3,513,749	1,786,586	130.1	0.7	48.6	48.5	-1.3	96.7
Salaries.....	5,271,777	2,166,201	2,116,258	1,010,971	682,187	(2)	(2)	143.4	2.4	109.2	46.1	.....	.....
Wages.....	12,463,767	5,540,157	5,537,329	4,139,034	2,777,016	(2)	(2)	125.0	0.1	33.8	49.0	.....	.....
Paid for contract work.....	40,031	8,969	49,600	8,335	(2)	(2)	(2)	346.2	-82.0	496.2	.....	.....	.....
Rent and taxes.....	2,139,249	763,783	636,981	4,423,263	(2)	(2)	(2)	180.1	20.0	50.5	.....	.....	.....
Cost of materials.....	33,222,432	13,625,457	14,029,065	9,107,735	5,954,718	4,703,982	3,910,133	143.8	-6.9	60.6	53.0	26.6	20.3
Value of products.....	68,932,266	26,471,527	28,027,904	18,643,530	12,428,040	10,821,621	7,252,470	141.5	-5.6	50.3	50.0	14.8	49.2
Value added by manufacture <sup>2</sup> .....	30,709,834	12,840,070	13,398,899	9,636,795	6,473,928	6,117,639	3,642,337	139.1	-4.1	40.5	47.3	5.8	83.0

<sup>1</sup> A minus sign (−) denotes decrease.

<sup>2</sup> Figures not available.

<sup>3</sup> Figures not strictly comparable.

<sup>4</sup> Exclusive of internal revenue.

<sup>5</sup> Value of products less cost of materials.

## MANUFACTURES.

TABLE 87.—WAGE EARNERS, BY MONTHS: 1919.

[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.....	11,470	<i>10,101</i>	10,471	10,711	10,785	11,065	11,358	11,678	11,942	12,178	12,467	12,463	12,421	81.0
Males.....	9,677	<i>8,509</i>	8,879	9,063	9,121	9,385	9,807	9,804	10,078	10,256	10,453	10,455	10,394	82.0
Females.....	1,703	<i>1,592</i>	1,592	1,648	1,664	1,680	1,751	1,814	1,864	1,922	2,014	2,008	2,027	75.6
1914.....	9,911	<i>9,816</i>	10,324	10,427	10,633	10,318	10,174	10,124	9,935	9,845	9,643	9,096	8,597	80.9
1909.....	11,122	<i>10,283</i>	10,682	11,008	10,815	11,143	11,070	10,957	11,420	11,700	11,638	11,587	11,169	87.9
Illinois.....	1,181	<i>1,039</i>	1,076	1,117	1,116	1,130	1,179	1,229	1,223	1,230	1,260	1,265	1,299	80.0
Massachusetts.....	614	<i>504</i>	534	535	549	503	638	648	674	702	676	675	640	71.8
Missouri.....	877	<i>775</i>	799	823	820	838	863	887	909	938	989	951	932	78.4
New Jersey.....	717	<i>631</i>	604	642	633	602	609	722	738	744	798	805	836	75.5
New York.....	1,950	<i>1,719</i>	1,800	1,845	1,851	1,883	1,911	1,979	2,046	2,118	2,131	2,094	2,023	80.7
Pennsylvania.....	1,115	<i>964</i>	980	1,022	1,024	1,113	1,160	1,197	1,172	1,166	1,195	1,198	1,201	79.4
Virginia.....	1,703	<i>1,549</i>	1,580	1,587	1,598	1,609	1,698	1,729	1,796	1,810	1,805	1,812	1,803	85.5
Wisconsin.....	933	<i>848</i>	840	809	851	882	874	942	927	1,007	1,048	1,041	1,061	79.7

TABLE 88.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—								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.	Over 60.			44 and under.	Between 44 and 48.	48.	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States.....	1919..	11,470	790	595	3,127	3,501	1,482	1,741	139	5	New York.....	1,950	345	31	1,213	134	224	...	3
1914.....		9,911	(2)	(2)	408	1,559	2,498	3,586	1,756	36	Pennsylvania.....	1,115	187	63	155	229	21	460	...
1909.....		11,122	(2)	(2)	390	378	2,564	4,753	2,092	36	Virginia.....	1,703	4	509	894	296	...	...	...
Illinois.....		1,181	165	238	382	354	15	27	...	...	Wisconsin.....	933	...	15	138	18	694	68	...
Massachusetts.....		614	11	159	357	61	...	20	...	...									
Missouri.....		877	...	90	16	638	65	20	...	...									
New Jersey.....		717	27	3	149	522	7	...	9	...									

<sup>1</sup> Includes 48 and under for 1914 and 1909.<sup>2</sup> Corresponding figures not available.

TABLE 89.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	Establishments.	Wage earners (average number).	TOTAL.								ESTABLISHMENTS EMPLOYING—								
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.								
United States.....	1919.	597	11,470	47	276	566	154	1,829	72	2,358	25	1,778	17	2,572	5	1,671	1	696	
1914.		561	9,911	49	254	640	147	1,713	60	1,804	30	2,070	10	2,704	1	340	1	590	
Illinois.....		61	1,181	5	21	55	20	218	8	243	5	347	2	318	...	...	...	...	
Massachusetts.....		614	1	8	14	8	102	7	104	1	65	1	239	...	...	...	...	...	
Missouri.....		877	...	6	12	6	71	4	114	2	182	1	190	1	308	...	...	...	
New Jersey.....		717	...	8	16	3	28	5	160	3	244	2	270	...	...	...	...	...	
New York.....		158	1,950	16	73	151	45	577	17	578	5	343	2	301	...	...	...	...	
Pennsylvania.....		86	1,115	12	46	87	18	210	6	199	2	111	1	109	1	399	1	696	
Virginia.....		15	1,703	2	5	2	30	5	216	1	65	3	402	1	289	1	696	...	...
Wisconsin.....		18	933	1	4	6	67	2	67	3	230	2	265	1	239	...	...	...	...

TABLE 90.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Census year.	Number of establishments	Average number of wage earners.	Value added by manufacture.	CHARACTER OF OWNERSHIP.		Census year.	Number of establishments	Average number of wage earners.	Value added by manufacture.	
					Per cent distribution:	Individual.....					
All classes.....	1919	597	11,470	\$63,932,268	44.2	14.4	1919	47.2	17.7	16.2	14.1
	1914	561	9,911	26,471,527	4,839,045	2,328,047				18.3	18.1
Individual.....	1919	264	1,049	10,337,202	4,337,951	...	1914	32.5	71.8	68.2	70.6
	1914	265	1,750	1,732,027	1,727,774			30.3	66.9	65.5	65.7
Corporation.....	1919	194	8,237	43,572,070	21,673,659	...	1919	23.3	13.8	15.7	15.3
	1914	170	6,028	17,332,027	8,572,224			22.5	15.5	16.2	15.1
All other.....	1919	139	1,584	10,022,994	4,698,224	...	1914	...	...	...	...
	1914	126	1,533	4,300,455	1,945,249						

# TRUNKS AND VALISES.

55

## GENERAL TABLE.

Detailed statement, by states.—The detailed statistics for the industry by states, 1919, are given in Table 91.

TABLE 91.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.						WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.			
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.		Total.	16 and over.		Under 16.		Capital.	Salaries and wages.		
					Male.	Female.	Average number.	Number, 15th day of—		Male.	Female.	Male.	Female.		Officials.	Clerks, etc.	
United States.....	597	14,216	601	741	937	467	11,470	Oc 12, 467	Ja 10, 101	12,649	10,453	1,977	151	68	\$34,258,034	\$2,723,188	\$2,548,589
California.....	45	430	53	22	20	8	336	De 410	My 238	410	320	81	.....	.....	34,586	34,771	.....
Colorado.....	7	102	7	10	7	5	73	Oc 82	Ja <sup>1</sup> 67	80	62	11	7	.....	189,464	33,195	18,941
Illinois.....	61	1,495	58	85	130	41	1,181	De 1,299	Ja 1,039	1,312	1,101	201	4	6	3,630,108	358,042	339,651
Indiana.....	8	466	8	12	8	11	427	No 468	Ja 323	446	364	82	.....	.....	1,262,519	35,151	33,550
Iowa.....	10	30	12	.....	.....	2	16	Au 18	Ja <sup>1</sup> 15	16	13	3	.....	.....	71,383	.....	1,650
Maryland.....	7	44	9	.....	.....	35	.....	Au 42	Ja 13	42	24	18	.....	.....	48,814	.....	.....
Massachusetts.....	28	753	28	35	47	29	614	Se 702	Ja 504	681	480	180	12	12	1,487,314	108,556	133,087
Michigan.....	10	237	11	12	4	11	199	Jy <sup>1</sup> 201	My 198	199	126	73	.....	.....	519,668	44,327	18,173
Minnesota.....	14	111	10	12	6	4	79	De 92	Ja <sup>1</sup> 65	93	84	6	1	2	194,795	21,710	8,338
Missouri.....	20	1,026	15	38	71	25	877	Oc 989	Ja 775	932	792	134	5	1	2,092,393	114,105	156,886
Nebraska.....	4	20	4	1	1	1	13	Ja 19	Ja <sup>1</sup> 11	11	10	1	.....	.....	31,459	2,500	2,063
New Jersey.....	21	849	15	42	51	24	717	De 836	Ja 631	837	717	120	.....	.....	2,494,174	248,315	192,346
New York.....	158	2,527	144	171	168	94	1,950	Oc 2,131	Ja 1,719	2,168	1,972	189	6	1	5,807,300	585,194	512,292
Ohio.....	22	399	26	29	21	17	306	Au 343	Ja 246	324	265	59	.....	.....	1,067,583	116,517	63,715
Oregon.....	5	77	5	7	4	2	59	No 72	Ja 48	71	39	32	.....	.....	198,076	24,381	20,686
Pennsylvania.....	86	1,467	120	58	122	52	1,115	De 1,201	Ja 954	1,220	1,064	124	15	17	3,467,647	295,928	294,544
Tennessee.....	7	178	.5	8	33	3	129	Au 144	Se 107	134	115	19	.....	.....	400,724	46,903	.....
Texas.....	12	178	13	21	15	2	125	De 135	Ja 91	135	126	9	.....	.....	220,387	55,435	20,295
Utah.....	6	28	9	1	4	1	13	Jy <sup>1</sup> 15	Ja <sup>1</sup> 10	15	15	15	.....	.....	53,861	1,500	5,015
Virginia.....	15	1,904	4	84	71	42	1,703	No 1,812	Ja 1,549	1,805	1,598	191	15	1	5,249,497	303,766	184,901
Washington.....	13	108	15	6	10	4	73	No 82	Fe 67	83	63	17	3	.....	240,982	11,303	21,298
Wisconsin.....	18	1,135	5	43	90	64	933	De 1,061	Fe 846	1,058	744	218	73	23	2,530,386	199,979	346,710
All other states <sup>1</sup> .....	22	645	25	44	54	25	497	.....	.....	574	350	209	10	5	1,781,679	101,498	92,144
EXPENSES—continued.																POWER.	
STATE.	Salaries and wages—Continued.	EXPENSES—continued.						Primary horsepower.						Electric horsepower generated in establishments reporting.			
		Rent and taxes.			For materials.			Value of products.	Value added by manufacture.	Owned.		Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Rented.	
		For contract work.	Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Steam engines (not turbines).			Steam turbines.							
United States.....	\$12,463,767	\$40,031	\$723,594	\$1,415,655	\$32,959,431	\$263,001	\$63,932,266	\$30,709,834	7,703	4,335	120	159	3,080	115	50	2	
California.....	360,636	412	32,402	6,348	835,158	4,011	1,552,508	713,339	195	80	.....	.....	.....	451	451	181	
Colorado.....	61,744	7	7,272	1,847	120,704	1,118	292,499	170,587	59	.....	.....	.....	.....	205	205	2	
Illinois.....	1,482,446	1,500	88,166	131,032	3,824,742	28,698	7,292,902	3,439,462	706	265	.....	.....	.....	3	3	2	
Indiana.....	416,682	.....	3,471	22,888	715,643	17,753	1,348,231	614,835	310	105	.....	.....	.....	75	75	15	
Iowa.....	17,772	.....	4,875	880	14,258	380	57,026	42,388	3	.....	.....	.....	.....	240	240	225	
Maryland.....	23,913	.....	4,027	93	60,424	663	112,316	51,229	8	.....	.....	.....	.....	88	88	8	
Massachusetts.....	541,587	1,105	20,690	64,532	1,842,242	7,900	3,206,473	1,356,322	88	.....	.....	.....	.....	23	23	15	
Michigan.....	202,187	.....	200	10,361	21,808	3,227	377,003	3,227	140,682	140,682	143	.....	.....	120	120	115	
Minnesota.....	95,975	.....	300	12,871	4,203	254,763	3,638	480,834	222,433	75	.....	.....	.....	290	290	225	
Missouri.....	856,187	.....	63,048	180,963	2,369,500	27,122	4,278,561	1,881,939	530	.....	.....	.....	.....	9	9	9	
Nebraska.....	12,525	.....	2,040	.....	27,747	464	86,619	58,408	9	.....	.....	.....	.....	158	158	200	
New Jersey.....	939,054	711	41,277	46,080	2,751,503	15,270	4,898,976	2,132,203	437	275	.....	.....	.....	103	433	25	
New York.....	2,780,245	25,494	259,235	55,078	7,624,774	42,632	13,077,087	6,309,881	828	290	.....	.....	.....	98	98	154	
Ohio.....	357,035	.....	26,100	19,735	798,074	7,525	1,636,384	832,785	223	125	.....	.....	.....	32	32	32	
Oregon.....	76,021	.....	7,170	3,710	176,658	1,665	398,350	221,027	32	.....	.....	.....	.....	4	4	4	
Pennsylvania.....	1,167,643	3,672	71,941	161,014	3,034,248	26,608	6,620,836	3,559,982	539	220	.....	.....	.....	32	287	180	
Tennessee.....	86,366	.....	3,785	12,946	220,243	3,654	470,730	246,833	176	150	.....	.....	.....	26	26	4	
Texas.....	90,965	.....	10,700	6,178	232,606	1,840	502,590	268,144	97	.....	.....	.....	.....	97	97	97	
Utah.....	10,551	.....	5,480	194	21,923	74	62,562	40,565	4	.....	.....	.....	.....	4	4	4	
Virginia.....	1,683,730	.....	3,948	475,182	4,119,725	17,246	8,618,472	4,481,501	1,557	1,430	.....	.....	.....	127	127	437	
Washington.....	85,712	.....	11,850	1,623	170,080	772	367,163	196,311	23	.....	.....	.....	.....	23	23	23	
Wisconsin.....	738,385	6,637	5,950	170,946	2,351,415	36,294	4,724,196	2,336,487	1,260	995	.....	.....	.....	274	274	616	
All other states <sup>1</sup> .....	407,532	.....	28,645	22,038	1,017,908	14,440	2,125,039	1,092,691	394	120	20	254	.....	254	254	254	

<sup>1</sup> Same number reported for one or more other months.

<sup>2</sup> All other states embrace: Alabama, 1 establishment; Arizona, 1; Arkansas, 1; Connecticut, 3; District of Columbia, 1; Georgia, 2; Kansas, 3; Kentucky, 2; Louisiana, 2; Maine, 2; North Dakota, 1; Rhode Island, 1; South Dakota, 1; and Wyoming, 1.

<sup>3</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

# POCKETBOOKS.

## GENERAL STATISTICS.

**General character of the industry.**—This industry embraces establishments manufacturing pocketbooks, purses, ladies' purse-hand bags, cardcases, wallets, coin purses, bill folds, brief cases, etc., made chiefly of leather. In addition to the establishments constituting the classified industry in 1919, production was reported to the value of \$110,772 by 7 establishments engaged in the manufacture of other products.

**Comparative summary.**—Table 92 presents the principal statistics for each census year from 1879 to 1919 inclusive. The large increase in financial items in 1919 as compared with 1914 was to a considerable extent, due to the general advance in prices, but the increase of 98.2 per cent in wage earners indicates a very material growth in the industry.

**Wage earners, by months.**—The figures in Table 93 reflect the steadiness of employment, or the reverse, from month to month. There was relatively less variation in employment, in 1919 than in 1914, the minimum-month number in 1919 being 81.6 per cent of the maximum month as compared with 73.3 per cent in 1914 and 78.1 per cent in 1909. The industry gave employment to a relatively large number of females, 47 per cent in 1919, and in the state of New York, the leading state, 36.6 per cent of the average number of wage earners were females.

**Prevailing hours of labor.**—In 1909 only 3.3 per cent, and in 1914 but 14.5 per cent of the total

number of wage earners, as shown in Table 94, were in establishments where the prevailing hours of labor were 48 per week or less, but in 1919 there were 76.1 per cent in establishments of this class. On the other hand, 74.9 per cent of the wage earners in 1909 were in establishments where the hours were more than 54 per week, whereas in 1914 the percentage dropped to 18.9 per cent and in 1919, to 8.5 per cent. New York, which reported 63.4 per cent of the wage earners, showed three-fourths of them in establishments where the prevailing hours per week were 44 or under.

**Size of establishments, by average number of wage earners.**—The establishments in 1919 averaged 21 wage earners per establishment as compared with 23 in 1914. Table 95 indicates that the industry included a relatively large number of establishments owned by individuals and by firms in which the work was done by the proprietors since many of the establishments reported few or no wage earners. In 1919, 43.2 per cent of the establishments, reporting no wage earners or fewer than 6 per establishment, employed only 4.6 per cent of the total average number.

**Character of ownership.**—Table 96 shows that less than one-fourth of the establishments in this industry were incorporated, but these reported 41 per cent of the value of products; the group "All other," chiefly firms, forming 38.8 per cent of the number of establishments, reported 42.3 per cent of the products.

TABLE 92.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	139	64	70	46	68	62	53	.....	.....	.....	.....	.....	.....
Persons engaged.....	3,407	1,738	1,771	2,500	1,862	(2)	(2)	101.2	-1.9	-29.2	34.8	.....	.....
Proprietors and firm members..	108	81	100	62	85	(2)	(2)	.....	-19.0	.....	.....	.....	.....
Salaried employees.....	424	191	199	157	124	(2)	(2)	122.0	-4.0	26.8	26.6	.....	.....
Wage earners (average number)	2,905	1,466	1,472	2,281	1,653	1,208	1,413	98.2	-0.4	-35.5	38.0	(1)	(1)
Primary horsepower.....	431	243	178	317	181	156	(2)	77.4	36.5	-43.8	75.1	16.0	87.5
Capital.....	\$5,427,900	\$1,609,601	\$1,892,862	\$2,127,824	\$991,876	\$1,121,884	\$598,360	237.2	-15.0	-11.0	114.5	-11.6	87.5
Salaries and wages.....	4,187,167	941,206	931,067	1,031,431	734,814	661,992	484,947	344.9	1.1	-9.7	40.4	11.0	36.5
Salaries.....	1,125,264	238,802	242,452	234,446	146,219	(2)	(2)	371.0	-1.5	3.4	60.3	.....	.....
Wages.....	3,061,903	702,314	688,615	798,985	588,595	(2)	(2)	336.0	2.0	-13.6	35.4	.....	.....
Paid for contract work.....	167,873	20,831	4,115	22,000	2,182	(2)	(2)	705.9	406.2	-81.3	917.6	.....	.....
Rent and taxes.....	231,898	53,232	61,473	428,038	430,285	(2)	(2)	429.6	-13.4	112.6	-4.5	.....	.....
Cost of materials.....	7,557,155	1,783,840	1,920,327	1,926,723	1,278,226	968,948	930,033	323.6	-7.5	0.1	50.7	31.9	4.2
Value of products.....	14,549,659	3,350,552	3,628,161	3,767,446	2,495,188	2,185,462	1,769,036	334.2	-7.7	-3.7	51.0	15.2	22.4
Value added by manufacture ..	6,992,504	1,566,712	1,698,834	1,840,723	1,216,982	1,196,514	839,008	346.3	-7.8	-7.7	51.3	1.7	42.6

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where base is less than 100.

<sup>2</sup> Figures not available.

<sup>3</sup> Figures not strictly comparable.

<sup>4</sup> Exclusive of internal revenue.

<sup>5</sup> Value of products less cost of materials.

## POCKETBOOKS.

57

TABLE 93.—WAGE EARNERS, BY MONTHS: 1919.

[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.	Febru-	March.	April.	May.	June.	July.	August.	Septem-	October.	November.	December.	
United States:														
1910.....	2,905	2,605	2,718	2,773	2,760	2,754	2,791	2,892	3,013	3,060	3,126	3,194	3,169	81.6
Males.....	1,541	1,431	1,477	1,490	1,465	1,458	1,464	1,542	1,608	1,666	1,636	1,638	1,627	86.4
Females.....	1,364	1,774	1,241	1,288	1,295	1,296	1,327	1,350	1,405	1,490	1,490	1,556	1,642	75.4
1914.....	1,466	1,300	1,389	1,545	1,506	1,432	1,398	1,438	1,517	1,627	1,695	1,492	1,243	73.3
1909.....	1,472	1,380	1,467	1,431	1,358	1,324	1,403	1,347	1,460	1,539	1,653	1,695	1,614	78.1
New York:	1,842	1,688	1,745	1,770	1,751	1,736	1,761	1,843	1,934	1,968	1,986	1,989	1,954	83.9
Males.....	1,167	1,082	1,119	1,119	1,106	1,097	1,103	1,177	1,236	1,268	1,240	1,236	1,217	85.6
Females.....	675	582	626	660	645	639	648	666	698	700	746	753	737	77.3

TABLE 94.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
		44 and under.	Between 44 and 48.	48. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	60.
United States.....	1010..	2,905	1,555	101	554	419	29	247
	1914..	1,466	(3)	(3)	212	275	702	274
	1909..	1,472	(3)	(3)	49	156	164	755
New York.....		1,842	1,398	101	67	243	20	13

<sup>1</sup> Includes 48 and under for 1914 and 1909.

<sup>2</sup> Corresponding figures not available.

TABLE 95.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS: 1919 AND 1914.

WAGE EARNERS PER ESTABLISHMENT.	ESTABLISHMENTS.		WAGE EARNERS (AVERAGE NUMBER).				WAGE EARNERS PER ESTABLISHMENT.	ESTABLISHMENTS.		WAGE EARNERS (AVERAGE NUMBER).				
	1919	1914	1919	1914	Per cent of total.			1919	1914	1919	1914	Per cent of total.		
					1919	1914						1919	1914	
All establishments.....	139	64	2,905	1,468	100.0	100.0	21 to 50 wage earners.....	21	11	763	335	26.3	22.9	
No wage earners.....	14	7					51 to 100 wage earners.....	9	2	570	190	19.6	13.0	
1 to 5 wage earners.....	46	19	135	48	4.6	3.3	101 to 250 wage earners.....	7	3	901	380	31.0	25.9	
6 to 20 wage earners.....	42	21	536	261	18.5	17.8	251 to 500 wage earners.....		1		252		17.2	

TABLE 96.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Cen-sus year.	Num-ber of estab-lish-ments.	Average number of wage earners.	Value of products.	Value added by manufac-ture.	CHARACTER OF OWNERSHIP.	Cen-sus year.	Num-ber of estab-lish-ments.	Average number of wage earners.	Value of products.	Value added by manufac-ture.
All classes.....	1910	139	2,905	\$14,549,659	\$8,992,504	Per cent distribution:					
	1914	64	1,406	3,350,552	1,566,712	Individual.....	1910	35.3	19.3	16.7	16.8
Individual.....	1910	49	561	2,425,813	1,175,720		1914	46.9	14.6	17.6	16.7
	1914	30	214	588,335	261,131	Corporation.....	1910	25.9	47.4	41.0	42.1
Corporation.....	1910	36	1,378	5,963,039	2,943,191		1914	21.9	43.3	38.1	41.9
	1914	14	635	1,276,523	656,609	All other.....	1910	38.8	33.3	42.3	41.1
All other.....	1910	54	966	6,160,807	2,873,593		1914	31.2	42.1	44.3	41.4
	1914	20	617	1,485,694	648,972						

## MANUFACTURES.

## GENERAL TABLE.

Detailed statement, by states.—The detailed statistics for the industry, 1919, are given in Table 97, by states.

TABLE 97.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establish- ments.	PERSONS ENGAGED IN THE INDUSTRY.						WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital,		
		Total.	Propri- tors and firm mem- bers.	Salar- ied offi- cers, super- in- tend- ents, and man- agers.	Clerks, etc.		Wage earners.		Total.	16 and over.		Under 16.		
					Male.	Fe- male.	Aver- age num- ber.	Number, 15th day of—		Male.	Fe- male.	Male.	Fe- male.	
United States.....	139	3,497	168	123	180	121	2,905	No 3,194 Ja 2,605	3,190	1,602	1,497	33	58	\$5,427,990
California.....	3	6	3	.....	.....	.....	3	(1) 3 (1) 3	3	3	.....	.....	.....	14,400
Illinois.....	10	122	9	9	11	10	83	No 111 Ja 67	99	59	40	.....	.....	252,604
Massachusetts.....	10	442	12	17	18	14	381	De 434 Ja 303	434	116	301	3	14	704,537
New York.....	93	2,223	134	67	110	70	1,842	No 1,989 Ja 1,668	1,969	1,224	745	.....	.....	3,366,469
Pennsylvania.....	7	185	5	6	9	4	161	Fe 160 Je 155	163	45	111	7	241,561	
Wisconsin.....	6	296	1	12	16	9	258	De 317 Jy 232	317	110	153	25	29	536,600
All other states <sup>1</sup> .....	10	223	4	12	16	14	177	.....	205	45	147	5	8	311,799
EXPENSES.													POWER.	
STATE.													.....	
		Salaries and wages.			For contract work.		Rent and taxes.		For materials.		Value of products.		Value added by manufacture.	
		Officials.	Clerks. etc.	Wage earners.	.....	.....	Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	.....	.....	Primary horse- power (elec- tric) rented.	
United States.....	\$565,925	\$559,330	\$3,001,903	\$167,873	\$177,636	\$104,262	\$7,524,883	\$32,272	\$14,540,659	\$6,992,504	431	.....	.....	
California.....	4,296	.....	.....	.....	924	20	3,928	131	10,709	6,050	1	214,485	22	
Illinois.....	27,031	82,130	259,623	4,299	8,680	1,759	161,179	847	376,511	207,643	50	707,643	22	
Massachusetts.....	118,525	81,310	245,022	9,887	17,385	612,010	5,138	1,324,791	5,174,664	254,716	28	254,716	28	
New York.....	291,111	345,402	2,337,223	157,166	141,057	56,937	5,913,503	18,268	11,103,315	5,174,664	22	368,629	28	
Pennsylvania.....	13,830	25,243	102,850	9,047	6,775	6,004	197,080	1,531	453,297	275,448	42	265,777	42	
Wisconsin.....	39,449	37,817	159,094	703	2,957	30,671	352,737	4,082	284,470	2,335	552,588	.....	.....	
All other states <sup>1</sup> .....	39,750	46,630	110,087	658	6,456	2,880	.....	.....	.....	.....	.....	.....	.....	

<sup>1</sup> Same number reported throughout the year.<sup>1</sup> All other states embrace: Colorado, 1 establishment; Maine, 1; Missouri, 1; New Jersey, 4; Ohio, 2; and Texas, 1.

# LEATHER GOODS, NOT ELSEWHERE SPECIFIED.

## GENERAL STATISTICS.

**General character of the industry.**—Establishments comprising this industry are those manufacturing leather goods that are not the products of one of the other leather industries, namely, (1) boots and shoes, (2) leather gloves and mittens, (3) boot and shoe cut stock, (4) boot and shoe findings, (5) leather belting, (6) pocketbooks, (7) saddlery and harness, (8) trunks and valises.

In 1919 there were 503 establishments in which leather articles not otherwise provided for were the products of chief value, amounting to \$52,952,772. In addition, 53 establishments engaged primarily in the manufacture of other products, reported miscellaneous leather articles to the value of \$3,507,901.

**Comparative summary.**—Table 98 gives the principal statistics for each census year from 1879 to 1919. On account of the advance in prices since 1914, the increases in the financial items are only in part an indication of growth. The increase in average number of wage earners employed, 26.5 per cent, shows fair growth.

**Wage earners, by months.**—The figures in Table 99, which shows, by months, the number of wage earners employed, reflect the steadiness of employment or the reverse. There was somewhat greater fluctuation in employment in 1919 than in 1914. In New York, the leading state, the number for the minimum month was 74.6 per cent of that for the maximum month. In this industry 37.8 per cent of the wage earners reported were females, and for the states shown this proportion varied from 25.3 per cent in Illinois to 62.5 per cent in Minnesota.

**Prevailing hours of labor.**—Table 100 shows a classification of the wage earners according to the prevail-

ing hours of labor in the establishments in which they were employed. In 1909 only 3.8 per cent of the total number of wage earners were employed in establishments where the prevailing hours per week were 48 or less, and in 1914, 7.2 per cent, but in 1919 the percentage was 77.3 per cent. On the other hand, the proportion of the wage earners in establishments where the working hours were more than 54 per week decreased 65.3 per cent in 1909 to 31.7 per cent in 1914 and to 3.8 per cent in 1919. In New York, the leading state in the industry, 64.6 per cent of the wage earners were employed where the prevailing hours did not exceed 44.

**Size of establishments, by average number of wage earners.**—Though there was an increase of 125—33.1 per cent—in the number of establishments in 1919 as compared with 1914, the average number of wage earners per establishment was approximately the same. Table 101 shows that in 1914, 41.3 per cent of the establishments employed no wage earners or not more than 5, and in 1919, 46.1 per cent.

**Character of ownership.**—In this industry only 32.8 per cent of the establishments, as shown in Table 102, were corporations, but these reported practically two-thirds of the total value of products and of the wage earners employed. The average value of products per establishment in 1919 was \$201,000 for the corporations, \$40,000 for the establishments under individual ownership, and \$94,000 for those of the "All other" class, most of them being firms; in 1914 comparable figures were \$81,000, \$18,000, and \$72,000, respectively. The average wage earners per establishment in 1919 were 32 for the corporation group, 7 for individuals, and 17 for other forms of ownership.

TABLE 98.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	503	378	425	423	315	104	84	33.1	-11.1	0.5	34.3	92.1	.....
Persons engaged.....	11,141	8,623	9,318	9,196	(2)	(2)	(2)	29.2	-7.5	1.3	.....	.....	.....
Proprietors and firm members.....	488	396	448	499	(2)	(2)	(2)	23.2	-11.6	-10.2	.....	.....	.....
Salaried employees.....	4,708	1,156	1,189	912	638	(2)	(2)	47.8	-2.8	30.4	42.9	.....	.....
Wage earners (average number).....	8,045	7,071	7,681	7,785	6,293	2,997	1,430	26.5	-7.9	-1.3	23.7	(2)	(2)
Primary horsepower Capital.....	3,902	3,272	3,851	3,554	1,644	2,264	(2)	19.3	-15.0	8.4	-116.2	-27.4	.....
\$33,341,468	\$10,951,427	\$10,389,283	\$8,508,111	\$5,511,294	\$3,571,847	\$1,428,850	204.4	5.4	22.1	54.4	54.3	150.3	.....
Salaries and wages.....	13,437,845	5,042,101	5,034,746	4,020,551	2,833,895	1,618,770	587,208	166.5	0.1	25.2	41.9	75.1	175.7
Salaries.....	4,022,442	1,438,236	1,411,546	883,428	502,140	(2)	(2)	179.7	1.9	59.8	57.2	.....	.....
Wages.....	9,415,403	3,603,865	3,623,200	3,137,125	2,271,755	(2)	(2)	161.3	-0.5	15.5	38.1	.....	.....
Paid for contract work.....	469,120	98,493	100,248	90,745	(2)	(2)	(2)	386.2	-3.7	10.5	.....	.....	.....
Rent and taxes.....	1,100,571	391,101	319,005	4,300,410	(2)	(2)	(2)	198.3	22.3	3.4	.....	.....	.....
Cost of materials.....	30,633,537	10,632,124	10,280,439	9,628,614	6,191,058	3,324,828	1,511,848	182.5	-3.3	6.9	55.5	86.2	119.9
Value of products.....	62,952,772	19,338,934	18,838,281	17,655,345	11,737,611	6,291,507	2,736,543	175.9	2.6	6.7	49.8	87.4	129.9
Value added by manufacture <sup>2</sup> .....	22,917,235	8,701,810	8,547,842	8,028,731	5,596,553	2,966,879	1,224,695	103.4	1.8	6.5	43.5	88.6	142.2

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where base is less than 100. <sup>2</sup> Figures not strictly comparable. <sup>3</sup> Value of products less cost of materials. <sup>4</sup> Exclusive of internal revenue.

## MANUFACTURES.

TABLE 99.—WAGE EARNERS, BY MONTHS: 1919.

(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 of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	8,945	8,019	8,082	8,097	8,344	8,458	8,575	9,012	9,240	9,328	9,073	10,153	10,089	79.0
Males.....	5,568	4,937	5,030	5,038	5,205	5,276	5,344	5,588	5,770	5,801	6,227	6,338	6,253	77.9
Females.....	3,377	3,082	3,043	3,059	3,109	3,182	3,231	3,424	3,470	3,527	3,746	3,815	3,836	79.3
1914.....	7,071	6,677	6,820	6,881	6,860	6,807	6,930	6,988	7,115	7,553	7,854	7,417	8,941	85.0
1909.....	7,681	7,129	7,242	7,293	7,250	7,248	7,252	7,418	7,780	8,139	8,480	8,623	8,264	82.2
Illinois.....	687	644	645	658	650	663	684	691	686	721	732	758	732	84.2
Massachusetts.....	545	501	513	508	498	513	515	521	548	502	592	625	644	77.3
Minnesota.....	633	632	597	688	605	625	649	687	703	717	756	813	834	70.5
New Jersey.....	630	913	947	920	878	873	801	906	910	950	998	997	1,007	85.5
New York.....	4,410	3,830	3,822	3,875	4,090	4,183	4,230	4,473	4,632	4,590	5,067	5,120	5,029	74.6
Pennsylvania.....	753	670	689	710	715	721	723	787	806	810	815	801	783	82.2
<i>States showing a large proportion of females.</i>														Per cent average of state
Illinois.....	174	165	162	159	166	164	168	174	171	184	183	197	195	25.3
Massachusetts.....	256	241	240	236	233	233	245	241	250	262	275	302	308	47.0
Minnesota.....	427	399	384	361	362	392	403	425	436	452	479	516	535	62.5
New Jersey.....	416	425	433	423	403	401	376	414	403	405	443	430	438	44.7
New York.....	1,277	1,140	1,075	1,113	1,150	1,209	1,232	1,316	1,346	1,321	1,468	1,479	1,469	29.0
Pennsylvania.....	395	349	362	372	376	379	379	421	422	426	428	419	407	52.5

TABLE 100.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
		44 and under.	Between 44 and 48.	48. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	Over 60.			44 and under.	Between 44 and 48.	48. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States: 1919.....	8,945	3,853	661	2,403	1,408	218	222	120	4	Massachusetts.....	545	103	43	336	36	8	13	6
1914.....	7,071	(2) <sup>2</sup>	(2)	511	2,032	2,287	2,040	197	4	Minnesota.....	683	416	...	237	...	...	...	...
1909.....	7,681	(2)	(2)	295	940	1,433	4,020	943	50	New Jersey.....	930	218	10	499	138	22	43	...
Illinois.....	687	65	118	100	336	10	3	5	...	New York.....	4,410	2,849	422	613	361	123	33	9
										Pennsylvania.....	753	99	...	394	208	48	8	1

<sup>1</sup> Includes 48 and under for 1914 and 1909.<sup>2</sup> Corresponding figures not available.

TABLE 101.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	Establishments.	Wage earners (average number).	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.	Over 250 wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States: 1910.....	503	8,945	39	193	511	152	1,751	85	2,086	18	1,335	14	2,132	2	530
1914.....	378	7,071	29	127	365	180	1,707	56	1,764	17	1,107	7	985	3	1,033
Illinois.....	41	687	2	15	50	18	217	5	163	...	...	...	...	1	257
Massachusetts.....	51	545	4	19	54	20	235	7	186	1	70	...	...	...	...
Minnesota.....	11	683	2	6	...	...	...	4	113	3	228	2	336	1	273
New Jersey.....	28	920	5	10	28	6	80	2	80	2	167	2	293	1	273
New York.....	244	4,410	20	86	230	76	875	43	1,450	10	750	8	1,105	2	398
Pennsylvania.....	33	753	1	16	37	6	56	7	207	1	55	2	...	...	...

TABLE 102.—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.	CHARACTER OF OWNERSHIP.		Census year.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
						Individual.....	Corporation.....					
All classes.....	1919	503	8,945	\$52,952,772	\$22,917,235	...	...	1919	43.7	18.3	15.5	16.5
	1914	378	7,071	<i>19</i> ,333, <sup>9</sup> 934	<i>8</i> ,701,810	...	...	1914	43.1	15.9	14.9	15.0
Individual.....	1919	220	1,641	8,725,032	3,807,737	...	...	1919	32.8	59.3	62.7	61.7
	1914	163	1,127	2,878,301	1,304,628	...	...	1914	28.6	45.9	45.2	45.3
Corporation.....	1919	165	5,301	33,184,311	14,138,513	...	...	1919	23.5	22.4	20.9	21.7
	1914	108	3,246	8,747,519	3,941,322	...	...	1914	28.3	38.2	39.9	39.7
All other.....	1919	118	2,003	11,043,429	4,970,985	...	...	1914	...	...	...	...
	1914	107	2,098	7,708,814	3,465,860	...	...	...	...	...	...	...

LEATHER GOODS, NOT ELSEWHERE SPECIFIED.

61

GENERAL TABLE.

Detailed statement, by states.—Table 103 presents the detailed statistics for the industry, by states, for 1919.

TABLE 103.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establish- ments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.				
		Total.	Propri- tors and firm mem- bers.	Sala- ried offi- cers, super- in- tendents, and man- agers.	Clerks, etc.		Wage earners.		Number, 15th day of—	16 and over.		Under 16.		Capital.	Salaries and wages.				
					Male.	Fe- male.	Aver- age num- ber.	Maximum month.		Minimum month.		Total.	Male.	Fe- male.	Male.	Fe- male.			
								Maximum month.		Minimum month.									
United States.....	503	11,141	488	503	718	427	8,945	No	10,153	Ja	8,019	10,076	6,130	3,679	123	144	\$33,341,468	\$2,204,193	\$1,818,249
California.....	17	213	15	14	16	10	158	De	206	Mh	127	108	80	114	1	3	439,111	28,196	21,438
Connecticut.....	4	37	5	1	31	8	33	De	39	Mh	25	39	17	20	1	1	25,395	2,000	-----
Illinois.....	41	836	27	43	46	33	687	No	758	Mh	638	735	510	181	18	17	1,630,633	182,389	104,978
Indiana.....	6	163	1	16	21	16	129	De	157	My	107	94	63	-----	-----	-----	653,029	85,307	52,400
Maryland.....	4	114	6	7	5	4	92	My	99	Mh	84	97	73	22	2	-----	184,270	11,820	117,562
Massachusetts.....	51	677	37	36	32	27	545	De	644	Ap	498	647	319	283	19	16	1,266,265	99,796	84,414
Michigan.....	14	225	11	24	8	8	173	Ap	192	Ja	145	187	117	70	-----	-----	728,731	89,895	22,428
Minnesota.....	11	830	4	37	75	40	883	De	834	Mh	588	753	279	474	-----	-----	2,290,721	192,685	172,438
Missouri.....	8	126	4	13	11	5	93	No	104	My	80	101	51	47	2	1	289,995	39,085	14,720
New Jersey.....	28	1,055	25	43	42	15	930	De	1,007	Je	861	1,009	530	392	34	44	1,853,145	171,623	132,954
New York.....	244	5,519	272	262	308	207	4,410	No	5,120	Fe	3,822	5,034	3,544	1,509	21	10	20,992,529	1,084,022	1,014,407
Ohio.....	13	187	11	15	14	11	136	De	159	Je	113	151	80	70	-----	1	470,039	40,578	18,246
Oregon.....	6	22	4	1	2	1	14	De	17	My	11	17	10	7	-----	-----	44,378	1,000	8,875
Pennsylvania.....	33	947	43	34	75	42	783	Oc	815	Ja	670	792	358	383	25	46	2,256,440	149,171	150,982
Rhode Island.....	4	20	3	2	1	1	22	Se	29	Ap	15	29	12	15	-----	2	18,045	1,876	700
Washington.....	3	11	3	2	-----	-----	6	Do <sup>1</sup>	7	Ja <sup>1</sup>	4	7	1	6	-----	-----	23,400	4,800	-----
Wisconsin.....	6	20	8	13	2	6	12	De	13	Ap	11	13	11	2	-----	-----	29,373	-----	-----
All other states <sup>2</sup> .....	10	101	9	13	2	6	71	Je	84	Fe	57	60	26	31	-----	3	170,068	19,950	6,759

STATE.	EXPENSES—continued.							POWER.						Electric horse- power gen- erated in estab- lish- ments re- port- ing.											
	Salaries and wages— Continued.	Rent and taxes.			For materials.			Value of products.	Value added by manufac- ture.	Primary Horsepower.				Total.	Steam en- gines (not tur- bines).	Internal com- bus- tion en- gines.	Water pow- er. <sup>3</sup>	Rented. <sup>4</sup>							
		For contract work.	Wages. earners.	Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Owned.															
										Total.	Steam en- gines (not tur- bines).	Internal com- bus- tion en- gines.	Water pow- er. <sup>3</sup>												
United States.....	\$0,415,403	3460,120	\$618,185	\$548,836	\$29,856,000	\$178,937	\$52,952,772	\$22,917,235	3,902	696	217	26	2,963	180											
California.....	137,102	50	15,036	2,184	330,950	1,916	670,927	347,061	58	-----	-----	-----	58	-----											
Connecticut.....	26,015	-----	540	234	54,406	511	105,993	51,076	5	-----	-----	-----	5	-----											
Illinois.....	652,863	312	47,361	44,977	2,252,590	25,318	3,921,630	1,643,422	523	175	-----	-----	348	1											
Indiana.....	124,012	8,908	9,662	54,004	823,822	5,393	1,300,832	466,617	134	-----	-----	134	-----												
Maryland.....	63,848	1,145	2,870	604	153,228	1,381	339,837	185,228	28	20	-----	-----	8	-----											
Massachusetts.....	417,345	12,448	32,351	13,384	1,113,942	16,149	2,062,710	932,619	396	94	-----	14	288	-----											
Michigan.....	183,079	-----	11,380	14,694	824,188	5,479	1,258,893	429,226	132	-----	49	-----	90	-----											
Minnesota.....	623,561	-----	22,614	91,441	2,544,678	12,697	4,052,079	1,494,833	194	-----	12	-----	182	-----											
Missouri.....	81,034	-----	6,152	3,374	337,603	5,288	574,996	232,105	419	-----	419	-----	419	-----											
New Jersey.....	918,172	5,673	14,100	48,631	1,641,648	16,764	3,572,645	1,914,133	416	250	65	-----	101	150											
New York.....	5,424,854	430,732	417,284	214,935	17,173,346	60,819	30,322,284	13,088,119	1,025	-----	34	10	981	-----											
Ohio.....	104,387	1,000	8,409	8,111	607,059	4,359	992,124	389,706	156	-----	8	-----	148	-----											
Oregon.....	15,120	-----	2,280	478	36,327	1,302	65,977	31,048	12	-----	12	-----	12	-----											
Pennsylvania.....	631,137	43	19,988	48,013	1,684,446	17,503	3,257,715	1,555,766	356	167	60	-----	152	29											
Rhode Island.....	14,741	-----	1,419	134	19,233	737	47,855	27,885	12	-----	6	-----	6	-----											
Washington.....	5,454	-----	1,526	190	26,135	122	41,996	15,739	4	-----	-----	-----	4	-----											
Wisconsin.....	9,393	95	726	176	68,531	578	84,479	15,370	4	-----	-----	-----	4	-----											
All other states <sup>2</sup> .....	37,796	8,714	4,230	2,782	159,107	2,451	287,900	106,282	25	-----	2	-----	23	-----											

<sup>1</sup> Same number reported for one or more other months.

<sup>2</sup> All other states embrace: Colorado, 2 establishments; Georgia, 4; Louisiana, 1; New Hampshire, 2; Texas, 1.

<sup>3</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

<sup>4</sup> 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

MACHINERY, TEXTILE MACHINERY  
AND MACHINE TOOLS

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

CONTENTS

EXPLANATION OF TERMS.....	Page	GENERAL TABLE.	Page
MACHINERY.	2	Detailed statement, by states.....	14
GENERAL STATISTICS.		MACHINE TOOLS.	
Scope of the industry.....	3	General character of the industry.....	15
Comparative statistics—principal classes of machinery.....	6	Summary.....	16
Principal classes of machinery, by states.....	7	Principal states, ranked by value of products.....	16
TEXTILE MACHINERY.		Persons engaged in the industry.....	16
GENERAL STATISTICS.		Wage earners, by months, for selected states.....	16
General character of the industry.....	9	Average number of wage earners, by prevailing hours of labor per	
Summary.....	10	week, for selected states.....	17
Principal states, ranked by value of products.....	10	Size of establishments, by average number of wage earners, for	
Persons engaged in the industry.....	11	selected states.....	17
Wage earners, by months, for selected states.....	11	Size of establishments, by value of products.....	17
Average number of wage earners, by prevailing hours of labor per		Character of ownership, by selected states.....	18
week, for selected states.....	11	Number and horsepower of types of prime movers.....	18
Size of establishments, by average number of wage earners for		Fuel consumed, by selected states.....	18
selected states.....	12	SPECIAL STATISTICS.	
Size of establishments, by value of products.....	12	Detailed statistics of quantity and value.....	19
Character of ownership, by selected states.....	12	GENERAL TABLE.	
Number and horsepower of types of prime movers.....	13	Detailed statement, by states.....	20
Fuel consumed, by selected states.....	13		
SPECIAL STATISTICS.			
Textile machinery and parts, by states.....	13		



## 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

late 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.

# MACHINERY.

## GENERAL STATISTICS.

**Scope of the industry.**—In this report are presented statistics relating to the manufacture of machinery, machine tools, and textile machinery.

Prior to the census of 1914 the classes of machinery under what is generally known as "factory machinery" had for the most part been included with foundry and machine-shop products, and with a few exceptions separate statistics for the various classes of machinery have not been shown in detail. Statistics were collected at some of the earlier censuses for certain classes of machinery, but the returns were not complete and figures are not comparable.

In 1914 statistics were shown for engines and machinery combined, but in the current census there is a separate bulletin covering the manufacture of engines. Since 1914 separate classes have also been established for machine tools and textile machinery.

The statistics for machinery include those for all establishments reporting the more important and clearly defined classes of machinery for 1919. Only the reports for establishments making the complete machines either as a primary or subsidiary product were considered in compiling the statistics for the various classes of machinery.

**Comparative statistics—principal classes of machinery.**—Table 1 presents data showing the number of establishments engaged in manufacturing each specified class of machinery and the value of product of each class in 1919 and 1914. The data include the products of all establishments engaged chiefly in the manufacture of the specified product, as well as most of those made as subsidiaries of other industries.

A large increase is shown in the value of products in 1919 over those of 1914. This increase, however, was due largely to the general rise of prices following the World War, and does not therefore fairly measure the growth of the industry for the period.

**Principal classes of machinery, by states.**—Table 2 gives, for 1919, the total value of products for the more important classes of machinery and similar data for all states for which figures can be presented without disclosing the operations of individual establishments.

Adding and calculating machines were reported chiefly from Michigan, Illinois, Ohio, New York, and Missouri, ranking in the order named, each state reporting over \$1,000,000 in products.

The manufacture of air compressors was confined chiefly to the states of New York, Pennsylvania, Ohio, and Illinois. New York ranked first and Ohio third, but figures for these states can not be shown without disclosing the operations of individual establishments.

Pennsylvania and Illinois ranked second and fourth, respectively, and, together, produced one-third of the total value of products.

Ammunition machinery was reported largely from states where the greater part of the output was produced by one or two establishments, and therefore can not be shown separately.

Bakers' machinery was manufactured chiefly in the states of Ohio, Illinois, Pennsylvania, New York, and Michigan. Ohio, the leading state, alone produced over 35 per cent of the total output.

Figures for blowers and fans can be shown separately for only two states—Indiana and New York. Massachusetts was the leading state and Michigan second.

Bottling machinery was manufactured to a considerable extent in states where one or two establishments reported a preponderance of the total output. Separate figures can not be shown for this reason for Ohio, the leading state, nor for Iowa, which also reported a large proportion of the output.

The production of brick, pottery, and other clay-working machinery was confined chiefly to the states of Ohio, Illinois, Indiana, Michigan, and New York. Ohio ranked first in this industry, with a total production of \$1,772,241, or 55.6 per cent of the total output.

Ohio produced nearly all of the cash registers and parts, but the figures can not be shown separately without disclosing the operations of individual establishments. Michigan ranked second.

Concrete mixers were manufactured chiefly in Wisconsin, where more than two-fifths of the total value of products were made. Michigan and Ohio ranked second and third, respectively.

Six states reported the manufacture of condensers, but separate figures can be shown for only three states. Pennsylvania ranked first, New Jersey second, and New York third.

The manufacture of cotton gins was largely centralized in the Southern states. The states of Alabama, Georgia, Louisiana, North Carolina, Oklahoma, Tennessee, and Texas had a combined valuation of 88.9 per cent of the total value of products for this industry. Georgia ranked first, with Alabama a close second, these two states combined producing nearly one-half of the total output.

Confectioners' machinery was manufactured chiefly in Massachusetts, Indiana, New York, and Ohio, which ranked first, second, third, and fourth, respectively.

## MANUFACTURES.

In the manufacture of cranes, Ohio was the leading state in the value of the output, with Michigan ranking second and Pennsylvania third.

Dairy machinery (including cream separators and other dairymen's supplies) was manufactured chiefly in New York, this state producing over 43 per cent of the total value of products for the industry. Wisconsin ranked second and Illinois, which is with "All other states," third. Other states producing a considerable percentage of the output were: Pennsylvania, Missouri, Minnesota, Ohio, Michigan, and Indiana.

Dredging machinery was reported as manufactured in comparatively few states, and figures for the states reporting can not be shown separately.

Elevators and elevator machinery were manufactured chiefly in the states of Illinois, New York, Pennsylvania, Ohio, New Jersey, Minnesota, Wisconsin, and Massachusetts, ranking in the order named, each state reporting over \$1,000,000 in products. These states combined produced an output of over \$63,000,000, or approximately 90 per cent of the total value of products. In the manufacture of electric elevators, New York was the leading state, with Illinois and Pennsylvania ranking second and third, respectively. Elevators, other than electric, were manufactured chiefly in Illinois, New York, Pennsylvania, and Ohio.

Excavating machinery was reported as manufactured in comparatively few states, and figures for only four states can be shown separately. Ohio and Illinois, which ranked first and second, respectively, produced more than one-half of the total value of products.

The manufacture of firearms and ordnance machinery was confined entirely to six states, whose total output amounted to \$2,283,859. Figures can not be shown separately for any of the states reporting.

Flour-mill and gristmill machinery manufacturing was centered in Indiana, Illinois, Pennsylvania, and Ohio. Figures for Indiana, the leading state, can not be shown separately without disclosing individual operations. Illinois, Pennsylvania, and Ohio ranked second, third, and fourth, respectively. These four states combined represented more than one-half of the total value of products for the industry.

Comparatively few states reported the manufacture of glass-making machinery. Figures for only two states—Pennsylvania and Indiana—can be shown separately. A large proportion of the total value of products was in Ohio, which can not be shown.

The manufacture of hydraulic rams was reported by six states, none of which can be shown. Pennsylvania was the leading state and Illinois second.

Laundry machinery, both hand and power, was

centralized in Illinois, where approximately one-half of the total value of products were made. New York and Ohio ranked second and third, respectively.

Ten states reported the manufacture of lawn mowers, but figures for only two states—Indiana and Pennsylvania—can be shown separately. These two states ranked first and second, respectively, and New York third.

Leather-working machinery (other than shoe) was reported chiefly from Massachusetts, where machinery amounting to 49.4 per cent of the total value of products for the industry was manufactured. Delaware and New York ranked next in order.

The manufacture of metal-working machinery, other than machine tools, was distributed chiefly among the states of New York, Ohio, Illinois, Pennsylvania, and Connecticut, each of these states reporting over \$6,000,000 in products, their combined totals representing more than three-fourths of the entire output.

Meters, gas and water, were manufactured chiefly in the states of New York, Pennsylvania, Illinois, New Jersey, and Ohio, these five states producing more than two-thirds of the total value of products.

Three states—Ohio, Pennsylvania, and New Jersey—were reported as the largest manufacturers of mining machinery (exclusive of oil-well machinery), these states combined producing more than 50 per cent of the entire output. The figures for New Jersey can not be shown separately without disclosing the operations of individual establishments.

New York ranked first, Illinois second, and New Jersey third in the manufacture of motion-picture machinery. Separate figures for states can not be shown.

The manufacture of oil-well machinery was centered chiefly in the petroleum-producing states of Pennsylvania, Oklahoma, Texas, Kansas, and California. Ohio and Tennessee manufactured a considerable proportion of this class of machinery, but separate figures for these states can not be shown.

In the manufacture of oil-mill machinery (cotton-seed and other) Ohio was the leading state, Kansas, which is included under "All other states," ranked second and Georgia third.

Ore crushers were manufactured chiefly in Massachusetts, Ohio, and Illinois, but the figures can not be shown separately without disclosing the operations of individual establishments.

Massachusetts was the leading state in the manufacture of paper and pulp mill and other machinery used in the paper industry. New York was second and Ohio third.

The manufacture of photo-engraving machinery was confined entirely to four states, the figures for which can not be shown. Illinois was the leading state and New York second.

Printing presses were manufactured chiefly in Illinois, New York, Connecticut, Ohio, and New Jersey, ranking in the order named, each state reporting over \$1,000,000 in products. New York was the leading state in the manufacture of typesetting machines, reporting approximately 80 per cent of the output of this class of printing machinery.

In the manufacture of pumps and pumping machinery New Jersey ranked first, Massachusetts second, New York third, and Pennsylvania fourth. These four states combined contributed more than one-half of the total value of products.

Pennsylvania was the leading state in the manufacture of refrigerating machinery (including ice-making machinery), this state alone producing over 37 per cent of the total value of products. Wisconsin, for which separate data can not be shown, ranked second, and Ohio third.

Reports from Illinois indicated that state to be far in the lead in the manufacture of road-making machines, the value of its products being over \$6,000,000. Ohio was next in rank and New York third.

Rubber-working machinery was manufactured chiefly in Ohio, New Jersey, Connecticut, and Pennsylvania, these states ranking first, second, third, and fifth, respectively. Separate figures can not be shown for Michigan, which was fourth in rank.

Sand-blast machines were reported as manufactured in comparatively few states, and figures can be shown for only one state. Maryland ranked first and Ohio second.

A large proportion of the machinery for sewing machines and parts was centered in New Jersey, but in order to avoid disclosure of individual operations separate figures can not be shown for this state. Illinois was second in rank, with a production of over \$5,000,000.

Shoe machinery was manufactured in only a few states. Massachusetts, which held first place, and Missouri, which ranked second, together reported over nine-tenths of the total value of products.

Separate figures for the manufacture of slot-vending machines can be shown for only two states—Illinois and Ohio. Illinois ranked first, New York second, and Ohio third.

Only four states reported the manufacturing of steam shovels, and figures for only one state—Ohio—can be shown separately.

In the manufacture of mechanical stokers Pennsylvania was the leading state, with a product valued at more than 50 per cent of the total output.

Sugar-mill machinery was manufactured to a considerable extent in states in which one or two establishments reported a preponderance of the total output. Separate figures can not be shown for this reason for Missouri, the leading state. New York, Louisiana, and Pennsylvania ranked second, third, and fourth, respectively.

Tar and oil spreading machines can not be reported separately without disclosure of individual operations.

Typewriters were manufactured chiefly in Connecticut and New York, which ranked first and second, respectively, in value of products. These two states together had over three-fourths of the total output.

Vacuum cleaners can not be shown separately for any of the states. New Jersey and Indiana ranked first and second, respectively, in the value of products.

In the manufacture of washing machines, Illinois led all other states. Pennsylvania ranked second and New York third. These three states together produced approximately 67 per cent of the total output.

Figures for well-drilling machinery can be shown for only three states. Ohio is the leading state, Pennsylvania second, and Iowa third.

Windmills were reported as manufactured chiefly in Illinois, Indiana, and Wisconsin, which ranked first, second, and third, respectively. Illinois reported 47.4 per cent of the entire value of products.

Eight states reported the manufacture of wire-drawing machinery, but separate figures for only one state—Connecticut—can be shown. This state produced 50.4 per cent of the total output.

Oregon was the leading state in the manufacture of sawmill machinery, reporting over 20 per cent of the total value of products for this class. Wisconsin was second in rank; Washington, third; and Tennessee, fourth. Wisconsin ranked first in the manufacture of planing-mill machinery, but separate figures for this state can not be shown. Pennsylvania and New York ranked second and third, respectively. The states of Ohio, New York, and Illinois, together produced more than one-half of the total value of products of woodworking machinery, other than sawmill and planing-mill machinery.

Included in "All other products" are those classes of machinery and machine parts for which manufacturers did not report separately or in detail. Castings, custom work and repairing, and contract work are also listed under this heading. The total value of all products in this group amounted to \$21,139,508.

## MANUFACTURES.

TABLE I.—COMPARATIVE STATISTICS—PRINCIPAL CLASSES OF MACHINERY: 1919 AND 1914.

CLASS.	Census year.	Number of establish-ments.	Value.	CLASS.	Census year.	Number of establish-ments.	Value.
Adding and calculating machines.....	1919	58	\$53,993,200	Oil-well machinery.....	1919	89	\$28,351,371
	1914	44	14,734,465		1914	127	10,569,483
Air compressors.....	1919	44	18,650,074	Oil-mill machinery, cottongeeseed and other.....	1919	26	11,306,359
	1914	84	5,158,121		1914	20	1,878,228
Ammunition machinery <sup>2</sup> .....	1919	5	570,138	Ore crushers <sup>2</sup> .....	1919	22	2,367,337
Bakers' machinery.....	1919	68	9,358,609	Paper and pulp mill machinery:			
	1914	32	2,554,703	Paper mill.....	1919	53	11,294,812
Blowers and fans <sup>2</sup> .....	1919	69	12,141,346		1914	(*)	
Bottling machinery.....	1919	46	10,468,479	Pulp mill.....	1919	16	1,385,332
	1914	29	1,358,025		1914	(*)	
Brick, pottery, and other clay-working machinery.....	1919	49	3,186,505	Other machinery used in the paper industry.....	1919	109	14,740,522
	1914	89	2,438,861		1914	139	8,585,227
Cash registers and parts of.....	1919	21	31,574,453	Photo-engraving machinery <sup>2</sup> .....	1919	6	732,941
	1914	19	15,935,069	Printing machinery:			
Concrete mixers.....	1919	62	10,450,344	Presses.....	1919	58	18,433,830
	1914	44	2,956,058		1914	88	8,395,508
Condensers <sup>2</sup> .....	1919	10	24,216,404	Typesetting machines <sup>5</sup> .....	1919	9	14,878,337
Cotton gins.....	1919	25	10,175,936		1914	10	7,634,631
	1914	25	4,901,680	All other <sup>6</sup> .....	1919	102	20,012,797
Confectioners' machinery <sup>2</sup> .....	1919	53	9,341,394		1914	56	3,197,319
Cranes:				Pumps and pumping machinery.....	1919	222	66,456,444
Electric.....	1919	30	27,324,864		1914	288	127,456,916
	1914	(*)		Refrigerating machinery:			
Hydraulic and steam.....	1919	16	13,972,133	Ice making.....	1919	48	15,864,736
	1914	(*)			1914	(*)	
All other.....	1919	59	11,237,025	Other refrigerating.....	1919	46	15,002,314
	1914	26	4,104,457		1914	73	10,522,322
Dairy machinery.....	1919	140	34,278,793	Road-making machines.....	1919	58	15,777,652
	1914	78	12,998,374		1914	31	3,545,272
Dredging machinery <sup>4</sup> .....	1919	9	1,824,025	Rubber-working machinery.....	1919	71	17,001,919
Elevators and elevator machinery:					1914	14	2,725,827
Electric.....	1919	94	29,607,380	Sand-blast machines <sup>2</sup> .....	1919	15	1,319,903
	1914	(*)		Sewing machines and parts.....	1919	40	43,604,910
All other.....	1919	157	40,570,919		1914	48	121,710,643
	1914	213	17,228,101	Shoe machinery.....	1919	61	16,269,941
Excavating machinery.....	1919	38	7,284,333		1914	72	5,946,300
	1914	21	4,208,965	Slot-vending machines <sup>2</sup> .....	1919	26	1,646,231
Firearms and ordnance machinery <sup>2</sup> .....	1919	10	2,283,859	Steam shovels.....	1919	8	12,453,763
Flour-mill and gristmill machinery.....	1919	106	19,980,816		1914	(*)	
	1914	101	5,017,761	Stokers, mechanical <sup>2</sup> .....	1919	13	4,280,236
Glass-making machinery.....	1919	24	3,316,139	Sugar-mill machinery.....	1919	56	14,847,346
	1914	30	1,000,726		1914	42	71,971,543
Hydraulic rams <sup>2</sup> .....	1919	10	3,506,963	Typewriters.....	1919	30	43,313,319
Laundry machinery:					1914	53	120,516,532
Power machines.....	1919	32	10,800,948	Vacuum cleaners:			
	1914	73	6,135,321	Electric.....	1919	3	209,385
All other.....	1919	27	3,000,340		1914	(*)	
	1914	35	1,429,958	All other.....	1919	10	1,941,338
Lawn mowers.....	1919	19	3,777,233		1914	39	2,058,524
	1914	22	2,848,110	Washing machines <sup>2</sup> .....	1919	115	42,895,929
Leather-working machinery, other than shoe.....	1919	51	4,691,431	Well-drilling machinery, other than oil well <sup>2</sup> .....	1919	30	2,566,668
	1914	27	1,066,939	Windmills.....	1919	32	9,933,085
Metal-working machinery, other than machine tools..	1919	211	57,541,482		1914	50	15,842,778
	1914	277	17,419,526	Wire-drawing machinery <sup>2</sup> .....	1919	20	1,402,049
Meters, gas and water.....	1919	111	27,764,884	Woodworking machinery:			
	1914	40	11,688,074	Sawmill.....	1919	89	15,038,945
Mining machinery.....	1919	133	51,243,489		1914	182	6,303,920
	1914	153	13,258,634	Planing mill.....	1919	34	6,732,247
Motion-picture machinery <sup>2</sup> .....	1919	23	3,605,591		1914	(*)	
				All other.....	1919	146	14,992,183
					1914	196	7,088,980

<sup>1</sup> Includes value of all products of establishments engaged primarily in the manufacture of the machines specified.<sup>2</sup> Figures not available for 1914.<sup>3</sup> Not reported separately.<sup>4</sup> Dredges and steam shovels, reported under "Excavating machinery," 1914.<sup>5</sup> Includes linotype and other for 1914.<sup>6</sup> Printing and bookbinding machinery (other than printing presses).<sup>7</sup> The amount reported includes, presumably, only machinery specially designed for sugar mills and not otherwise available, and does not include large amounts of sugar-mill equipment, such as boilers, tanks, kettles, etc.

## MACHINERY.

7

TABLE 2.—PRINCIPAL CLASSES OF MACHINERY, BY STATES: 1919.

CLASS AND STATE.	Value of products.	CLASS AND STATE.	Value of products.	CLASS AND STATE.	Value of products.
Adding and calculating machines	\$53,993,200	Elevators and elevator machinery	\$70,187,299	Mining machinery, exclusive of oil-well machinery	\$51,243,489
Ohio	2,399,134	Electric	29,607,380	Ohio	11,833,544
Missouri	1,156,564	New York	7,900,864	Pennsylvania	10,534,940
All other states	50,437,502	Illinois	6,430,300	Colorado	3,039,642
Air compressors	18,650,074	Pennsylvania	5,292,787	Illinois	2,025,719
Pennsylvania	5,229,202	New Jersey	5,279,647	Missouri	930,661
Illinois	836,727	Ohio	1,139,399	California	911,095
All other states	12,584,145	Minnesota	1,026,153	Indiana	535,520
Ammunition machinery	570,138	Massachusetts	936,141	Tennessee	466,190
Bakers' machinery	9,358,609	Michigan	246,668	New York	325,930
Ohio	3,333,945	California	108,087	All other states	20,640,248
Illinois	1,954,311	All other states	1,237,834		
Pennsylvania	1,331,880	Illinois	49,570,010	Motion-picture machinery	3,605,591
New York	966,438	Ohio	8,642,341		
Michigan	471,883	Pennsylvania	6,915,589	Oil-well machinery	28,351,371
All other states	1,277,152	Minnesota	5,122,951	Pennsylvania	6,715,013
Blowers and fans	12,141,346	New York	4,022,122	Oklahoma	5,456,607
Indiana	1,781,295	Wisconsin	3,705,753	Texas	4,044,161
New York	845,860	Massachusetts	3,587,651	Kansas	2,145,422
All other states	9,514,191	Michigan	534,600	California	1,393,356
Bottling machinery	10,408,470	All other states	15,747	Louisiana	797,490
Wisconsin	1,133,069	Excavating machinery	8,030,105	Illinois	179,696
New York	620,335	Ohio	7,284,333	All other states	7,619,626
Illinois	451,068	Illinois	2,551,346		
All other states	8,264,007	Minnesota	1,719,052	Oil-mill machinery, cottonseed and other	11,306,359
Brick, pottery, and other clay-working machinery	3,186,505	California	633,113	Ohio	4,957,587
Ohio	1,772,241	All other states	149,800	Georgia	1,619,482
Illinois	173,184		2,230,122	Massachusetts	276,376
Indiana	131,698			All other states	4,452,914
Michigan	115,306				
New York	41,431				
All other states	952,645				
Cash registers and parts of	31,574,453	Firearms and ordnance machinery	2,283,859		
Michigan	923,948	Flour-mill and gristmill machinery	19,980,816		
All other states	30,650,505	Illinois	2,907,758	Ore crushers	2,367,357
Concrete mixers	10,450,344	Pennsylvania	2,745,080	Colorado	216,290
Wisconsin	4,042,360	Ohio	2,332,783	All other states	2,151,067
Michigan	1,018,923	New York	1,578,693		
Ohio	765,582	Kansas	669,791	Paper and pulp mill machinery	27,420,666
Illinois	600,853	Missouri	621,603	Paper mill	11,294,812
Pennsylvania	507,713	North Carolina	442,829	Massachusetts	3,373,357
Indiana	29,525	California	189,609	New York	1,782,940
All other states	2,885,488	Nebraska	135,661	Pennsylvania	1,285,355
Condensers	24,210,404	All other states	8,359,009	All other states	4,853,160
New Jersey	3,951,685			Pulp-mill	1,385,332
New York	2,069,008	Glass-making machinery	3,316,139	New York	600,162
Michigan	904,170	Pennsylvania	1,083,555	Massachusetts	240,022
All other states	16,661,532	Indiana	128,603	All other states	545,148
Cotton gins	10,175,936	All other states	2,103,981		
Georgia	2,436,328				
Alabama	2,268,669				
All other states	5,470,941				
Confectioners' machinery	9,341,304	Hydraulic rams	3,596,963		
New York	1,261,980				
Ohio	837,354				
Connecticut	25,278				
Pennsylvania	14,082				
All other states	7,202,700				
Cranes	52,534,022				
Electric	27,324,864				
Ohio	17,062,240				
Michigan	2,180,841				
Pennsylvania	1,347,212				
All other states	6,728,571				
Steam and hydraulic	13,972,133				
Ohio	7,520,891				
All other states	6,445,242				
All other cranes	11,237,025				
Ohio	6,490,914				
Pennsylvania	408,997				
Illinois	408,588				
All other states	3,922,526				
Dairy machinery	34,278,793	Metal-working machinery, other than machine tools	57,541,482		
New York	15,795,315	New York	10,770,544		
Wisconsin	4,359,774	Ohio	10,192,199		
Pennsylvania	2,073,216	Illinois	9,445,316		
Missouri	811,854	Pennsylvania	9,413,411		
Minnesota	705,154	Connecticut	6,993,073		
Ohio	587,518	New Jersey	2,911,832		
Michigan	547,499	California	650,472		
Indiana	480,001	Indiana	376,817		
All other states	9,918,402	Wisconsin	340,792		
Dredging machinery	1,824,025	Maryland	104,933		
		All other states	6,341,193		
		Meters, gas and water	27,764,884	Pumps and pumping machinery	60,456,444
		New York	6,468,607	New Jersey	14,216,368
		Pennsylvania	5,731,811	Massachusetts	10,502,421
		Illinois	2,963,647	New York	9,527,016
		New Jersey	2,102,071	Pennsylvania	7,159,779
		Ohio	1,934,405	Illinois	4,804,867
		All other states	8,564,343	California	4,107,013
				Ohio	3,709,005
				Indiana	3,348,688
				Michigan	2,183,362
				Iowa	1,408,060
				Missouri	149,219
				Texas	134,020
				All other states	5,206,625

## MANUFACTURES.

TABLE 2.—PRINCIPAL CLASSES OF MACHINERY, BY STATES: 1919—Continued.

CLASS AND STATE.	Value of products.	CLASS AND STATE.	Value of products.	CLASS AND STATE.	Value of products.
Refrigerating machinery.	\$30,667,050	Steam shovels.	\$12,453,763	Wire-drawing machinery.	\$1,402,019
Ice making.	15,664,736	Ohio.	5,018,750	Connecticut.	707,921
Pennsylvania.	3,846,557	All other states.	7,405,004	All other states.	694,128
Ohio.	2,365,136	Stokers, mechanical.	4,280,236	Woodworking machinery.	
Missouri.	996,311	Pennsylvania.	2,890,052	Sawmill.	36,703,375
Illinois.	570,573	All other states.	1,390,184	Oregon.	15,038,945
California.	307,091	Sugar-mill machinery.	14,847,346	Wisconsin.	3,204,500
All other states.	7,578,708	New York.	2,702,181	Washington.	3,163,393
Other refrigerating.	15,002,314	Louisiana.	2,188,716	Tennessee.	1,570,789
Illinois.	1,530,888	Pennsylvania.	1,287,090	Ohio.	1,028,778
All other states.	13,471,426	Colorado.	235,568	Michigan.	1,007,944
Road-making machines.	15,777,632	Illinois.	22,267	Minnesota.	975,487
Illinois.	6,250,329	All other states.	8,411,521	Mississippi.	501,678
Ohio.	2,698,002	Typewriters.	43,313,319	Indiana.	252,150
New York.	1,900,599	Connecticut.	10,991,251	Pennsylvania.	224,713
Minnesota.	1,487,909	New York.	15,760,068	Maine.	187,288
All other states.	3,434,903	New Jersey.	938,661	Massachusetts.	161,552
Rubber-working machinery.	17,001,919	All other states.	9,032,736	All other states.	116,552
Ohio.	5,898,439	Vacuum cleaners, electric and other.	2,210,723	Planing mill.	2,568,271
New Jersey.	3,437,095	Ohio.	510,521	Pennsylvania.	6,732,247
Connecticut.	3,179,072	All other states.	1,730,302	New York.	1,573,515
Pennsylvania.	1,075,025	Washing machines.	42,895,929	All other states.	486,661
Illinois.	568,845	Illinois.	14,657,190	Other.	4,672,071
Massachusetts.	458,557	Pennsylvania.	3,910,551	Ohio.	14,092,083
New York.	111,030	New York.	3,230,147	New York.	4,774,610
All other states.	2,275,266	Ohio.	2,988,510	Illinois.	2,060,677
Sand-blast machines.	1,319,003	Missouri.	2,900,058	Massachusetts.	1,761,548
Ohio.	270,171	Michigan.	904,732	Michigan.	1,456,607
All other states.	1,049,732	Indiana.	880,987	Wisconsin.	1,377,410
Sewing machines and parts.	43,694,919	Wisconsin.	615,737	Minnesota.	913,267
Illinois.	7,100,783	All other states.	12,700,037	Pennsylvania.	465,681
New York.	1,101,345	Well-drilling machinery.	2,566,608	Indiana.	220,848
All other states.	35,423,791	Ohio.	1,407,775	All other states.	146,301
Shoe machinery.	16,260,941	Iowa.	239,417	All other products.	1,806,231
Massachusetts.	12,828,311	Texas.	40,736		
Missouri.	1,968,041	All other states.	869,740		
New York.	266,233	Windmills.	9,033,085		
All other states.	1,198,356	Illinois.	4,715,045		
Slot-vending machines.	1,640,231	Indiana.	1,556,315		
Illinois.	640,643	Wisconsin.	895,495		
Ohio.	246,510	All other states.	2,768,230		
All other states.	750,072				

## TEXTILE MACHINERY.

### GENERAL STATISTICS.

**General character of the industry.**—This report presents statistics for the manufacture of textile machinery in the United States in 1919. Prior to this census separate statistics were not shown for this industry, the figures being included with those for foundry and machine shops.

The textile machinery manufactured by establishments here considered may be subdivided into four principal classes: (1) Machinery for working raw stock, and all subsequent machinery used in textile mills in preparing yarn for weaving, knitting, etc.; (2) fabric machinery; (3) machinery for converting and finishing yarn and fabric; and (4) extra parts and attachments. Statistics for the four classes combined are herein presented, one of the tables giving separate figures for each group as well.

A considerable proportion of the total output of textile machinery is produced by establishments engaged primarily in the manufacture of other products. The value of such manufactures—\$3,611,676—however, is not included in the total value of products shown for the textile-machinery industry.

**Summary for the industry.**—Table 3 summarizes the statistics of the textile-machinery manufacturing industry for 1919. The data include the total product of establishments engaged chiefly in the manufacture of textile machinery, but excludes those made as subsidiary products of other industries.

**Principal states, ranked by value of products.**—Table 4 presents the more important statistics of the industry, by states, the states being ranked according to value of products reported for 1919.

The textile-machinery industry is confined to 23 states, all except Michigan and Wisconsin being located east of the Mississippi River. The industry is largely centralized in the New England and Middle Atlantic states, the combined valuation of these sections being 97.6 per cent of the total value of products for the industry in 1919. The industry in the Southern states is represented by 41 establishments, located in North Carolina, South Carolina, Georgia, Tennessee, Alabama, Kentucky, Maryland, and Virginia.

Massachusetts is the leading state in the industry. The value of its product is more than one-half of the total value of textile machinery manufactured in the United States, and the number of wage earners employed in the industry in the state represents 54.7 per cent of the total number of wage earners. Rhode Island and Pennsylvania are second and third, respectively, in importance, the former contributing 12.2

per cent of the value of products and 11.9 per cent of the wage earners, while the latter state contributed 11.8 per cent and 11.6 per cent, respectively, of these two items.

**Persons engaged in the industry.**—Table 5 shows, for 1919, the number of persons engaged in the industry, distributed by sex, and the average number of wage earners, distributed by age also. The sex and age classification of the average number of wage earners in this table is an estimate obtained by the method described in the "Explanation of terms."

The number of males engaged in the industry in 1919 was greatly in excess of the number of females, the proportion which the two sexes formed of the total being 91.5 per cent and 8.5 per cent, respectively. Of the total average number of wage earners employed in 1919, 93.7 per cent were males and 6.3 per cent females.

**Wage earners, by months.**—Table 6 gives the total average number of wage earners employed in the textile-machinery industry together with the number employed on the 15th (or nearest representative day) of each month during the year 1919 for each state for which figures can be shown separately, together with the percentages in each state which the minimum number forms of the maximum reported for any month.

The states shown in the table vary considerably in the season of greatest activity. In Massachusetts, where more than one-half of the total number of wage earners in the textile-machinery industry are employed, October was the month of greatest and April the month of least employment. Maine, New York, and Pennsylvania employed the greatest number in December and the least in January.

**Prevailing hours of labor.**—In Table 7 the average number of wage earners reported for 1919 for the industry has been classified according to the number of hours of labor per week prevailing in the establishments in which they were employed. More than three-fourths of the wage earners employed in the textile-machinery industry in 1919 were in establishments operating 54 hours or fewer per week, 42.4 per cent of the total being employed in establishments where the prevailing hours were between 48 and 54 per week.

**Size of establishments, by average number of wage earners.**—Table 8 shows the size of establishments in 1919 as measured by the number of wage earners employed.

## MANUFACTURES.

Of the 432 establishments engaged in the industry, 20 employed no wage earners. These were small plants in which the work was done by proprietors and firm members. The small establishments (those employing from 1 to 50 wage earners) greatly predominate, this class constituting 73.8 per cent of the total number of establishments reporting, while only 4,199, or 13.2 per cent of the total average number of wage earners, were employed therein. The classes "251 to 500," "501 to 1,000," and "Over 1,000," comprising 23 establishments, employed 20,070 wage earners, or 63.1 per cent of the total average number, illustrating the tendency of the industry to become concentrated in a few large establishments.

**Size of establishments, by value of products.**—Of the 432 establishments reported for 1919, as shown in Table 9, 26, or 6 per cent, reported products valued at \$1,000,000 or over. While such establishments represented a small proportion of the total number, they reported more than three-fifths of the total value of products.

On the other hand, the small establishments—that is, those having products valued at less than \$20,000—constituted 27.8 per cent of the total number of establishments, but the value of their products represented only nine-tenths of 1 per cent of the total. The great bulk of manufactures was reported by plants having products valued at \$100,000 or over, such establishments reporting 92.8 per cent of the total value.

**Character of ownership.**—Table 10 presents statistics concerning the character of ownership, or legal organization, of the establishments in the industry for 1919.

The table indicates the predominance of the corporate form of ownership. Corporations owned 46.8 per cent of the total number of establishments for the industry in 1919, employed 90.8 per cent of the total average number of wage earners, and reported 91.3 per cent of the total value of products.

**Number and horsepower of types of prime movers.**—Table 11 shows, for 1919, the number and total horsepower of engines or motors employed in generating power (including electric motors operated by purchased current). It also shows separately the number and horsepower of electric motors operated by current generated in the establishments reporting.

The total primary horsepower reported for the industry amounted to 41,997 horsepower. Steam power constituted 48.2 per cent of the total; 23,704 horsepower, or 56.4 per cent of the total primary horsepower, was owned by establishments reporting.

**Fuel consumed.**—Table 12 shows the principal kinds of fuel used for the industry in 1919, and also gives separately the amounts consumed in states requiring considerable quantities of fuel for this industry.

Bituminous coal was the principal fuel used in the industry in 1919, 91,551 tons being reported, of which the establishments in Massachusetts consumed a fraction less than two-thirds. Massachusetts was also the principal consumer of coke and gas, while 55.8 per cent of the oil was used in Rhode Island. Pennsylvania was the largest consumer of anthracite coal, reporting 24.9 per cent of the total amount of this kind of coal used by the industry in 1919.

TABLE 3.—SUMMARY: 1919.

	Number or amount.	Number or amount.
Number of establishments.		
Persons engaged.	432	
Proprietors and firm members.	38,120	
Salaried employees.	354	
Wage earners (average number).	3,949	
Primary horsepower.	31,823	
Capital.	41,997	
	\$129,797,903	

<sup>1</sup> Value of products less cost of materials.

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

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			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.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.			
United States..	432	31,823	100.0	...	\$129,089	100.0	...	\$76,453	100.0	...	Connecticut....	23	669	2.1	8	\$2,876	2.4	8	\$1,792	2.3	8
Massachusetts....	116	17,413	54.7	1	65,901	54.0	1	42,424	55.5	1	North Carolina....	14	305	1.0	9	1,159	0.9	9	588	0.8	10
Rhode Island....	60	3,778	11.9	2	14,842	12.2	2	9,168	12.0	2	Vermont....	14	243	0.8	10	722	0.6	10	456	0.6	11
Pennsylvania....	64	3,709	11.6	3	14,355	11.8	3	8,604	11.3	3	South Carolina....	6	134	0.4	11	615	0.5	11	331	0.4	12
New Hampshire....	11	1,109	3.5	6	6,223	5.1	4	3,753	4.9	4	Georgia....	9	94	0.3	13	378	0.3	12	188	0.2	13
Maine....	10	1,732	5.4	4	6,185	5.0	5	3,518	4.6	5	Tennessee....	4	16	0.1	19	88	0.1	16	38	(1)	19
New Jersey....	56	1,672	5.3	5	5,003	4.1	6	3,172	4.2	6	Alabama....	4	17	0.1	18	67	0.1	19	16	(1)	20
New York....	30	708	2.2	7	2,933	2.4	7	1,858	2.4	7	All other states....	11	232	0.7	...	792	0.6	...	547	0.7	11

<sup>1</sup> Less than one-tenth of 1 per cent.

## TEXTILE MACHINERY.

11

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

CLASS.	Total.	Male.	Female.	PER CENT OF TOTAL.		CLASS.	Total.	Male.	Female.	PER CENT OF TOTAL.	
				Male.	Female.					Male.	Female.
All classes.....	36,126	33,066	3,060	91.5	8.5	Clerks and other subordinate salaried employees.....	2,719	1,714	1,005	63.0	37.0
Proprietors and officials.....	1,584	1,525	59	96.3	3.7	Wage earners (average number).....	31,823	29,827	1,996	93.7	6.3
Proprietors and firm members.....	354	327	27	92.4	7.6	16 years of age and over.....	31,399	29,463	1,936	93.8	6.2
Salaried officers of corporations.....	390	370	20	94.9	5.1	Under 16 years of age.....	424	364	60	85.8	14.2
Superintendents and managers.....	840	828	12	98.6	1.4						

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 employments 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.....	31,823	30,206	29,030	29,138	28,898	29,503	30,706	32,456	32,904	33,981	34,361	34,577	35,426	81.6
Males.....	29,827	28,200	27,076	27,173	26,967	27,552	28,759	30,405	30,933	32,020	32,388	32,473	33,329	80.9
Females.....	1,996	2,087	1,954	1,965	1,931	1,951	1,947	1,961	1,971	1,961	2,023	2,104	2,037	91.8
Alabama.....	17	8	8	8	19	20	21	20	20	20	20	20	20	38.1
Connecticut.....	669	645	641	688	696	703	675	695	697	692	678	638	700	79.4
Georgia.....	94	96	94	93	93	94	94	94	94	94	94	94	94	96.9
Maine.....	1,732	1,606	1,638	1,607	1,658	1,675	1,721	1,715	1,789	1,778	1,812	1,902	1,904	84.3
Massachusetts.....	17,413	16,740	16,181	15,737	15,399	15,780	16,706	17,739	18,226	19,082	19,297	18,816	10,253	79.8
New Hampshire.....	1,109	1,040	1,047	1,007	1,060	1,031	1,041	1,116	1,164	1,152	1,165	1,228	1,248	80.7
New Jersey.....	1,072	1,506	1,583	1,648	1,704	1,746	1,785	1,879	1,480	1,485	1,559	1,707	1,886	78.7
New York.....	706	636	637	658	647	651	668	691	738	753	767	802	826	77.0
North Carolina.....	305	305	304	307	300	298	300	303	298	301	308	318	318	93.7
Pennsylvania.....	3,705	3,276	3,303	3,359	3,388	3,505	3,565	3,719	3,842	3,961	3,926	4,229	4,387	74.7
Rhode Island.....	3,776	3,695	3,528	3,384	3,316	3,403	3,536	3,867	3,953	4,032	4,195	4,236	4,167	78.3
South Carolina.....	134	144	149	128	131	133	132	120	129	125	134	134	139	80.5
Tennessee.....	16	17	17	14	14	14	12	18	15	16	14	18	18	63.2
Vermont.....	243	222	227	232	232	237	241	255	264	260	244	247	255	84.1

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

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						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.			44 and under.	Between 44 and 48.	48.	Between 48 and 54.	54.	Between 54 and 60.	
United States.....	31,823	775	196	9,039	13,483	1,608	4,692	1,130	New Jersey.....	1,672	593	74	118	796	38	53
Alabama.....	17	1	2	8	6	—	—	—	New York.....	706	134	51	85	222	158	29
Connecticut.....	669	1	93	460	17	98	—	—	North Carolina.....	305	—	—	—	—	89	137
Georgia.....	94	—	—	—	—	—	—	—	Pennsylvania.....	3,705	8	—	565	1,335	283	651
Maine.....	1,732	18	1,445	64	223	31	12	—	Rhode Island.....	3,776	25	71	360	2,854	208	258
Massachusetts.....	17,413	18	6,236	7,390	510	3,224	62	12	South Carolina.....	134	—	—	—	19	—	—
New Hampshire.....	1,100	—	1,018	—	22	62	12	—	Tennessee.....	16	—	—	6	—	70	45
								—	Vermont.....	243	—	—	15	168	51	4
								—						6	9	

## MANUFACTURES.

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

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—									Over 1,000 wage earners.							
	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.		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.....	432	31,823	20	108	202	141	1,556	70	2,351	30	2,740	31	4,805	10	3,444	7	5,234	6	11,392
Alabama.....	4	17	2	3	2	14	71	1	64										
Connecticut.....	23	669	2	11	27	6	67	2	64						1	440			
Georgia.....	9	94	1	1	1	6	63	1	30										
Maine.....	10	1,732	2	3	7	1	7			2	160	1	116						
Massachusetts.....	116	17,413	1	29	91	32	356	16	503	13	916	14	2,240	3	995	3	2,362	1	1,442
New Hampshire.....	11	1,109		1	2	4	38	2	62	1	57	2	280						5,956
New Jersey.....	56	1,672	4	17	43	18	228	9	332	4	326	3	456	1	282	1	661		
New York.....	30	706	4	6	13	11	122	5	156	2	160	2	246						
North Carolina.....	14	305		4	10	4	47	5	188	1	60								
Pennsylvania.....	64	3,705	2	16	39	18	206	15	508	3	171	7	1,202	2	783	1	736		
Rhode Island.....	60	3,776	3	8	26	25	249	8	220	9	606	2	256	3	944	2	1,475		
South Carolina.....	6	134		3	7	1	16	1	45	1	66								
Tennessee.....	4	16	1	2	10	1	6												
Vermont.....	14	243		1	1	10	104	2	53	1	85								

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

VALUE OF PRODUCT.	Number of establish- ments.	Average number of wage earners.	Value of products.	Value added by manufac- ture.	VALUE OF PRODUCT.	Number of establish- ments.	Average number of wage earners.	Value of products.	Value added by manufacture.
All classes.....	432	31,823	122,089,264	76,452,036	All classes.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	40	31	103,972	70,538	Less than \$5,000.....	0.3	0.1	0.1	0.1
\$5,000 to \$20,000.....	80	287	1,003,552	603,682	\$5,000 to \$20,000.....	18.5	0.9	0.8	0.8
\$20,000 to \$100,000.....	166	2,161	7,675,721	4,295,006	\$20,000 to \$100,000.....	38.4	6.8	6.3	5.6
\$100,000 to \$500,000.....	100	5,562	22,360,635	13,403,204	\$100,000 to \$500,000.....	28.1	17.5	18.3	17.5
\$500,000 to \$1,000,000.....	20	3,371	14,301,083	5,578,622	\$500,000 to \$1,000,000.....	4.6	10.6	11.7	11.2
\$1,000,000 and over.....	26	20,411	76,644,301	49,500,894	\$1,000,000 and over.....	6.0	64.1	62.8	64.7

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

STATE.	NUMBER OF ESTABLISH- MENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.													
	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	In establish- ments owned by—			Of establish- ments owned by—													
				Total.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.											
United States.....	154	202	76	31,823	1,696	28,895	1,232	5.3	90.8	3.9	\$122,089,264	\$6,197,967	\$111,416,110	\$4,445,178	5.1	91.3	3.6			
Alabama.....	3	8	1	17	17	621	25	100.0	92.8	3.7	66,911	1,66,911	2,875,089	143,188	2,000,017	123,484	100.0	90.7	4.3	
Connecticut.....	8	8	7	669	23	621	25	3.4	92.8	3.7	377,580	144,545	233,044	61.7	38.3	61.7	38.3	61.7		
Georgia.....	6	3		94	35	59		37.2	62.8		6,134,677	1,67,627	6,067,050		1.1	98.9				
Maine.....	4	4	2	1,732	1,15	1,717		0.9	99.1		1,709,735	62,077,828	1,123,807		2.7	95.6	1.7			
Massachusetts.....	39	62	15	17,413	487	10,678	248	2.8	95.8	1.4	65,001,370									
New Hampshire.....	2	7	2	1,109	1,054	255		95.0	5.0		6,222,552	1,068,741	6,000,000	153,811	97.5	2.5				
New Jersey.....	26	20	10	1,672	483	922	267	28.9	55.1	16.0	5,002,932	1,306,373	2,840,733	765,826	27.9	56.8	15.3			
New York.....	11	14	5	706	81	499	126	11.5	70.7	17.8	2,933,308	252,061	2,209,000	470,733	8.6	75.3	16.0			
North Carolina.....	2	9	3	305	288	217		94.4	5.6		1,159,277	1,021,771	1,37,506		88.1	11.9				
Pennsylvania.....	18	31	15	3,705	132	3,348	225	3.6	90.4	6.1	14,354,753	577,880	12,004,514	872,359	4.0	89.9	8.1			
Rhode Island.....	23	32	5	3,776	278	3,385	113	7.4	89.6	3.0	14,842,170	1,172,203	13,297,607	372,309	7.9	89.6	2.5			
South Carolina.....	2	2	2	134	134	134		100.0			614,758		614,758				100.0			
Tennessee.....	2	2		16	16	16		100.0			88,112		88,112				100.0			
Vermont.....	5	3	6	243	56	101	86	23.0	41.6	35.4	722,180	180,702	318,455	223,023	25.0	44.1	30.9			

<sup>1</sup>Include the group "All others."<sup>2</sup>Includes the group "Individuals."<sup>3</sup>Includes the groups "Individuals" and "All others."

## TEXTILE MACHINERY.

13

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

POWER.	Number of engines or motors.	HORSEPOWER.		POWER.	Number of engines or motors.	HORSEPOWER.	
		Amount.	Per cent distribution.			Amount.	Per cent distribution.
Primary power, total.....	2,104	41,997	100.0	Primary power—Continued.			
Owned.....	230	23,704	56.4	Rented.....	1,874	18,203	43.6
Steam.....	139	20,247	48.2	Electric.....	1,874	18,040	43.0
Engines.....	134	17,755	42.3	Other.....	233	0	0.6
Turbines.....	5	2,492	5.9	Electric.....	2,630	27,338	100.0
Internal-combustion engines.....	50	862	2.1	Rented.....	1,874	18,040	66.0
Water wheels and turbines.....	41	2,595	6.2	Generated by establishments reporting.....	756	0,298	34.0

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

STATE.	COAL.		Coke (tons, 2,000 pounds)	Fuel oils (barrels)	Gasoline and other volatile oils (barrels)	Gas (1,000 cubic feet).	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)						Anthracite (tons, 2,240 pounds)	Bituminous (tons, 2,000 pounds)				
United States.....	14,015	91,551	27,645	43,140	693	52,310	New Jersey.....	2,312	2,383	111	.....	60	5,106
Alabama.....	247	12	421	7	6	.....	New York.....	564	283	250	.....	.....	1,185
Connecticut.....	10	36	.....	.....	.....	.....	North Carolina.....	248	102	.....	.....	.....	222
Georgia.....	2,142	1,918	2,025	1,498	.....	.....	Pennsylvania.....	3,487	11,164	3,161	832	287	9,896
Maine.....	2,780	61,183	17,247	14,678	211	25,023	Rhode Island.....	2,305	8,816	4,235	24,002	113	5,239
Massachusetts.....	40	2,207	.....	1,833	.....	5,334	South Carolina.....	.....	800	110	200	5	.....
New Hampshire.....	.....	.....	.....	.....	.....	.....	Tennessee.....	.....	.....	.....	.....	.....	.....
Vermont.....	.....	.....	.....	.....	.....	.....	Vermont.....	10	150	50	.....	.....	.....

## SPECIAL STATISTICS.

Special statistics relating to products.—Table 13 summarizes the statistics, for 1919, relative to the differ-

ent kinds or groups of textile machinery and parts and attachments for which separate totals were compiled.

TABLE 13.—TEXTILE MACHINERY AND PARTS, BY STATES: 1919.

STATE AND KIND.	Number.	Value.	STATE AND KIND.	Number.	Value.
Total value <sup>1</sup> .....	.....	\$122,089,264	Fabric machinery—Continued.	.....	.....
State totals:	.....	.....	New York.....	.....	\$1,372,581
Massachusetts.....	65,901,370	.....	New Jersey.....	.....	96,600
Rhode Island.....	14,842,179	.....	All other states.....	.....	3,624,516
Pennsylvania.....	14,354,753	.....	Machinery for converting and finishing yarn and fabrics.....	22,562	7,623,797
New Hampshire.....	6,222,552	.....	Rhode Island.....	527	2,147,293
Maine.....	6,134,677	.....	Massachusetts.....	16,918	2,158,989
New Jersey.....	5,002,932	.....	Pennsylvania.....	1,960	1,748,669
New York.....	2,933,308	.....	New Jersey.....	565	855,884
Connecticut.....	2,875,659	.....	New York.....	142	96,629
North Carolina.....	1,159,277	.....	All other states.....	2,441	616,333
Vermont.....	722,180	.....	Extra parts, attachments, and accessories for textile machinery.....	.....	34,788,177
South Carolina.....	614,758	.....	Massachusetts.....	.....	17,373,189
All other states.....	1,325,589	.....	Pennsylvania.....	4,334,764	4,334,764
Machinery for working raw stock and subsequent machinery used in textile mills in preparing yarn for weaving, knitting, etc.....	40,582	35,520,666	Rhode Island.....	.....	3,277,523
Spinning and throwing machines—	.....	.....	New Jersey.....	3,086,246	3,086,246
Massachusetts.....	3,741	6,465,628	New Hampshire.....	2,691,189	2,691,189
All other states.....	3,200	3,147,805	Maine.....	950,420	950,420
Carding machines—	.....	.....	North Carolina.....	596,143	596,143
Massachusetts.....	13,754	7,176,675	Connecticut.....	712,974	712,974
All other states.....	1,450	440,755	South Carolina.....	565,054	565,054
Winders and warp spooling machines—	.....	.....	Vermont.....	456,361	456,361
Massachusetts.....	1,475	1,240,440	New York.....	219,537	219,537
All other states.....	8,215	4,552,326	All other states.....	515,788	515,788
Raying machines and slubbing frames—	.....	.....	Other textile machinery including repairs.....	10,282,910	10,282,910
All states.....	2,350	4,500,269	Massachusetts.....	4,607,163	4,607,163
Twisting or doubling frames—	.....	.....	Pennsylvania.....	1,143,989	1,143,989
Massachusetts.....	770	1,618,300	New York.....	1,011,391	1,011,391
All other states.....	352	241,643	Rhode Island.....	882,386	882,386
Picker machines—	.....	.....	Connecticut.....	530,993	530,993
Massachusetts.....	817	976,366	New Jersey.....	262,336	262,336
All other states.....	118	172,299	North Carolina.....	108,017	108,017
All other preliminary machinery—	.....	.....	All other states.....	1,656,585	1,656,585
Massachusetts.....	3,280	4,012,945	Other machinery not pertaining to textiles.....	1,331,677	1,331,677
All other states.....	1,030	965,214	Massachusetts.....	824,176	824,176
Fabric machinery—	(*)	29,865,051	Pennsylvania.....	185,516	185,516
Massachusetts.....	17,081,912	.....	Rhode Island.....	177,647	177,647
Pennsylvania.....	4,464,186	.....	All other states.....	144,338	144,338
Rhode Island.....	3,225,356	.....	All other products, all states.....	2,687,986	2,687,986

<sup>1</sup>In addition, textile machinery and parts to the value of \$3,611,676 were reported by establishments engaged primarily in other industries. \* Figures not available.

## MANUFACTURES.

## GENERAL TABLE.

Detailed statement, by states.—The principal data secured by the census inquiry concerning the manufacture of textile machinery are presented in detail for

the industry as a whole and for each state for which figures can be shown in Table 14.

TABLE 14.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.		
		Total.	Proprietors, superintendents, and firm members.	Salaries of officers, superintendents, and managers.	Clerks, etc.		Wage earners.				Total.	16 and over.		Under 16.		Capital.	Salaries and wages.	
					Male.	Female.	Average number.	Number, 15th day of—	Maximum month.	Minimum month.		Male.	Female.	Male.	Female.		Officials.	Clerks, etc.
United States.....	432	36,120	354	1,230	1,714	1,005	31,823	De 35,426	Ap 28,898	35,598	33,007	2,020	409	63	\$120,707,903	\$5,027,595	\$3,071,175	
Alabama.....	4	23	6	...	...	...	17	Je 21	Ja 1	8	20	15	5	...	22,140	...	...	
Connecticut.....	23	763	44	37	5	8	609	My 703	Oc 558	609	78	0	1	2,771,501	177,336	14,729		
Georgia.....	9	122	6	16	1	5	94	Ja 98	Mh 1	93	85	11	...	...	156,910	27,100	3,623	
Maine.....	10	1,871	8	59	34	38	1,732	De 1,904	Jb 1,605	1,904	1,850	54	...	3,914,700	218,631	100,920		
Massachusetts.....	116	19,378	71	490	861	543	17,413	Oc 19,297	Ap 15,399	19,254	17,914	1,058	252	30	76,750,004	2,209,299	1,545,893	
New Hampshire.....	11	1,194	6	27	18	34	1,109	Do 1,248	Mh 1	1,007	1,247	1,138	108	1	5,131,758	149,910	81,551	
New Jersey.....	56	1,901	52	83	73	21	1,672	Do 1,886	Se 1,485	1,888	1,532	201	53	12	4,532,953	282,216	113,797	
New York.....	30	872	21	56	45	44	706	Do 826	Jb 636	825	780	39	...	...	2,056,641	286,364	94,493	
North Carolina.....	14	366	10	28	16	7	305	Do 1	318	My 1	298	307	7	4	677,157	71,858	30,187	
Pennsylvania.....	64	4,318	60	158	291	104	3,705	Do 4,387	Jb 3,276	4,369	4,252	85	28	4	16,744,426	764,614	496,141	
Rhode Island.....	60	4,575	33	298	351	187	3,776	No 4,236	Ap 3,316	4,344	4,019	252	58	15	15,005,963	753,605	545,236	
South Carolina.....	6	156	6	9	4	3	134	Fe 149	Jv 120	138	113	20	4	1	672,254	17,555	10,325	
Tennessee.....	4	24	2	4	...	2	16	No 19	My 12	18	18	...	7	...	47,291	5,230	765	
Vermont.....	14	278	10	10	3	3	243	Au 264	Jb 222	267	260	7	...	...	483,040	23,474	6,652	
All other states <sup>2</sup> .....	11	285	10	25	12	6	232	...	...	213	199	14	...	...	821,538	70,313	17,883	
EXPENSES—continued.																		
STATE.	Salaries and wages—Con.	EXPENSES—continued.				For materials.				Primary horsepower.						POWER.		
		Wage earners.		For contract work.		Rent and taxes.		For materials.		Value of products.	Value added by manufacturer.	Owned.				Electric horsepower generated in establishments reporting.		
		Total.	Rent of factory.	Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Total.	Steam engines (not turbines).	Internal-combustion engines.	Steam turbines.	Water power. <sup>3</sup>	Total.	Steam turbines.	Internal-combustion engines.	Water power. <sup>3</sup>	Rent ed. <sup>4</sup>	Electric horsepower generated in establishments reporting.	
United States.....	\$36,528,720	\$178,686	\$308,482	\$6,193,733	\$44,094,714	\$1,541,914	\$122,080,264	\$70,452,036	41,907	17,755	2,402	862	2,595	18,293	9,298	...	...	
Alabama.....	10,306	...	840	288	50,259	670	66,911	15,973	19	...	...	...	...	...	19	...	...	
Connecticut.....	668,083	...	7,422	229,355	1,062,500	21,471	2,875,080	1,791,628	810	350	...	...	10	155	205	25	...	
Georgia.....	92,552	...	1,985	8,087	180,751	2,406	377,589	188,432	78	50	...	...	...	...	28	...	...	
Maine.....	2,033,078	...	7,314	145,952	2,551,024	65,163	6,134,677	3,618,490	3,324	205	1,072	...	203	1,784	5	...	...	
Massachusetts.....	20,712,227	81,603	66,712	3,055,076	22,033,109	844,263	65,901,370	42,423,008	22,402	12,134	1,250	230	1,810	6,972	6,434	...	...	
New Hampshire.....	1,164,246	...	405	634,738	2,422,224	47,108	6,222,552	3,753,160	1,313	526	...	...	164	623	3	...	...	
New Jersey.....	1,589,560	18,264	65,268	99,270	1,760,087	70,920	5,002,932	3,171,925	1,715	591	...	...	224	45	855	103	...	
New York.....	941,879	69,974	24,039	24,117	1,042,703	32,260	2,933,308	1,858,339	754	...	5	8	741	...	...	...	...	
North Carolina.....	245,443	...	4,578	30,305	550,437	11,416	1,156,277	588,424	504	210	...	...	204	...	...	...	...	
Pennsylvania.....	4,367,609	1,864	77,602	617,278	5,551,300	109,176	14,354,753	8,604,187	4,855	2,355	...	304	...	2,196	2,358	...	...	
Rhode Island.....	4,189,640	6,956	44,952	604,840	5,457,235	217,340	14,842,170	9,187,604	4,751	840	150	35	40	3,686	275	...	...	
South Carolina.....	101,461	...	985	7,543	274,659	8,773	614,758	331,326	287	24	...	40	...	223	...	...	...	
Tennessee.....	15,296	25	720	518	47,920	1,873	88,112	38,319	29	...	...	...	...	20	...	...	...	
Vermont.....	185,055	...	19,830	250,052	7,147	722,180	455,981	780	310	20	...	184	292	50	...	...	...	
All other states <sup>2</sup> .....	231,094	...	4,760	25,641	236,274	11,853	792,977	544,860	361	100	...	5	...	266	...	...	...	

<sup>1</sup> Same number reported for one or more other months.<sup>2</sup> All other states comprise: Delaware, 1 establishment; Illinois, 1; Indiana, 2; Iowa, 1; Kentucky, 2; Maryland, 1; Michigan, 1; Virginia, 1; and Wisconsin, 1.<sup>3</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).<sup>4</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

## MACHINE TOOLS.

### GENERAL STATISTICS.

**General character of the industry.**—This report presents statistics of the manufacture of machine tools in the United States in 1919. Prior to this census, separate statistics have not been shown for this industry, the figures being included with those for the foundry and machine-shop and other industries, therefore comparative figures are not available.

**Summary for 1919.**—Table 15 summarizes the statistics for the census of 1919.

**States, ranked by value of products.**—Ohio was the leading state in the manufacture of machine tools. This state, as shown in Table 16, reported 26.1 per cent of the total number of wage earners and 29.4 per cent of the total value of products. Massachusetts, second in importance, contributed 12.2 per cent and 11 per cent, respectively, of these two items. Rhode Island, third in importance, contributed 13.5 per cent and 10.5 per cent; and Connecticut, ranking fourth, contributed 10.3 per cent and 8.7 per cent, respectively, of these two items. Pennsylvania, Illinois, Michigan, Vermont, Wisconsin, New Jersey, New York, Indiana, Kentucky, Minnesota, Missouri, and Maine follow in the order listed.

**Persons engaged in the industry.**—The classification by sex for 1919 is shown separately in Table 17. The age classification of the average number of wage earners in this table is an estimate obtained by the method described in the "Explanation of terms." Figures by states will be found in Table 26.

**Wage earners, by months.**—In addition to the number of wage earners employed by months, similar data are given in Table 18 for males and females separately as well as the total average number for each state for which statistics can be presented, together with the percentage which the minimum number forms of the maximum.

**Pervailing hours of labor.**—Table 19 shows that 39.1 per cent of the employees were reported working from 48 to 54 hours per week and 31 per cent working 48 hours and less.

**Size of establishments, by average number of wage earners.**—Analysis of Table 20 discloses the significant fact that 62 establishments, or 15.4 per cent of the total number for the industry, were shown

in classes having fewer than 6 wage earners, while only 157, or about three-tenths of 1 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 27 establishments, employed 27,239 wage earners, or 51.3 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.**—The statistics in Table 21 strikingly illustrate the predominance of large establishments measured by value of products. The group "\$1,000,000 and over" reports 52 establishments, or 12.9 per cent of the total number for the industry, with a value of products of \$146,142,213, or 68.8 per cent of the total value. On the other hand, the establishments in groups under \$1,000,000 report 351, or 87.1 per cent of the total number, and \$66,257,945 in value of products, or 31.2 per cent of total value.

**Character of ownership.**—Table 22 emphasizes the predominance of the corporate form of ownership. Corporations owned 79.4 per cent of the total number of establishments for the industry, employed 94.3 per cent of the total average number of wage earners, and reported 94.5 per cent of the value of products.

**Number and horsepower of types of prime movers.**—Table 23 shows primary horsepower owned and rented. Rented power predominates with a total of 70,176 horsepower, or 69.9 per cent of total horsepower.

**Fuel consumed.**—Table 24 shows the principal kinds of fuel used for the industry and also gives separately the amounts consumed in states requiring considerable quantities of fuel. Of the total for the three chief kinds of fuel used in connection with this industry, Ohio reported 31.1 per cent of the bituminous coal and 41.4 per cent of the fuel oils, and Michigan reported 30.7 per cent of the gas. Anthracite coal is naturally consumed in the Eastern states, and three states—Massachusetts, New Jersey, and Pennsylvania—combined, reported 84.4 per cent of this kind of coal used by the industry in 1919.

## MANUFACTURES.

TABLE 15.—SUMMARY: 1919.

	Number or amount.			Number or amount.
Number of establishments.....				
Persons engaged.....	403			Salaries and wages.....
Proprietors and firm members.....	61,762			Salaries.....
Salaried employees.....	132			Wages.....
Wage earners (average number).....	8,519			Paid for contract work.....
Primary horsepower.....	53,111			Rent and taxes.....
Capital.....	100,433			Cost of materials.....
	\$231,039,813			Value of products.....
				Value added by manufacture <sup>1</sup> .....

<sup>1</sup> Value of products less cost of materials.

TABLE 16.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			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.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States.....	403	53,111	100	...	\$212,400	100	...	\$153,366	100	...	New Jersey.....	14	1,678	3.2	10	\$6,768	3.2	10	\$4,317	2.8	19
Ohio.....	102	13,855	26.1	1	62,554	29.4	1	45,077	29.4	1	New York.....	20	1,590	33.0	11	5,028	2.4	11	3,723	2.4	10
Massachusetts.....	46	6,471	12.2	3	23,443	11.0	2	16,534	10.8	3	Indiana.....	15	1,228	2.3	12	4,250	2.0	12	2,885	1.9	13
Rhode Island.....	13	7,169	13.5	2	22,301	10.5	3	18,607	12.1	2	Kentucky.....	7	240	0.5	14	1,022	0.5	14	708	0.5	14
Connecticut.....	33	5,472	10.3	4	18,435	8.7	4	13,512	8.8	4	Minnesota.....	5	163	0.3	15	827	0.4	15	608	0.4	15
Pennsylvania.....	32	9,671	6.9	5	16,797	7.9	5	12,029	7.8	5	Missouri.....	5	121	0.2	18	435	0.2	17	244	0.2	18
Illinois.....	28	3,273	6.2	6	15,008	7.1	6	10,263	6.7	6	Maine.....	3	5	(1)	21	16	(1)	21	10	(1)	21
Michigan.....	31	3,198	6.0	7	12,656	6.0	7	8,684	5.7	7	All other states.....	10	594	1.1	...	3,828	1.8	...	2,648	1.7	11
Vermont.....	6	2,024	3.8	9	9,610	4.5	8	6,683	4.4	9											
Wisconsin.....	24	2,352	4.4	8	9,415	4.4	9	6,816	4.4	8											

<sup>1</sup> Less than one-tenth of 1 per cent.

TABLE 17.—PERSONS ENGAGED IN THE INDUSTRY: 1919.

CLASS.	Total.	Male.	Female.	PER CENT OF TOTAL.		CLASS	Total.	Male.	Female.	PER CENT OF TOTAL.	
				Male.	Female.						
				Male.	Female.						
All classes.....	61,762	57,066	4,696	92.4	7.6	Clerks and other subordinate salaried employees.....	6,186	3,608	2,488	59.8	40.2
Proprietors and officials.....	2,465	2,425	40	98.4	1.6	Wage earners (average number).....	53,111	50,043	2,168	95.9	4.1
Proprietors and firm members.....	132	120	3	97.7	2.3	16 years of age and over.....	53,000	50,834	2,166	95.0	4.1
Salaried officers of corporations.....	637	615	22	99.5	3.5	Under 16 years of age.....	111	109	2	98.2	1.8
Superintendents and managers.....	1,696	1,681	15	99.1	0.9						

TABLE 18.—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.....	53,111	55,750	52,941	51,656	50,195	49,515	50,166	51,074	52,498	52,713	55,190	56,994	58,640	81.4
Males.....	50,943	52,938	50,437	49,278	47,907	47,801	48,122	49,092	50,632	50,761	53,187	54,979	56,802	81.7
Females.....	2,168	2,812	2,504	2,378	2,198	2,124	2,044	1,982	1,906	1,952	2,003	2,015	2,038	69.4
Connecticut.....	5,472	5,926	5,511	5,320	5,087	5,138	5,398	5,419	5,292	5,309	5,504	5,724	5,917	85.8
Illinois.....	3,273	3,385	3,356	3,336	3,156	2,813	2,713	3,219	3,380	3,537	3,636	3,751	32.9	33.4
Indiana.....	1,228	1,311	1,335	1,186	1,140	1,152	1,177	1,166	1,184	1,281	1,327	1,362	1,362	50.2
Massachusetts.....	6,471	6,916	6,628	6,497	6,258	6,032	6,045	6,858	6,131	6,315	6,704	6,974	7,297	69.4
Michigan.....	3,196	3,314	3,214	3,066	3,044	3,055	3,030	3,057	3,105	3,203	3,324	3,436	3,384	88.2
New Jersey.....	1,678	1,744	1,672	1,579	1,568	1,518	1,531	1,613	1,635	1,741	1,802	1,860	1,850	82.8
New York.....	1,500	1,607	1,480	1,384	1,433	1,467	1,515	1,602	1,658	1,638	1,652	1,758	1,886	73.4
Ohio.....	13,855	14,490	13,853	13,477	13,192	12,911	12,095	13,201	13,889	13,816	14,380	14,781	15,305	84.4
Pennsylvania.....	3,671	4,005	3,934	3,950	3,873	3,764	3,691	3,688	3,047	3,033	3,344	3,504	3,619	75.7
Rhode Island.....	7,169	7,379	6,562	6,444	6,548	6,710	6,984	7,194	7,138	7,354	7,828	7,999	8,032	73.5
Vermont.....	2,024	1,989	1,970	1,919	1,897	1,808	2,006	2,042	2,071	2,014	2,130	2,147	2,205	46.0
Wisconsin.....	2,352	2,505	2,485	2,403	1,886	1,905	2,030	2,203	2,359	2,488	2,480	2,722	2,703	69.3

# MACHINE TOOLS.

17

TABLE 19.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						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.			44 and under.	Between 44 and 48.	48.	Between 48 and 54.	54.	Between 54 and 60.	
		53,111	239	1,024	15,313	20,749	5,407	10,259	120	New Jersey.....	1,678	846	17	138	591	86
United States.....	53,111	239	1,024	15,313	20,749	5,407	10,259	120	New Jersey.....	1,678	846	17	138	591	86	
Connecticut.....	5,472	13	—	1,691	632	2,062	1,974	—	New York.....	1,590	18	4	1,269	271	22	11
Illinois.....	3,273	182	5	7	1,671	78	1,330	—	Ohio.....	13,355	1	169	7,926	3,241	473	2,045
Indiana.....	1,228	—	—	25	762	50	385	—	Pennsylvania.....	3,671	—	—	1,033	974	342	1,208
Massachusetts.....	6,471	—	—	643	3,866	692	1,270	—	Rhode Island.....	7,169	—	—	—	7,065	—	104
Michigan.....	3,106	—	—	144	1,760	185	1,107	—	Vermont.....	2,024	—	—	1,269	—	68	687
									Wisconsin.....	2,352	22	—	570	147	800	807
															6	

TABLE 20.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

STATE.	Estab-lish-ments.	Wage earners (average number).	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.	Over 1,000 wage earners.	Establish-ments.	Establish-ments.	Establish-ments.					
			Establish-ments.	Establish-ments.	Establish-ments.	Establish-ments.	Establish-ments.	Establish-ments.	Establish-ments.	Establish-ments.	Establish-ments.	Establish-ments.	Establish-ments.	Establish-ments.					
United States.....	403	53,111	8	54	157	87	1,092	85	2,801	65	4,693	52	8,259	25	8,810	21	14,375	6	12,864
Connecticut.....	33	5,472	—	6	18	8	98	10	305	2	145	2	273	2	550	1	828	2	3,255
Illinois.....	28	3,273	1	6	25	5	57	4	134	5	381	3	431	2	768	2	1,477	—	—
Indiana.....	15	1,228	1	2	5	1	19	5	192	3	200	1	144	2	608	—	—	—	—
Massachusetts.....	46	6,471	—	4	6	7	103	12	442	10	721	5	850	4	1,312	3	1,744	1	1,293
Michigan.....	31	3,106	—	3	10	7	81	4	144	8	590	7	1,008	—	—	2	1,366	—	—
New Jersey.....	14	1,678	1	2	8	6	78	1	26	2	138	—	—	2	1,428	—	—	—	—
New York.....	20	1,500	1	5	19	9	97	7	189	2	137	4	732	1	416	9	3,307	3	2,525
Ohio.....	102	13,855	2	8	22	17	230	22	798	20	1,488	10	3,204	9	8,307	3	2,523	2	2,283
Pennsylvania.....	32	3,671	—	3	9	11	134	6	175	2	126	5	810	3	1,204	2	2,123	1	6,033
Rhode Island.....	13	7,109	—	3	7	2	28	2	82	4	817	—	—	1	702	1	—	—	—
Vermont.....	6	2,024	—	1	3	3	34	8	243	3	186	1	139	—	—	3	1,814	—	—
Wisconsin.....	24	2,352	1	3	8	4	34	8	243	3	186	2	307	1	296	2	1,278	—	—

TABLE 21.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919.

VALUE OF PRODUCT.	Number of establish-ments.	Average number of wage earners.	Value of products.	Value added by manu-fac-ture.	VALUE OF PRODUCT.	Number of establish-ments.	Average number of wage earners.	Value of products.	Value added by manu-fac-ture.	PER CENT DISTRIBUTION.			
										100.0	100.0	100.0	100.0
All classes.....	403	53,111	\$212,400,158	\$153,305,850	All classes.....	—	—	—	—	4.7	(1)	(1)	(1)
Less than \$5,000.....	19	10	48,730	31,345	Less than \$5,000.....	—	—	—	—	11.7	0.4	0.3	0.2
\$5,000 to \$20,000.....	47	220	560,655	353,206	\$5,000 to \$20,000.....	—	—	—	—	27.3	3.7	2.8	2.6
\$20,000 to \$100,000.....	110	1,941	6,020,550	3,977,057	\$20,000 to \$100,000.....	—	—	—	—	33.3	15.4	15.0	14.0
\$100,000 to \$500,000.....	134	8,102	31,759,041	21,488,595	\$100,000 to \$500,000.....	—	—	—	—	10.2	13.6	13.1	13.0
\$500,000 to \$1,000,000.....	41	7,235	27,850,054	20,000,404	\$500,000 to \$1,000,000.....	—	—	—	—	12.9	66.9	68.8	70.1
\$1,000,000 and over.....	52	35,528	140,142,213	107,500,182	\$1,000,000 and over.....	—	—	—	—	—	—	—	—

<sup>1</sup> Less than one-tenth of 1 per cent.

## MANUFACTURES.

TABLE 22.—CHARACTER OF OWNERSHIP, BY SELECTED STATES: 1919.

STATE.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.						VALUE OF PRODUCTS.								
				In establishments owned by—			Per cent of total.			Total.			Of establishments owned by—					
	Total.	Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.		
United States.....	46	320	37	53,111	650	50,100	2,361	1.2	94.3	4.4	\$212,400,158	\$2,082,478	\$200,730,860	\$9,586,820	1.0	94.5	4.5	
Connecticut.....	2	31	—	5,472	1	5,472	—	100.0	—	—	18,435,449	—	18,435,449	—	—	—	—	
Illinois.....	3	24	1	3,273	2	2,928	2,345	28.4	71.6	—	15,008,096	3,512,501	11,495,595	—	23.4	76.6	—	
Indiana.....	1	12	2	1,228	—	1,080	148	87.9	12.1	—	4,259,463	—	3,538,916	720,517	—	83.1	16.9	
Massachusetts.....	11	30	5	6,471	328	5,634	503	5.1	87.1	7.9	23,442,547	1,150,310	20,452,575	1,839,662	4.9	87.2	7.8	
Michigan.....	3	27	1	3,196	2	141	3,055	—	4.4	95.6	12,656,492	2	410,419	12,246,073	—	3.2	96.8	—
New Jersey.....	2	11	1	1,078	2	14	1,664	0.8	99.2	—	6,707,671	2	51,029	6,716,642	—	0.8	99.2	—
New York.....	4	22	3	1,590	29	1,510	51	1.8	95.0	3.2	5,027,880	91,504	4,812,397	123,979	1.8	95.7	3.5	
Ohio.....	7	85	10	13,855	46	13,270	539	0.3	95.8	3.9	62,554,169	178,059	60,188,897	2,187,213	0.3	96.2	3.5	
Pennsylvania.....	2	24	6	3,671	—	3,548	123	—	96.6	3.4	16,797,040	—	10,277,662	1,519,378	—	96.9	3.1	
Rhode Island.....	2	11	—	7,169	—	7,109	—	100.0	—	—	22,301,290	—	22,301,290	—	—	100.0	—	
Vermont.....	—	6	—	2,024	—	—	2,024	—	100.0	—	—	9,600,745	—	9,600,745	—	—	100.0	—
Wisconsin.....	2	20	2	2,352	—	—	2,312	—	140	—	—	9,414,820	—	9,069,044	1,345,776	—	96.3	3.7

<sup>1</sup> Includes the group "Individual."<sup>2</sup> Includes the group "All others."

TABLE 23.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919.

POWER.	Number of engines or motors.	HORSEPOWER.		POWER.	Number of engines or motors.	HORSEPOWER.	
		Amount.	Per cent distribution.			Amount.	Per cent distribution.
Primary power, total.....	7,971	100,433	100.0	Primary power—Continued.	—	—	—
Owned.....	—	—	—	Rented.....	7,751	70,176	69.9
Steam.....	220	30,257	30.1	Electric.....	7,751	70,037	69.7
Engines.....	149	26,975	26.9	Other.....	—	139	0.1
Turbines.....	132	20,325	20.2	Electric.....	11,408	98,817	100.0
Internal-combustion engines.....	17	6,650	6.6	Rented.....	7,751	70,037	70.9
Water wheels and turbines.....	55	2,240	2.2	Generated by establishments reporting.....	3,687	28,780	29.1
	16	1,033	1.0				

TABLE 24.—FUEL CONSUMED, BY SELECTED STATES: 1919.

STATE.	COAL.		Coke (tons, 2,240 lbs.).	Fuel oils (barrels)	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).	STATE.	COAL.		Coke (tons, 2,240 lbs.).	Fuel oils (barrels)	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
	Anthracite (tons, 2,240 lbs.).	Bituminous (tons, 2,000 lbs.).						Anthracite (tons, 2,240 lbs.).	Bituminous (tons, 2,000 lbs.).				
United States.....	17,513	196,071	28,871	55,081	9,462	335,130	New Jersey.....	1,887	10,585	1,855	1,025	52	39
Connecticut.....	644	19,758	3,297	8,191	757	9,902	New York.....	603	3,393	310	125	—	3,210
Illinois.....	14	18,093	1,921	30	28	54,249	Ohio.....	289	81,004	2,955	23,059	734	75,223
Indiana.....	6	4,917	865	837	840	—	Pennsylvania.....	11,209	14,339	3,322	2,235	358	39,126
Massachusetts.....	1,683	17,452	1,515	7,590	145	19,119	Rhode Island.....	299	13,155	9,360	6,405	148	16,261
Michigan.....	7	9,491	—	4,244	6,050	102,948	Vermont.....	556	2,774	—	1,542	1,065	1,492
							Wisconsin.....	329	16,097	2,181	276	98	2,668

## SPECIAL STATISTICS.

Detailed statistics of products.—Machine tools for the establishments here considered are subdivided, as shown in Table 25, into 18 principal classes: (1) Lathes, (2) milling, (3) grinding, (4) drilling, (5) screw, (6) boring, (7) planers, (8) presses, (9)

gear-cutting, (10) hammers, (11) shapers, (12) pipe, (13) shears, (14) broaching, (15) bending, (16) portable tools, (17) all other machine tools, and (18) all other products. In 1919 the total value of such manufactures was \$212,400,158.

## MACHINE TOOLS.

19

TABLE 25.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919.

STATE AND KIND.	Number.	Value.	STATE AND KIND.	Number.	Value.
Total value.....		\$212,400,158	Drilling machines—Continued.		
Ohio.....	62,554,169		Upright.....	6,477	\$1,754,463
Massachusetts.....	23,442,547		Illinois.....	3,804	891,188
Rhode Island.....	22,301,290		All other states.....	2,673	883,275
Connecticut.....	18,435,449		Screw machines:		
Pennsylvania.....	16,797,040		Automatic.....	3,181	6,465,636
Illinois.....	15,008,096		Hand.....	3,046	3,159,410
Michigan.....	12,656,492		Ohio.....	2,365	2,042,132
Vermont.....	9,609,745		All other states.....	681	517,278
Wisconsin.....	9,414,820		Boring machines:		
New Jersey.....	6,767,671		Horizontal.....	826	4,437,937
New York.....	5,027,880		Ohio.....	343	1,448,449
Indiana.....	4,250,463		Pennsylvania.....	126	1,340,532
Kentucky.....	1,022,499		Massachusetts.....	97	445,884
All other states.....	5,102,997		All other states.....	280	1,203,092
Lathes:			Vertical.....	607	4,329,654
Engine lathes.....	17,188	23,239,840	Ohio.....	248	2,410,446
Ohio.....	6,775	12,604,232	Pennsylvania.....	258	1,136,029
Pennsylvania.....	74	1,739,737	All other states.....	101	783,179
Massachusetts.....	1,411	1,670,023	Planers.....	1,482	8,128,655
New York.....	2,008	1,383,223	Ohio.....	869	4,154,315
Illinois.....	1,080	1,431,286	Massachusetts.....	151	584,661
Kentucky.....	617	367,894	Pennsylvania.....	20	600,987
All other states.....	5,103	5,033,454	All other states.....	442	2,788,692
Turret lathes.....	4,657	10,140,582	Presses:		
Indiana.....	861	1,470,910	Punching.....	32,168	5,400,044
Massachusetts.....	205	550,887	Ohio.....	31,457	4,530,299
All other states.....	3,501	8,112,785	All other states.....	711	869,745
Bench and other lathes.....	7,186	4,094,346	All other.....	3,618	956,855
Massachusetts.....	2,224	903,247	New Jersey.....	559	135,480
Illinois.....	1,199	781,103	Ohio.....	370	158,865
New York.....	963	444,388	Illinois.....	240	28,770
Connecticut.....	280	96,622	All other states.....	2,449	633,740
All other states.....	2,520	1,869,006	Gear-cutting machines.....	2,688	5,845,505
Milling machines:			Hammers, pneumatic and other.....	38,535	4,951,974
Plain:			Ohio.....	7,348	807,977
Ohio.....	4,635	6,171,010	New York.....	368	256,229
Wisconsin.....	1,926	2,620,301	All other states.....	30,824	3,887,768
New York.....	924	1,536,068	Shapers.....	4,515	4,230,605
Connecticut.....	646	479,937	Ohio.....	1,875	1,682,301
All other states.....	274	176,986	Michigan.....	217	308,866
Universal.....	865	1,348,150	Pennsylvania.....	13	81,947
Wisconsin.....	3,103	5,580,044	All other states.....	2,410	2,177,591
Ohio.....	914	1,710,317	Pipe machines.....	4,118	2,481,441
All other states.....	1,155	1,880,215	Ohio.....	1,048	585,572
Vertical.....	1,304	2,755,943	All other states.....	3,070	1,895,869
Automatic.....	822	1,232,048	Shears.....	1,367	1,506,467
All other.....	1,550	2,787,290	Broaching machines.....	549	1,395,300
Grinding machines:			Bending machines.....	153	941,739
Plain:			Portable tools.....		
Massachusetts.....	8,359	12,011,923	Michigan.....	10,907,928	
Pennsylvania.....	4,425	6,234,103	Ohio.....	2,881,729	
Ohio.....	1,029	2,381,570	Pennsylvania.....	2,650,146	
Connecticut.....	993	925,229	Connecticut.....	185,965	
Wisconsin.....	533	382,846	All other states.....	58,604	
All other states.....	150	166,484	All other.....	5,131,484	
Universal.....	1,229	1,921,691	All other machine tools.....		
Massachusetts.....	1,792	2,066,166	Massachusetts.....	31,313,335	
Ohio.....	771	520,307	Ohio.....	6,346,693	
All other states.....	241	354,843	Rhode Island.....	6,232,137	
All other.....	780	1,191,016	Connecticut.....	5,109,905	
Drilling machines:			Michigan.....	4,340,245	
Radial.....	2,735	1,725,252	Pennsylvania.....	2,523,745	
Ohio.....	560	404,990	Illinois.....	2,081,883	
All other states.....	228	310,378	Wisconsin.....	1,258,778	
Multiple spindle.....	349	237,076	New Jersey.....	1,375,260	
Ohio.....	163	119,687	New York.....	719,271	
All other states.....	1,435	652,521	Indiana.....	682,716	
Sensitive.....			All other states.....	590,683	
Massachusetts.....	5,993	1,974,917	All other products.....	1,052,019	
All other states.....	1,085	1,045,573		32,052,932	
	4,008	929,344			

## MANUFACTURES.

## GENERAL TABLE.

Detailed statement, by states.—Table 26 presents, for 1919, statistics in detail for the industry as a whole.

TABLE 26.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.		Number, 15th day of—	16 and over.		Under 16.		Capital.	Salaries and wages.		
					Male.	Female.	Average number.	Maximum month.		Male.	Female.	Male.	Female.		Officials.	Clerks, etc.	
United States	403	61,762	132	2,333	3,608	2,488	53,111	De 58,640	My 49,515	58,776	50,618	2,035	121	2	\$231,039,843	\$9,491,952	\$8,545,004
Connecticut	33	6,311	2	208	366	263	5,472	Ja 5,926	Ap 5,087	5,943	5,702	181	59	1	20,380,557	926,324	689,478
Illinois	28	3,841	6	145	278	139	3,273	De 3,751	Je 2,713	3,764	3,624	138	2		14,323,537	650,595	646,123
Indiana	15	1,464	6	114	78	38	1,228	Ja 1,302	Mh 1,136	1,360	1,355	3	2		4,315,557	478,508	136,472
Kentucky	7	292	10	16	9	8	249	De 302	Ja 209	302	297	5			633,454	62,892	19,729
Maine	3	8	3				5	(1)	5	5	5				15,607		
Massachusetts	46	7,709	22	274	490	473	6,471	De 7,297	Jy 5,858	7,370	7,011	326	32	1	32,446,551	925,899	965,451
Michigan	31	3,085	5	137	212	135	3,196	No 3,436	Jo 3,030	3,385	3,177	202	6		14,438,803	633,491	547,780
Minnesota	5	224	3	10	25	23	163	De 1,108	Jo 102	197	197				778,024	25,325	32,333
Missouri	5	155		18	13	3	121	De 149	Jo 104	149	140				401,177	61,708	16,433
New Jersey	14	2,186	4	113	255	136	1,678	De 1,850	Jo 1,531	1,844	1,844				7,343,687	349,188	586,762
New York	29	1,863	12	106	96	59	1,500	De 1,886	Mh 1,384	1,881	1,871	7	3		7,351,070	398,641	201,312
Ohio	102	16,112	29	663	1,038	527	15,855	De 15,306	My 12,011	15,333	15,064	260	9		56,626,865	2,511,242	2,028,768
Pennsylvania	32	4,400	17	103	358	191	3,071	Ja 4,005	Se 3,033	3,612	3,544	65	3		21,809,376	717,680	936,704
Rhode Island	13	7,776	2	142	160	303	7,160	De 8,002	Fe 6,352	8,099	7,422	675	2		25,036,802	536,253	661,366
Vermont	6	2,313		39	165	85	2,024	De 2,205	Ap 1,897	2,213	2,112	100	1		11,041,881	200,747	479,571
Wisconsin	24	2,760	6	158	152	92	2,352	No 2,722	Ap 1,886	2,703	2,628	73	2		10,885,674	711,431	499,472
All other states <sup>1</sup>	10	683	5	27	24	13	594			616	616				3,111,125	182,038	88,020
EXPENSES—continued.																	
STATE.	Salaries and wages—Con.	EXPENSES—continued.				POWER.											
		Wage earners.	For contract work.	Rent and taxes.		For materials.		Value of products.	Value added by manufacture.	Primary horsepower.				Electric horsepower generated in establishments reporting.			
				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. <sup>2</sup>	Rented. <sup>4</sup>		
United States	\$66,178,909	\$1,469,844	\$470,353	\$17,838,802	\$56,048,334	\$2,985,974	\$212,400,158	\$153,305,850	100,433	20,325	6,650	2,249	1,033	70,176	28,780		
Connecticut	7,247,888	8,917	13,125	1,040,390	4,548,245	374,721	18,435,449	13,512,483	8,903	1,202	200	60	110	7,271	35		
Illinois	4,410,243	6,093	10,046	593,090	4,582,312	173,007	15,008,096	10,252,087	5,707	1,965	12	16	3,774	1,699			
Indiana	1,383,825	21,854	18,123	205,788	1,303,228	71,107	4,259,463	2,885,128	2,272	160	10		2,112	150			
Kentucky	272,222	8,487	840	37,267	303,250	11,595	1,022,499	707,654	381		60		321				
Maine	4,780	50	300	98	5,368	293	16,555	9,894	18				18				
Massachusetts	7,610,041	101,642	98,717	1,072,132	6,532,701	376,062	23,442,547	16,533,784	12,676	2,165	35	170	10,306	780			
Michigan	4,408,088	25,476	32,501	619,855	3,789,355	182,818	12,056,492	8,684,319	5,905	400	320	5,185					
Minnesota	182,168	55,054	6,720	13,116	207,584	13,018	827,184	605,982	334				334				
Missouri	148,877	140	7,764	4,044	184,075	6,009	434,999	244,315	211				211				
New Jersey	1,519,552	4,300	3,742	936,220	2,345,341	75,241	6,767,671	4,347,089	3,984	1,365	2,200	25	394	4,122			
New York	1,825,120	20,665	109,566	306,950	1,231,764	73,181	6,027,880	3,722,935	3,925	300	24	20	3,581	10			
Ohio	17,071,620	400,204	119,528	6,294,723	16,731,387	745,468	62,554,189	45,077,334	25,255	4,649	1,035	915	18,056	9,309			
Pennsylvania	5,141,121	492,633	24,257	1,067,750	4,516,253	251,782	16,797,040	12,029,005	8,530	3,619	802	4,115	4,115	7,846			
Rhode Island	8,702,410	17,243	5,284	1,729,094	3,308,170	325,796	22,301,290	18,007,324	8,998	550	1,530		6,918				
Vermont	2,550,347	5,690	2,400	1,424,642	2,817,119	110,016	6,600,745	6,082,610	7,201	300	1,050	267	5,401				
Wisconsin	2,936,033	182,924	12,255	1,044,683	2,456,188	142,270	9,414,820	6,816,302	4,325	2,060	21	267	1,087	4,380			
All other states <sup>1</sup>	864,828	111,873	2,185	544,045	1,120,014	52,300	3,826,259	2,640,945	1,742	650			1,092	458			

<sup>1</sup> Same number reported throughout the year.<sup>2</sup> All other states embrace: California, 2 establishments; Delaware, 1; Iowa, 1; Kansas, 1; Maryland, 1; New Hampshire, 3; Washington, 1.<sup>3</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).<sup>4</sup> 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

MOTORCYCLES, BICYCLES  
AND PARTS

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

CONTENTS

	Page.		Page.
EXPLANATION OF TERMS.....	2	Size of establishments, by value of products.....	6
GENERAL STATISTICS.			
General character of the industry.....	3	Character of ownership.....	6
Comparative summary.....	4	Number and horsepower of types of prime movers.....	7
Summary of the industry.....	4	Fuel consumed, by states.....	7
Principal states, ranked by value of products.....	4	SPECIAL STATISTICS.	
Persons engaged in the industry.....	5	Detailed statistics of quantity and value.....	7
Wage earners, by months, for states.....	5	GENERAL TABLES.	
Average number of wage earners, by prevailing hours of labor per week, for states.....	5	Comparative summary, by states.....	8
Size of establishments, by average number of wage earners, by states.....	6	Detailed statement for the industry, by states.....	8



## 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 \$600, or the manufacturing done in educational, eleemosynary, and penal institutions.

**Period covered.**—The returns relate to the calendar year 1910, 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 1910 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 calcu-

late 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 census of 1910 and 1900. 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.

# MOTORCYCLES, BICYCLES, AND PARTS.

## GENERAL STATISTICS.

**General character of the industry.**—The statistics for this industry cover establishments engaged primarily in the manufacture or assembling of complete motorcycles or bicycles, and also those making parts and accessories of these machines, such as saddles, seat posts, frames, gears, handlebars, and chains. The report, however, does not include establishments engaged primarily in the manufacture of tires, engines, lamps, or electrical supplies.

**Comparative summary.**—Table 1 summarizes the statistics for each census since 1899, with percentages of increase and decrease for each five-year period. In 1899 the average number of wage earners was about ten times and the value of products twelve times the number and amount reported in 1889. During the five-year period ending with 1904 the industry declined rapidly. A considerable recovery of the industry as a whole is indicated by the statistics for 1909, and the growth has been constantly maintained at each succeeding census. The increases 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.

**Summary of the industry.**—The products of the industry may be divided into two principal classes—(1) motorcycles, including side and delivery cars and parts, and (2) bicycles and parts. Table 2 summarizes the more important figures relative to the combined industry and to each of the branches for 1919.

Bicycles and parts, motorcycle parts, and accessories were also made by establishments engaged primarily in the manufacture of other products to the value of \$2,205,748 in 1919, the value of which, however, is not included in the total value of products shown for the motorcycle and bicycle industry.

**Principal states, ranked by value of products.**—Massachusetts and Ohio, ranking first and second, respectively, in 1919, as shown by Table 3, reported 50.6 per cent of the total value of products and 50.3 per cent of the 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," page 2. Figures in detail will be found in Table 14.

**Wage earners, for 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 11,653 in December to a minimum of 10,166 in February, the minimum number being equivalent to 87.2 per cent of the maximum. Figures are given for all states reporting an average, in 1919, of over 400 wage earners that could be shown without disclosing operations of individual establishments, while for the United States the number of males and females is also shown.

**Average number of wage earners, by prevailing hours of labor per week, for states.**—Table 6 shows a marked shortening of the working-day since 1914. In that year only 7.3 per cent of the average number of wage earners were reported as employed less than 54 hours per week as compared with 57.7 per cent in 1919.

**Size of establishments, by average number of wage earners, by states.**—Analysis of Table 7 discloses the significant fact that 22 establishments, or 43.1 per cent of the total number for the industry, employed fewer than 51 wage earners each, while only 245, or 2.3 per cent of the total number of wage earners were employed therein. On the other hand, the groups "501 to 1,000" and "Over 1,000," comprising 6 establishments, employed 7,293 wage earners, or 67 per cent of the total average number, illustrating the concentration of the industry 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. Combined figures for wage earners and value added by manufacture are given for 1914. In 1909 all establishments reporting products of \$100,000 and over were combined to avoid disclosure of individual operators. The statistics in Table 8 illustrate further 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 20 establishments, or 39.2 per cent of the total number for the industry, employed 9,836 wage earners, or 90.4 per cent of the total average number, and reported products to the value of \$48,603,277, or 91.5 per cent of the total value of products.

**Character of ownership.**—As indicated in Table 9, corporations controlled 72.5 per cent of the total

## MANUFACTURES.

number of establishments reported for 1919, employed 96.2 per cent of the average number of wage earners, and reported 96.7 per cent of the value of products. During the five-year period from 1914 to 1919 the average number of wage earners in corporations increased 4,064, or 63.4 per cent, and the value of products \$29,919,054, or 139.7 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 6,053, or 69.2 per cent. This was due largely to the gain in rented electric power used, which increased 79.2 per cent as compared with an increase of 38.9 per cent in power owned.

**Fuel consumed, by states.**—Table 11 shows the principal kinds of fuel used for the industry in the United States in 1919 and 1914, and also gives separately the amounts consumed in states requiring considerable quantities of fuel for manufacturing purposes.

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

	1919	1914	1909	1904	1899	PER CENT OF INCREASE, <sup>1</sup>			
						1914-1919	1909-1914	1904-1909	1899-1904
Number of establishments.....	51	78	95	101	312	.....	.....	.....	-5.9 -67.6
Persons engaged.....	12,200	7,753	5,017	3,761	19,768	57.4	54.5	33.4	-81.8
Proprietors and firm members.....	16	47	78	81	208	.....	.....	.....	-81.2
Salaried employees.....	1,298	1,026	502	361	2,034	26.5	104.4	39.1	-82.3
Wage earners (average number).....	10,886	6,680	4,437	3,319	17,525	63.0	50.6	33.7	-81.1
Primary horsepower.....	14,800	8,753	5,932	5,730	19,847	69.2	47.0	3.5	-71.1
Capital.....	\$35,362,150	\$18,134,950	\$9,780,102	\$5,883,458	\$20,783,659	95.0	85.4	66.2	-80.2
Salaries and wages.....	14,903,593	5,913,270	3,490,501	2,322,201	9,943,052	153.1	69.4	56.3	-76.6
Salaries.....	2,200,358	1,174,520	582,302	350,798	1,783,235	87.3	101.7	66.0	-80.0
Wages.....	12,703,235	4,738,750	2,908,199	1,971,403	8,189,817	169.3	62.9	47.5	-75.9
Paid for contract work.....	1,036	60,127	48,414	78,105	41,517	-98.3	24.2	-38.1	88.3
Rent and taxes.....	3,318,546	279,577	72,303	285,116	2,320,000	1,087.0	286.7	.....	-73.1
Cost of materials.....	25,985,915	10,927,054	5,082,569	2,028,140	16,792,051	137.8	115.0	93.4	-84.3
Value of products.....	53,105,895	22,234,262	10,698,567	5,153,240	31,915,908	138.8	107.8	107.6	-83.9
Value added by manufacture <sup>2</sup> .....	27,110,980	11,306,008	5,615,998	2,525,094	15,123,857	139.9	101.3	122.4	-83.3

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where base is less than 100. <sup>2</sup> Exclusive of internal revenue. <sup>3</sup> Value of products less cost of materials.

TABLE 2.—SUMMARY OF THE INDUSTRY: 1919.

	Total.	Motocycles, including parts.	Bicycles, including parts.				Total.	Motocycles, including parts.	Bicycles, including parts.
Number of establishments.....	51	20	31	Salaries and wages.....	14,903,593	7,377,669	7,585,924	7,377,669	7,585,924
Persons engaged.....	12,200	6,411	5,789	Salaries.....	2,200,358	1,086,111	1,114,247	1,086,111	1,114,247
Proprietors and firm members.....	16	0	10	Wages.....	12,703,235	6,291,558	6,471,077	6,291,558	6,471,077
Salaried employees.....	1,298	703	595	Paid for contract work.....	1,036	.....	1,036	.....	1,036
Wage earners (average number).....	10,886	5,702	5,184	Rent and taxes.....	3,318,546	2,173,323	1,145,223	2,173,323	1,145,223
Primary horsepower.....	14,800	6,278	8,523	Cost of materials.....	25,985,915	14,109,049	11,876,866	14,109,049	11,876,866
Capital.....	\$35,362,150	\$19,250,836	\$16,111,314	Value of products.....	53,105,895	28,609,327	24,496,508	28,609,327	24,496,508
				Value added by manufacture.....	27,110,980	14,500,278	12,619,702	14,500,278	12,619,702

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.	51	10,886	100.0	...	\$53,106	100.0	...	\$27,120	100.0	...
Massachusetts.....	8	3,000	27.6	1	18,000	30.1	1	7,591	28.0	1
Ohio.....	9	2,480	22.8	2	10,874	20.5	2	5,744	21.2	2
Illinois.....	7	1,082	9.9	4	4,852	9.1	4	2,879	10.6	4
Indiana.....				5			7	\$2,968	5.6	6
New York.....				7			6	2,385	5.4	7
Pennsylvania.....				4			8	310	2.8	8
All other states.....				11			...	1,905	2.5	8
								14,242	20.8	...
									7,981	29.4

# MOTORCYCLES, BICYCLES, AND PARTS.

5

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

CLASS.	Cen-sus year.	Total	Male.	Fe-male.	PER CENT OF TOTAL.		CLASS.	Cen-sus year.	Total	Male.	Fe-male.	PER CENT OF TOTAL.	
					Male.	Fe-male.						Male.	Fe-male.
					Male.	Fe-male.						Male.	Fe-male.
All classes.....	1919	12,200	10,518	1,682	86.2	13.8	Clerks and other subordinate salaried employees.	1919	922	460	462	49.9	50.1
	1914	7,753	7,346	407	94.8	5.2		1914	800	534	266	66.8	33.2
	1909	5,017	4,853	164	96.7	3.3		1909	374	256	118	68.4	31.6
Proprietors and officials.....	1919	392	385	7	98.2	1.8	Wage earners (average number).....	1919	10,886	9,673	1,213	88.9	11.1
	1914	278	268	5	98.2	1.8		1914	6,620	6,544	136	98.0	2.0
	1909	206	204	2	99.0	1.0		1909	4,437	4,393	44	99.0	1.0
Proprietors and firm members.....	1919	16	16	.....	100.0	.....	16 years of age and over.....	1919	10,752	9,593	1,159	89.2	10.8
	1914	47	44	3	93.6	6.4		1914	6,640	6,506	134	98.0	2.0
	1909	78	77	1	98.7	1.3		1909	4,353	4,315	38	99.1	0.9
Salaried officers of corporations.....	1919	85	84	1	98.8	1.2	Under 16 years of age.....	1919	134	80	54	59.7	40.3
	1914	66	64	2	97.0	3.0		1914	40	38	2	95.0	5.0
	1909	50	50	.....	100.0	.....		1909	84	78	6	92.9	7.1
Superintendents and managers.....	1919	291	285	6	97.9	2.1							
	1914	160	160	.....	100.0	.....							
	1909	78	77	1	98.7	1.3							

TABLE 5.—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.	Aver-age num-ber em-ployed dur-ing year.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Sep-tem- ber.	Octo- ber.	Novem- ber.	Decem- ber.	Per cent mini- mum is of max- imum.
United States:														
1919.....	10,886	11,258	<b>10,166</b>	10,550	10,903	10,952	10,777	10,628	10,630	10,616	11,008	11,491	11,653	87.2
Males.....	9,673	9,581	<b>8,853</b>	9,381	9,750	9,538	9,658	9,537	9,506	9,447	9,847	10,244	10,434	84.8
Females.....	1,213	1,677	<b>1,313</b>	1,169	1,153	1,114	1,119	1,091	1,124	1,169	1,161	1,247	1,219	65.1
1914.....	6,680	8,843	<b>9,177</b>	8,840	8,300	7,872	6,270	5,351	4,792	4,353	4,608	5,360	6,414	47.2
1909.....	4,437	8,991	<b>4,134</b>	4,428	4,638	4,808	4,996	4,318	4,223	4,214	4,245	4,451	4,738	79.9
Illinois.....	1,082	1,195	<b>410</b>	999	1,247	<b>1,282</b>	1,219	1,173	1,146	1,063	1,087	1,084	1,093	33.0
Indiana.....	439	438	<b>458</b>	482	485	465	415	399	307	403	422	440	494	74.3
Massachusetts.....	3,000	3,019	<b>3,047</b>	2,984	3,068	3,081	2,980	2,969	2,924	2,794	2,928	3,080	3,128	89.3
New York.....	674	674	<b>657</b>	678	693	705	676	672	670	659	657	671	93.2	
Ohio.....	2,480	2,995	2,616	2,392	2,264	2,285	2,284	2,236	2,328	2,402	2,501	2,709	2,748	74.3
States showing large proportion of females.														Per ct. av. is of state.
Massachusetts.....	406	425	<b>427</b>	413	416	405	393	388	370	397	406	427	415	13.5
Ohio.....	280	697	373	216	197	207	229	217	244	252	212	261	255	11.3

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

STATE.	Cen-sus year.	Total	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						STATE.	Cen-sus year.	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.				44 and under.	Between 44 and 48.	48.	Between 48 and 54.	54.	Between 54 and 60.	
			44.	48.	54.	54.	60.	Over 60.				44.	48.	54.	54.	60.	Over 60.	
United States.....	1919	10,886	30	.....	3,356	2,896	959	3,518	127	.....	Massachusetts <sup>3</sup> .....	1919	3,000	.....	2,220	45	572	163
	1914	6,680	(2)	(2)	42	444	1,722	4,404	66	2		1914	674	(2)	14	426	78	165
	1909	4,437	(2)	(2)	12	11	1,262	1,473	1,677	2		1914	653	(2)	2	224	393	34
Illinois <sup>3</sup> .....	1919	1,082	1	....	853	160	98	.....	.....	.....	Ohio.....	1919	2,480	.....	160	180	220	1,970
Indiana.....	1919	430	(2)	(2)	38	.....	351	.....	78	199		1914	752	.....	78	1,467	6	2
	1914	203	.....	.....	.....	.....	185	.....	.....	.....								

<sup>1</sup> Includes 48 and under for 1914 and 1909.

<sup>2</sup> Corresponding figures not available.

<sup>3</sup> Figures not available in 1914.

## MANUFACTURES.

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

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
	51	78	95	10,886	6,680	4,437	\$53,105,895	\$22,234,262	\$10,698,507	\$27,119,980	\$11,306,608	\$5,015,998
All classes.....	51	78	95	10,886	6,680	4,437	\$53,105,895	\$22,234,262	\$10,698,507	\$27,119,980	\$11,306,608	\$5,015,998
Less than \$5,000.....	6	23	34	4	16	39	16,346	54,377	94,088	9,328	31,801	61,807
\$5,000 to \$20,000.....	5	17	22	7	84	80	40,339	197,649	225,737	27,468	117,578	135,993
\$20,000 to \$100,000.....	6	16	17	85	349	251	259,947	876,139	881,434	150,076	453,595	355,631
\$100,000 to \$500,000.....	14	11	{ 054 }	{ 1,399 }	{ 4,007 }	{ 4,185,098 }	{ 2,689,203 }	{ 9,096,708 }	{ 1,910,249 }	{ 3,100,464 }	{ 2,515,344 }	{ 5,059,094 }
\$500,000 to \$1,000,000.....	10	5	22	{ 1,329 }	{ 8,607 }	{ 4,332 }	{ 7,216,137 }	{ 3,175,371 }	{ 15,241,518 }	{ 22,010,397 }	{ 8,188,320 }	
\$1,000,000 and over.....	10	6										
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.....	11.8	29.5	35.8	(1)	0.2	0.9	(1)	0.2	0.9	(1)	0.3	1.1
\$5,000 to \$20,000.....	9.8	21.8	23.2	0.1	1.3	1.8	0.1	0.9	2.1	0.1	1.0	2.4
\$20,000 to \$100,000.....	11.8	20.5	17.9	0.8	5.2	5.7	0.5	3.9	0.4	0.6	4.0	6.4
\$100,000 to \$500,000.....	27.5	14.1	{ 8.8 }	{ 12.2 }	{ 28.4 }	{ 91.7 }	{ 7.9 }	{ 12.1 }	{ 6.4 }	{ 0.7 }	{ 22.2 }	{ 90.1 }
\$500,000 to \$1,000,000.....	19.8	6.4	23.2				13.6	14.3	90.0	11.5		
\$1,000,000 and over.....	19.6	7.7		78.1	64.9		77.9	68.5		81.2	72.4	

<sup>1</sup> Less than one-tenth of 1 per cent.

TABLE 9.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Cen-sus year.	Num-ber of estab-lish-ments.	Average number of wage-earners.	Value of products.	Value added by manufac-ture.	CHARACTER OF OWNERSHIP.	Cen-sus year.	Num-ber of estab-lish-ments.	Average number of wage-earners.	Value of products.	Value added by manufac-ture.
All classes.....	1919	51	10,886	\$53,105,895	\$27,110,980	Per cent distribution:					
	1914	78	6,680	22,234,202	11,306,008	Individual.....	1919	19.0	0.3	0.2	0.3
Individual.....	1919	10	28	127,070	68,933		1914	30.8	0.8	0.9	0.8
	1914	24	55	204,314	98,293	Corporation.....	1919	72.5	96.2	96.7	96.1
Corporation.....	1919	37	10,477	51,335,671	26,031,203		1914	53.8	90.0	90.3	90.1
	1914	42	6,413	21,416,617	10,893,235	All other.....	1919	7.8	3.5	3.1	3.8
All other.....	1919	4	381	1,043,154	1,019,844		1914	15.4	3.2	2.8	2.8
	1914	12	212	613,331	320,080						

# MOTORCYCLES, BICYCLES, AND PARTS.

7

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

POWER.		NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
		1919	1914	1909	Amount.			Per cent distribution.		
					1919	1914	1909	1919	1914	1909
Primary power, total		980	551	144	14,806	8,753	5,932	100.0	100.0	100.0
Owned		26	38	56	4,137	2,979	5,006	27.9	34.0	84.4
Steam		20	22	26	3,970	2,580	3,628	26.8	29.2	61.2
Engines		19	(1)	(1)	3,700	(1)	(1)	25.0	.....	.....
Turbines		1	(1)	(1)	270	(1)	(1)	1.8	.....	.....
Internal-combustion engines		4	14	27	77	310	1,261	0.5	3.6	21.3
Water wheels and turbines		2	2	3	90	100	117	0.6	1.1	1.9
Rented		963	513	88	10,669	5,774	926	72.1	66.0	15.6
Electric		963	513	88	10,283	5,739	810	69.5	65.6	13.7
Other					386	35	116	2.6	0.4	2.0
Electric		1,017	555	146	11,632	6,256	2,534	100.0	100.0	100.0
Rented		963	513	88	10,283	5,739	810	88.4	91.7	32.0
Generated by establishments reporting		54	42	58	1,350	517	1,724	11.6	8.3	68.0

<sup>1</sup> Not reported separately.

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

STATE.	Cen-	COAL.		Coke (tons, 2,240 pounds).	Fuel oils (bar- rels).	Gaso- line and other volatile oils (bar- rels).	Gas (1,000 cubic feet).	STATE.	Cen-	COAL.		Coke (tons, 2,240 pounds).	Fuel oils (bar- rels).	Gaso- line and other volatile oils (bar- rels).	Gas (1,000 cubic feet).
		Cen-	sus- year.	Anthra- cite (tons, 2,240 pounds).	Bitu- minous (tons, 2,000 pounds).	Coke (tons, 2,000 pounds).	Fuel oils (bar- rels).			Anthra- cite (tons, 2,240 pounds).	Bitu- minous (tons, 2,000 pounds).	Coke (tons, 2,240 pounds).	Fuel oils (bar- rels).		
United States...	1919	5,365	38,280	3,008	22,013	2,380	117,642	New York.....	1919	97	2,675	.....	1,800	1	6,073
	1914	2,497	21,467	924	S,113	(1)	111,108		1914	218	3,356	885	10	(1)	18,787
Illinois.....	1919	.....	5,405	.....	920	687	5,400	Ohio.....	1919	.....	10,532	3,000	4,534	198	76,982
	1914	17	2,402	.....	(1)	.....	2,706		1914	.....	5,734	.....	3,555	(1)	12,336
Indiana.....	1919	.....	7,655	.....	1,869	381	10,146	All other states.....	1919	428	7,351	8	5,700	98	4,202
	1914	.....	2,600	.....	800	(1)	73,561		1914	1,684	3,237	.....	3,061	(1)	3,158
Massachusetts.....	1919	4,840	4,662	30	7,100	1,704	14,830		.....	.....	.....	.....	.....	.....	.....
	1914	578	4,048	.....	.....	.....	560		.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> Included in figures for fuel oils.

## SPECIAL STATISTICS.

Detailed statistics of quantity and value.—A detailed statement of the number and value of motorcycles and bicycles manufactured in 1919, 1914, 1909, and 1904 is given in Table 12.

In the five-year period from 1914 to 1919, the number of motorcycles manufactured decreased 2,940, or 4.7 per cent, while the value of the machines increased \$4,014,280, or 33 per cent. The number of bicycles manufactured during the same period in-

creased 171,646, or 57.4 per cent, and the value \$8,520,023, or 226.8 per cent.

Wisconsin lead all other states in the number and value of motorcycles manufactured in 1919, with Massachusetts ranking second, while Ohio ranked first in the number and value of bicycles produced, with New York second in number. In the value of bicycles manufactured, however, Massachusetts exceeded New York.

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

PRODUCT.	1919	1914	1909	1904	PRODUCT.	1919	1914	1909	1904
All products, value <sup>1</sup> .....	\$53,105,805	\$22,234,262	\$10,608,507	\$5,153,240	Motorcycle parts, including side and delivery cars, value.....	\$11,423,592	.....	.....	.....
Motorcycles:					Bicycle parts, value.....	4,974,688	\$6,315,169	\$5,245,583	\$1,594,755
Number.....	59,214	62,154	18,628	2,300	All other products, including repairs, value.....	8,254,239	.....	.....	.....
Value.....	\$16,170,055	\$12,161,775	\$3,015,988	\$354,980					
Bicycles:									
Number.....	470,675	299,020	168,824	225,309					
Value.....	\$12,277,341	\$3,757,318	\$2,436,996	\$3,203,505					

<sup>1</sup> In addition, the following products were made by establishments engaged primarily in the manufacture of products other than those covered by this industry: In 1919, 8,488 bicycles, and other products, including parts, etc., valued at \$2,205,748; in 1914, 639 motorcycles, valued at \$144,672; 99,870 bicycles, valued at \$1,603,912; and other products, including parts, etc., valued at \$2,899,214; in 1909, 64,883 bicycles, valued at \$791,193; and other products, including parts, etc., valued at \$579,927; and in 1904, 25,178 bicycles, valued at \$537,418; 28 motorcycles, valued at \$4,200; and other products, including parts, etc., valued at \$34,341.

## MANUFACTURES.

## GENERAL TABLES.

Table 13 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.

TABLE 13.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen-sus year.	Num-ber of es-tab-lish-ments.	Wage earners (ave-rage num-ber).	Primary horse-power.	Wages.	Cost of ma-terials.	Value of prod-ucts.	STATE.	Cen-sus year.	Num-ber of es-tab-lish-ments.	Wage earners (ave-rage num-ber).	Primary horse-power.	Wages.	Cost of ma-terials.	Value of prod-ucts.
United States.....	1919	51	10,886	14,806	\$12,763	\$25,986	\$53,106	New York.....	1910	7	674	1,017	\$856	\$1,515	\$2,965
	1914	78	6,680	8,753	4,739	10,928	22,234		1914	16	653	991	454	840	1,650
	1909	95	4,437	5,932	2,908	5,083	10,699		1900	20	558	406	345	522	1,165
Illinois.....	1919	7	1,082	1,370	1,329	1,973	4,852	Ohio.....	1910	9	2,480	4,280	3,330	5,130	10,874
	1914	13	911	1,041	751	2,260	4,065		1914	9	752	1,951	518	1,634	2,931
	1909	14	910	775	600	972	1,777		1909	6	942	1,895	686	1,066	2,308
Indiana.....	1919	5	430	805	512	1,837	2,968	Pennsylvania.....	1910	4	310	265	345	882	1,305
	1914	4	203	485	117	359	675		1914	8	156	122	111	186	352
	1909	10	843	899	580	1,378	2,706		1900	11	341	205	193	339	597
Massachusetts.....	1919	8	3,000	3,050	3,238	8,408	18,000	All other states.....	1910	11	2,901	4,010	3,144	6,261	14,249
	1914	6	2,135	2,104	1,507	3,194	7,021		1914	22	1,370	2,059	1,221	2,455	5,549
	1909	10	843	899	580	1,378	2,706		1900	34	843	1,752	504	806	2,146

TABLE 14.—DETAILED STATEMENT FOR THE INDUSTRY, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.						WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.	
		Total.	Propri- tors and firm mem- bers.	Sal- ried offi- cers, super- in- tend- ents, and man- agers.	Clerks, etc.		Wage earners.		Total.	16 and over.		Under 16.		Capital.	Salaries and wages.
					Male	Fe- males	Ave- rage num- ber.	Number, 15th day of—		Male	Fe- males	Male	Fe- males		
United States.....	51	12,200	16	370	460	462	10,886	De 11,653	Fe 10,166	11,616	10,357	1,121	86	52	\$35,362,150
Motorcycles, including parts. Bicycles, including parts....	20	6,411	6	197	273	283	5,702	De 6,025	Fe 4,836	5,528	5,451	501	25	21	19,250,836
	31	5,780	10	179	187	220	5,184	Ja 5,819	Jy 4,736	6,088	4,906	530	61	31	616,882,800
Illinois.....	7	1,170	—	33	35	29	1,082	My 1,262	Fe 416	1,137	1,007	40	—	—	2,456,460
Indiana.....	5	494	2	18	19	16	493	De 494	Au 367	496	494	2	—	—	216,888
Massachusetts.....	8	3,444	3	126	165	150	3,000	De 3,128	S6 2,704	3,128	2,664	377	40	38	1,512,873
New York.....	7	711	4	15	6	12	674	My 705	No 657	671	643	28	—	—	10,154,259
Ohio.....	9	2,780	1	96	92	111	2,480	Ja 2,995	Ja 2,224	2,747	2,402	255	—	—	1,795,897
Pennsylvania.....	4	351	—	10	17	14	310	No 351	Ja 204	371	344	22	5	—	8,447,379
All other states <sup>1</sup> .....	11	3,241	6	78	120	130	2,901	—	—	3,066	2,623	307	32	14	773,310
															328,904
															177,818

STATE.	EXPENSES—continued.						POWER.							
	Salaries and wages—Con.	Rent and taxes.		For materials.		Value of products.	Value added by manu-fac-ture.	Primary horsepow-er.				Electric horse-power generated in estab-lish-ments report-ing.		
		For con- tract work.	Rent of factory.	Taxes, Federal, state, county, and local.	Princi-pal ma-terials.			Total.	Steam en-gines (not tur- bine).	Steam tur- bines.	Inter- nal com- bus- tion en- gines.			
United States.....	\$12,703,235	\$1,036	\$152,606	\$3,165,940	\$25,346,673	\$630,242	\$53,105,895	\$27,110,980	14,806	3,700	270	77	90	10,669
Motorcycles, including parts. Bicycles, including parts....	6,201,558	—	99,834	2,073,489	13,802,281	306,768	28,600,927	14,500,278	6,278	1,000	—	74	90	5,024
	6,471,677	1,036	52,772	1,092,451	11,544,302	332,474	24,496,568	12,610,702	8,528	2,610	270	3	6,645	3,869
Illinois.....	1,329,104	—	97,015	73,000	1,937,440	35,997	4,852,039	2,878,602	1,370	925	270	—	—	175
Indiana.....	511,618	—	2,628	110,802	1,801,625	35,488	2,968,180	1,131,049	805	—	—	805	—	—
Massachusetts.....	3,238,280	—	10,281	876,833	8,229,010	170,342	15,999,501	7,991,143	5,050	575	—	90	2,385	385
New York.....	855,603	—	4,576	41,836	1,476,150	38,992	2,864,829	1,349,687	1,017	300	—	15	702	—
Ohio.....	3,359,074	1,036	7,643	513,059	4,065,313	164,483	10,874,030	5,744,234	4,289	1,210	—	60	3,019	—
Pennsylvania.....	344,675	—	7,975	7,756	838,433	23,100	1,305,376	443,843	265	65	—	200	—	—
All other states <sup>1</sup> .....	3,144,881	—	21,888	1,543,304	6,098,696	161,842	14,241,960	7,981,422	4,010	625	—	2	3,383	—

<sup>1</sup> Same number reported for one or more other months.<sup>2</sup> All other states embrace Connecticut, 3 establishments; Michigan, 2; Washington, 1; and Wisconsin, 5.<sup>3</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).<sup>4</sup> 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

# MUSICAL INSTRUMENTS

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

## CONTENTS

EXPLANATION OF TERMS.....	Page.	MUSICAL INSTRUMENTS AND MATERIALS, NOT SPECIFIED.	Page.
SUMMARY AND ANALYSIS.		GENERAL STATISTICS.	
Scope of the report.....	3	General character of the industry.....	18
Comparative summary for the combined industry.....	3	Comparative summary.....	18
PIANOS, ORGANS, AND MATERIALS.		Persons engaged in the industry.....	
GENERAL STATISTICS.		GENERAL TABLES.	
General character of the industry.....	4	Comparative summary, by states.....	19
Pianos, organs, and materials—comparative summary.....	6	Detailed statement, by states.....	20
Piano materials and organ materials—comparative summary.....	6	PHONOGRAPHS, GRAPHOPHONES, AND TALKING MACHINES.	
Principal states, ranked by value of products.....	7	GENERAL STATISTICS.	
Persons engaged in the industry.....	7	General character of the industry.....	21
Wage earners, by months, for selected states.....	8	Comparative summary.....	22
Average number of wage earners, by prevailing hours of labor per week, for selected states.....	9	Principal states, ranked by value of products.....	22
Size of establishments, by average number of wage earners, for se- lected states.....	10	Persons engaged in the industry.....	22
Size of establishments, by value of products.....	11	Wage earners, by months, for selected states.....	23
Character of ownership, by states.....	11	Average number of wage earners, by prevailing hours of labor per week, for selected states.....	23
Number and horsepower of types of prime movers.....	12	Size of establishments, by average number of wage earners, for se- lected states.....	23
Fuel consumed, by states.....	13	Size of establishments, by value of products.....	24
SPECIAL STATISTICS.		Character of ownership.....	24
Production of pianos.....	13	Number and horsepower of types of prime movers.....	24
Production of organs.....	14	Fuel consumed, by states.....	24
Detailed statistics of quantity and value.....	14	SPECIAL STATISTICS.	
GENERAL TABLES.		Detailed statistics of quantity and value.....	25
Comparative summary, by states.....	15	GENERAL TABLE.	
Detailed statement, by states.....	16	Detailed statement, by states.....	26



## 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 1910, 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 1910 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 calcu-

late 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.

## MUSICAL INSTRUMENTS.

### SUMMARY AND ANALYSIS.

**Scope of the report.**—This report presents statistics for the manufacture of (1) pianos, organs, and piano and organ materials; (2) musical instruments and materials not specified; and (3) phonographs, graphophones, and talking machines. The products of the establishments assigned to these three classes are so dissimilar that a combination of the three would have little, if any, significance. For this reason each class is treated in a separate section. The manufacture of phonographs has so increased as to make it the most

important of the three industries with regard to the value of products.

Table 1 presents combined statistics for five classes of establishments engaged in the manufacture of pianos; organs; piano and organ materials; metal and stringed instruments and materials; and phonographs, graphophones, and talking machines for the census years from 1849 to 1919, inclusive. This is the only table showing combined statistics for the five industries.

TABLE 1.—COMPARATIVE SUMMARY FOR THE COMBINED INDUSTRY: 1849-1919.

CENSUS YEAR.	MUSICAL INSTRUMENTS AND MATERIALS.							
	Number of establish- ments. <sup>1</sup>	Wage earners (average number).	Primary horsepower.	Capital.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
1919.....	778	68,741	91,258	\$268,318,333	\$75,867,659	\$137,459,527	\$320,905,149	\$183,445,322
1914.....	737	48,768	57,902	108,618,245	30,884,655	49,323,415	119,688,728	70,365,313
1909.....	712	45,041	49,417	120,895,331	26,594,346	47,753,728	104,743,648	56,989,920
1904.....	639	38,617	34,259	80,965,997	21,373,049	33,277,702	79,811,415	46,533,713
1899.....	630	24,981	23,288	51,054,864	13,383,392	19,403,551	46,605,252	27,261,701
1889 <sup>1</sup> .....	674	18,096	11,788	29,650,489	11,648,648	14,430,183	36,868,169	22,432,006
1879.....	429	11,350	( <sup>2</sup> )	14,446,765	7,098,794	8,361,227	19,264,739	10,893,512
1869.....	337	7,167	2,018	9,554,761	5,107,291	4,834,552	13,905,908	9,071,356
1853.....	248	4,758	( <sup>2</sup> )	4,022,600	2,529,788	2,325,209	6,967,718	4,642,509
1849.....	201	2,331	( <sup>2</sup> )	1,515,935	1,054,728	693,167	2,580,715	1,882,548

<sup>1</sup> Exclusive of 2 establishments manufacturing phonographs and graphophones (1 in Connecticut and 1 in New York).

<sup>2</sup> Figures not available.

## THE MANUFACTURE OF PIANOS AND ORGANS AND MATERIALS.

### GENERAL STATISTICS.

**General character of the industry.**—This section covers the manufacture of pianos, organs, and piano and organ materials. The piano branch of the industry includes establishments making chiefly upright and grand pianos, with or without player attachments; the organ branch includes establishments whose chief products are pipe and reed organs and orchestrions; and the branch manufacturing materials includes those establishments making primarily piano actions, back frames, cases, hammers, keys, keyboards, pedal attachments, plates and strings, organ reeds, pipes, stops, etc., perforated music rolls, sounding boards, and piano and organ hardware.

**Importance and growth of the industry.**—Table 2 summarizes the more important figures relative to the combined industry and to each of the three branches for the census years 1904 to 1919, inclusive, giving the percentages of increase or decrease.

In the industry as a whole, increases are noticeable for the five-year period 1914-1919, except for persons engaged in the industry, each class of which showed a decrease. The relatively large increases, however, in salaries and wages, cost of materials, and value of products are due largely to a general rise in prices and wages following the World War, and do not therefore fairly measure the growth of the industry. The increase in primary horsepower is a truer index of actual conditions. 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. The piano branch of the industry, the value of products of which formed, in 1919, 71.5 per cent of the total, as compared with 70.6 per cent in 1914, 74.1 per cent in 1909, and 71 per cent in 1904, kept pace with the general increase shown by the industry as a whole. Organs, however, showed a consistent decrease, due probably to the increasing popularity of the phonograph. In 1919 organs formed 4 per cent of the total value of products of the industry, as against 7.1 per cent in 1914, 5.3 per cent in 1909, and 9.1 per cent in 1904. The third branch of the industry, piano and organ materials, showed increases in every item except number of establishments and contract work. A segregation of the detail for this branch is shown in Table 3, giving

statistics for those establishments making piano materials and for those manufacturing organ materials.

**States, ranked by value of products.**—New York, as shown by Table 4, which presents data for the industry as a whole, is the leading state in production of pianos and organs, followed by Illinois; these two states held the same position in the census of 1914. Although 25 states reported establishments in this industry, 8 states—New York, Illinois, Massachusetts, Connecticut, Indiana, Ohio, Michigan, and New Jersey in the order named—reported 89.9 per cent of the total value of products and employed 89.4 per cent of the total number of wage earners.

**Persons engaged in the industry.**—Table 5 shows for 1919, 1914, and 1909 for the industry combined and for its three branches separately the number of persons engaged, distributed by sex, and the average number of wage earners, distributed also by age. 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 being an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 17.

**Wage earners, by months.**—The statistics for wage earners in Table 6 show the regularity of employment, or the reverse, in accordance with the existing industrial conditions during the census year. The table presents statistics for the combined industry, also for each branch separately. Figures for the principal states are shown where possible, while for the United States the numbers of males and females are also shown for 1919. The number of wage earners employed in the industry as a whole ranged from a maximum of 38,426 in August to a minimum of 32,458 in January, the minimum number being equivalent to 84.5 per cent of the maximum.

**Prevailing hours of labor.**—Table 7 shows a marked shortening of the working day for the industry since 1914. In that year only 18.7 per cent of the total wage earners of the industry as a whole were reported as employed fewer than 54 hours per week as against 75.3 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 10.9 per cent of the total, as compared with 2.8 per cent in 1919. In the piano branch of the industry 82.2 per cent of the wage earners worked fewer than 54 hours per week in 1919, as against 17.9 per cent in 1914. Organs in 1919 showed 46.4 per cent of its wage earners working 54

hours or less, as against 9.8 per cent in 1914. The material branch of the industry showed 66 per cent of its wage earners working fewer than 54 hours per week in 1919, as against 23 per cent in 1914. In the groups "60" and "Over 60" the percentages of wage earners for the three branches were, pianos, 2.1 per cent; organs, 16.5 per cent; and materials, 1.8 per cent in 1919, compared with 9.4 per cent, 30.5 per cent, and 8.6 per cent, respectively, in 1914.

**Size of establishments, by average number of wage earners.**—Analysis of Table 8 discloses the significant fact that, in 1919, 66 establishments, or 17.7 per cent of the total number for the industry, employed fewer than 6 wage earners each, while only 152, or two-fifths 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 classes "501 to 1,000" and "Over 1,000" wage earners, comprising only 10 establishments, employed 6,498 wage earners, or 18.1 per cent of the total average number, illustrating the extent of manufacturing operations in a few large establishments.

The conditions cited above were reflected in the piano branch of the industry, wherein the 7 largest establishments employed 4,899, or 21.3 per cent of the total number of wage earners reported for this branch. Thirteen establishments employed fewer than 6 wage earners each, 34 persons, or less than one-fifth of 1 per cent, being employed therein. A good proportion of the establishments in the organ branch were small ones, 28 of which employed only 62 wage earners altogether; 11 establishments, classified in the groups "51 to 100" and "101 to 250," employed 1,127, or 58.1 per cent of the total. Approximately the same conditions prevailed in the establishments making materials, 25 establishments, employing fewer than 6 wage earners each, reported only 56 persons employed, this number being one-half of 1 per cent of the total number of wage earners. There were no establishments reporting over 1,000 wage earners, but the classes "251 to 500" and "501 to 1,000" embraced 16 factories employing 6,376, or 57.9 per cent of the total.

**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 9, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of the average number of wage earners and value added by manufacture for 1914. The statistics in the table are presented only for the industry as a whole, and bring out the degree of concentration of production in large establishments. In the two highest groups, 102 establishments, or 27.4 per cent of the total number for the industry, employed 26,601 wage earners, or 74.1 per cent of the total average number, and reported products to the value of \$111,405,568, or 74.3 per cent of the total value.

**Character of ownership.**—Table 10 emphasizes the predominance of the corporate form of ownership. Corporations owned 75.5 per cent of the number of establishments in 1919, employed 94.8 per cent of the wage earners, and reported 95 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 combined industry of 7.8 per cent. The organ branch of the industry showed a decrease in proportion of owned power used, from 54.3 per cent in 1914 to 47.6 per cent in 1919.

**Fuel consumed.**—Table 12 shows the principal kinds of fuel used for the industry in 1919 and 1914 and also gives separately the amount consumed in the states requiring considerable quantities of fuel for manufacturing purposes. Of the coal consumed, New York reported 59.4 per cent of the total amount of anthracite in 1919, Illinois, 37.7 per cent of the bituminous coal, and Ohio, 35.7 per cent of the gas.

## MANUFACTURES.

TABLE 2.—PIANOS, ORGANS, AND MATERIALS—COMPARATIVE SUMMARY: 1919, 1914, 1909, AND 1904.

	1919	1914	1909	1904	PER CENT OF INCREASE.		
					1914-1919	1909-1914	1904-1909
<b>PIANOS AND ORGANS AND MATERIALS.</b>							
Number of establishments.....	372	478	507	444	-22.2	-5.7	14.2
Persons engaged.....	39,931	41,723	41,882	36,106	-4.3	-0.4	16.0
Proprietors and firm members.....	127	221	297	303	-42.5	-25.6	-2.0
Salaried employees.....	3,897	3,946	3,545	2,722	-1.2	10.7	31.0
Wage earners (average number).....	35,907	37,659	38,020	33,081	-4.4	-1.2	14.9
Primary horsepower.....	47,804	44,349	41,023	30,134	7.8	6.5	38.1
Capital.....	\$155,200,792	\$130,989,794	\$103,234,301	\$68,481,910	18.5	23.9	50.7
Salaries and wages.....	46,883,617	29,835,276	28,313,754	22,255,008	57.1	5.4	27.2
Salaries.....	8,963,702	6,482,026	5,552,186	3,727,930	38.3	16.8	48.9
Wages.....	37,919,855	23,352,051	22,761,568	18,527,078	62.4	2.6	22.9
Paid for contract work.....	69,618	310,198	202,907	340,880	-77.6	5.9	-14.1
Rent and taxes (including internal revenue).....	4,955,530	1,772,396	1,331,324	2,875,430	179.6	33.1	.....
Cost of materials.....	73,274,893	41,252,701	43,764,737	27,986,627	77.6	-5.7	53.4
Value of products.....	149,850,945	88,948,145	89,789,544	60,002,630	68.5	-0.9	35.5
Value added by manufacture <sup>a</sup> .....	76,576,052	47,695,354	45,024,807	38,106,003	60.6	3.6	20.5
<b>PIANOS.</b>							
Number of establishments.....	191	255	294	249	-25.1	-13.3	18.1
Persons engaged.....	25,760	26,828	28,415	23,207	-4.0	-5.6	22.4
Proprietors and firm members.....	33	85	125	137	.....	-32.5	-8.0
Salaried employees.....	2,770	2,800	2,702	2,068	-3.3	2.7	35.0
Wage earners (average number).....	22,957	23,877	25,497	21,002	-3.9	-6.4	21.4
Primary horsepower.....	28,732	25,081	23,246	17,467	10.6	11.8	33.1
Capital.....	\$116,106,530	\$101,740,424	\$81,544,094	\$40,649,135	14.1	24.8	64.2
Salaries and wages.....	31,871,866	20,414,510	20,102,875	15,016,936	56.1	1.1	34.5
Salaries.....	6,397,666	4,700,840	4,455,598	2,846,685	35.8	5.7	56.5
Wages.....	25,474,200	15,704,070	15,737,277	12,170,251	62.2	-0.2	24.3
Paid for contract work.....	27,640	270,470	217,604	294,180	-90.0	27.1	-26.0
Rent and taxes (including internal revenue).....	3,620,088	1,292,678	1,003,707	2,602,268	180.0	21.5	.....
Cost of materials.....	54,364,656	29,001,046	32,818,770	19,587,770	86.9	-11.4	67.5
Value of products.....	107,088,050	62,775,035	66,569,273	46,022,471	70.6	-5.7	41.9
Value added by manufacture <sup>a</sup> .....	52,723,394	33,083,090	33,750,503	27,334,701	50.5	-0.2	23.5
<b>ORGANS.</b>							
Number of establishments.....	68	85	86	94	.....	.....	.....
Persons engaged.....	2,285	3,518	2,754	4,083	-35.0	27.7	-31.7
Proprietors and firm members.....	56	74	83	87	.....	.....	.....
Salaried employees.....	288	381	288	323	-24.4	32.3	-10.8
Wage earners (average number).....	1,941	3,003	2,383	3,623	-36.6	28.5	-34.2
Primary horsepower.....	3,251	3,086	3,334	4,085	-11.3	10.0	-18.4
Capital.....	\$6,770,587	\$8,042,405	\$4,563,000	\$7,203,878	-15.8	76.6	-36.8
Salaries and wages.....	2,502,190	2,517,194	1,777,640	2,406,921	-0.6	41.6	-26.1
Salaries.....	523,672	523,779	349,008	372,362	(4)	50.1	-4.3
Wages.....	1,978,518	1,903,415	1,428,641	2,034,560	-0.7	39.5	-29.8
Paid for contract work.....	26,806	12,444	36,950	18,038	115.4	-66.3	104.9
Rent and taxes (including internal revenue).....	118,443	68,031	52,28	2,75,330	30.2	.....	.....
Cost of materials.....	2,217,097	2,050,980	1,722,023	2,068,038	-16.0	54.4	-16.7
Value of products.....	5,073,268	6,297,348	4,745,655	6,041,844	-5.1	32.7	-21.5
Value added by manufacture <sup>a</sup> .....	3,750,171	3,037,308	3,022,732	3,073,206	3.3	20.3	-23.9
<b>PIANO AND ORGAN MATERIALS.</b>							
Number of establishments.....	113	138	127	101	-18.1	8.7	25.7
Persons engaged.....	11,886	11,377	10,713	8,806	4.5	6.2	20.8
Proprietors and firm members.....	38	62	88	79	.....	.....	.....
Salaried employees.....	839	699	485	331	20.0	44.1	46.5
Wage earners (average number).....	11,600	10,010	10,140	8,456	3.7	4.7	19.9
Primary horsepower.....	15,821	14,702	15,043	8,582	7.6	-2.3	75.3
Capital.....	\$32,323,689	\$21,200,906	\$17,133,598	\$11,028,897	52.5	23.7	47.4
Salaries and wages.....	12,509,561	9,003,523	6,343,230	4,831,151	81.2	8.8	31.3
Salaries.....	2,042,424	1,249,006	747,580	508,883	63.5	67.1	46.9
Wages.....	10,467,137	5,654,557	5,595,050	4,322,238	85.1	1.1	29.5
Paid for contract work.....	15,172	21,284	38,344	28,053	-28.7	-44.5	33.8
Rent and taxes (including internal revenue).....	1,216,990	411,689	215,349	2,137,823	195.6	91.2	.....
Cost of materials.....	16,093,140	9,501,700	9,223,044	6,330,210	75.7	3.0	45.7
Value of products.....	36,780,627	19,875,702	18,474,616	13,128,315	85.1	7.6	40.7
Value added by manufacture <sup>a</sup> .....	20,096,487	10,373,906	9,251,572	6,708,066	93.7	12.1	36.1

<sup>a</sup> A minus sign (−) denotes decrease; percentages are omitted where base is less than 100.<sup>b</sup> Exclusive of internal revenue.<sup>a</sup> Value of products less cost of materials<sup>b</sup> Less than one-tenth of 1 per cent.

TABLE 3.—PIANO MATERIALS AND ORGAN MATERIALS—SUMMARY: 1919.

	Total.	ESTABLISHMENTS MANUFACTURING PRINCIPALLY—			Total.	ESTABLISHMENTS MANUFACTURING PRINCIPALLY—	
		Piano materials.	Organ materials.			Piano materials.	Organ materials.
Number of establishments.....	113	97	16	Cost of materials.....	\$16,603,140	\$16,329,129	\$36,911,931
Wage earners.....	11,009	10,769	240	Value of products.....	36,780,627	35,956,944	46,677,937
Capital.....	\$32,323,689	\$31,769,045	\$554,024	Value added by manufacture.....	20,096,487	19,327,815	20,096,487
Wages.....	10,467,137	10,281,122	296,015				

# MUSICAL INSTRUMENTS.

7

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

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			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.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States.	372	35,907	100.0	....	\$149,851	100.0	....	\$76,576	100.0	....	Pennsylvania.....	23	972	2.7	9	\$3,798	2.5	9	\$1,641	2.1	9
New York.....	131	11,317	31.5	1	52,231	34.9	1	23,596	30.8	1	Maryland.....	7	720	2.0	10	2,670	1.8	11	1,624	2.1	10
Illinois.....	52	8,575	23.9	2	36,255	24.2	2	20,717	27.1	2	Vermont.....	3	444	1.2	12	1,423	0.9	13	823	1.1	12
Massachusetts.....	40	3,950	11.0	3	13,342	8.9	3	7,535	9.8	3	Minnesota.....	3	76	0.2	18	427	0.3	16	255	0.3	15
Ohio.....	22	1,820	5.1	5	6,797	4.5	6	3,643	4.8	6	California.....	5	94	0.3	15	321	0.2	17	171	0.2	16
Michigan.....	11	1,305	3.6	8	6,098	4.1	7	2,916	3.8	8	All other states.....	75	6,634	18.4	....	26,489	17.7	....	13,655	17.9	....

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

INDUSTRY AND CLASS.	Cen-	Total.	Male.	Fe-	PER CENT OF TOTAL.	Male.	Fe-	INDUSTRY AND CLASS.	Cen-	Total.	Male.	Fe-	PER CENT OF TOTAL.	Male.	Fe-	
<b>PIANOS AND ORGANS AND MATERIALS.</b>																
All classes.....	1919	39,031	33,678	6,253	84.3	15.7		ORGANS.	1919	2,288	1,078	307	86.6	13.4		
	1914	41,723	38,115	3,608	91.4	8.6		All classes.....	1914	3,518	3,233	285	91.9	8.1		
	1909	41,882	39,005	2,877	93.1	6.9			1909	2,754	2,592	162	94.1	5.9		
Proprietors and officials.....	1919	1,412	1,347	65	95.4	4.6		Proprietors and officials.....	1919	177	170	7	96.0	4.0		
	1914	1,357	1,317	40	97.1	2.9			1914	198	194	4	98.0	2.0		
	1909	1,378	1,340	38	97.2	2.8			1909	175	168	7	96.0	4.0		
Proprietors and firm members.....	1919	127	121	6	95.3	4.7		Proprietors and firm members.....	1919	56	56	....	100.0	....		
	1914	221	217	4	98.2	1.8			1914	74	72	2	97.3	2.7		
	1909	207	285	12	90.0	4.0			1909	83	78	5	94.0	6.0		
Salaried officers of corporations.....	1919	595	556	39	93.4	6.6		Salaried officers of corporations.....	1919	60	54	6	90.0	10.0		
	1914	613	582	31	94.0	5.1			1914	61	59	2	96.7	3.3		
	1909	546	524	22	96.0	4.0			1909	42	40	2	95.2	4.8		
Superintendents and managers.....	1919	690	670	20	97.1	2.9		Superintendents and managers.....	1919	61	60	1	98.4	1.6		
	1914	523	518	5	99.0	1.0			1914	63	63	....	100.0	....		
	1909	535	531	4	99.3	0.7			1909	50	50	....	100.0	....		
Clerks and other subordinate salaried employees.....	1919	2,612	1,482	1,130	56.7	43.3		Clerks and other subordinate salaried employees.....	1919	167	84	83	50.3	49.7		
	1914	2,810	1,825	985	64.9	35.1			1914	257	131	126	51.0	49.0		
	1909	2,484	1,788	696	72.0	28.0			1909	196	127	69	64.8	35.2		
Wage earners (average number).....	1919	35,907	30,840	5,058	85.9	14.1		Wage earners (average number).....	1919	1,941	1,724	217	88.8	11.2		
	1914	37,586	34,973	2,583	93.1	6.9			1914	3,063	2,908	155	94.9	5.1		
	1909	38,020	35,877	2,143	94.4	5.6			1909	2,383	2,297	86	96.4	3.6		
16 years of age and over.....	1919	35,310	30,416	4,894	86.1	13.9		16 years of age and over.....	1919	1,899	1,687	212	88.8	11.2		
	1914	37,198	34,045	2,553	93.1	6.9			1914	3,045	2,892	153	95.0	5.0		
	1909	37,316	35,340	1,976	94.7	5.3			1909	2,366	2,280	86	96.4	3.6		
Under 16 years of age.....	1919	597	433	184	72.5	27.5		Under 16 years of age.....	1919	42	37	5	88.1	11.9		
	1914	358	328	30	91.6	8.4			1914	18	16	2	88.9	11.1		
	1900	704	537	167	76.3	25.7			1909	17	17	....	100.0	....		
<b>PIANOS.</b>																
All classes.....	1919	25,760	22,951	2,809	89.1	10.9		All classes.....	1919	11,886	8,740	3,137	73.6	26.4		
	1914	26,828	25,320	1,508	94.4	5.6			1914	11,377	9,562	1,815	84.0	16.0		
	1909	28,415	27,222	1,193	95.8	4.2			1909	10,713	9,191	1,522	85.8	14.2		
Proprietors and officials.....	1919	836	805	31	96.3	3.7		Proprietors and officials.....	1919	390	372	27	93.2	6.8		
	1914	795	775	20	97.5	2.5			1914	364	348	18	95.6	4.4		
	1909	907	886	21	97.7	2.3			1909	296	286	10	96.6	3.4		
Proprietors and firm members.....	1919	33	30	3	90.9	9.1		Proprietors and firm members.....	1919	38	35	3	92.1	7.9		
	1914	85	84	1	98.8	1.2			1914	62	61	1	98.4	1.6		
	1909	126	121	5	96.0	4.0			1909	88	86	2	97.7	2.3		
Salaried officers of corporations.....	1919	382	362	20	94.8	5.2		Salaried officers of corporations.....	1919	153	140	13	91.5	8.5		
	1914	397	370	18	95.5	4.5			1914	155	144	11	92.0	7.1		
	1909	307	385	12	97.0	3.0			1909	107	99	8	92.5	7.5		
Superintendents and managers.....	1919	421	413	8	98.1	1.9		Superintendents and managers.....	1919	208	197	11	94.7	5.3		
	1914	313	312	1	99.7	0.3			1914	147	143	4	97.3	2.7		
	1900	384	380	4	99.0	1.0			1909	101	101	....	100.0	....		
Clerks and other subordinate salaried employees.....	1919	1,967	1,168	709	59.4	40.6		Clerks and other subordinate salaried employees.....	1919	478	230	248	48.1	51.9		
	1914	2,156	1,449	707	67.2	32.8			1914	397	245	152	61.7	38.3		
	1900	2,011	1,483	528	73.7	26.3			1909	277	178	99	64.3	35.7		
Wage earners (average number).....	1919	22,057	20,078	1,979	91.4	8.6		Wage earners (average number).....	1919	11,009	8,147	2,862	74.0	26.0		
	1914	23,877	23,096	781	96.7	3.3			1914	10,616	8,969	1,647	84.5	15.5		
	1900	25,497	24,853	644	76.5	2.5			1909	10,140	8,727	1,413	86.1	13.9		
16 years of age and over.....	1919	22,613	20,709	1,904	91.6	8.4		16 years of age and over.....	1919	10,799	8,020	2,779	74.3	25.7		
	1914	23,074	22,907	767	96.8	3.2			1914	10,479	8,846	1,633	84.4	15.6		
	1900	25,146	24,530	616	97.6	2.4			1909	9,804	8,550	1,274	87.0	13.0		
Under 16 years of age.....	1919	344	260	75	78.2	21.8			1919	210	127	83	60.5	39.5		
	1914	203	189	14	98.1	6.9			1914	137	123	14	89.8	10.2		
	1900	351	323	28	92.0	8.0			1909	336	197	139	58.6	41.4		

## MANUFACTURES.

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.]

INDUSTRY AND 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.	
<b>PIANOS AND ORGANS AND MATERIALS.</b>														
United States:														
1919.....	35,907	<b>32,458</b>	33,952	35,138	36,175	36,386	36,950	38,018	<b>38,426</b>	38,301	34,134	34,556	35,330	84.5
Males.....	30,849	29,279	30,318	31,278	31,404	31,036	32,756	33,134	<b>33,192</b>	28,951	29,041	30,809	31,530	84.6
Females.....	5,058	<i>4,389</i>	4,073	4,820	4,597	4,982	4,984	5,212	5,292	5,109	5,183	5,515	79.4	
1914.....	37,553	39,992	49,150	<b>40,442</b>	39,992	35,715	37,306	35,350	<i>35,176</i>	35,698	35,949	35,845	35,057	87.0
1909.....	38,020	37,241	37,530	37,679	37,690	37,455	37,238	37,238	38,522	39,752	39,978	40,011	90.6	
Illinois.....	8,575	7,873	8,050	8,290	8,444	8,482	8,511	8,653	8,797	8,783	9,045	9,007	8,975	87.0
Maryland.....	720	<i>677</i>	691	710	704	721	724	727	740	733	747	744	740	90.6
Massachusetts.....	3,950	<i>3,834</i>	3,484	3,685	3,823	3,951	3,955	4,072	4,098	4,172	4,218	4,292	4,315	77.3
Michigan.....	1,305	1,147	1,141	1,136	1,154	1,132	1,144	1,335	1,420	1,421	1,488	1,518	1,594	71.0
New York.....	11,317	10,868	11,484	11,942	12,351	12,285	12,535	12,905	<b>13,005</b>	12,902	12,972	8,084	9,471	61.3
Ohio.....	1,820	1,409	1,553	1,598	1,678	1,730	1,820	1,955	1,957	1,915	2,028	2,069	2,152	65.5
Pennsylvania.....	972	924	927	942	947	952	957	983	994	1,000	1,000	1,011	1,018	90.8
<b>PIANOS.</b>														
United States:														
1919.....	22,957	21,585	22,224	22,882	23,363	23,461	23,954	24,212	24,508	<b>24,719</b>	20,902	21,201	22,483	84.6
Males.....	20,978	19,687	20,319	20,933	21,401	21,483	21,990	22,244	22,533	<b>22,767</b>	18,998	19,029	21,322	83.4
Females.....	1,979	<i>1,898</i>	1,905	1,910	1,972	1,978	1,954	1,058	1,075	1,952	1,904	2,172	2,161	87.1
1914.....	23,877	25,168	25,221	<b>25,372</b>	25,276	25,595	23,752	22,497	<i>22,593</i>	22,915	23,130	23,091	23,144	83.3
1909.....	25,497	24,677	24,914	25,194	25,232	25,316	25,037	24,256	24,925	25,873	26,680	23,201	26,932	90.0
Connecticut.....	608	<i>544</i>	545	534	616	610	605	593	601	628	651	683	655	79.6
Illinois.....	6,991	<i>6,417</i>	6,630	6,730	6,832	6,893	6,949	6,988	7,122	7,222	<b>7,439</b>	7,377	7,390	85.3
Indiana.....	1,432	<i>1,160</i>	1,184	1,197	1,246	1,318	1,425	1,511	1,554	1,556	1,578	1,672	1,783	65.1
Maryland.....	523	<i>480</i>	494	513	507	524	525	527	530	543	536	551	548	78.7
Massachusetts.....	2,228	<i>1,885</i>	1,952	2,030	2,107	2,276	2,283	2,338	2,301	2,312	2,340	2,380	2,391	78.7
Michigan.....	1,122	1,055	1,048	1,043	1,038	1,051	1,036	1,136	1,174	1,212	1,238	<b>1,288</b>	80.6	
New Jersey.....	713	889	725	794	809	788	826	727	704	657	652	544	641	65.9
New York.....	6,908	<i>7,229</i>	7,510	7,734	7,817	7,707	7,921	7,094	8,048	<b>8,050</b>	8,822	4,021	5,040	47.5
Ohio.....	787	<i>595</i>	645	635	603	683	703	835	885	877	939	948	978	60.8
Pennsylvania.....	774	747	753	757	758	764	761	784	788	790	795	797	794	93.7
<b>ORGANS.</b>														
United States:														
1919.....	1,941	<i>1,770</i>	1,814	1,854	1,900	1,941	1,951	2,000	1,961	1,937	2,005	2,039	2,111	83.8
Male.....	1,724	<i>1,587</i>	1,616	1,651	1,695	1,713	1,722	1,770	1,747	1,723	1,776	1,808	1,877	84.5
Female.....	217	<i>183</i>	198	203	214	225	229	230	214	223	221	234	238	78.2
1914.....	3,033	3,191	3,217	<b>3,231</b>	3,194	3,115	3,103	3,077	2,904	2,918	2,020	2,886	2,930	88.7
1909.....	2,383	2,400	2,301	2,305	2,394	2,398	2,370	2,366	2,368	2,418	2,460	2,480	2,460	95.0
<b>PIANO AND ORGAN MATERIALS.</b>														
United States:														
1919.....	11,009	<i>9,103</i>	9,014	10,402	10,903	10,984	11,045	11,816	<b>11,957</b>	11,705	11,227	11,316	11,733	76.1
Male.....	8,147	<i>6,795</i>	7,344	7,704	8,182	8,235	8,254	8,742	<i>8,854</i>	8,702	8,177	8,204	8,601	76.7
Female.....	2,852	<i>3,308</i>	2,570	2,608	2,721	2,770	2,791	3,074	3,103	3,003	3,050	3,112	3,185	73.6
1914.....	10,616	11,633	11,712	<b>11,830</b>	11,522	11,035	10,451	<i>9,776</i>	9,787	9,785	9,805	9,899	9,983	82.6
1909.....	10,140	9,828	9,036	9,975	10,082	9,983	10,080	9,934	9,957	10,201	<b>10,689</b>	10,030	10,590	91.9
Connecticut.....	1,291	<i>984</i>	1,002	1,155	1,211	1,230	1,295	1,381	1,360	1,382	1,434	1,472	1,487	66.2
Illinois.....	1,311	<i>1,212</i>	1,275	1,308	1,318	1,315	1,279	1,374	<i>1,391</i>	1,278	1,325	1,347	1,308	87.3
Massachusetts.....	1,581	<i>1,321</i>	1,403	1,480	1,515	1,534	1,539	1,594	1,653	1,686	1,717	1,755	1,788	74.3
New Jersey.....	768	<i>684</i>	756	766	750	731	745	761	787	785	700	<b>805</b>	706	85.0
New York.....	4,141	<i>3,426</i>	3,753	3,070	4,308	4,324	4,342	4,616	4,609	4,549	3,863	3,756	4,107	73.4
Ohio.....	980	768	858	888	906	1,000	1,007	1,036	1,010	982	1,034	1,062	1,113	69.0

## MUSICAL INSTRUMENTS.

9

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

INDUSTRY AND STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							INDUSTRY AND 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.			44 and under.	Between 44 and 48.	48.1	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
PIANOS AND ORGANS AND MATERIALS.									PIANOS—continued.									
United States:									Michigan:									
1919.....	35,907	2,329	311	9,037	15,362	5,207	2,578	993	1919.....	1,122								
1914.....	37,556	(2)	(2)	1,754	5,269	19,951	6,498	3,814	1914.....	925								
1909.....	38,020	(2)	(2)	1,270	2,584	17,372	6,055	10,789	1919.....	713	26	(2)	162	525	366	363	270	
1914.....									1914.....	852			5		847			
Illinois:									New Jersey:									
1919.....	8,575	1,627	.....	548	5,170	887	448	95	1919.....	6,908	357	.....	2,899	3,406	230	16		
1914.....	8,334	(2)	(2)	318	1,708	3,814	1,801	630	1914.....	8,202	(2)	(2)	244	1,120	6,100	716	16	
Maryland:									Ohio:									
1919.....	720	.....	2	327	196	25	1	169	1919.....	787	(2)	(2)	403	158	212	14		
1914.....	773	.....	.....	.....	.....	297	242	234	1914.....	707			96	257	117	93	144	
Massachusetts:									Pennsylvania:									
1919.....	3,950	175	.....	1,891	1,023	250	2	.....	1919.....	774	.....	.....	610	84	90	10		
1914.....	3,906	(2)	(2)	244	641	2,876	135	10	1914.....	646	(2)	(2)	25	60	295	101	165	
Michigan:									ORGANS.									
1919.....	1,305	.....	.....	133	443	366	363	.....	United States:									
1914.....	1,070	.....	.....	.....	2	98	335	365	1919.....	1,941	11	.....	239	651	214	506	320	
New York:									1914.....	3,063	(2)	(2)	104	197	1,129	698	935	
1919.....	11,317	450	62	3,807	5,588	667	572	105	PIANO AND ORGAN MATERIALS.									
1914.....	12,002	(2)	(2)	317	1,694	9,123	981	487	United States:									
Ohio:									1919.....	11,009	152	103	2,361	4,648	2,835	717	193	
1919.....	1,820	.....	.....	871	346	540	19	44	1914.....	10,616	(2)	(2)	345	2,098	5,779	1,480	914	
1914.....	1,745	(2)	(2)	282	848	138	248	229	Connecticut:									
Pennsylvania:									1919.....	1,291	.....	.....	23	.....	1,268			
1919.....	972	.....	39	649	94	125	38	27	1914.....	1,544	(2)	(2)	4	40	1,439	44	8	
1914.....	922	(2)	(2)	59	105	293	198	264	Illinois:									
PIANOS.									1919.....	1,311	60	.....	156	930	77	.....		
United States:									1914.....	1,420	(2)	(2)	84	688	403	168	88	
1919.....	22,957	2,166	208	6,437	10,063	2,248	1,355	480	Massachusetts:									
1914.....	23,877	(2)	(2)	1,305	2,974	13,043	4,320	1,965	1919.....	1,581	(2)	(2)	524	820	235	2		
Connecticut:									1914.....	1,349	(2)	(2)	1	140	1,163	35	10	
1919.....	608	45	.....	201	227	.....	135	.....	New Jersey:									
1914.....	599	.....	.....	.....	273	326	.....	.....	1919.....	758	(2)	(2)	253	386	.....	119		
Illinois:									1914.....	777	.....	.....	60	37	157	312	211	
1919.....	6,091	1,567	(2)	334	4,190	530	361	.....	New York:									
1914.....	6,682	(2)	(2)	234	1,051	3,405	1,554	483	1919.....	4,141	92	62	792	2,141	409	540	105	
Indiana:									1914.....	3,752	(2)	(2)	6	540	2,530	212	455	
1919.....	1,432	.....	208	101	727	306	.....	.....	Ohio:									
1914.....	1,585	(2)	(2)	319	.....	34	596	636	1919.....	980	(2)	(2)	466	188	326	.....		
Maryland:									1914.....	915	(2)	(2)	185	591	.....	132	7	
1919.....	523	.....	.....	327	196	293	226	.....	PIANOS AND ORGAN MATERIALS.									
1914.....	518	.....	.....	.....	.....	.....	.....	.....	United States:									
Massachusetts:									1919.....	11,009	152	103	2,361	4,648	2,835	717	193	
1919.....	2,228	171	(2)	1,307	690	.....	97	.....	1914.....	10,616	(2)	(2)	345	2,098	5,779	1,480	914	
1914.....	2,352	(2)	(2)	240	448	1,507	97	.....	Connecticut:									

<sup>1</sup> Includes 48 and under in 1914.<sup>2</sup> Corresponding figures not available.

## MANUFACTURES.

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

INDUSTRY AND 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,	Wage earners.	Establishments,	Wage earners.	Establishments,	Wage earners.	Establishments,	Wage earners.	Establishments,	Wage earners.	Establishments,	Wage earners.	Establishments,	Wage earners.	Establishments,	Wage earners.		
<b>PIANOS AND ORGANS AND MATERIALS.</b>																				
United States.. 1919..	372	35,907	10	56	152	63	757	81	2,759	54	4,133	68	10,834	30	10,774	9	5,265	1	1,233	
1914..	478	37,556	11	93	234	100	1,259	92	3,193	76	5,723	68	11,119	32	11,296	5	3,338	1	1,394	
Illinois.....	52	8,575	2	3	11	4	48	10	377	9	662	14	2,052	5	1,725	4	2,467	1	1,233	
Maryland.....	7	720	2	2	3	7	68	2	47	6	458	7	1,237	1	327					
Massachusetts.....	40	3,950	2	6	18	7	60	6	212	3	202	3	596	6	1,057					
Michigan.....	11	1,305	1	1	15	3	30	3	81	3	302	1	366							
New York.....	131	11,317	3	15	42	30	370	32	1,008	18	1,288	20	3,064	10	3,745	3	1,710			
Ohio.....	22	1,820	6	17	2	24	3	89	4	322	6	901	1	407						
Pennsylvania.....	23	972	10	25	4	58	6	190	1	89	1	141	1	409						
<b>PIANOS.</b>																				
United States.. 1919..	191	22,957	2	11	34	25	312	47	1,537	33	2,512	49	7,666	17	6,000	6	3,663	1	1,233	
1914..	255	23,877	2	32	87	52	644	52	1,760	50	3,832	44	7,221	17	5,592	5	3,338	1	1,394	
Connecticut.....	5	608	1	1	2	2	20	2	77	4	335	3	531							
Illinois.....	33	6,901	1	1	5	5	182	5	182	13	1,806	4	1,408	3	1,917	1	1,233			
Indiana.....	8	1,432	1	1	1	1	1	1	33	2	132	4	692	1	575					
Maryland.....	3	523	1	1	1	1	22	1	22	1	174	1	327							
Massachusetts.....	14	2,228	3	3	34	3	34	3	243	4	686	4	1,265							
Michigan.....	8	1,122	1	1	4	3	81	1	70	3	596	1	366							
New Jersey.....	6	713	1	1	13	14	184	26	858	15	1,015	14	2,482	1	425					
New York.....	79	6,908	4	13	1	14	2	58	4	322	3	393	4	4,455	2	1,171				
Ohio.....	10	787	5	16	2	27	1	32	1	89	1	141	1	409						
Pennsylvania.....	11	774	5	16	2	27	1	32	1	89	1	141								
<b>ORGANS.</b>																				
United States.. 1919..	68	1,941	4	24	62	11	122	18	630	8	580	3	547							
1914..	85	3,063	2	33	71	17	220	17	594	10	684	4	746	2	739					
<b>PIANO AND ORGAN MATERIALS.</b>																				
United States.. 1919..	113	11,009	4	21	56	27	323	16	592	13	1,041	16	2,621	13	4,774	3	1,602			
1914..	138	10,616	7	28	76	31	386	23	830	16	1,207	20	3,152	13	4,965					
Connecticut.....	6	1,291	1	5	2	23	1	45	3	215	1	156	2	750	1	513				
Illinois.....	9	1,311	2	4	10	4	34	4	143	2	151	3	551	1	317	1	550			
Massachusetts.....	21	1,581	1	3	3	3	48	2	75	2	160	3	472	2	692					
New Jersey.....	11	758	1	3	3	3	48	4	170	3	243	5	751	0	2,200	1	539			
New York.....	36	4,141	6	18	11	130	4	170	3	243	5	751	1	467						
Ohio.....	6	980	2	5	1	1	1	1	1	1	1	508	1							

# MUSICAL INSTRUMENTS.

11

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.....	372	478	507	35,907	37,556	38,020	\$149,850,945	\$88,948,145	\$89,789,544	\$76,570,052	\$47,695,354	\$46,024,807
Less than \$5,000.....	18	47	53	12	54	86	48,287	121,034	168,073	29,608	80,923	110,908
\$5,000 to \$20,000.....	49	73	85	179	397	435	546,366	766,381	900,917	341,274	457,229	559,824
\$20,000 to \$100,000.....	74	145	166	1,207	3,572	3,907	4,023,635	8,035,328	8,952,604	2,353,335	4,161,844	4,794,745
\$100,000 to \$500,000.....	120	172	193	7,908	26,947	27,551	44,159,333	20,692,404	63,736,264	16,273,549	33,083,250	32,049,304
\$500,000 to \$1,000,000.....	64	30	10	10,925	6,586	6,041	67,245,735	16,522,956	16,031,680	35,443,759	9,912,108	8,510,026
\$1,000,000 and over.....	38	11	10	15,676								
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.....	4.8	9.8	10.5	(1)	0.1	0.2	(1)	0.1	0.2	(1)	0.2	0.2
\$5,000 to \$20,000.....	13.2	15.3	16.8	0.5	1.1	1.1	0.4	0.9	1.0	0.4	1.0	1.2
\$20,000 to \$100,000.....	19.9	30.3	32.7	3.4	9.5	10.3	2.7	9.0	10.0	3.1	8.7	10.4
\$100,000 to \$500,000.....	34.7	36.0	38.1	{ 22.0	71.8	72.5	{ 22.6	48.1	{ 71.0	{ 21.2	69.4	69.6
\$500,000 to \$1,000,000.....	17.2	6.3	{ 30.4	{ 30.4	72.5	29.5	29.3	{ 28.9	{ 17.9	{ 46.3	20.8	18.5
\$1,000,000 and over.....	10.2	2.3	2.0	43.7	17.5	15.9	44.9	18.6	17.9			

<sup>1</sup> Less than one-tenth of 1 per cent.

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

STATE.	Cen-	sus	year.	AVERAGE NUMBER OF WAGE EARNERS.						VALUE OF PRODUCTS.									
				NUMBER OF ESTABLISHMENTS OWNED BY—			In establishments owned by—			Per cent of total.			Of establishments owned by—						
				Total.	Indi-	Cor-	All	Indi-	Cor-	All	Individ-	Corpor-	All	Individ-	Corpor-	All			
					vid-	pora-	oth-		por-	ers.		por-	ers.		por-	ers.			
United States.....	1919			35,907	792	34,045	1,070	2.2	94.8	3.0	\$149,850,945	\$3,218,323	\$142,375,308	\$4,257,309	2.1	95.0	2.8		
				37,556	1,727	34,722	1,107	4.6	92.5	2.9	38,020	4,621,448	81,651,530	2,675,167	5.2	91.8	3.0		
				35,020	2,751	32,722	2,547	7.2	86.1	6.7	80,789,544	7,923,369	4,900,983	8.8	85.7	5.5			
Illinois.....	1919	7	44	1	8,575	119	8,456	—	1.4	98.6	—	36,255,055	377,591	135,877,464	—	1.0	99.0	—	
	1914	11	55	5	8,334	85	8,215	34	1.0	98.6	0.4	19,705,601	190,763	10,354,624	160,209	1.0	98.2	0.8	
Massachusetts.....	1919	10	27	3	3,050	37	3,103	810	0.9	78.6	20.5	13,342,488	111,805	10,076,519	3,154,074	0.8	75.5	23.6	
	1914	14	34	4	3,906	190	3,378	338	4.9	86.5	8.7	8,213,341	418,137	6,872,022	923,182	5.1	83.7	11.2	
Michigan.....	1919	1	10	—	1,305	2	1,305	988	—	7.7	92.3	—	6,097,874	—	6,097,874	—	100.0	—	—
	1914	4	12	1	1,070	182	—	—	—	—	—	2,681,855	140,765	2,541,090	—	5.2	94.8	—	
New York.....	1919	16	105	10	11,317	305	10,933	79	2.7	96.6	0.7	52,231,101	1,499,818	50,424,255	306,998	2.9	96.5	0.6	
	1914	25	114	21	12,602	629	11,653	320	5.0	92.5	2.5	33,071,781	2,393,702	29,907,739	770,340	7.2	90.4	2.3	
Ohio.....	1910	3	18	3	1,820	5	1,776	39	0.3	97.6	2.1	6,797,129	29,978	6,606,020	161,131	0.4	97.2	2.4	
	1914	6	15	6	1,745	23	1,636	86	1.3	93.8	4.9	3,544,086	61,528	3,276,414	206,744	1.7	92.4	5.8	
Pennsylvania.....	1919	7	12	4	972	41	923	8	4.2	95.0	0.8	3,798,015	263,407	3,500,828	27,780	6.9	92.3	0.7	
	1914	10	13	5	922	95	778	49	10.3	84.4	5.3	2,083,727	192,354	1,734,056	157,317	9.2	83.2	7.5	

<sup>1</sup> Includes the group "All others."

<sup>2</sup> Includes the group "Individuals."

## MANUFACTURES.

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

INDUSTRY AND POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
<b>PIANOS AND ORGANS AND MATERIALS.</b>									
Primary power, total.....	3,076	2,079	1,147	47,804	44,349	41,623	100.0	100.0	100.0
Owned.....				32,028	35,027	35,702	68.3	79.0	83.8
Steam <sup>1</sup> .....	218	203	302	30,912	32,702	33,314	64.7	74.0	80.7
Engines.....	191	(2)	(2)	30,050	(2)	(2)	62.9	(2)	(2)
Turbines.....	27	(2)	(2)	862	(2)	(2)	1.8	(2)	(2)
Internal-combustion engines.....	25	39	55	1,280	1,592	1,282	2.7	3.6	3.1
Water wheels, turbines, and motors.....	14	19	36	436	643	1,100	0.9	1.4	2.7
Rented.....	2,810	1,758	754	15,176	9,322	5,921	31.7	21.0	14.2
Electric.....	2,810	1,758	754	15,030	9,046	5,355	31.4	20.4	12.9
Other.....				146	276	560	0.3	0.6	1.4
Electric.....	8,208	3,170	1,002	28,760	21,492	13,250	100.0	100.0	100.0
Rented.....	2,810	1,758	754	15,030	9,046	5,355	52.2	42.1	40.4
Generated by establishments reporting.....	5,380	1,412	908	13,736	12,446	7,901	47.8	57.9	59.6
<b>PIANOS.</b>									
Primary power, total.....	1,761	962	553	28,732	25,981	23,246	100.0	100.0	100.0
Owned.....				20,545	21,491	20,702	71.5	82.7	80.1
Steam <sup>1</sup> .....	154	178	102	19,822	20,630	19,897	69.0	79.4	85.6
Engines.....	147	163	106	19,015	(2)	(2)	80.2	(2)	(2)
Turbines.....	122	(2)	(2)	807	(2)	(2)	2.8	(2)	(2)
Internal-combustion engines.....	25	(2)	(2)	623	710	561	2.2	2.7	2.4
Water wheels, turbines, and motors.....	6	10	16	100	145	244	0.3	0.6	1.1
Rented.....	1,607	784	301	8,187	4,400	2,544	28.5	17.3	10.9
Electric.....	1,607	784	301	8,152	4,347	2,256	28.4	16.7	9.7
Other.....				35	143	288	0.1	0.6	1.2
Electric.....	2,650	1,882	1,053	17,270	12,689	7,345	100.0	100.0	100.0
Rented.....	1,607	784	361	8,152	4,347	2,256	47.2	34.3	30.7
Generated by establishments reporting.....	1,049	1,098	692	9,118	8,342	5,089	52.8	65.7	69.3
<b>ORGANS.</b>									
Primary power, total.....	477	530	172	3,251	3,666	3,334	100.0	100.0	100.0
Owned.....				1,548	1,089	2,406	47.6	54.3	74.9
Steam <sup>1</sup> .....	22	20	54	1,360	1,770	2,205	41.8	48.3	66.2
Engines.....	14	19	31	1,360	(2)	(2)	41.8	(2)	(2)
Turbines.....	14	(2)	(2)	188	(2)	(2)	5.8	(2)	(2)
Internal-combustion engines.....	8	10	23	219	291	5.8	6.0	8.7	
Rented.....	465	507	118	1,703	1,077	838	52.4	45.7	25.1
Electric.....	465	507	118	1,697	1,077	813	52.2	45.7	24.4
Other.....				0		25	0.2		0.7
Electric.....	586	519	157	2,106	1,908	1,225	100.0	100.0	100.0
Rented.....	455	607	118	1,697	1,077	813	80.6	85.2	66.4
Generated by establishments reporting.....	131	12	39	409	291	412	19.4	14.8	33.6
<b>PIANO AND ORGAN MATERIALS.</b>									
Primary power, total.....	838	581	422	15,821	14,702	15,043	100.0	100.0	100.0
Owned.....				10,535	11,647	12,604	66.6	78.6	83.1
Steam <sup>1</sup> .....	81	114	147	9,730	10,380	11,223	61.5	70.6	74.6
Engines.....	57	81	105	9,675	(2)	(2)	61.2	(2)	(2)
Turbines.....	55	(2)	(2)	55	(2)	(2)	0.3	(2)	(2)
Internal-combustion engines.....	2	(2)	(2)	409	603	419	3.0	4.5	2.8
Water wheels, turbines, and motors.....	11	10	16	336	498	862	2.1	3.4	5.7
Rented.....	757	407	275	5,280	3,155	2,539	33.4	21.5	16.9
Electric.....	757	407	275	5,181	3,022	2,286	32.7	20.8	15.2
Other.....				105	133	253	0.7	0.9	1.7
Electric.....	4,966	769	452	9,360	6,835	4,086	100.0	100.0	100.0
Rented.....	757	407	275	5,181	3,022	2,286	55.2	44.2	48.8
Generated by establishments reporting.....	4,209	302	177	4,209	3,813	2,400	44.8	55.8	51.2

<sup>1</sup> Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.<sup>2</sup> Not reported separately.

# MUSICAL INSTRUMENTS.

13

TABLE 12.—FUEL CONSUMED, BY STATES: 1919 AND 1914.

INDUSTRY AND STATE.	Census year.	COAL.		Coke (tons, 2,000 lbs.).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
		Anthracite (tons, 2,240 lbs.).	Bituminous (tons, 2,000 lbs.).				
<b>PIANOS AND ORGANS AND MATERIALS.</b>							
United States.....	1919	27,455	184,556				
	1914	36,812	185,934	5,854 5,869	2,236 1,979	335	82,128 79,622
Illinois.....	1919	98	69,519				
	1914	1,099	63,220	1,546 1,168	740 41	263	3,875
Maryland <sup>a</sup> .....	1919	1,832	1,819		600		5,433 165
Massachusetts.....	1919	147	16,921				
	1914	2,260	18,789	72 353	129 99	32	28,263 8,285
Michigan.....	1919		11,479				
	1914	161	12,215			2	
New York.....	1919	16,321	32,586				
	1914	23,871	28,093	627 583	287 837	(1)	10,981 14,378
Ohio.....	1919	7	5,145				
	1914		7,957	1,773 1,808	24	22	29,312 42,906
Pennsylvania.....	1919	632	3,745				
	1914	610	1,868	1,020		6	1,052 2,491
<b>PIANOS.</b>							
United States.....	1919	17,571	144,707				
	1914	26,891	138,619	1,074 2,507	927 1,549	15	6,123 26,556
Connecticut <sup>a</sup> .....	1919	127	5,085				
Illinois.....	1919	90	59,228				
	1914	1,020	55,290	400 423	40 5	(1)	3,061 2,877
Indiana.....	1919		16,389				
	1914		20,434				
Maryland <sup>a</sup> .....	1919	1,825	1,269	192	216 600	10	
Massachusetts.....	1919		11,365				
	1914	1,345	10,445	300			120 7,724
Michigan.....	1919		10,023				
	1914	161	10,367				20
New Jersey.....	1919	5,813	900				
	1914	6,035	2,433				357 55
New York.....	1919	9,041	22,133				
	1914	17,364	17,634	602 542	287 765	(1)	2,177 11,901
Ohio.....	1919		4,705				
	1914		7,261	30	10	5	45 1,077
Pennsylvania.....	1919	477	3,430				
	1914	547	1,250	1,020			343 74
<b>ORGANS.</b>							
United States.....	1919	1,047	7,796				
	1914	812	12,691	52 22	480 171	5	15,557 13,814
<b>PIANO AND ORGAN MATERIALS.</b>							
United States.....	1919	8,837	32,053				
	1914	9,100	34,624	4,728 3,340	829 259	315	60,448 39,252
Connecticut.....	1919	608	6,073				
	1914	1,018	8,139	1,603 557			205
Illinois.....	1919		7,670				
	1914	70	6,251	1,100 745	700 31	263	684 2,476
Massachusetts.....	1919	93	5,198				
	1914	880	4,682				
New Jersey <sup>a</sup> .....	1919	862	1,463	120 225	99	(1)	26,463 546 809
New York.....	1919	7,198	9,472				
	1914	6,454	7,300	25 46	72	(1)	4,132 1,697
Ohio.....	1919	7	348	1,773		12	
	1914		630	1,778	10	(1)	27,981 31,811

<sup>a</sup> Included in fuel oils.

<sup>b</sup> Not shown separately in 1914.

## SPECIAL STATISTICS.

Certain additional information concerning the quantity and value of products is collected by means of supplemental schedules. At the last four censuses, data were obtained from establishments engaged primarily in the manufacture of pianos and organs, consisting of a detailed statement of the number and value of the different kinds of pianos and organs manufactured.

**Production of pianos.**—Table 13 shows in comparative form for 1904 to 1919, inclusive, the number

and value of the upright and grand pianos made in the United States and in the 10 states for which figures can be shown without disclosing the operations of individual establishments. From 1909 to 1919 there was a decrease in the number of upright pianos manufactured, this decrease being more noticeable in Illinois, Massachusetts, and New York, although the value of products increased in that period 52.3 per cent and from 1914 to 1919, 60.3 per cent. The total number and value of grand pianos

## MANUFACTURES.

manufactured show large increases at each census period shown in the table, the increase showing especially in the states of Illinois, Massachusetts, New York, Ohio, and Pennsylvania.

The value of products reported in this branch of the industry by New York, Massachusetts, and Illinois, in the order named, constituted 71.6 per cent of the total reported for the industry. These states held the same relative rank in 1914, reporting 74.4 per cent of the value of products for that year.

TABLE 13.—PIANOS (WITH AND WITHOUT PLAYER ATTACHMENTS)—NUMBER AND VALUE, BY STATES: 1919, 1914, 1909, AND 1904.

STATE.	Cen-sus year.	Total value.	UPRIGHT.		GRAND.		Cen-sus year.	Total value. <sup>1</sup>	REED.		PIPE.	
			Num-ber.	Value.	Num-ber.	Value.			Number.	Value.	Number.	Value.
United States ..	1919	\$94,460,761	313,973	\$82,853,450	22,318	\$11,613,302	1919	\$6,558,996	20,420	\$1,827,057	1,872	\$4,731,936
	1914	56,311,863	315,764	51,696,898	10,510	4,614,907	1914	6,378,312	40,533	1,718,011	2,273	4,660,301
	1909	58,493,946	355,804	54,455,177	8,741	4,038,669	1909	5,300,016	64,111	2,595,420	1,221	2,713,357
	1904	41,476,479	253,825	37,815,056	7,372	3,061,423	1904	6,152,032	113,065	4,162,053	901	1,988,679
Per cent of total..	1919	100.0	93.4	87.7	6.6	12.3	1919	100.0	93.4	28.5	6.6	71.5
	1914	100.0	96.8	91.8	3.2	8.2	1914	100.0	94.7	26.0	5.3	73.1
	1909	100.0	97.6	95.1	2.4	6.9	1909	100.0	98.1	48.9	1.9	51.1
	1904	100.0	97.2	91.2	2.8	8.8	1904	100.0	99.2	67.7	0.8	32.3
Connecticut.....	1919	2,074,922	8,477	2,050,286	55	18,036						
	1914	972,343	6,127	972,343	(1)	(1)						
	1909	1,716,685	9,759	1,710,695	(1)	(1)						
	1904	1,238,087	9,221	1,231,242	10	7,425						
Illinois.....	1919	25,034,422	91,084	23,909,487	1,900	1,034,935						
	1914	14,562,820	92,898	14,277,117	733	285,703						
	1909	14,783,394	107,903	14,410,471	380	136,923						
	1904	9,696,142	73,899	9,014,431	238	81,711						
Indiana <sup>2</sup> .....	1910	6,370,350	21,981	6,823,010	96	47,310						
	1914	3,513,127	23,069	3,513,127	(1)	(1)						
	1909	3,310,100	22,891	3,310,100	(1)	(1)						
Massachusetts.....	1919	7,051,740	20,379	5,337,984	3,676	2,313,702						
	1914	5,033,930	23,596	4,315,701	1,948	718,220						
	1909	5,328,716	25,644	4,411,927	2,533	916,789						
	1904	5,129,833	20,967	4,022,237	2,150	1,107,996						
Michigan <sup>2</sup> .....	1919	5,012,774	18,870	4,079,627	61	33,447						
	1914	2,203,745	13,707	2,203,745	(1)	(1)						
	1909	3,732,073	25,165	3,732,073	(1)	(1)						
New Jersey <sup>2</sup> .....	1919	1,191,740	3,319	915,078	770	270,662						
	1914	805,711	4,618	805,711	(1)	(1)						
	1909	693,917	3,970	693,917	(1)	(1)						
New York.....	1919	35,002,033	106,860	28,653,453	13,208	6,340,180						
	1914	22,285,350	115,812	19,600,964	5,403	2,678,395						
	1909	22,704,384	127,482	20,303,363	4,298	2,376,521						
	1904	16,084,911	98,401	14,819,717	3,541	1,905,194						
Ohio.....	1919	2,957,768	11,769	2,050,803	585	300,965						
	1914	1,924,679	10,239	1,702,273	365	162,406						
	1909	1,901,294	11,118	1,778,620	229	122,665						
	1904	1,855,610	11,110	1,782,610	100	72,700						
Pennsylvania <sup>2</sup> .....	1919	2,926,937	10,823	2,827,617	242	99,320						
	1914	1,363,114	6,018	1,302,700	165	60,408						
	1909	1,818,070	9,300	1,784,220	90	33,850						
Wisconsin <sup>2</sup> .....	1919	2,031,332	9,984	2,627,909	15	6,423						
	1914	1,440,721	11,760	1,440,721	(1)	(1)						
	1909	5,10,350	4,735	5,10,350	(1)	(1)						
All other states.....	1910	3,109,137	6,827	1,976,205	1,602	1,132,932						
	1914	2,116,314	6,719	1,406,488	1,890	769,826						
	1909	1,894,863	7,831	1,436,942	1,205	457,921						
	1904	6,871,316	40,128	6,344,519	1,255	520,797						

<sup>1</sup> Included in "All other states," to avoid disclosing individual operations.

<sup>2</sup> Figures for 1904 included in "All other states," to avoid disclosing individual operations.

was greatest in 1914. The figures for pipe organs include those for 721 orchestrions valued at \$546,404. Measured by value of products, Illinois was the leading state in 1919 and 1914 in both reed and pipe organs, reporting 23 per cent and 22.4 per cent for 1919 and 31.4 per cent and 19.5 per cent in 1914, respectively, of the total value of products for each period.

TABLE 14.—ORGANS—NUMBER AND VALUE, BY STATES: 1919, 1914, 1909, AND 1904.

STATE.	Cen-sus year.	Total value. <sup>1</sup>	REED.		PIPE.	
			Number.	Value.	Number.	Value.
United States ..	1919	\$6,558,996	20,420	\$1,827,057	1,872	\$4,731,936
	1914	6,378,312	40,533	1,718,011	2,273	4,660,301
	1909	5,300,016	64,111	2,595,420	1,221	2,713,357
	1904	6,152,032	113,065	4,162,053	901	1,988,679
Per cent of total..	1919	100.0	93.4	28.5	6.6	71.5
	1914	100.0	94.7	26.0	5.3	73.1
	1909	100.0	98.1	48.9	1.9	51.1
	1904	100.0	99.2	67.7	0.8	32.3
Illinois.....	1919	1,493,598	7,765	434,700	797	1,058,838
	1914	1,448,129	12,508	540,033	589	908,396
	1909	1,281,415	28,644	473,783	154	307,832
	1904	1,969,513	55,610	1,730,220	140	230,323
Massachusetts.....	1919	303,952	17	1,840	39	302,112
	1914	379,204	(2)	(2)	73	379,204
	1909	339,693	(2)	(2)	151	339,693
	1904	671,770	2,073	150,883	137	520,887
New York.....	1910	642,782	500	94,393	229	548,389
	1914	734,771	(2)	(2)	879	734,771
	1909	330,373	(2)	(2)	245	330,373
	1904	133,471	(2)	(2)	58	133,471
Ohio.....	1919	104,208			70	104,208
	1914	187,601	(2)	(2)	85	187,601
	1909	199,604	(2)	(2)	85	199,604
	1904	310,063	1,949	94,577	137	251,466
Pennsylvania.....	1919	158,365	800	41,707	32	113,568
	1914	215,444	(2)	(2)	81	215,444
	1909	192,901	(2)	(2)	82	192,901
	1904	417,014	5,745	242,059	87	175,555
All other states.....	1919	3,706,001	17,347	1,251,267	705	2,514,734
	1914	3,412,773	28,027	1,177,908	768	2,234,935
	1909	2,984,670	35,407	1,621,640	507	1,343,024
	1904	2,613,571	47,709	1,935,314	312	678,257

<sup>1</sup> Includes orchestrions.

<sup>2</sup> Included in "All other states," to avoid disclosing individual operations.

Detailed statistics of quantity and value.—Table 15 shows in detail the statistics of products manufactured in the piano and organ branches of the industry for 1919, 1914, and 1909.

The production of pianos increased 10,017, or 3.1 per cent, in number, and \$38,154,898, or 67.8 per cent, in value, from 1914 to 1919, while from 1909 to 1919, the number decreased 28,254, or 7.8 per cent, but the value increased \$35,972,915, or 61.5 per cent.

The manufacture of upright pianos without player attachments decreased by 91,922, or 40.4 per cent, in number, and \$2,590,062, or 8 per cent, in value, during the period 1914 to 1919. This decrease is offset by the increase in the production of pianos for or with player attachments, which was 86,620, or 98.3 per cent, in number, and \$32,250,414, or 159.1 per cent, in value, during this period. These figures do not include the 2,145 automatic pianos, valued at \$896,846, nor 1,366 electric pianos, valued at \$538,865.

The production of player attachments in the piano and organ industry greatly increased, 15,326, or 236.1 per cent, in number, and \$985,664, or 115.3 per cent, in value of products, from 1914 to 1919.

Production of organs.—Table 14 shows the number and value of the reed and pipe organs reported for the United States and for five specified states for 1919, 1914, 1909, and 1904.

The total value of organs manufactured increased from 1909 to 1919, while the total number manufactured has steadily decreased during that period, although the number of pipe organs manufactured

# MUSICAL INSTRUMENTS.

15

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

PRODUCT.	1919	1914	1909
Total value <sup>1</sup> .....	\$113,061,318	\$69,072,383	\$70,056,223
Pianos:			
Number.....	336,291	326,274	364,545
Value.....	\$94,466,761	\$56,311,863	\$58,493,846
Upright—			
Without player attachment—			
Number.....	135,764	227,686	321,309
Value.....	\$28,902,320	\$31,431,382	\$45,180,176
With player attachment—			
Number.....	174,698	88,078	34,495
Value.....	\$52,515,928	\$20,265,514	\$9,275,001
Grand—			
Baby grand—			
Without player attachment—			
Number.....	17,900	9,679	8,720
Value.....	\$8,619,054	\$4,201,302	\$4,009,769
With player attachment—			
Number.....	2,034	831	21
Value.....	\$1,711,314	\$413,065	\$28,900
Parlor—			
Without player attachment—			
Number.....	2,172	(2)	(2)
Value.....	\$1,109,501		
With player attachment—			
Number.....	125	(2)	(2)
Value.....	\$119,378		
Concert—			
Number.....	87	(2)	(2)
Value.....	\$54,055		
Automatic—			
Number.....	2,145	(2)	(2)
Value.....	\$806,340		
Electric—			
Number.....	1,366	(2)	(2)
Value.....	\$538,865		
Player attachments and actions made separately:			
Number.....	21,819	6,493	10,898
Value.....	\$1,840,438	\$854,774	\$1,474,630
Organs:			
Number.....	28,301	42,808	65,325
Value.....	\$6,558,906	\$6,378,312	\$5,309,016
Pipe—			
Number.....	1,151	2,273	1,224
Value.....	\$4,185,535	\$4,660,301	\$2,713,587

<sup>1</sup>In addition, products to the value of \$1,382,353 were reported in 1919 by establishments engaged primarily in other industries.

\*Not reported separately.

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

PRODUCT.	1919	1914	1909
Organs—Continued.			
Reed—			
Folding—			
Number.....	10,370		
Value.....	\$1,370,510	40,533	64,111
Other reed—			
Number.....	7,059		
Value.....	\$450,547		
Orchestrions—			
Number.....	721		
Value.....	\$546,404		
Perforated music rolls, value.....	\$3,103,554		
Parts, materials, and supplies.....	\$1,432,797		
Piano and organ, value.....	\$1,258,303	\$2,913,197	\$2,442,611
Other musical instruments, value.....	\$174,494		
Repairs, value.....	\$1,252,156		
All other products, value.....	\$4,406,616	\$1,780,880	\$2,119,970

The total number of organs decreased during each period shown in the table, while the value increased 2.8 per cent from 1914 to 1919. The production of reed organs decreased in number at each period shown, while pipe organs decreased in both number and value from 1914 to 1919.

Eight establishments, whose chief product was pianos, manufactured organs valued at \$1,663,455, while four, whose chief product was organs, manufactured pianos valued at \$30,034.

Eight establishments, whose chief products were pianos and organs, manufactured orchestrions valued at \$546,404. The value of perforated music rolls made in establishments manufacturing pianos and organs increased \$2,887,404, or 1,335.8 per cent, since 1909, the first census to report these data separately.

## GENERAL TABLES.

Table 16 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 combined industries. Table 17 presents, for 1919, by states, the more detailed statistics of the industry.

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

STATE.	Cen-sus year.	Num-ber of es-tab-lish-ments.	Wage earners (av-er-age num-ber).	Pri-mary horse-power.	Wages.	Cost of ma-terials.	Value of prod-ucts.	Expressed in thousands.							
								STATE.	Cen-sus year.	Num-ber of es-tab-lish-ments.	Wage earners (av-er-age num-ber).	Pri-mary horse-power.	Wages.	Cost of ma-terials.	Value of prod-ucts.
United States.....	1919	372	35,907	47,804	\$37,020	\$73,275	\$149,851	Minnesota.....	1919	3	76	204	\$85	\$172	\$427
	1914	478	37,556	44,349	23,353	41,253	\$8,948		1914	4	108	249	79	156	315
	1909	507	38,020	41,623	22,762	43,705	\$9,790		1909	5	143	160	100	126	294
California.....	1910	5	94	196	97	149	321	New Jersey.....	1919	19	1,642	2,315	1,517	2,233	5,424
	1914	8	94	89	74	132	232		1914	24	1,960	2,102	1,096	1,738	3,503
	1909	11	57	53	60	41	150		1909	18	1,393	1,121	721	1,076	2,229
Connecticut.....	1919	13	2,028	2,734	1,909	3,587	7,397	New York.....	1919	131	11,317	12,589	12,368	28,635	52,231
	1914	19	2,267	2,696	1,277	2,570	5,230		1914	120	11,527	7,765	15,786	33,072	
	1909	17	2,304	2,550	1,251	3,022	5,538		1909	184	11,938	10,905	7,752	17,495	33,080
Illinois.....	1919	52	8,575	10,475	9,118	15,538	36,255	Ohio.....	1919	22	1,820	2,747	1,840	3,154	6,797
	1914	71	8,334	8,597	5,237	8,322	19,706		1914	27	1,745	2,201	1,022	1,673	3,545
	1909	68	8,777	8,123	5,009	8,642	19,176		1909	30	1,841	2,254	1,092	1,922	3,920
Indiana.....	1919	10	1,474	2,259	1,617	3,467	7,179	Pennsylvania.....	1919	23	972	1,970	973	2,157	3,798
	1914	15	1,014	3,263	1,054	1,047	3,084		1914	28	1,233	555	1,058	2,084	
	1909	15	1,667	2,650	994	1,703	3,086		1909	30	1,182	1,260	505	1,248	2,382
Massachusetts.....	1919	40	3,950	4,462	4,302	5,808	13,342	Wisconsin.....	1919	13	519	652	524	1,574	2,937
	1914	52	3,900	5,105	2,510	3,702	8,213		1914	16	495	553	307	886	1,470
	1909	59	4,245	4,454	2,668	4,149	9,106		1909	11	369	339	202	490	893
Michigan.....	1919	11	1,305	2,098	1,370	3,182	6,098	All other states.....	1919	30	2,135	5,103	2,101	3,619	7,645
	1914	17	1,070	1,927	1,677	1,259	2,682		1914	47	2,439	4,817	1,489	2,374	4,942
	1909	17	1,779	2,690	1,075	2,009	4,226		1909	42	2,325	5,002	1,333	1,842	4,504

<sup>1</sup> Excludes statistics for 3 establishments, to avoid disclosing individual operations.

## MANUFACTURES.

TABLE 17.—DETAILED STATEMENT,

INDUSTRY AND STATE.	Number of establish- ments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Propri- etors and firm mem- bers.	Salaried offi- cers, super- intendents, and managers.	Clerks, etc.		Wage earners.		Number, 15th day of—	16 and over.		Under 16.			
					Male.	Female.	Aver- age num- ber.	Maximum month.		Male.	Female.	Male.	Female.		

## PIANOS AND ORGANS AND MATERIALS.

1	United States.....	372	39,931	127	1,285	1,482	1,130	35,907	Au 38,426	Ja 32,458	38,750	32,658	5,445	405	182	\$155,200,792
2	California.....	5	117	2	7	5	9	94	My 110	De 72	110	82	28	...	...	523,609
3	Illinois.....	52	9,500	10	224	309	322	8,575	Oc 9,045	Ja 7,873	9,134	7,083	1,225	152	74	45,405,651
4	Maryland.....	7	778	3	16	22	17	720	No 747	Ja 677	743	607	27	17	2	3,630,269
5	Massachusetts.....	40	4,267	15	133	86	83	3,950	De 4,315	Ja 3,334	4,359	3,658	536	121	44	12,725,255
6	Michigan.....	11	1,461	1	42	82	31	1,305	De 1,504	My 1,132	1,584	1,372	159	44	9	8,877,220
7	Minnesota.....	3	100	3	8	10	3	76	Ap 86	Ja 68	77	75	2	...	...	624,484
8	New York.....	131	12,614	39	440	484	334	11,317	Au 13,005	Oc 7,072	11,573	9,884	1,048	24	17	48,025,215
9	Ohio.....	22	2,025	11	84	68	42	1,820	De 2,152	Ja 1,409	2,155	1,810	343	2	...	6,023,146
10	Pennsylvania.....	23	1,094	17	46	33	26	972	De 1,018	Ja 924	1,015	887	90	38	...	4,434,109
11	Vermont.....	3	504	1	10	32	17	444	De 520	Ja 347	521	470	42	...	...	1,703,729
12	All other states <sup>3</sup> .....	75	7,471	25	275	291	246	6,634	...	...	7,479	6,031	1,346	67	36	23,324,676

## PIANOS.

1	United States.....	101	25,760	33	803	1,168	799	22,957	So 24,719	Oc 20,902	24,665	22,131	2,162	287	85	116,100,538
2	Connecticut.....	5	684	...	41	13	22	608	No 683	Ja 544	655	582	65	5	3	3,111,770
3	Illinois.....	33	7,781	7	168	337	278	6,991	Oc 7,430	Ja 6,417	7,539	6,029	72L	120	60	42,005,469
4	Indiana.....	8	1,591	...	34	84	41	1,432	De 1,783	Ja 1,100	1,727	1,406	230	18	4	4,873,570
5	Massachusetts.....	14	2,419	3	70	67	51	2,228	De 2,394	Ja 1,885	2,394	2,215	114	57	8	8,545,273
6	Michigan.....	8	1,257	...	34	77	24	1,122	De 1,288	My 1,038	1,288	1,103	132	44	9	1,882,078
7	New Jersey.....	6	513	1	19	62	18	713	Ja 820	No 544	777	619	153	...	...	1,906,371
8	New York.....	79	7,868	15	304	306	245	6,908	Se 8,050	Oc 3,822	6,957	6,537	415	4	1	33,857,648
9	Ohio.....	10	902	...	52	37	26	787	De 970	Ja 595	979	825	152	2	...	3,054,456
10	Pennsylvania.....	11	855	6	27	28	20	774	No 795	Ja 747	794	728	63	3	...	3,714,979
11	Wisconsin.....	7	521	...	27	18	28	448	De 477	Ja 387	477	432	32	13	...	2,182,302
12	All other states <sup>4</sup> .....	10	1,069	1	27	49	46	940	...	...	1,078	995	71	12	...	4,974,220

## ORGANS.

1	United States.....	68	2,285	56	121	84	83	1,941	De 2,111	Ja 1,770	2,132	1,850	235	41	6	6,770,557
2	Illinois.....	10	317	2	15	13	14	273	Jy 201	Ja 242	290	246	39	3	2	925,285
3	Massachusetts.....	5	166	3	12	3	7	141	De 155	Ja 128	155	145	10	...	...	472,119
4	New York.....	16	321	18	13	8	14	268	De 324	Ja 213	328	259	63	2	2	691,561
5	Ohio.....	6	75	10	10	2	2	53	De 60	Ja 46	59	54	5	...	...	154,985
6	Pennsylvania.....	7	103	8	12	3	1	79	De 95	Fe 63	95	63	32	...	...	269,055
7	Wisconsin.....	4	88	3	12	2	3	68	No 85	Ja 45	80	68	12	...	...	379,341
8	All other states <sup>6</sup> .....	20	1,215	12	47	55	42	1,050	...	...	1,127	1,015	106	4	2	3,877,741

## PIANO AND ORGAN MATERIALS.

1	United States.....	113	11,880	38	361	230	248	11,009	Au 11,057	Ja 9,103	11,953	8,677	3,048	137	91	32,323,669
2	Connecticut.....	6	1,370	4	38	26	20	1,201	De 1,487	Ja 984	1,487	1,097	340	21	29	3,973,103
3	Illinois.....	9	1,402	1	41	19	30	1,311	Au 1,391	Ja 1,214	1,305	808	465	20	12	2,478,266
4	Massachusetts.....	21	1,082	9	51	16	25	1,581	No 1,855	Fe 1,303	1,810	1,298	412	64	36	3,707,933
5	New Jersey.....	11	896	4	39	42	53	758	No 805	Ja 684	766	430	330	6	...	1,857,783
6	New York.....	36	4,425	6	123	80	75	4,141	An 4,067	Ja 3,426	4,200	3,088	1,170	18	14	13,476,000
7	Ohio.....	6	1,048	1	22	31	14	980	De 1,113	Ja 768	1,117	931	186	...	...	2,813,705
8	Pennsylvania.....	5	136	3	7	2	5	119	Oc 128	Ja 108	128	96	27	3	...	450,075
9	All other states <sup>6</sup> .....	19	918	10	40	14	20	828	...	...	1,052	920	118	5	...	3,566,394

<sup>1</sup> Includes water wheels and turbines (irrespective of ownership of water supply) and water motors (operated by water from city mains).<sup>2</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).<sup>3</sup> All other states embrace: Alabama, 1 establishment; Connecticut, 13; Indiana, 10; Iowa, 2; Kentucky, 6; Louisiana, 1; Maine, 1; Missouri, 2; New Hampshire, 1; New Jersey, 19; North Carolina, 1; Rhode Island, 1; Virginia, 3; Washington, 1; Wisconsin, 13.<sup>4</sup> All other states embrace: Alabama, 1 establishment; Iowa, 1; Kentucky, 2; Maine, 1; Maryland, 3; Minnesota, 2.

# MUSICAL INSTRUMENTS.

17

BY STATES: 1919.

EXPENSES.								POWER.						
Salaries and wages.			Rent and taxes.		For materials.			Value of products.	Value added by manufacturer.	Primary horsepower.				Electric horse-power generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.	For contract work.	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. <sup>1</sup>

## PIANOS AND ORGANS AND MATERIALS.

\$5,610,866	\$3,352,896	\$37,919,855	\$69,618	\$1,223,231	\$3,732,299	\$71,719,369	\$1,555,524	\$149,850,948	\$76,570,052	47,804	30,050	862	1,280	436	15,176	13,736	1	
17,725	10,632	96,655	.....	9,577	1,848	145,707	3,720	320,975	171,543	196	6,860	600	25	.....	196	4,233	2	
1,138,109	929,464	9,118,090	2,546	143,327	1,234,336	15,150,406	381,968	36,255,055	20,716,681	10,475	2,670,421	1,624,260	619	350	225	44	577	3
84,849	35,092	816,636	1,708	14,016	67,480	1,022,890	23,271	2,670,421	1,624,260	4,462	2,952	57	95	122	1,235	1,703	5	
631,885	182,665	4,391,735	17,120	145,341	271,327	5,624,624	182,926	13,342,488	7,534,938	2,915,731	1,362	6	730	482	6	482	6	
269,897	162,821	1,379,252	.....	7,357	190,901	3,123,073	59,067	6,097,874	2,477,328	2,098	125	.....	79	40	7	79	40	7
33,125	35,530	84,738	.....	.....	11,296	164,666	7,318	255,344	204	.....	.....	.....	.....	.....	.....	.....	.....	
1,943,634	1,016,182	12,367,547	35,758	735,452	1,040,086	28,160,005	408,350	52,231,101	23,596,148	12,589	7,260	150	348	13	4,818	1,985	8	
252,321	130,653	1,839,917	2,380	73,281	187,579	3,100,652	53,385	6,797,129	3,643,092	2,747	600	.....	455	.....	1,692	207	9	
125,191	97,542	973,362	6,743	18,527	117,996	2,123,590	33,560	3,798,015	1,640,865	1,970	1,662	23	.....	285	386	10	386	11
70,546	66,122	430,504	.....	.....	18,910	575,272	24,708	1,422,795	822,817	1,425	1,030	95	300	.....	388	11	388	11
1,043,534	685,203	6,421,419	3,363	70,353	500,120	12,515,884	317,253	26,487,764	13,654,627	11,019	7,849	55	102	206	2,807	3,726	12	

## PIANOS.

3,731,656	2,666,010	25,474,200	27,640	910,874	2,709,214	53,322,488	1,042,168	107,088,050	52,723,394	28,732	19,015	807	623	100	8,187	9,118	1
128,935	36,293	645,322	.....	8,260	15,578	1,450,353	26,064	2,505,955	1,022,941	857	720	.....	137	282	2	282	2
924,733	857,240	7,654,467	.....	110,170	1,145,210	12,648,605	306,056	30,848,147	17,893,486	8,421	5,485	600	.....	2,336	2,688	3	
203,638	224,249	1,578,620	.....	.....	187,659	3,293,600	82,377	6,978,030	3,601,993	2,184	1,715	469	990	4	469	990	4
318,484	138,346	2,703,293	.....	102,478	219,381	3,312,415	111,706	8,123,257	4,099,136	2,502	1,812	57	100	533	1,435	5	
247,497	149,324	1,170,048	.....	7,357	181,579	2,774,186	49,311	5,297,445	2,573,948	1,767	1,037	.....	730	482	6		
54,304	102,930	723,249	.....	21,208	34,045	1,142,084	40,790	2,205,253	1,022,379	1,440	1,305	.....	135	875	7		
1,409,868	823,039	8,085,286	20,800	578,278	623,270	21,729,348	310,071	37,978,813	15,939,394	6,794	3,575	150	303	.....	2,736	915	8
135,497	67,090	743,274	.....	43,742	63,078	1,940,773	19,126	3,475,513	1,515,644	935	600	95	210	207	9		
77,660	88,854	759,417	5,200	8,580	114,004	1,726,480	23,699	3,022,688	1,272,509	1,555	1,450	.....	105	375	10		
81,209	73,303	438,023	1,640	3,239	45,005	1,458,583	27,538	2,609,704	1,185,583	582	350	.....	232	232	11		
119,769	105,242	973,201	.....	18,502	79,502	1,812,001	44,830	3,833,212	1,906,381	1,705	986	225	514	609	12		

## ORGANS.

339,262	184,410	1,978,518	26,806	45,505	72,938	2,111,833	105,264	5,973,208	3,756,171	3,251	1,360	.....	188	.....	1,703	409	1
49,832	25,326	207,981	1,706	10,144	19,276	327,024	15,562	869,167	526,581	425	125	.....	300	40	2	40	2
34,588	9,006	161,091	17,050	720	3,924	125,643	6,089	445,083	313,351	40	90	37	50	3	50	3	
20,642	20,718	288,858	876	11,903	10,357	108,304	18,487	683,169	496,378	324	110	20	254	4	254	4	
14,810	2,012	67,273	2,380	2,464	1,386	91,593	1,505	233,193	140,095	69	20	49	5	5	49	5	
18,823	3,805	81,334	1,473	1,835	1,823	92,943	2,124	224,472	129,405	214	125	23	66	6	66	6	
21,850	240	81,091	.....	1,250	2,463	70,576	3,367	249,557	166,614	68	68	68	68	7	68	7	
178,717	123,243	1,030,888	3,431	17,129	33,709	1,226,750	58,130	3,208,627	1,933,747	1,924	960	35	929	319	319	319	

## PIANO AND ORGAN MATERIALS.

1,539,948	502,476	10,407,137	15,172	266,852	950,147	16,285,048	408,092	36,789,627	20,096,487	15,821	9,675	55	469	336	5,286	4,209	1
151,885	49,555	1,096,600	.....	12,080	81,155	1,899,882	57,484	4,266,704	2,309,338	1,028	1,173	55	61	201	138	1,440	2
163,541	49,898	1,195,612	750	14,013	69,670	2,180,777	60,350	4,537,741	2,296,614	1,029	1,250	25	354	1,225	3		
248,813	35,313	1,527,351	70	42,143	48,022	2,185,506	65,131	4,774,148	2,522,451	1,793	1,100	6	22	665	218	4	
165,505	82,453	629,320	.....	13,108	151,786	850,097	22,829	2,822,142	1,949,216	755	685	6	5	159	157	5	
513,174	172,375	3,093,403	14,282	145,211	407,050	6,268,953	130,792	13,570,110	7,160,374	5,421	3,575	25	13	1,808	1,070	6	
102,014	61,551	1,029,368	.....	27,075	123,115	1,085,280	32,754	3,088,393	1,957,353	1,743	340	1,403	.....	1,403	7		
28,699	4,823	132,611	70	8,112	2,169	304,167	7,737	550,855	238,951	201	87	114	11	645	88	9	
136,317	49,508	862,704	.....	5,110	67,171	1,520,320	22,015	3,180,525	1,632,190	2,651	1,905	6	95	645	88	9	

<sup>1</sup> All other states embrace: California, 3 establishments; Connecticut, 2; Iowa, 1; Kentucky, 3; Maryland, 2; Minnesota, 1; Missouri, 2; New Jersey, 2; North Carolina, 1; Vermont, 1; Virginia, 2.

<sup>2</sup> All other states embrace: California, 2 establishments; Indiana, 2; Kentucky, 1; Louisiana, 1; Maryland, 2; Michigan, 3; New Hampshire, 1; Rhode Island, 1; Vermont, 2; Virginia, 1; Washington, 1; Wisconsin, 2.

## MUSICAL INSTRUMENTS AND MATERIALS NOT SPECIFIED.

### GENERAL STATISTICS.

**General character of the industry.**—The establishments in this industry were engaged primarily in the manufacture of various kinds of wind, percussive, and stringed musical instruments, and materials therefor. The instruments include, among others, accordions, banjos, bones, bugles, castanets, concertinas, cornets, trombones, trumpets, and other metal instruments for band and orchestral use; cymbals, drums, bass and snare; fifes, flageolets, flutes, piccolas, guitars, harps, lutes, lyres, mandolins, mechanical musical instruments, musical bells, sonnettes of wood and metal, ukuleles, steel guitars, violoncellos, and all other instruments of the violin type; xylophones and zithers. Parts of these instruments, such as strings, drum-heads, violin bows and bridges, etc., are also produced for sale, as such, direct to musicians or to manufacturers of complete instruments. Thus there is some duplication within the industry. The number and value of products were not reported separately. In addition to the production here presented, products to the value of \$513,884 were reported by establishments engaged primarily in other industries.

**Comparative summary.**—Table 18 summarizes the statistics of establishments engaged in the manufacture of musical instruments and materials not specified, for each census from 1879 to 1919, and gives percentages of increase. There was comparatively little change from 1879 to 1914 in the more important items given in the table. Figures for 1919 show a marked increase in all items with the exception of number of establishments, which shows a slight decrease from 1914 to 1919.

In 1919 Indiana ranked first as measured by value of products, to which position it advanced in 1914; Illinois retained second place, and New York third. In both census years these three states together reported more than one-half of the total value of products.

**Persons engaged in the industry.**—Table 19 shows for 1919 and 1914 the number of persons engaged in the industry distributed by sex, the average number of wage earners being distributed also by age.

TABLE 18.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, 1899, 1889, AND 1879.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	240	241	187	181	229	203	84	-0.4	28.0	3.3	-21.0	-21.8	.....
Persons engaged.....	4,957	2,410	2,260	2,554	2,799	(2)	(2)	105.7	6.2	-11.2	-8.8	.....	.....
Proprietors and firm members.....	223	234	187	190	238	(2)	(2)	-4.7	25.1	-1.6	-19.5	.....	.....
Salaried employees.....	621	345	260	225	158	(2)	(2)	80.0	32.7	15.6	42.4	.....	.....
Wage earners (average number).....	4,113	1,531	1,822	2,139	2,405	1,050	573	124.6	0.5	-14.8	-11.1	127.7	(2)
Primary horsepower.....	3,286	1,865	1,423	1,603	1,417	600	(2)	76.2	31.1	-11.2	13.1	103.6	.....
Capital.....	\$7,876,182	\$3,857,787	\$3,297,660	\$3,743,400	\$3,896,101	\$1,320,329	\$654,850	101.2	17.0	-11.9	-3.9	193.1	103.0
Salaries and wages.....	5,016,828	1,545,709	1,335,128	1,413,834	1,373,784	802,177	293,062	224.6	15.8	-5.6	2.9	59.3	191.2
Salaries.....	1,632,172	385,197	342,553	251,766	141,745	(2)	(2)	108.0	12.1	30.2	77.6	.....	.....
Wages.....	3,384,656	1,160,512	992,275	1,162,068	1,232,039	(2)	(2)	243.4	17.0	-14.6	-5.7	.....	.....
Paid for contract work.....	32,027	14,601	14,990	1,012	6,254	(2)	(2)	119.3	-2.6	1,338.6	-83.3	.....	.....
Rent and taxes.....	415,070	128,708	\$6,309	487,457	480,617	(2)	(2)	222.5	49.1	.....	.....	32.4	.....
Cost of materials.....	4,444,729	1,022,534	\$89,600	1,129,039	1,205,337	510,064	385,776	334.7	14.9	-21.3	-6.3	136.0	121.2
Value of products.....	12,506,334	3,624,667	3,228,198	3,481,710	3,394,734	1,888,613	853,746	215.0	12.3	-7.3	2.6	79.7	194.2
Value added by manufacture <sup>2</sup> .....	8,001,005	2,002,033	2,338,508	2,351,771	2,180,307	1,377,049	407,070	209.8	11.3	-0.6	7.4	58.9	194.2

<sup>1</sup> A minus sign (—) denotes decrease; percentages are omitted where base is less than 100.

<sup>2</sup> Figures not available.

<sup>3</sup> Figures not strictly comparable.

<sup>4</sup> Exclusive of internal revenue.

<sup>5</sup> Value of products less cost of materials.

## MUSICAL INSTRUMENTS.

19

TABLE 19.—PERSONS ENGAGED IN THE INDUSTRY: 1919 AND 1914.

CLASS.	Cen-sus year.	Total.	Male.	Fe-male.	PER CENT OF TOTAL.		CLASS.	Cen-sus year.	Total.	Male.	Fe-male.	PER CENT OF TOTAL.	
					Male.	Fe-male.						Male.	Fe-male.
					78.8	21.2						39.0	61.0
All classes.....	1919	4,957	3,908	1,049	83.1	16.9	Clerks and other subordinate salaried employees.	1919	426	166	260	39.0	61.0
	1914	2,410	2,002	408	83.1	16.9		1914	248	85	163	34.3	65.7
Proprietors and officials.....	1919	418	410	8	98.1	1.9	Wage earners (average number).....	1919	4,113	3,332	781	81.0	19.0
	1914	331	324	7	97.9	2.1		1914	1,831	1,593	238	87.0	13.0
Proprietors and firm members.....	1919	223	220	3	98.7	1.3	16 years of age and over.....	1919	4,043	3,285	758	81.3	18.7
	1914	234	229	5	97.9	2.1		1914	1,801	1,571	230	87.2	12.8
Salaried officers of corporations.....	1919	67	64	3	95.5	4.5	Under 16 years of age.....	1919	70	47	23	67.1	32.9
	1914	46	44	2	95.7	4.3		1914	30	22	8	73.3	26.7
Superintendents and managers.....	1919	128	126	2	98.4	1.6							
	1914	51	51	.....	100.0	.....							

## GENERAL TABLES.

Comparative summary, by states.—Table 20 shows for 1919 and 1914 and in totals for 1909, comparative statistics, by states, for number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products.

Detailed statement, by states.—Table 21 presents for 1919, by states, the more detailed statistics of the industry.

TABLE 20.—COMPARATIVE SUMMARY, BY STATES: 1919 AND 1914.

STATE.	Cen-sus year.	Num-ber of es-tab- lish-ments.	Wage earners (aver- age num- ber).	Pri-mary horse- power.	Wages.	Cost of ma-te-rials.	Value of prod- ucts.	STATE.	Cen-sus year.	Num-ber of es-tab- lish-ments.	Wage earners (aver- age num- ber).	Pri-mary horse- power.	Wages.	Cost of ma-te-rials.	Value of prod- ucts.
					Ex-pressed in thousands.		Ex-pressed in thousands.								
United States.....	1919	210	4,113	3,280	\$3,985	\$1,445	\$12,500	Minnesota.....	1919	3	3	5	\$4	\$1	\$10
	1914	211	1,831	1,865	1,161	1,023	3,625		1914	4	4	12	2	2	21
	1909	187	1,822	1,423	992	890	3,228	Missouri.....	1919	5	7	3	6	11	27
California.....	1919	16	89	96	95	72	222		1914	5	9	3	5	6	17
	1914	17	20	9	17	15	65	New Jersey.....	1919	8	291	317	264	422	987
Illinois.....	1919	23	669	628	695	799	2,171		1914	7	242	244	112	128	354
	1914	27	378	352	237	250	719	New York.....	1919	67	352	201	380	678	2,060
Indiana.....	1919	14	1,337	825	1,229	1,101	3,148		1914	61	227	192	136	183	636
	1914	12	395	503	264	155	742	Pennsylvania.....	1919	22	115	93	109	108	328
Massachusetts.....	1919	25	246	262	238	280	702		1914	18	73	97	46	24	133
	1914	25	282	302	205	163	410	Washington.....	1919	5	2	2	1	1	7
Michigan.....	1919	11	378	268	389	258	866		1914	8	2	3	1	1	13
	1914	14	139	76	95	47	329	All other states.....	1919	41	626	526	576	714	1,888
									1914	43	60	72	41	47	177

## MANUFACTURES.

TABLE 21.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15 OR NEAREST REPRESENTATIVE DAY.						EXPENSES.			
		Total.	Proprietors and firm members.	Salaries of officers, superintendents, and managers.	Clerks, etc.		Wage earners.				Total.	16 and over.		Under 16.					
					Male.	Female.	Average number.	Number, 15th day of—				Male.	Female.	Male.	Female.				
								Maximum month.	Minimum month.										
United States.....	240	4,957	223	195	166	260	4,113	De 4,377	Ja 3,853	4,361	3,513	774	50	24	\$7,876,182	\$642,109	\$390,063		
California.....	16	117	24	2	1	1	89	De 103	Ja 1 86	104	78	23	3	...	89,534	4,000	1,900		
Illinois.....	23	768	8	35	27	27	669	No 735	Ja 584	717	635	55	18	9	1,416,943	170,559	62,494		
Indiana.....	14	1,499	9	24	47	82	1,337	Se 1,350	Ja 1,318	1,346	1,177	107	1	1	2,333,730	80,064	83,836		
Iowa.....	4	7	7	7	...	...	...	...	...	...	...	...	...	...	8,250	...	...		
Massachusetts.....	25	304	22	17	6	13	246	De 272	Ja 201	272	222	36	14	...	446,430	53,120	17,472		
Michigan.....	11	474	7	31	9	49	378	Ja 407	Se 362	360	266	93	...	1	582,327	64,173	50,399		
Minnesota.....	3	6	3	3	...	...	3	(2)	3	3	3	3	...	...	3,240	...	...		
Missouri.....	5	13	3	3	...	...	7	(2)	7	7	7	7	...	...	33,298	4,200	...		
New Jersey.....	8	322	4	12	6	9	291	Jy 307	Ja 257	297	160	115	12	10	681,088	44,597	19,236		
New York.....	67	505	75	26	37	15	352	No 473	Ja 300	457	340	116	1	...	718,103	76,904	65,536		
Pennsylvania.....	22	159	23	7	5	9	115	Se 130	Ja 91	130	129	...	1	...	356,230	18,324	12,417		
Washington.....	5	5	5	5	...	...	...	...	...	...	...	...	...	...	8,170	...	...		
Wisconsin.....	7	208	6	21	6	11	164	De 192	Mh 142	172	145	26	1	...	371,911	45,051	15,290		
All other states <sup>3</sup> .....	30	572	27	17	22	44	462	...	...	496	351	143	...	2	831,868	81,057	52,833		
EXPENSES—continued.																			
STATE.	Salaries and wages—Continued.	EXPENSES—continued.								Value of products.	Value added by manufacture.	POWER.							
		For contract work.		Rent and taxes.		For materials.						Primary horsepower.							
		Wage earners.	For contract work.	Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Total.				Owned.							
United States.....	\$3,084,656	\$32,027	\$137,045	\$278,025	\$4,295,490	\$149,230	\$12,506,334	\$8,061,605	3,286	142	...	88	100	2,956	27	...	...		
California.....	94,677	8,302	5,238	372	60,773	2,515	222,236	149,948	96	...	...	...	...	...	96	...	...		
Illinois.....	694,716	5,732	22,234	37,112	773,058	26,256	2,170,915	1,371,601	628	35	...	...	...	...	593	...	...		
Indiana.....	1,228,834	313	2,035	105,250	1,057,050	43,319	3,118,410	2,047,141	825	...	...	20	...	...	805	23	...		
Iowa.....	238,470	4,483	18,750	4,220	272,090	6,090	702,714	512,734	202	42	...	7	90	...	3	...	...		
Massachusetts.....	389,258	200	4,126	26,221	245,348	13,121	866,101	607,632	268	...	...	...	...	...	268	...	...		
Michigan.....	3,914	...	905	76	926	115	9,981	8,040	5	...	...	...	...	...	5	...	...		
Minnesota.....	5,621	...	753	159	10,720	184	27,372	10,468	3	...	...	...	...	...	3	...	...		
New Jersey.....	263,851	1,429	4,422	36,767	408,077	12,850	987,216	565,389	317	45	...	13	5	...	254	...	...		
New York.....	379,677	8,292	48,518	43,485	664,043	13,161	2,050,067	1,381,500	261	...	...	19	...	...	242	...	...		
Pennsylvania.....	109,017	3,006	10,286	2,126	103,113	5,212	327,973	219,648	93	20	...	4	...	...	60	...	...		
Washington.....	...	...	1,715	52	831	20	0,040	5,780	2	...	...	...	...	...	2	...	...		
Wisconsin.....	152,911	...	1,151	12,090	107,336	10,555	542,793	424,002	77	...	...	...	...	...	77	...	...		
All other states <sup>3</sup> .....	423,710	90	15,731	10,014	578,359	14,830	1,336,612	743,423	446	...	...	25	5	...	410	2	...		

<sup>1</sup> Same number reported for one or more other months.<sup>2</sup> Same number reported throughout the year.<sup>3</sup> All other states embrace: Colorado, 2 establishments; Connecticut, 6; Florida, 1; Kentucky, 1; Maine, 2; Maryland, 1; North Carolina, 1; Ohio, 11; Oklahoma, 1; Oregon, 1; Texas, 1; Vermont, 1; West Virginia, 1.<sup>4</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).<sup>5</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-horse or transmitted power from neighboring power plants).

## PHONOGRAPHS, GRAPHOPHONES, AND TALKING MACHINES.

### GENERAL STATISTICS.

**General character of the industry.**—Establishments manufacturing mechanical devices for registering and producing speech, music, and other sounds are included in this industry. Those manufacturing records, blanks, needles, and parts and accessories, cabinets, and other supplies and materials used in the industry are also included.

**Comparative summary.**—Table 22 summarizes the statistics of establishments engaged in the manufacture of phonographs, graphophones, and talking machines for each census year from 1899 to 1919 and gives percentages of increase. The development of the industry was most marked in the period 1914 to 1919, when there was an increase of 22,460, or 197.6 per cent, in the number of persons engaged, while the value of products shows an increase of \$131,431,954, or 484.7 per cent.

**Principal states, ranked by value of products.**—Table 23 shows the more important statistics of the industry, by states, ranked by value of products reported for 1919. Connecticut ranked higher than some of those named in the table; but data for that state could not be shown without disclosing the operations of individual establishments.

Statistics are shown for seven states separately New Jersey, which ranks first, reported 35 per cent of the total, having advanced from seventh place since 1914, while New York dropped from first place in 1914 to third in 1919, and Illinois from second to fourth.

**Persons engaged in the industry.**—Table 24 shows for 1919 and 1914 the number of persons engaged in the industry, distributed by sex, and the average number of wage earners distributed also by age. The sex and age classification of the average number of wage earners in this table is an estimate obtained by the method described in the "Explanation of terms."

**Wage earners employed, by months.**—Table 25 gives for the industry the total average number of wage earners employed during 1919 and 1914, together with the number employed on the 15th day of each month or the nearest representative day for the United States as a whole, and in 1919 for states in which the average number of wage earners was 500 or more, together with the per cent that the minimum is of the maximum.

**Prevailing hours of labor.**—Table 26 shows a marked shortening of the working day for the industry since 1914. In that year 15.3 per cent were reported as employed fewer than 54 hours per week as against 72.6 per cent in 1919.

**Size of establishments, by average number of wage earners.**—Table 27 discloses the fact that 41 establishments, or 24.7 per cent of the total, employed fewer than 6 wage earners each, while only 83, or three-tenths of 1 per cent of the total number of wage earners, were employed therein, evidencing the predominance of small establishments based on the average number of wage earners. The classes "501 to 1,000" and "Over 1,000" wage earners comprising 10 establishments employed 20,347 wage earners, or 70.8 per cent of the total average number.

**Size of establishments, by value of products.**—The statistics in Table 28 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" employed 25,384, or 88 per cent of the total average number of wage earners, and reported products to the value of \$143,946,448, or 90.8 per cent of the total value of products.

**Character of ownership.**—Table 29 emphasizes the predominance of the corporate form of ownership. Corporations owned 79.5 per cent of the total number of establishments for the industry for 1919, employed 98.8 per cent of the total average number of wage earners, and reported 98.8 per cent of the value of products.

**Number and horsepower of types of prime movers.**—From 1914 to 1919, as shown by Table 30, there was an increase in the total horsepower for the industry of 28,480 horsepower, or 243.7 per cent, due wholly to a large increase in rented power.

**Fuel consumed.**—Table 31 shows the principal kinds of fuel used in the industry in 1919 and 1914 for the United States, and for the states in 1919 in which considerable quantities of fuel were consumed. New Jersey reported 68 per cent of the anthracite coal, 45.4 per cent of the bituminous coal, 54.1 per cent of the fuel oils, and 74.7 per cent of the gas.

## MANUFACTURES.

TABLE 22.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, AND 1899.

	1919	1914	1909	1904	1899	PER CENT OF INCREASE, <sup>1</sup>			
						1914-1919	1909-1914	1904-1909	1899-1901
Number of establishments.....	166	18	18	14	11				
Persons engaged.....	33,826	11,366	5,928	3,940	1,415	197.6	91.7	50.5	178.4
Proprietors and firm members.....	43	11	2	6	4				
Salaried employees.....	5,002	1,974	727	537	144	156.4	171.5	35.4	272.9
Wage earners (average number).....	28,721	9,381	5,190	3,397	1,267	206.2	80.4	53.0	168.1
Primary horsepower.....	40,108	11,088	6,371	2,522	1,082	243.7	83.4	152.6	133.1
Capital.....	\$105,241,359	\$33,770,511	\$14,363,361	\$8,740,618	\$3,348,282	211.6	135.1	64.3	161.0
Salaries and wages.....	42,650,710	\$8,770,664	3,785,706	2,350,392	787,035	386.3	131.7	61.1	198.4
Salaries.....	8,087,568	2,429,169	945,263	666,489	179,145	257.6	157.0	41.8	272.0
Wages.....	33,963,148	6,341,495	2,840,503	1,083,903	608,490	435.6	123.2	68.7	176.7
Paid for contract work.....	1,751,018		250	4,240	10,415			-83.9	-59.3
Rent and taxes.....	9,082,122	153,941	50,557	2,31,037	2,11,066	5,799.7	204.3		
Cost of materials.....	59,740,205	7,048,040	3,099,391	4,161,130	827,529	747.6	127.4	-25.5	402.8
Value of products.....	158,547,870	27,115,916	11,725,990	10,237,075	2,246,274	484.7	131.2	14.5	355.7
Value added by manufacture <sup>2</sup> .....	95,807,065	20,007,876	8,620,005	6,075,030	1,418,745	392.4	132.6	42.0	328.3

<sup>1</sup> A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.<sup>2</sup> Exclusive of internal revenue.<sup>3</sup> Value of products less cost of materials.

TABLE 23.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			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.	Amt. (expressed in thousands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amt. (expressed in thousands).	Per cent distribution.	Rank.
United States...	166	28,721	100.0	...	\$158,548	100.0	...	\$98,808	100.0	...	Indiana.....	13	2,178	7.6	3	\$7,977	5.0	5	\$3,968	4.0	5
New Jersey.....	15	12,206	42.7	1	55,419	35.0	1	34,759	35.2	1	Ohio.....	20	1,424	5.0	6	6,221	3.9	6	3,265	3.3	7
New York.....	32	1,876	6.5	5	16,552	10.4	3	7,499	7.6	3	Michigan.....	10	798	2.8	9	4,230	2.7	8	2,558	2.6	8
Illinois.....	36	1,910	6.7	4	12,842	8.1	4	5,745	5.8	4	Wisconsin.....	9	808	3.1	8	3,862	2.4	9	2,016	2.0	9
All other states.....	31	7,362	25.6	...							All other states.....	31	7,362	25.6	...	51,445	32.4	...	38,998	39.5	...

<sup>1</sup> Includes Connecticut, which ranked second according to value of products, and Iowa, which ranked seventh.

TABLE 24.—PERSONS ENGAGED IN THE INDUSTRY: 1919 AND 1914.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.		CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.	
					Male.	Female.						Male.	Female.
All classes.....	1910	33,823	23,540	7,286	78.5	21.5	Clerks and other subordinate salaried employees.....	1910	4,203	2,260	1,934	54.0	45.0
	1914	11,306	9,854	1,512	86.7	13.3		1914	1,791	1,236	555	69.0	31.0
Proprietors and officials.....	1910	902	881	21	97.7	2.3	Wage earners (average number).....	1910	28,721	23,390	5,331	81.4	18.6
	1914	194	188	6	96.9	3.1		1914	0,381	8,430	951	89.9	10.1
Proprietors and firm members...	1910	43	43	...	100.0	...	16 years of age and over.....	1910	28,004	23,341	5,323	81.4	18.6
	1914	11	6	5	54.5	45.5		1914	0,370	8,426	950	89.9	10.1
Salaried officers of corporations...	1910	234	220	5	97.9	2.1	Under 16 years of age.....	1910	57	49	8	86.0	14.0
	1914	43	43	16	100.0	...		1914	5	4	1	80.0	20.0
Superintendents and managers...	1910	625	609	16	97.4	2.6							
	1914	140	130	1	90.3	9.7							

## MUSICAL INSTRUMENTS.

23

TABLE 25.—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.....	28,721	23,947	25,642	26,754	27,581	28,269	29,601	24,021	24,369	31,248	33,334	34,656	35,180	68.2
Males.....	22,390	19,575	21,280	22,429	23,197	23,898	25,221	19,598	19,889	24,498	26,414	27,106	27,876	71.0
Females.....	5,331	4,422	4,302	4,325	4,384	4,371	4,380	4,423	4,480	6,750	6,920	7,550	7,605	56.9
1914.....	9,381	9,276	9,050	9,413	9,441	9,017	9,177	9,523	9,673	8,743	9,017	9,635	10,007	87.4
Illinois.....	1,919	1,245	1,391	1,476	1,574	1,647	1,724	1,974	2,159	2,205	2,401	2,583	2,649	47.0
Indiana.....	2,178	1,805	2,007	2,064	2,064	2,131	2,200	2,255	2,296	2,276	2,318	2,309	2,321	81.6
Michigan.....	798	713	649	637	655	719	766	708	831	878	910	986	1,036	81.5
New Jersey.....	12,266	9,880	10,707	11,428	11,738	12,175	12,516	12,250	12,101	12,722	13,424	14,121	14,024	70.0
New York.....	1,876	1,457	1,580	1,714	1,887	1,882	1,844	1,750	1,883	1,929	2,145	2,140	2,285	63.5
Ohio.....	1,424	908	982	1,102	1,212	1,278	1,391	1,546	1,585	1,505	1,753	1,851	1,885	48.2
Wisconsin.....	898	818	881	844	865	837	844	902	929	950	980	976	990	82.6

TABLE 26.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED STATES: 1919 AND 1914.

<sup>1</sup> Includes 48 and under for 1914

<sup>2</sup> Corresponding figures not available.

TABLE 27.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED STATES: 1919.

## MANUFACTURES.

TABLE 28.—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.....	166	18	28,721	9,381	\$158,547,870	\$27,115,916	\$98,807,665	\$20,067,876
Less than \$5,000.....	11	—	7	—	25,077	—	7,618	—
\$5,000 to \$20,000.....	18	3	44	15	203,507	30,828	122,001	—
\$20,000 to \$100,000.....	49	10	622	207	2,507,878	488,114	1,363,364	25,010
\$100,000 to \$500,000.....	51	(1)	2,704	(1)	11,861,900	(1)	5,943,827	275,321
\$500,000 to \$1,000,000.....	13	—	1,046	—	8,053,293	—	4,089,778	(1)
\$1,000,000 and over.....	24	5	23,338	9,159	135,803,155	26,596,974	87,280,987	19,767,545
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.....	6.6	—	(2)	—	(2)	—	(2)	—
\$5,000 to \$20,000.....	10.8	10.7	0.2	0.2	0.1	0.1	0.1	0.1
\$20,000 to \$100,000.....	29.5	55.0	2.2	2.2	1.0	1.8	1.4	1.4
\$100,000 to \$500,000.....	30.7	(1)	9.0	(1)	7.5	(1)	6.0	(1)
\$500,000 to \$1,000,000.....	7.8	—	6.8	—	5.1	—	4.1	—
\$1,000,000 and over.....	14.5	27.8	81.3	97.6	85.7	98.1	88.3	98.5

<sup>1</sup> Included in the group "\$1,000,000 and over."<sup>2</sup> Less than one-tenth of 1 per cent.

TABLE 29.—CHARACTER OF OWNERSHIP: 1919.

CHARACTER OF OWNERSHIP.	1919	Per cent of total.	CHARACTER OF OWNERSHIP.	1919	Per cent of total.	CHARACTER OF OWNERSHIP.	1919	Per cent of total.
Number of establishments.....	166	100.0	Average number of wage earners....	28,721	100.0	Value of products.....	\$158,547,870	100.0
Individual.....	28	16.9	Individual.....	277	1.0	Individual.....	1,173,444	0.7
Corporation.....	132	79.5	Corporation.....	28,363	98.8	Corporation.....	150,736,680	98.8
Other.....	6	3.6	Other.....	81	0.3	Other.....	637,746	0.4

TABLE 30.—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.				Amount.		Per cent distribution.					
		1919	1914	1919	1914	1919	1914			1919	1914	1919	1914	1919	1914		
Primary power, total.....	2,456	143	40,168	11,688	100.0	100.0	Primary power—Continued.										
Owned.....	64	22	22,514	9,975	56.0	85.3	Rented.....	2,302	121	17,654	1,713	44.0	14.7				
Steam <sup>1</sup> .....	54	20	21,973	9,865	54.7	84.4	Electric.....	2,302	121	17,649	1,713	43.0	14.7				
Engines.....	46	(1)	9,684	(1)	24.1	—	Other.....	5	—	—	—	—	—				
Turbines.....	8	(1)	12,289	(1)	30.6	—	Electric.....	3,641	574	32,193	7,400	100.0	100.0				
Internal-combustion engines.....	8	2	366	110	0.9	0.9	Rented.....	2,302	121	17,649	1,713	51.8	23.1				
Waters wheel.....	2	—	173	—	0.4	—	Generated by establishments reporting.....	1,249	453	14,544	5,687	45.2	76.9				

<sup>1</sup> Figures not available.<sup>2</sup> Less than one-tenth of 1 per cent.

TABLE 31.—FUEL CONSUMED, BY STATES: 1919.

STATE.	COAL.				STATE.	COAL.				STATE.	COAL.			
	Anthra-cite (tons, 2,240 pounds).	Bitumi-nous (tons, 2,000 pounds).	Coke (tons, 2,000 pounds).	Fuel oils (barrels).		Anthra-cite (tons, 2,240 pounds).	Bitumi-nous (tons, 2,000 pounds).	Coke (tons, 2,000 pounds).	Fuel oils (barrels).		Anthra-cite (tons, 2,240 pounds).	Bitumi-nous (tons, 2,000 pounds).	Coke (tons, 2,000 pounds).	Fuel oils (barrels).
United States:					Michigan.....					Michigan.....	5,457		12	339
1919.....	42,105	127,659	16	2,908	1,216	51,448				New Jersey.....	57,878	1,573	84	9,519
1914.....	24,133	37,730					1,598			New York.....	5,937	12	8	3,580
Illinois.....	157	7,813	16	23	Ohio.....					Wisconsin.....	6,792		1,060	7,207
Indiana.....		18,087									3,993		45	250

## SPECIAL STATISTICS.

Products, quantity and value.—Table 32 shows the number and value of phonographs, graphophones, and talking machines, and records and blanks for 1919, 1914, and 1909, and the value only for 1904, as the number was not reported for that census. In 1919 complete instruments formed 57.8 per cent of the total value of products; records and blanks, 28.2; and parts and supplies, 10 per cent.

Parts and supplies are frequently sold to establishments engaged in the manufacture of the complete machines; therefore the figures presented include some duplication.

Of the establishments reporting in 1919, 29 manufactured phonographs, graphophones, or talking machines and also made other products of the industry.

TABLE 32.—DETAILED STATISTICS OF QANTITY AND VALUE: 1919, 1914, 1909, AND 1904.

PRODUCT.	1919	1914	1909	1904	PRODUCT.	1919	1914	1909	1904
Total value <sup>1</sup> .....	\$158,547,870	\$27,115,916	\$11,725,996	\$10,237,075	Needles:				
Phonographs, graphophones, and talking machines: <sup>2</sup>					Steel needles, value.....	\$1,359,754			
For disk records—					Other needles, value.....	\$240,248	{(4)}	(4)	(4)
Number.....	2,137,506				Parts and accessories, not included in finished instruments reported:				
Value.....	\$88,836,368				Cabinets, value.....	\$3,653,418	(8)	(8)	(8)
For cylinder records—					Other parts and accessories, value.....	\$10,515,739	\$356,935	\$844,631	.....
Number.....	65,957	514,154	344,681	(3)	Custom work and repairing, value.....	\$268,803	\$2,116	(6)	(6)
Value.....	\$1,315,886	\$15,290,491	\$5,408,684	\$2,966,343	All other products, value.....	\$6,242,170	\$354,956	\$467,577	\$2,592,185
Dictating machines—									
Number.....	22,853								
Value.....	\$1,416,689								
Records and blanks:									
Number.....	106,996,510	27,221,290	27,183,959	(3)					
Value.....	\$44,689,705	\$11,111,418	\$5,007,104	\$4,678,547					
Disk records—									
Number.....	101,084,901	23,314,176	8,572,805	{(3)}					
Value.....	\$42,930,923	\$10,377,475	\$2,567,711						
Cylinder records and blanks—									
Number.....	5,011,540	3,907,114	18,611,154	{(3)}					
Value.....	\$1,758,872	\$733,943	\$2,439,387						

<sup>1</sup> In addition, in 1919, phonographs, and graphophones and parts, valued at \$7,173,143; in 1914, valued at \$66,531; and in 1909, valued at \$31,899 were made by establishments engaged primarily in the manufacture of products other than those covered by this industry designation.

<sup>2</sup> Not segregated, to avoid disclosure of individual operations.

<sup>3</sup> Figures not available.

<sup>4</sup> Included in "Parts and accessories."

<sup>5</sup> Included in "All other products."

## MANUFACTURES.

## GENERAL TABLE.

Comparative statistics can not be presented. Table 33 presents, for 1919, statistics in detail, for all states for which data can be shown without disclosing the operations of individual establishments.

TABLE 33.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establish- ments	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.			
		Total.	Propri- tors and firm mem- bers.	Salari- ed offi- cers, super- in- tend- ents, and man- agers.	Clerks, etc.		Wage earners.		Total.	16 and over.		Under 16.						
					Male.	Fe- male.	Aver- age num- ber.	Number 15th day of—		Male.	Fe- male.	Male.	Fe- male.					
								Maximum month.	Minimum month.									
United States...	166	33,826	43	850	2,269	1,934	28,721	De 35,180	Ja 23,097	35,184	27,512	7,003	58	11	\$105,241,359	\$3,374,652	\$5,312,916	
Illinois.....	36	2,225	12	122	91	81	1,919	De 2,049	Ja 1,245	2,067	2,475	171	16	5	6,570,855	404,373	249,703	
Indiana.....	13	2,368	3	57	36	94	2,178	De 2,321	Ja 1,895	2,330	1,952	358	20	....	4,766,616	305,533	87,677	
Michigan.....	10	929	1	46	42	42	798	De 1,026	Mh 637	1,010	1,007	106	0	....	2,599,218	110,525	140,431	
New Jersey.....	15	13,663	.....	201	508	628	12,266	No 14,024	Ja 9,880	14,041	11,235	2,800	6	....	44,615,918	928,044	1,485,136	
New York.....	32	2,408	13	102	208	140	1,876	De 2,295	Ja 1,457	2,270	1,878	387	5	....	8,307,292	521,757	360,007	
Ohio.....	20	1,656	5	46	55	120	1,424	De 1,885	Ja 908	1,880	1,640	243	2	4	3,402,734	129,472	194,887	
Wisconsin.....	9	1,019	1	39	41	40	898	De 990	Ja 818	900	900	00	00	....	3,506,517	138,598	127,473	
All other states <sup>1</sup> ...	31	9,558	8	186	1,228	774	7,362	.....	.....	9,978	6,525	3,448	3	2	31,322,209	836,350	2,667,603	
EXPENSES—continued.																		
STATE.	Salaries and wages Continued.	Wage earners.	For contract work.	Rent and taxes.		For materials.		Value of products.	Value added by manufacture.	POWER.						Electric horse- power generated in estab- lishments report- ing.		
				Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Primary horsepower.		Owned.					
United States...	\$33,063,148	\$1,751,018	\$304,179	\$8,777,043	\$58,223,578	\$1,516,027	\$158,547,870	\$98,807,065	40,168	9,084	12,289	306	175	17,654	14,544			
Illinois.....	2,210,993	63,401	63,386	360,952	7,007,723	88,535	12,841,682	5,745,424	1,873	250	.....	.....	.....	1,623	300			
Indiana.....	1,757,076	2,076	3,391	217,951	3,026,077	83,458	7,977,405	3,907,900	2,807	1,550	150	.....	.....	1,107	1,628			
Michigan.....	608,203	712,169	2,609	114,676	1,632,731	40,112	4,230,492	2,557,049	611	300	.....	.....	.....	311	333			
New Jersey.....	15,521,113	33,268	30,315	3,374,291	19,931,717	728,900	55,410,321	34,758,704	20,257	4,407	12,004	25	.....	3,701	11,737			
New York.....	2,091,094	854,044	111,305	186,605	8,934,855	117,942	16,551,523	7,408,720	2,412	935	75	62	100	1,240	353			
Ohio.....	1,780,020	23,574	19,813	78,596	2,910,371	45,292	6,220,534	3,284,001	1,498	695	.....	25	.....	778	50			
Wisconsin.....	939,276	.....	16,076	78,844	1,815,877	29,588	3,801,727	2,016,202	1,049	650	.....	75	.....	321	75			
All other states <sup>1</sup> ...	8,988,104	62,480	46,224	4,300,028	12,004,227	382,830	51,445,098	38,998,039	9,604	837	.....	254	.....	8,573	403			

<sup>1</sup> All other states embrace: California, 2 establishments; Connecticut, 3; Iowa, 2; Massachusetts, 2; Minnesota, 4; Missouri, 2; Montana, 1; North Carolina, 2; Oregon, 2; Pennsylvania, 8; Rhode Island, 1; Tennessee, 1; Virginia, 1.

<sup>2</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

<sup>3</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

