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BRASS, BRONZE, AND COPPER PRODUCTS.

GENERAL STATISTICS.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE.[1]					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments	1,092	992	1,021	813	695	610	449	10.1	−2.8	25.6	17.0	13.9	35.9
Persons engaged	86,106	45,657	45,441	36,952	(2)	(2)	(2)	88.6	0.5	23.0	.....	.....	.....
Proprietors and firm members	751	791	828	784	(2)	(2)	(2)	−5.1	−4.5	5.6	.....	.....	.....
Salaried employees	10,304	4,560	3,995	3,000	1,813	(2)	(2)	126.0	14.1	33.2	65.5	.....	.....
Wage earners (average number)	75,051	40,306	40,618	33,168	27,166	21,849	12,614	86.2	−0.8	22.5	22.1	24.3	73.2
Primary horsepower	265,688	122,700	106,120	69,494	47,257	27,571	(2)	116.5	15.6	52.7	47.1	71.4	.....
Capital	$325,299,738	$116,092,882	$109,319,224	$77,438,177	$51,120,156	$39,489,689	$15,578,919	180.2	6.2	41.2	51.5	29.5	153.5
Salaries and wages	117,748,794	32,158,279	29,217,281	21,443,783	15,896,109	11,292,540	5,729,365	266.2	10.1	36.3	34.9	40.8	97.1
Salaries	23,616,676	7,073,998	5,539,898	3,777,697	2,206,668	(2)	(2)	233.9	27.7	46.6	64.5	.....	.....
Wages	94,132,118	25,084,281	23,677,383	17,666,086	13,509,441	(2)	(2)	275.3	5.9	34.0	29.9	.....	.....
Paid for contract work	419,868	111,021	123,001	73,820	(2)	(2)	(2)	278.2	−0.7	66.6	.....	.....	.....
Rent and taxes	14,647,115	1,381,624	956,864	[3] 729,768	(2)	(2)	(2)	960.1	44.4	.....	.....	.....	.....
Cost of materials	304,823,580	115,486,768	99,228,412	65,653,330	61,189,324	27,293,130	16,864,197	163.9	16.4	51.1	7.3	124.2	61.8
Value of products	482,312,790	162,199,019	149,989,058	102,407,104	88,653,987	50,056,101	27,332,483	197.4	8.1	46.5	15.5	77.1	83.1
Value added by manufacture [4]	177,489,210	46,712,251	50,760,646	36,753,774	27,464,663	22,762,971	10,468,286	280.0	−8.0	38.1	33.8	20.7	117.4

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

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

	Total for the industry, 1919.	ESTABLISHMENTS MANUFACTURING PRINCIPALLY—				Total for the industry, 1919.	ESTABLISHMENTS MANUFACTURING PRINCIPALLY—		
		Brass and bronze products.	Copper products.	Other metal products.[1]			Brass and bronze products.	Copper products.	Other metal products.[1]
Number of establishments	1,092	1,007	47	38	Salaries and wages	$117,748,794	$100,279,325	$14,298,090	$3,171,379
Persons engaged	86,106	73,533	10,219	2,354	Salaries	23,616,676	20,711,540	2,213,166	691,970
Proprietors and firm members	751	700	29	22	Wages	94,132,118	79,567,785	12,084,924	2,479,409
Salaried employees	10,304	9,038	966	300	Paid for contract work	419,868	415,772	2,962	1,134
Wage earners (average number)	75,051	63,795	9,224	2,032	Rent and taxes	14,647,115	12,567,952	1,696,893	382,270
Primary horsepower	265,688	201,494	53,157	11,037	Cost of materials	304,823,580	234,945,137	60,192,325	9,686,118
Capital	$325,299,738	$270,637,860	$43,659,485	$11,002,393	Value of products	[2] 482,312,790	389,550,094	78,338,948	14,423,748
					Value added by manufacture [3]	177,489,210	154,604,957	18,146,623	4,737,630

[1] Includes chiefly establishments manufacturing nickel products and white metal and aluminum castings.
[2] In addition, brass, bronze, and copper products, valued at $82,978,676, were manufactured by establishments engaged primarily in other industries.
[3] Value of products less cost of materials.

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

STATE.	Number of establishments	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	1,092	75,051	100.0	....	$482,313	100.0	....	$177,489	100.0	...
Connecticut	75	29,580	39.4	1	169,550	35.2	1	59,312	33.4	1
New York	213	10,746	14.3	2	66,562	13.8	2	26,597	15.0	2
Michigan	80	10,306	13.7	3	62,708	13.0	3	23,859	13.4	3
Pennsylvania	125	4,053	5.4	5	33,496	6.9	4	12,069	6.8	4
Ohio	92	4,264	5.7	4	27,802	5.8	5	11,624	6.6	5
Illinois	90	3,174	4.2	6	25,107	5.2	6	9,417	5.3	6
Wisconsin	36	2,778	3.7	8	22,510	4.7	7	7,179	4.0	8
Massachusetts	72	2,832	3.8	7	16,943	3.5	8	7,576	4.3	7
New Jersey	67	2,185	2.9	9	14,412	3.0	9	5,943	3.3	9
Missouri	21	608	0.8	12	8,209	1.7	10	2,350	1.3	11
Indiana	31	1,271	1.7	10	5,638	1.2	12	2,404	1.4	10
Maryland	20	926	1.2	11	5,058	1.0	13	2,062	1.2	12
California	45	492	0.7	13	3,316	0.7	14	1,498	0.8	13
Rhode Island	18	426	0.6	14	$2,976	0.6	15	$1,123	0.6	14
Washington	16	163	0.2	16	1,608	0.3	16	603	0.3	16
Texas	7	122	0.2	18	1,467	0.3	18	450	0.3	18
Minnesota	10	213	0.3	15	1,018	0.2	19	467	0.3	17
Oregon	4	58	0.1	23	525	0.1	22	250	0.1	21
New Hampshire	6	106	0.1	20	478	0.1	23	289	0.2	20
Kentucky	9	104	0.1	21	460	0.1	24	228	0.1	23
Colorado	9	52	0.1	24	369	0.1	25	138	0.1	26
West Virginia	3	50	0.1	25	367	0.1	26	176	0.1	24
Louisiana	6	43	0.1	26	235	(1)	28	109	0.1	28
Iowa	5	25	(1)	29	225	(1)	29	72	(1)	29
Delaware	4	23	(1)	30	150	(1)	30	60	(1)	30
Maine	5	19	(1)	31	84	(1)	32	35	(1)	32
Nebraska	3	2	(1)	35	27	(1)	36	12	(1)	36
All other states	20	430	0.6	....	11,004	2.3	....	1,587	0.9	...

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

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

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	Female.
All classes	1919	86,106	76,741	9,365	89.1	10.9
	1914	45,657	42,280	3,377	92.6	7.4
	1909	45,441	42,153	3,288	92.8	7.2
Proprietors and officials	1919	4,094	3,998	96	97.7	2.3
	1914	2,146	2,096	50	97.7	2.3
	1909	2,160	2,120	40	98.1	1.9
Proprietors and firm members	1919	751	727	24	96.8	3.2
	1914	791	766	25	96.8	3.2
	1909	828	799	29	96.5	3.5
Salaried officers of corporations	1919	1,099	1,059	40	96.4	3.6
	1914	642	622	20	96.9	3.1
	1909	584	575	9	98.5	1.5
Superintendents and managers	1919	2,244	2,212	32	98.6	1.4
	1914	713	708	5	99.3	0.7
	1909	748	746	2	99.7	0.3
Clerks and other subordinate salaried employees.	1919	6,961	4,470	2,491	64.2	35.8
	1914	3,205	2,443	762	76.2	23.8
	1909	2,663	1,972	691	74.1	25.9
Wage earners (average number)	1919	75,051	68,273	6,778	91.0	9.0
	1914	40,300	37,741	2,565	93.6	6.4
	1909	40,618	38,061	2,557	93.7	6.3
16 years of age and over	1919	74,817	68,100	6,717	91.0	9.0
	1914	40,043	37,532	2,511	93.7	6.3
	1909	40,136	37,681	2,455	93.9	6.1
Under 16 years of age	1919	234	173	61	73.9	26.1
	1914	263	209	54	79.5	20.5
	1909	482	380	102	78.8	21.2

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

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

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Per cent minimum is of maximum.
United States:														
1919	75,051	81,783	75,650	70,232	68,457	68,345	*67,301*	69,524	75,628	78,048	80,999	**82,382**	82,263	81.7
Males	68,273	72,882	67,676	63,458	62,348	62,409	*61,358*	63,386	69,279	71,621	74,263	**75,433**	75,163	81.3
Females	6,778	8,901	7,974	6,774	6,109	*5,936*	5,943	6,138	6,349	6,427	6,736	6,949	7,100	66.7
1914	40,306	39,531	40,402	41,714	**41,971**	41,706	40,873	40,407	39,685	39,920	39,315	*38,789*	39,359	92.4
1909	40,618	*37,948*	38,496	38,657	38,348	38,565	38,957	39,808	40,930	42,081	43,541	44,431	**45,615**	83.2
Connecticut	29,580	**36,135**	31,857	27,878	*25,988*	26,062	26,143	27,910	29,240	29,996	30,909	31,147	31,695	71.9
Illinois	3,174	3,280	3,065	2,868	2,916	2,998	*2,765*	3,075	3,415	3,391	3,369	3,381	**3,565**	77.6
Indiana	1,271	1,175	*1,117*	1,166	1,198	*1,117*	1,172	1,225	1,306	1,429	1,438	**1,502**	1,407	74.4
Maryland	926	948	829	*828*	907	933	925	942	961	952	962	932	**993**	83.4
Massachusetts	2,832	2,929	2,872	2,790	2,681	*2,605*	2,688	2,756	2,825	2,872	2,936	2,998	**3,032**	85.9
Michigan	10,306	9,759	9,357	9,121	9,170	9,270	*8,922*	9,696	10,852	11,437	12,402	**12,454**	11,232	71.6
Missouri	608	609	595	565	576	*555*	584	600	615	626	628	647	**696**	79.7
New Jersey	2,185	**2,575**	2,451	2,106	2,018	2,020	*1,968*	2,091	2,226	2,007	2,056	2,300	2,402	76.4
New York	10,746	10,887	10,568	10,339	10,329	10,258	9,615	*8,245*	10,527	11,344	11,969	12,352	**12,519**	65.9
Ohio	4,264	3,716	*3,681*	3,744	3,843	3,840	3,968	4,338	4,594	4,632	4,843	**5,036**	4,933	73.1
Pennsylvania	4,053	4,420	4,220	3,982	3,853	3,667	*3,645*	3,812	3,983	4,102	4,169	4,301	**4,482**	81.3
Wisconsin	2,778	2,898	2,692	*2,502*	2,606	2,704	2,673	2,609	2,744	2,953	**3,016**	3,011	2,928	83.0

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

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States	1919	75,051	2,699	3,572	11,779	23,344	3,071	29,089	1,466	31
	1914	40,306	(2)	(2)	1,851	6,680	7,545	17,401	6,669	160
	1909	40,618	(2)	(2)	458	1,256	6,397	22,802	9,542	163
Connecticut	1919	29,580	52	1,722	300	8,300	255	18,942	9	.....
	1914	16,781	(2)	(2)	64	4,143	358	9,328	2,888	.....
Illinois	1919	3,174	228	32	1,301	849	373	302	89	.....
	1914	1,502	(2)	(2)	80	169	819	323	111	.....
Indiana	1919	1,271	108	648	18	154	16	311	16	.....
	1914	562	(2)	(2)	13	219	26	237	67	.....
Maryland	1919	926	8	10	9	830	10	28	.....	31
	1914	392	(2)	(2)	20	39	8	235	32	58
Massachusetts	1919	2,832	100	50	909	1,112	42	610	9	.....
	1914	1,620	(2)	(2)	3	111	453	470	583	.....
Michigan	1919	10,306	497	524	26	5,834	124	2,924	377	.....
	1914	4,731	(2)	(2)	14	143	1,360	1,977	1,237	.....
Missouri	1919	608	4	.....	129	75	400	.....	.....	.....
	1914	383	(2)	(2)	6	95	282	.....	.....	.....
New Jersey	1919	2,185	324	8	579	432	370	445	27	.....
	1914	1,236	(2)	(2)	22	113	276	800	25	.....
New York	1919	10,746	155	215	5,979	2,467	460	1,407	63	.....
	1914	6,627	(2)	(2)	743	865	2,180	1,365	1,474	.....
Ohio	1919	4,264	578	104	741	2,159	206	444	32	.....
	1914	2,277	(2)	(2)	484	422	543	651	75	102
Pennsylvania	1919	4,053	185	120	1,057	902	481	780	528	.....
	1914	1,940	(2)	(2)	52	159	721	944	64	.....
Wisconsin	1919	2,778	2	.....	7	107	66	2,419	177	.....
	1914	1,122	(2)	(2)	143	44	51	881	3	.....

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

[2] Corresponding figures not available.

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

STATE.	TOTAL.		ESTABLISHMENTS 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.	
	Establishments.	Wage earners (average number).	Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States 1919	1,092	75,051	60	358	979	320	3,689	168	5,291	72	5,227	61	9,301	23	7,734	17	11,408	13	31,362
1914	992	40,306	82	397	1,030	278	3,159	114	3,664	55	3,891	39	6,693	14	4,633	4	2,870	9	14,366
Connecticut	75	29,580	3	14	29	18	199	10	268	6	436	8	1,236	3	1,123	6	4,368	7	21,921
Illinois	90	3,174	4	13	38	37	461	21	670	5	371	9	1,322	1	312	.....	.....	.....	.....
Indiana	31	1,271	1	10	26	11	120	3	68	4	262	1	147	.....	.....	1	648	.....	.....
Maryland	20	926	1	7	25	9	109	1	31	.....	.....	1	158	.....	.....	1	603	.....	.....
Massachusetts	72	2,832	2	29	83	23	264	11	342	2	170	1	151	2	600	2	1,222	.....	.....
Michigan	80	10,306	2	14	39	23	281	12	397	9	649	5	862	9	3,114	5	3,432	1	1,532
Missouri	21	608	2	9	25	3	30	2	62	4	298	1	193	.....	.....	.....	.....	.....	.....
New Jersey	67	2,185	3	24	61	18	189	10	298	5	406	7	1,231	.....	.....	.....	.....	.....	.....
New York	213	10,746	16	78	205	55	627	33	999	14	1,033	12	1,676	1	342	.....	.....	4	5,864
Ohio	92	4,264	4	24	68	30	344	17	526	6	387	6	925	4	1,471	1	543	.....	.....
Pennsylvania	125	4,053	5	47	133	36	389	19	732	7	514	8	1,178	2	515	1	592	.....	.....
Wisconsin	36	2,778	.....	12	29	13	155	6	182	3	222	1	145	.....	.....	.....	.....	1	2,045

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

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			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	1,092	992	1,021	75,051	40,306	40,618	$482,312,790	$162,199,019	$149,989,058	$177,489,210	$46,712,251	$50,760,646
Less than $5,000	97	214	196	53	200	238	276,470	562,539	537,452	170,937	326,043	291,426
$5,000 to $20,000	203	296	326	509	1,263	1,415	2,333,629	3,338,002	3,626,877	1,231,974	1,753,573	1,879,185
$20,000 to $100,000	396	309	327	3,787	4,839	5,450	19,504,055	14,058,956	14,569,088	9,435,516	6,539,196	7,133,540
$100,000 to $500,000	264	124	148	10,905	13,198	13,957	58,964,937	30,615,443	45,308,498	26,950,566	16,900,798	18,902,928
$500,000 to $1,000,000	51	21		5,653			34,905,365	14,162,344		13,868,477		
$1,000,000 and over	81	28	24	54,144	20,806	19,558	366,328,334	99,461,735	85,047,143	125,831,740	21,192,641	22,553,567
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	8.9	21.6	19.2	0.1	0.5	0.6	0.1	0.3	0.4	0.1	0.7	0.6
$5,000 to $20,000	18.6	29.8	31.9	0.7	3.1	3.5	0.5	2.1	2.4	0.7	3.8	3.7
$20,000 to $100,000	36.3	31.1	32.0	5.0	12.0	13.4	4.0	8.7	9.7	5.3	14.0	14.1
$100,000 to $500,000	24.2	12.5	14.5	14.5	32.7	34.4	12.2	18.9	30.2	15.2	36.2	37.2
$500,000 to $1,000,000	4.7	2.1		7.5			7.2	8.7		7.8		
$1,000,000 and over	7.4	2.8	2.4	72.1	51.6	48.2	76.0	61.3	57.3	70.9	45.4	44.4

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

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

[1] Includes the group "All others."

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

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

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

[2] Figures not available.

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

STATE.	Census year.	COAL. Anthracite (tons, 2,240 pounds).	COAL. Bituminous (tons, 2,000 pounds).	Coke (tons, 2,000 pounds)	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
United States	1919	200,719	655,947	131,113	893,228	21,363	812,573
	1914	127,828	378,306	75,812	310,910	(1)	464,259
Connecticut	1919	115,871	303,022	15,299	390,023	3,658	25,850
	1914	79,797	187,671	3,249	125,653	(1)	28,761
Illinois	1919	3,129	15,339	4,105	33,443	5,475	144,789
	1914	1,812	8,760	4,623	20,410	(1)	5,937
Indiana	1919	27	2,954	3,272	3,469	3	30,632
	1914	6	839	1,656	304	(1)	14,518
Maryland [2]	1919	3,358	3,673	1,256	15,528	70	4,752
Massachusetts	1919	12,211	20,904	2,710	30,216	29	6,470
	1914	8,338	14,008	493	14,615	(1)	1,398
Michigan	1919	2,629	75,527	33,560	127,470	1,596	195,154
	1914	498	48,577	24,103	33,615	(1)	14,752
Missouri [2]	1919	.....	597	1,923	24,336	60	4,027
New Jersey	1919	7,584	17,596	5,450	31,235	125	7,697
	1914	5,080	17,891	3,296	16,900	(1)	10,869
New York	1919	33,774	75,279	10,144	87,569	2,328	60,300
	1914	21,572	32,695	8,244	24,292	(1)	52,444
Ohio	1919	2,154	52,911	16,634	42,113	3,808	102,692
	1914	47	14,612	6,568	6,018	(1)	207,507
Pennsylvania	1919	4,530	25,233	28,343	42,826	537	161,700
	1914	3,896	18,936	12,545	6,234	(1)	108,991
Wisconsin	1919	13,727	59,380	3,633	2,066	156	22,536
	1914	5,194	26,418	1,209	18,911	(1)	3,610

[1] Included in figures for fuel oils.

[2] Figures for 1914 not available.

SPECIAL STATISTICS.

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

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

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

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

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

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

[1] In addition, brass, bronze, and copper products to the value of $82,978,676 in 1919 and $43,755,136 in 1914 were manufactured by establishments engaged primarily in the manufacture of other products.
[2] Not reported separately.
[3] Included with "Brass and bronze" to avoid disclosure of individual operations.

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

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

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

CLASS AND STATE.	1919 Weight in pounds. Brass and bronze.	Copper.	Other metals or alloys.[1]	Value.	1914 Value.
Ingots and bars	121,790,427	17,605,166	20,629,787	$30,490,628	$4,791,708
Connecticut	82,286,972	80,919	4,061,168	12,652,643	120,809
Pennsylvania	5,021,042	8,628,859	14,941,503	6,628,361	2,296,828
Illinois	8,289,857	454,000	54,000	2,158,545	812,563
Ohio	6,486,488	48,000	10,000	1,360,119	209,220
New Jersey	2,971,248	30,450	1,160,406	689,119	20,192
Michigan	803,339	23,465	39,674	409,590	447,961
Massachusetts	646,762	83,426	4,000	215,625	32,414
Wisconsin	548,800	7,012	42,000	204,026	59,790
All other states [2]	14,735,319	8,249,035	317,036	6,172,600	791,931
Plates and sheets	283,109,614	85,319,088	45,336,816	102,898,118	41,655,037
Connecticut	173,440,123	33,892,481	44,382,979	59,067,535	25,534,754
Michigan	48,913,066	11,024,913	.....	14,915,514	(3)
New York	17,084,000	8,823,111	.....	6,835,102	4,821,676
Illinois	6,846,382	2,350,000	.....	3,122,685	(3)
Ohio	4,915,643	2,928,306	.....	2,538,401	(3)
Massachusetts	1,919,986	6,730,824	.....	2,499,704	1,506,144
New Jersey	2,120,494	207,875	358,901	1,202,665	557,086
All other states [2]	27,869,920	19,301,578	594,936	12,716,512	9,236,377
Rods	118,412,135	58,687,553	207,189	$40,703,984	$12,189,421
Connecticut	69,955,697	14,640,209	193,357	19,434,431	9,158,182
Michigan	13,550,045	4,342,016	43	4,320,418	(3)
New Jersey	3,006,821	845,154	.....	888,247	(3)
Pennsylvania	1,173,036	.....	.....	358,549	(3)
All other states [2]	30,726,536	38,860,174	13,789	15,702,339	3,031,239
Tubing, seamless	66,076,897	39,820,839	467,672	37,530,485	10,268,980
Connecticut	28,359,308	14,332,588	167,672	15,653,209	5,409,975
New York	11,713,990	7,102,540	.....	6,550,536	1,285,973
Michigan	2,023,317	3,564,464	.....	2,014,230	(3)
New Jersey	3,636,500	1,581,508	.....	1,079,317	(3)
All other states [2]	20,343,782	13,239,739	300,000	12,233,193	3,573,032
Tubing, brazed	11,859,631	269,202	.....	4,596,422	3,645,810
Connecticut	5,694,941	.....	.....	2,178,587	1,769,180
All other states	6,164,690	269,202	.....	2,417,835	1,876,630
Wire, plain and insulated	43,648,993	113,228,038	2,429,350	37,626,374	14,333,142
Connecticut	37,148,909	77,001,766	2,165,091	28,237,038	12,383,167
New York	4,144,309	14,514,534	.....	4,666,065	545,200
All other states	2,355,775	21,711,738	264,259	4,723,271	1,404,775

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

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

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

PRODUCT.	WEIGHT IN POUNDS.			Value.	PRODUCT.	WEIGHT IN POUNDS.			Value.
	Brass and bronze.	Copper.	Other metal.			Brass and bronze.	Copper.	Other metal.	
Total				$82,978,676	Wire, plain	4,984,900	195,263,700	9,994,700	$40,215,473
					Castings and machinery fittings	10,911,800	90,787	1,256,883	6,237,036
Ingots and bars	58,748,830	15,849,099	1,987,746	13,759,437					
Plates and sheets	2,049,360			511,345		*Value.*	*Value.*	*Value.*	
Rods	2,430,395	9,796,739		2,893,604	Hardware and trimmings	$9,709,535	$2,109,676		11,819,211
Tubing, seamless	515,835	3,613,064	24,818	1,239,538	Other manufactured articles	1,917,694	4,219,618	$165,720	6,303,032

GENERAL TABLES.

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

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

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

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	1,092	75,051	265,688	$94,132	$304,824	$482,313
	1914	992	40,306	122,700	25,084	115,487	162,199
	1909	1,021	40,618	106,120	23,677	99,228	149,989
California	1919	45	492	840	754	1,818	3,316
	1914	36	247	400	230	487	951
	1909	29	195	261	181	295	679
Colorado	1919	9	52	109	68	231	369
	1914	7	36	75	26	54	101
	1909	5	42	52	36	75	145
Connecticut	1919	75	29,580	121,319	36,386	110,238	169,550
	1914	67	16,781	57,033	9,846	53,886	69,353
	1909	80	16,817	50,034	9,667	47,864	66,933
Illinois	1919	90	3,174	5,847	3,856	15,690	25,107
	1914	75	1,502	2,698	1,109	5,240	7,570
	1909	79	1,688	1,859	1,136	4,148	6,842
Indiana	1919	31	1,271	1,514	1,485	3,234	5,638
	1914	21	562	1,166	421	802	1,561
	1909	21	468	503	292	774	1,379
Kentucky	1919	9	104	183	115	232	460
	1914	9	59	166	39	73	137
	1909	7	25	99	12	32	61
Maine	1919	5	19	58	17	50	84
	1914	5	31	70	26	42	84
	1909	3	12	10	7	6	14
Maryland	1919	20	926	7,362	1,039	2,996	5,058
	1914	15	392	2,078	243	753	1,173
	1909	17	219	243	98	432	748
Massachusetts	1919	72	2,832	15,511	3,506	9,367	16,943
	1914	73	1,620	7,415	1,063	3,715	5,959
	1909	85	1,791	6,407	1,115	3,663	6,042
Michigan	1919	80	10,306	27,912	14,579	38,849	62,708
	1914	64	4,731	14,251	3,030	11,473	16,869
	1909	60	4,771	11,622	2,450	8,993	13,890
Minnesota	1919	10	213	393	241	550	1,018
	1914	9	99	154	68	242	359
	1909	7	33	37	22	91	139
Missouri	1919	21	608	887	670	5,859	8,208
	1914	18	383	523	264	2,438	3,047
	1909	18	297	448	196	1,654	2,221
New Hampshire	1919	6	106	134	$104	$189	$478
	1914	5	53	146	30	50	99
	1909	5	56	123	29	45	102
New Jersey	1919	67	2,185	11,656	2,595	8,469	14,412
	1914	61	1,236	5,798	760	3,175	4,686
	1909	66	1,265	4,431	719	3,355	5,131
New York	1919	213	10,746	32,352	12,245	39,965	66,562
	1914	228	6,627	13,667	4,051	15,215	23,965
	1909	247	6,651	13,397	3,951	13,139	22,184
Ohio	1919	92	4,264	10,915	5,894	16,178	27,802
	1914	84	2,277	4,393	1,557	4,190	7,843
	1909	82	2,232	4,214	1,372	3,533	6,572
Oregon	1919	4	58	250	96	275	525
	1914	6	35	138	34	59	140
	1909	4	42	66	49	41	122
Pennsylvania	1919	125	4,053	10,577	5,161	21,427	33,496
	1914	107	1,940	4,578	1,260	7,123	9,780
	1909	104	2,080	4,996	1,234	5,605	8,455
Rhode Island	1919	18	426	1,250	466	1,853	2,976
	1914	19	123	149	76	210	577
	1909	18	225	350	118	549	828
Texas	1919	7	122	249	139	1,016	1,467
	1914	7	91	189	63	351	495
	1909	8	112	146	61	309	518
Washington	1919	16	163	311	285	1,006	1,608
	1914	11	45	118	42	84	180
	1909	7	40	60	33	60	136
West Virginia	1919	3	50	110	65	190	367
	1914	4	49	125	25	103	193
	1909	3	41	140	21	101	193
Wisconsin	1919	36	2,778	13,096	3,748	15,331	22,510
	1914	30	1,122	7,053	674	4,395	5,409
	1909	33	1,289	6,102	751	3,514	5,387
All other states	1919	38	523	2,853	618	9,811	11,651
	1914	31	265	317	147	1,327	1,668
	1909	33	227	520	127	950	1,268

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

INDUSTRY AND STATE.	Number of establishments.	Persons engaged in the industry. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	Wage earners Dec. 15 or nearest representative day. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.	Expenses. Salaries and wages. Officials.	Expenses. Salaries and wages. Clerks, etc.
															Dollars.	Dollars.	Dollars.
United States	1,092	86,106	751	3,343	4,470	2,491	75,051	No 82,882	Je 67,301	81,720	74,669	6,799	190	62	325,299,738	13,560,148	10,056,528
Brass and bronze	1,007	73,533	700	2,989	3,901	2,148	63,795	Ja 70,115	Je 57,260	68,951	62,522	6,205	168	56	270,637,860	12,008,636	8,702,904
Copper	47	10,219	29	260	435	271	9,224	De 10,911	Jy 7,321	10,689	10,229	457	3	.....	43,659,485	1,170,698	1,042,468
All other	38	2,354	22	94	134	72	2,032	Mh 2,096	Je 1,924	2080	1,918	137	19	6	11,002,393	380,814	311,156
California	45	614	48	41	24	9	492	Ja 537	No 450	496	492	2	2	.....	1,451,941	142,537	42,352
Colorado	9	67	7	5	1	2	52	No 66	Jy 45	64	59	1	4	.....	124,184	11,985	4,120
Connecticut	75	33,352	37	944	1,825	966	29,580	Ja 36,135	Ap 25,988	30,891	27,340	3,476	61	14	127,028,693	3,703,098	4,206,239
Delaware	4	32	3	4	1	1	23	Ja[1] 37	Se[1] 15	18	18	.....	.....	.....	116,105	14,300	5,779
Illinois	90	3,883	45	245	275	144	3,174	De 3,565	Je 2,765	3,558	3,303	237	17	1	14,381,095	1,007,981	513,688
Indiana	31	1,396	17	56	27	25	1,271	No 1,502	My[1] 1,117	1,425	1,351	70	4	.....	2,260,491	216,980	38,801
Iowa	5	39	6	5	2	1	25	Jy[1] 30	Ja 8	29	25	4	.....	.....	142,626	19,312	2,608
Kentucky	9	130	10	9	3	4	104	Au[1] 109	Mh 98	106	105	1	.....	.....	250,289	31,090	5,563
Louisiana	6	59	5	6	5	.....	43	Oc 47	Fe 34	46	46	.....	.....	.....	84,013	11,371	4,359
Maine	5	27	6	1	.....	1	19	De 24	Ja[1] 15	25	25	.....	.....	.....	88,933	1,820	810
Maryland	20	1,051	11	41	50	23	926	De 993	Mh 828	993	939	51	3	.....	4,539,936	147,034	106,342
Massachusetts	72	3,217	59	157	96	73	2,832	De 3,032	My 2,605	3,040	2,960	59	17	4	12,253,619	606,719	237,158
Michigan	80	11,630	36	392	582	314	10,306	No 12,454	Je 8,922	11,307	10,402	900	5	.....	40,284,256	1,814,957	1,405,332
Minnesota	10	252	5	20	6	8	213	De 249	Je 192	256	243	13	.....	.....	800,171	56,460	19,238
Missouri	21	722	21	40	46	7	608	De 696	My 555	688	668	13	6	1	2,395,835	177,515	121,823
Nebraska	3	6	4	.....	.....	.....	2	Je[1] 3	Oc[1] 1	3	3	.....	.....	.....	3,350	.....	.....
New Hampshire	6	122	4	10	1	1	106	De 117	Je 96	116	113	3	.....	.....	368,712	26,790	2,500
New Jersey	67	2,611	57	123	165	81	2,185	Ja 2,575	Je 1,968	2,388	2,305	71	10	2	12,542,950	506,241	276,725
New York	213	12,301	155	488	512	400	10,746	De 12,519	Jy 8,245	12,606	11,132	1,426	11	37	49,827,746	2,145,625	1,258,120
Ohio	92	5,019	57	230	318	150	4,264	No 5,036	Fe 3,681	4,983	4,773	203	7	.....	16,887,641	1,001,777	755,044
Oregon	4	72	1	10	1	2	58	Mh[1] 65	Oc[1] 49	52	52	.....	.....	.....	283,288	28,010	6,774
Pennsylvania	125	4,995	89	339	330	184	4,053	De 4,482	Je 3,645	4,479	4,341	132	6	.....	21,815,742	1,201,234	624,217
Rhode Island	18	481	18	15	11	11	426	Fe 500	Jy[1] 384	397	371	19	4	3	1,666,978	53,399	34,203
Texas	7	150	5	12	9	2	122	Oc 136	Je 110	125	111	.....	14	.....	259,090	46,020	16,980
Washington	16	212	12	20	10	7	163	Ja 195	Fe 70	171	168	2	1	.....	453,884	83,874	13,073
West Virginia	3	65	1	9	2	3	50	De 60	Mh[1] 47	60	55	5	.....	.....	262,563	24,730	19,142
Wisconsin	36	3,091	16	87	145	65	2,778	Oc 3,016	Mh 2,502	2,931	2,807	111	13	.....	10,722,111	377,984	209,297
All other states[2]	20	510	16	34	23	7	430	.....	.....	467	462	.....	5	.....	4,003,496	101,305	45,226

INDUSTRY AND STATE.	Expenses—continued. Salaries and wages—Contd. Wage earners.	For contract work.	Rent and taxes. Rent of factory.	Rent and taxes. Taxes, Federal, state, county, and local.	For materials. Principal materials.	For materials. Fuel and rent of power.	Value of products.	Value added by manufacture.	Power. Primary horsepower. Total.	Owned. Steam engines (not turbines).	Owned. Steam turbines.	Owned. Internal-combustion engines.	Owned. Water power.[3]	Rented.[4]	Electric horsepower generated in establishments reporting.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.							
United States	94,132,118	419,868	851,814	13,795,301	292,136,779	12,686,801	482,312,790	177,489,210	265,688	61,862	54,655	3,540	2,320	143,311	40,598
Brass and bronze	79,567,785	415,772	770,487	11,797,465	224,374,033	10,571,104	389,550,094	154,604,957	201,494	41,642	45,947	3,186	1,060	109,659	29,634
Copper	12,084,924	2,962	62,989	1,633,904	58,447,508	1,744,817	78,338,948	18,146,623	53,157	17,895	8,708	85	1,000	25,469	10,372
All other	2,479,409	1,134	18,338	363,932	9,315,238	370,880	14,423,748	4,737,630	11,037	2,325	.....	269	260	8,183	592
California	754,168	6,976	34,720	27,535	1,767,805	50,661	3,316,347	1,497,881	840	.....	.....	.....	.....	840	.....
Colorado	67,686	.....	6,810	2,098	219,539	11,083	368,643	138,021	109	.....	.....	.....	.....	109	.....
Connecticut	36,386,425	19,297	40,312	4,546,506	104,556,291	5,682,102	169,550,248	59,311,855	121,319	25,250	45,712	435	2,305	47,617	26,403
Delaware	21,726	.....	670	876	95,961	3,383	159,477	60,133	27	.....	.....	.....	.....	27	.....
Illinois	3,855,753	19,110	150,819	631,901	15,223,287	466,409	25,106,507	9,416,811	5,847	185	.....	20	.....	5,642	27
Indiana	1,485,221	1,647	11,970	153,084	3,130,452	103,603	5,638,482	2,404,427	1,514	.....	.....	.....	.....	1,514	3
Iowa	33,910	.....	280	551	144,998	8,072	224,916	71,846	51	.....	.....	.....	.....	51	.....
Kentucky	115,090	.....	1,290	3,026	222,995	8,961	460,385	228,429	183	.....	.....	15	.....	168	.....
Louisiana	50,949	.....	3,191	2,849	120,269	5,505	234,769	108,905	60	.....	.....	.....	.....	60	.....
Maine	17,064	.....	880	264	46,361	3,172	84,349	34,816	58	.....	.....	.....	.....	58	.....
Maryland	1,039,207	.....	17,365	73,533	2,816,346	179,767	5,057,684	2,061,571	7,362	200	.....	25	.....	7,137	.....
Massachusetts	3,506,249	17,372	38,662	904,082	8,859,585	507,180	16,943,199	7,576,434	16,511	3,610	200	47	15	11,639	60
Michigan	14,578,780	16,608	72,722	1,075,233	37,357,127	1,491,851	62,708,335	23,859,357	27,912	7,880	1,000	230	.....	18,802	671
Minnesota	240,771	.....	5,700	20,324	519,471	30,762	1,017,680	467,447	393	.....	.....	.....	.....	393	.....
Missouri	669,995	4,813	9,335	248,859	5,752,356	106,548	8,208,474	2,349,570	887	.....	.....	4	.....	883	.....
Nebraska	3,164	.....	576	27	14,417	762	27,158	11,979	7	.....	.....	.....	.....	7	.....
New Hampshire	104,307	.....	13,024	31,998	174,191	15,015	478,020	288,814	134	125	.....	.....	.....	9	.....
New Jersey	2,595,454	48,260	30,721	363,314	7,977,372	491,621	14,412,106	5,943,113	11,656	4,730	10	253	.....	6,663	497
New York	12,244,627	107,774	259,584	2,696,960	38,780,889	1,184,237	66,562,045	26,596,919	32,352	9,473	5,483	881	.....	16,515	5,597
Ohio	5,893,721	4,939	43,639	903,828	15,527,757	649,776	27,801,760	11,624,227	10,915	1,792	300	904	.....	7,919	835
Oregon	96,289	.....	5,770	50,024	263,834	11,525	525,105	249,746	250	.....	.....	.....	.....	250	.....
Pennsylvania	5,161,263	151,964	65,883	871,025	20,721,204	706,111	33,496,320	12,069,005	10,577	3,127	.....	606	.....	6,844	1,621
Rhode Island	465,957	.....	6,177	77,737	1,810,888	42,037	2,975,561	1,122,636	1,250	380	.....	120	.....	750	350
Texas	138,793	.....	8,035	13,579	992,341	24,096	1,466,867	450,430	249	.....	.....	.....	.....	249	.....
Washington	284,880	20,608	10,127	9,506	985,057	20,773	1,608,367	602,537	311	.....	.....	.....	.....	311	.....
West Virginia	64,828	.....	608	6,766	187,288	2,983	366,685	176,414	110	100	.....	.....	.....	10	.....
Wisconsin	3,747,872	.....	9,755	1,030,419	14,583,327	747,653	22,509,723	7,178,743	13,096	5,010	1,950	.....	.....	6,136	4,534
All other states[2]	507,969	500	3,689	49,307	9,285,371	131,063	11,003,578	1,587,144	2,708	.....	.....	.....	.....	2,708	.....

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

SMELTING AND REFINING.

(NONFERROUS METALS.)

GENERAL STATISTICS.

General character of the industries.—The statistics presented in this report on the smelting and refining of nonferrous metals cover a group of six industries, as classified by the Fourteenth Census, namely, those comprising establishments engaged primarily in the smelting and refining of (1) copper, (2) lead, (3) zinc, (4) antimony, (5) tin, and (6) "metals not elsewhere specified."

To avoid the disclosure of individual operations, the data relating to antimony, tin, and "metals not elsewhere specified" are combined in all cases in this report. The figures relating to copper, to lead, and to zinc are given separately. Among the "metals not elsewhere specified" reported at this census are cobalt, molybdenum, nickel, platinum, iridium, palladium, quicksilver, selenium, titanium minerals, and tungsten ores.

In brief, this report covers the smelting and refining of the nonferrous metals, gold and silver being important items among the products of copper and lead smelting and refining.

The statistics pertaining to iron smelting will be found in the report on iron and steel, which comprises iron blast furnaces, ferroalloys, and the allied industries, steel works and rolling mills, tin-plate and terne-plate, and wire. The recovery of metals from scrap, waste, etc., is not the subject of a special report, but the statistics for such establishments are included in the industries "gold and silver, reducing and refining, not from ore" for the precious metals; and "smelting and refining, not from the ore" for all others.

This report makes no mention of the metal by-products of other industries, although various establishments engaged primarily in other lines of industry report some products of this nature.

Comparability with previous censuses.—Heretofore the Census Bureau has issued no special report on smelting and refining, except that on lead, copper, and zinc smelting and refining in the census of 1900. The figures given in censuses previous to 1900 are not strictly comparable with those of the present census. In 1870 smelting and refining were reported separately from the mining industry, but in 1890 they were reported as an adjunct thereto.

In the 1900 and succeeding censuses, the crushing and milling of quartz, the separation of gold and silver from the ore in concentrating and separating plants have been considered to be so closely allied with the mining industry that the statistics of these operations constituted a part of the reports on mines and are not included in the reports on manufactures.

Mines, smelters, and refineries.—In several branches of mining the mineral products are subjected to manufacturing processes at the mine, such as crushing, separating, washing, concentrating, burning, or calcining before being regarded as marketable commodities. In such cases the mining schedules cover the entire work of mining the crude material and its preparation for the market. The distinction between mining and manufacturing industries was not clearly made prior to the census of 1899, and the statistics for smelting and refining were included with those for mines in such a manner as to make it impossible to obtain satisfactory comparative figures.

Copper smelting and refining.—This classification includes establishments which smelt or refine copper ore or matte on toll as well as those smelting ores of their own production. The cost of materials and the value of products reported for establishments which treat ore or matte for others includes under cost of materials, the estimated value of the ore or matte treated, and under products, the value of the metals produced. In the smelting and refining of copper and lead, a large part of the value of the products consists of gold and silver content.

The combined figures involve extensive duplications, the value of the blister copper as it comes from the smelters being included in cost of materials for the refineries.

Other smelting and refining industries.—As in the case of copper, separate statistics for 1919, 1914, and 1909 are given, as a rule, in the following tables for the establishments that both smelt lead ores and refine the bullion, and for those that smelt only. In addition to refined lead, lead smelters and refineries produced as subsidiary products chemicals, gold, silver, and copper.

Spelter and sheet zinc are the principal products reported for establishments included under the classification "zinc smelting." The only comparable figures are those for 1919, 1914, 1909, 1904, and 1899. The statistics are segregated for establishments whose product of chief value was pigs, bars, plates, and sheets of zinc, and for those reporting other zinc products.

Summary for the group, 1919.—Table 1 presents the general statistics for the smelting and refining group and the constituent industries. Although copper smelting and refining has less than one-third of the total number of establishments in the combined group, it is to be credited with 67 per cent of the total value of products and with 54.1 per cent of the value added by manufacture.

Comparative summary, copper, lead, and zinc.—Table 2 presents the general statistics for the copper, lead, and zinc smelting and refining industries severally and combined for the census years 1899 to 1919, inclusive.

The group of "Metals not elsewhere specified," is not here included, as statistics therefor for prior census years are not available.

The increases in wages, cost of materials, and value of products are in a great measure due to the change in industrial conditions brought about by the World War, and can not be taken as a true measure of growth. The increases in primary horsepower, however, and in the number of wage earners employed, evidence the growth of the smelting and refining industries.

Principal states, ranked by value of products.—In Table 3 the states are arranged according to the value of products reported for 1919.

Some of the states for which data can not be shown separately without disclosing the operations of individual establishments ranked higher in value of products than some of those named in the table.

Persons engaged in the industries.—The age classification of the average number of wage earners, in Table, is an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 12.

Wage earners, by months.—The statistics presented in Table 5 are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions existing during the several census years.

Prevailing hours of labor.—Table 6 shows a marked drift toward fewer hours per week, especially in lead smelting and refining. In that industry, in 1914, only 1 per cent of the wage earners were included in the groups "48 and under," as against 15.6 per cent in 1919. On the other hand, in 1914, the "60" and "Over 60" groups constituted 20.5 per cent of the total wage earners, as against 2.1 per cent in 1919.

The smelting and refining of zinc shows the least change, 4.7 per cent of its wage earners being in the group "48 and under" in 1914, and 18.5 in 1919.

Size of establishments, by average number of wage earners.—As indicated in Table 7, the smelting and refining industries are characterized by rather large establishments. In 1919, 76.6 per cent and in 1914, 78.4 per cent of the establishments employed more than 100 wage earners each.

Size of establishments, by value of products.—Table 8 shows that the average value of products per establishment in 1909 was approximately $6,100,000; in 1914, $7,600,000; and in 1919, $8,760,000. At the census of 1914, establishments valued at "$100,000 to $1,000,000" constituted a single group, but at the census of 1919 this group was subdivided into "$100,000 to $500,000" and "$500,000 to $1,000,000."

Character of ownership.—The establishments included in the smelting and refining industries are almost entirely owned by corporations. In 1919 only 2 out of a total of 111 establishments were owned by individuals or firms and in 1914 but 4 of the 88 establishments.

Number and horsepower of types of prime movers.—The power equipment reported in Table 9 is that installed at the end of the year. In the smelting and refining industries an increase is shown at each census in both owned and rented power, particularly in the latter. In 1919 the rated capacity of all electric motors was more than double the capacity reported for 1914, the figures showing an increase of 110 per cent. In 1919, 60.4 per cent of the total primary power, whether owned or rented, was utilized in the form of electric power as compared with 50.7 per cent in 1914 and 36.7 per cent in 1909.

Fuel consumed.—Table 10 shows the consumption of the principal kinds of fuel, by industries and by states. The figures are inclusive of smelting fuel and that used for steam and power purposes. The figures for gas include both natural and manufactured gas, chiefly natural gas.

TABLE 1.—SUMMARY FOR THE SMELTING AND REFINING INDUSTRIES: 1919.

	Total.	Copper.	Lead.	Zinc.	All other.[1]	PER CENT OF TOTAL.			
						Copper.	Lead.	Zinc.	All other.[1]
Number of establishments	111	34	25	39	13	30.6	22.5	35.1	11.7
Persons engaged	44,271	19,654	7,354	14,903	2,360	44.4	16.6	33.7	5.3
Proprietors and firm members	2	.....	1	.....	1	.....	.....	.....	.....
Salaried employees	4,649	2,309	915	1,107	318	49.7	19.7	23.8	6.8
Wage earners (average number)	39,620	17,345	6,438	13,796	2,041	43.8	16.2	34.8	5.2
Primary horsepower	459,479	321,610	52,565	73,604	11,700	70.0	11.4	16.0	2.6
Capital	$543,341,935	$308,680,268	$115,676,768	$98,757,355	$20,227,544	56.8	21.3	18.2	3.7
Salaries and wages	67,061,064	31,619,716	11,281,401	20,244,747	3,915,200	47.2	16.8	30.2	5.8
Salaries	11,411,652	5,896,345	2,101,786	2,461,469	952,052	51.7	18.4	21.6	8.3
Wages	55,649,412	25,723,371	9,179,615	17,783,278	2,963,148	46.2	16.5	32.0	5.3
Paid for contract work	472,171	222,176	249,995	.....	.....	47.1	52.9	.....	.....
Rent and taxes	6,955,213	3,411,123	1,036,804	1,777,587	729,699	49.0	14.9	25.6	10.5
Cost of materials	848,755,914	584,410,173	179,373,646	70,014,728	14,957,367	68.9	21.1	8.2	1.8
Value of products	972,093,552	651,101,591	196,794,519	104,122,938	20,074,504	67.0	20.2	10.7	2.1
Value added by manufacture[2]	123,337,638	66,691,418	17,420,873	34,108,210	5,117,137	54.1	14.1	27.7	4.1

[1] Includes "Metals not elsewhere specified."

[2] Value of products less cost of materials.

TABLE 2.—COMPARATIVE SUMMARY FOR COPPER, LEAD, AND ZINC SMELTING AND REFINING: 1919, 1914, 1909, 1904, AND 1899.

	1919	1914	1909	1904	1899	PER CENT OF INCREASE.[1] 1914–1919	1909–1914	1904–1909	1899–1904
TOTAL.									
Number of establishments	98	88	95	103	117	.....	.....	−7.8	−12.0
Persons engaged	41,911	37,957	32,047	28,548	25,648	10.4	18.4	12.3	11.3
Proprietors and firm members	1	5	10	8	15	.....	.....	.....	.....
Salaried employees	4,331	3,219	2,330	1,687	1,121	34.5	38.2	38.1	50.5
Wage earners (average number)	37,579	34,733	29,707	26,853	24,512	8.2	16.9	10.6	9.6
Primary horsepower	447,779	261,419	206,537	141,928	95,740	71.3	26.6	45.5	48.2
Capital	$523,114,391	$351,057,554	$271,512,727	$164,349,036	$139,354,138	49.0	29.3	65.2	17.9
Salaries and wages	63,145,864	35,573,238	27,925,293	23,054,663	18,123,644	77.5	27.4	21.1	27.2
Salaries	10,459,600	6,590,093	4,888,581	2,996,463	2,150,018	58.7	34.8	63.1	39.4
Wages	52,686,264	28,983,145	23,036,712	20,058,200	15,973,626	81.8	25.8	14.8	25.6
Paid for contract work	472,171	226,228	68,882	161,825	45,580	108.7	228.4	−57.4	255.0
Rent and taxes	6,225,514	2,063,265	2,339,348	[2] 1,902,565	[2] 391,839	201.7	−11.8	23.0	385.5
Cost of materials	833,798,547	572,744,382	510,724,661	382,723,480	279,655,350	45.6	12.1	33.4	36.9
Value of products	952,019,048	660,138,943	580,417,518	451,398,354	358,786,472	42.3	15.3	28.6	25.8
Value added by manufacture [3]	118,220,501	96,394,561	69,692,857	68,674,874	79,131,122	22.6	38.3	1.5	−13.2
COPPER.									
Number of establishments	34	37	38	40	47	.....	.....	.....	.....
Persons engaged	19,654	19,594	16,832	13,562	11,816	0.3	16.4	24.1	14.8
Proprietors and firm members	.....	.....	7	1	4	.....	.....	.....	.....
Salaried employees	2,309	1,863	1,197	809	488	23.9	55.6	48.0	65.8
Wage earners (average number)	17,345	17,731	15,628	12,752	11,324	−2.2	13.5	22.6	12.6
Primary horsepower	321,610	194,980	158,126	85,828	66,242	64.9	23.3	84.2	29.6
Capital	$308,680,268	$171,419,795	$111,442,654	$76,824,640	$53,063,395	80.1	53.8	45.1	44.8
Salaries and wages	31,619,716	19,767,215	15,814,891	12,354,425	9,483,926	60.0	25.0	28.0	30.3
Salaries	5,896,345	3,617,964	2,419,172	1,527,382	954,905	63.0	49.6	58.4	60.0
Wages	25,723,371	16,149,251	13,395,719	10,827,043	8,529,021	59.3	20.6	23.7	26.9
Paid for contract work	222,176	168,195	34,050	117,401	45,580	31.5	394.0	−71.0	157.6
Rent and taxes	3,411,123	1,479,579	2,056,641	[2] 1,717,563	[2] 248,142	130.5	−28.1	19.7	592.2
Cost of materials	584,410,173	379,157,030	333,531,638	196,736,986	122,174,129	54.1	13.7	69.5	61.0
Value of products	651,101,591	444,021,958	378,805,974	240,780,216	165,131,670	46.6	17.2	57.3	45.8
Value added by manufacture [3]	66,691,418	64,864,928	45,274,336	44,043,230	42,957,541	2.8	43.3	2.8	2.5
LEAD.									
Number of establishments	25	22	28	32	39	.....	.....	.....	.....
Persons engaged	7,354	8,036	8,059	8,102	8,751	−8.5	−0.3	−0.5	−7.4
Proprietors and firm members	1	3	.....	5	7	.....	.....	.....	.....
Salaried employees	915	648	635	524	425	41.2	2.0	21.2	23.3
Wage earners (average number)	6,438	7,385	7,424	7,573	8,319	−12.8	−0.5	−2.0	−9.0
Primary horsepower	52,565	29,734	26,954	32,648	16,952	76.8	10.3	−17.4	92.6
Capital	$115,076,768	$143,249,321	$132,310,220	$63,822,810	$72,148,933	−19.2	8.3	107.3	−11.5
Salaries and wages	11,281,401	7,629,555	6,906,566	6,262,293	5,843,597	47.9	10.5	10.3	7.2
Salaries	2,101,786	1,495,281	1,475,914	887,602	754,913	40.6	1.3	66.3	17.6
Wages	9,179,615	6,134,274	5,430,652	5,374,691	5,088,684	49.6	13.0	1.0	5.6
Paid for contract work	249,995	10,258	14,832	37,934	.....	2,337.1	−30.8	−60.9	.....
Rent and taxes	1,036,804	338,994	188,766	[2] 116,230	[2] 89,016	205.8	79.6	62.4	30.6
Cost of materials	179,373,646	154,014,765	151,963,022	168,958,076	144,195,163	16.5	1.4	−10.1	17.2
Value of products	196,794,519	171,578,587	167,405,650	185,826,839	175,466,304	14.7	2.5	−9.9	5.9
Value added by manufacture [3]	17,420,873	17,563,822	15,442,628	16,868,763	31,271,141	−0.8	13.7	−8.5	−46.1
ZINC.									
Number of establishments	39	29	29	31	31	.....	.....	.....	.....
Persons engaged	14,903	10,327	7,156	6,884	5,081	44.3	44.3	4.0	35.5
Proprietors and firm members	.....	2	3	2	4	.....	.....	.....	.....
Salaried employees	1,107	708	498	354	208	56.4	42.2	40.7	70.2
Wage earners (average number)	13,796	9,617	6,655	6,528	4,869	43.5	44.5	1.9	34.1
Primary horsepower	73,604	36,705	21,457	23,452	12,546	100.5	71.1	−8.5	86.9
Capital	$98,757,355	$36,388,438	$27,759,853	$23,701,586	$14,141,810	171.4	31.1	17.1	67.6
Salaries and wages	20,244,747	8,176,468	5,203,836	4,437,945	2,796,121	147.6	57.1	17.3	58.7
Salaries	2,461,469	1,476,848	993,495	581,479	440,200	66.7	48.7	70.9	32.1
Wages	17,783,278	6,699,620	4,210,341	3,856,466	2,355,921	165.4	59.1	9.2	63.7
Paid for contract work	.....	47,775	20,000	6,490	.....	.....	138.9	208.2	.....
Rent and taxes	1,777,587	244,692	93,941	[2] 68,772	[2] 54,681	626.5	160.5	36.6	25.8
Cost of materials	70,014,728	39,572,587	25,230,001	17,028,418	13,286,053	76.9	56.8	48.2	28.2
Value of products	104,122,938	53,538,398	34,205,894	24,791,299	18,188,498	94.5	56.5	38.0	36.3
Value added by manufacture [3]	34,108,210	13,965,811	8,975,893	7,762,881	4,902,440	144.2	55.6	15.6	58.3

A minus sign (−) denotes decrease; percentages are omitted where base is less than 100. [2] Exclusive of internal revenue. [3] Value of products less cost of materials.

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

STATE.	Number of establishments.	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	111	39,620	100.0	.....	$972,094	100.0	.....	$123,338	100.0	.....
New Jersey	9	5,220	13.2	2	256,945	26.4	1	16,673	13.5	2
Arizona	10	3,112	7.9	5	94,184	9.7	2	15,515	12.6	3
Pennsylvania	5	4,451	11.2	3	42,371	4.4	7	18,069	14.6	1
Illinois	10	5,264	13.3	1	39,047	4.0	9	9,493	7.7	5
Colorado	11	1,642	4.1	8	18,893	1.9	13	3,693	3.0	11
Indiana	4	574	1.4	17	9,620	1.0	17	1,949	1.6	14
Missouri	4	1,032	2.6	11	9,218	0.9	18	1,259	1.0	18
Arkansas	3	547	1.4	20	4,423	0.5	22	817	0.7	22
All other states	55	17,778	44.9	.....	497,393	51.2	.....	55,870	45.3	.....

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

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
All classes	1919	44,271	43,338	933	97.9	2.1
	[1] 1914	37,957	37,761	196	99.5	0.5
	[1] 1909	32,047	31,924	123	99.6	0.4
Proprietors and officials	1919	1,214	1,205	9	99.3	0.7
	1914	523	519	4	.....	.....
	1909	539	537	2	.....	.....
Proprietors and firm members	1919	2	2	.....	.....	.....
	1914	5	5	.....	100.0	.....
	1909	10	10	.....	.....	.....
Salaried officers of corporations	1919	166	160	6	96.4	3.6
	1914	129	125	4	96.9	3.1
	1909	131	129	2	.....	.....
Superintendents and managers	1919	1,046	1,043	3	99.7	0.3
	1914	389	389	.....	100.0	.....
	1919	398	398	.....	.....	.....
Clerks and other subordinate salaried employees.	1919	3,437	2,801	636	81.5	18.5
	1914	2,701	2,520	181	93.3	6.7
	1909	1,801	1,686	115	93.6	6.4
Wage earners (average number)	1919	39,620	39,332	288	99.3	0.7
	1914	34,733	34,722	11	100.0	([3])
	1909	29,707	29,701	6	100.0	([3])
16 years of age and over	1919	39,618	39,330	288	99.3	0.7
	1914	34,689	34,678	11	100.0	([3])
	1909	29,668	29,662	6	100.0	([3])
Under 16 years of age	1919	2	2	.....	.....	.....
	1914	44	44	([3])	.....	.....
	1909	39	39	([3])	.....	.....

[1] Includes only copper, lead, and zinc smelting and refining. [2] Figures not available; included, if any, with males. [3] Less than one-tenth of 1 per cent.

TABLE 5.—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.]

INDUSTRY AND STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Per cent minimum is of maximum.
United States:														
1919	39,620	50,502	45,567	41,252	39,616	38,152	*36,110*	37,161	36,925	37,263	37,263	37,681	37,948	71.5
Males	39,332	50,140	45,242	40,886	39,332	37,859	*35,796*	36,876	36,685	37,021	37,006	37,436	37,705	71.4
Females	288	362	325	366	284	293	314	285	*240*	242	257	245	243	63.7
1914 [1]	34,733	38,278	37,094	37,746	38,054	37,900	37,916	37,211	33,087	30,382	30,325	*28,036*	30,167	74.8
1909 [1]	29,707	30,366	29,993	29,588	29,840	29,117	29,456	29,912	*28,049*	30,244	29,902	29,947	30,090	92.4
Copper smelting and refining:														
1919	17,345	23,627	20,451	18,652	17,616	16,426	15,742	16,505	*15,351*	15,754	15,944	16,284	15,788	65.0
Smelting only	7,919	10,982	8,927	8,536	8,088	7,575	7,186	7,578	*6,743*	7,118	7,124	7,627	7,544	61.4
Refining only	5,400	7,540	6,709	5,571	5,318	4,785	*4,546*	5,024	5,176	5,207	5,204	4,853	4,867	60.3
Smelting and refining	4,026	5,105	4,815	4,545	4,210	4,066	4,016	3,903	3,432	3,429	3,616	3,804	*3,577*	66.2
1914	17,731	20,778	19,867	20,381	20,811	20,725	20,837	20,502	16,233	13,568	13,435	*12,295*	13,340	59.0
1909	15,628	16,031	15,869	15,585	15,656	15,420	15,397	15,761	*14,889*	15,943	15,813	15,704	15,480	92.9
Lead smelting and refining:														
1919	6,438	8,054	7,551	6,441	6,402	6,353	6,001	5,988	6,011	*5,723*	6,170	6,255	6,307	71.1
Smelting only	4,839	6,101	5,752	4,796	4,746	4,670	4,446	4,476	4,544	*4,167*	4,593	4,824	4,953	68.3
Smelting and refining [2]	1,599	1,953	1,799	1,645	1,656	1,683	1,555	1,512	1,467	1,556	1,577	1,431	*1,354*	69.3
1914	7,385	7,752	7,564	7,541	7,560	7,512	7,640	7,449	7,510	7,147	7,089	*6,779*	7,077	87.4
1909	7,424	7,651	7,785	7,751	7,671	7,100	7,468	7,415	*6,947*	7,476	7,121	7,260	7,451	89.2
Zinc smelting and refining:														
1919	13,796	16,159	15,464	14,339	13,815	13,469	*12,250*	12,691	13,572	13,807	13,095	13,034	13,857	75.8
Pigs, bars, plates, and sheets	12,928	15,103	14,491	13,304	12,772	12,443	*11,405*	11,824	12,631	12,881	12,697	12,439	13,146	75.5
All other	868	1,056	973	1,035	1,043	1,026	845	867	941	926	*398*	595	711	37.7
1914	9,617	9,748	9,663	9,824	9,683	9,663	9,439	*9,260*	9,344	9,667	9,801	9,582	9,750	94.3
1909	6,655	6,684	6,339	6,252	6,513	6,597	6,591	6,736	*6,215*	6,825	6,968	6,983	7,159	86.8
Smelting and refining, metals not elsewhere specified:														
1919	2,041	2,662	2,101	1,820	*1,783*	1,904	2,117	1,977	1,991	1,979	2,054	2,108	1,996	67.0
Arizona: Copper	3,112	3,914	3,501	2,886	2,764	*2,662*	2,697	3,021	3,162	3,218	3,287	3,178	3,054	68.0
Arkansas: Zinc	547	517	522	533	*462*	530	542	566	580	562	584	579	587	78.7
California: Copper	289	602	592	549	430	292	146	139	128	*127*	143	157	163	21.1
Colorado: Zinc	1,642	2,089	2,040	1,684	1,821	1,794	1,517	1,395	1,371	*1,341*	1,436	1,596	1,620	64.2
Illinois: Zinc	5,264	5,774	5,498	5,301	5,183	5,173	5,132	5,298	5,400	5,273	5,394	*4,715*	5,027	81.7
Indiana	574	919	800	578	747	626	*380*	419	550	551	439	450	429	41.3
Kansas	717	723	842	786	722	719	701	714	698	706	*657*	668	688	75.7
Missouri	1,032	1,244	1,142	*723*	729	852	967	968	1,054	1,092	1,243	1,264	1,106	57.2
New Jersey	5,220	6,590	6,065	5,402	5,326	5,007	4,817	5,008	4,845	*4,767*	4,972	4,913	4,928	72.3
Oklahoma: Zinc	2,272	2,956	2,769	2,457	2,057	2,008	2,000	*1,972*	2,149	2,032	2,021	2,312	2,531	66.7
Pennsylvania	4,451	5,069	4,688	4,472	4,502	4,318	4,182	4,608	4,572	4,621	*4,011*	4,120	4,249	79.1
Utah: Lead	1,749	2,253	2,003	1,957	1,813	1,596	*1,514*	1,539	1,600	1,585	1,685	1,745	1,698	67.2

[1] Not including "Metals not elsewhere specified." [2] Includes "Refining only."

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

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.	Over 60.
United States, smelting and refining (nonferrous metals):									
1919	39,620	161	231	7,229	2,694	1,343	26,569	177	1,216
1914[2]	34,733	(3)	(3)	855	6,127	1,591	18,291	4,487	3,382
1909[2]	29,707	(3)	(3)	834	.....	549	16,927	3,908	7,489
Copper:									
1919	17,345	.....	.....	3,500	990	1,343	11,512	.....	.....
1914	17,731	(3)	(3)	336	2,225	864	11,170	2,336	800
1909	15,628	(3)	(3)	203	.....	.....	9,975	2,599	2,851
Lead:									
1919	6,438	1	.....	1,002	397	.....	4,900	.....	138
1914	7,385	(3)	(3)	72	.....	727	5,073	108	1,405
1909	7,424	(3)	(3)	25	.....	549	5,481	186	1,183
Zinc:									
1919	13,796	160	.....	2,387	395	.....	9,644	139	1,071
1914	9,617	(3)	(3)	447	3,902	.....	2,048	2,043	1,177
1909	6,655	(3)	(3)	606	.....	.....	1,471	1,123	3,455
Metals not elsewhere specified:[4]									
1919	2,041	.....	231	340	912	.....	513	38	7
Arizona: Copper	3,112	.....	.....	193	890	.....	2,029	.....	.....
Arkansas: Zinc	547	.....	.....	.....	.....	.....	547	.....	.....
California: Copper	289	.....	.....	.....	.....	.....	289	.....	.....
Colorado	1,642	.....	.....	35	.....	.....	1,607	.....	.....
Illinois	5,264	.....	.....	1,254	397	.....	3,613	.....	.....
Indiana	574	.....	.....	.....	.....	.....	303	139	132
Kansas: Zinc	717	.....	.....	304	.....	.....	413	.....	.....
Missouri	1,032	.....	.....	591	.....	.....	441	.....	.....
New Jersey	5,213	.....	231	1,919	912	.....	2,151	.....	.....
Oklahoma: Zinc	2,272	160	.....	677	.....	.....	1,435	.....	.....
Pennsylvania	4,451	.....	.....	.....	.....	.....	3,355	25	1,071
Utah: Lead	1,749	.....	.....	.....	.....	.....	1,749	.....	.....

[1] Includes 48 and under for 1914 and 1909. [2] Not including "Metals not elsewhere specified." [3] Figures not available. [4] Includes antimony and tin.

TABLE 7.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR 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.	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, smelting and refining (nonferrous metals):																				
1919	111	39,620	.....	4	14	6	63	9	354	7	525	34	5,697	28	9,778	17	12,401	6	10,788
1914[1]	88	34,733	1	1	1	2	34	4	144	11	819	24	4,006	22	8,406	17	12,511	6	8,812
Copper smelting and refining:																				
1919	34	17,345	.....	.....	.....	1	16	2	79	3	240	9	1,390	6	2,196	8	5,873	5	7,551
1914	37	17,731	.....	.....	.....	1	16	1	40	5	373	11	1,799	6	2,319	8	6,278	5	6,906
Lead smelting and refining:																				
1919	25	6,438	.....	1	1	1	6	1	36	2	153	8	1,232	8	2,695	4	2,315	.....	.....
1914	22	7,385	.....	1	1	1	18	.....	.....	3	208	3	414	9	3,591	5	3,153	.....	.....
Zinc smelting and refining:																				
1919	39	13,796	.....	1	4	1	14	3	134	2	132	15	2,714	12	4,253	4	3,308	1	3,237
1914	29	9,617	1	.....	.....	.....	.....	3	104	3	238	10	1,793	7	2,496	4	3,080	1	1,906
Smelting and refining; metals not elsewhere specified:																				
1919	13	2,041	.....	2	9	3	27	3	105	.....	.....	2	361	2	634	1	905	.....	.....
Arizona: Copper	10	3,112	.....	.....	.....	.....	.....	1	47	1	63	3	590	4	1,523	1	889	.....	.....
Arkansas: Zinc	3	547	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	547	.....	.....	.....	.....	.....	.....
California: Copper	3	289	.....	.....	.....	1	16	.....	.....	.....	.....	2	273	.....	.....	.....	.....	.....	.....
Colorado	11	1,642	.....	1	6	.....	.....	2	72	2	132	4	736	2	696	.....	.....	.....	.....
Illinois	10	5,264	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	195	6	2,357	.....	2,712	.....	.....
Indiana	4	574	.....	.....	.....	.....	.....	.....	.....	1	100	3	474	.....	.....	3	.....	.....	.....
Kansas: Zinc	3	717	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	137	2	580	.....	.....	.....	.....
Missouri	4	1,032	.....	.....	.....	.....	.....	1	36	.....	.....	.....	.....	3	996	.....	.....	.....	.....
New Jersey	9	5,220	.....	1	4	2	14	.....	.....	.....	.....	1	231	.....	.....	3	2,404	2	2,567
Oklahoma: Zinc	11	2,272	.....	.....	.....	1	14	.....	.....	.....	.....	6	1,115	4	1,143	.....	.....	.....	.....
Pennsylvania	5	4,451	.....	.....	.....	.....	.....	1	25	.....	.....	1	118	1	475	1	596	1	3,237
Utah: Lead	3	1,749	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1,749	.....	.....

[1] Not including "Metals not elsewhere specified."

TABLE 8.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.[1]

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	111	88	95	39,620	34,733	29,707	$972,093,552	$669,138,943	$580,417,518	$123,337,638	$96,394,561	$69,692,857
Less than $5,000	.....	2	1	.....			.....			.....		
$5,000 to $20,000	1	.....	.....	6			19,318			2,873		
$20,000 to $100,000	7	3	5	47	1,770	2,678	351,424	9,867,135	13,528,073	58,618	2,163,265	3,088,511
$100,000 to $500,000	11	7	24	428			2,719,542			834,516		
$500,000 to $1,000,000	9	10		1,609			6,085,134			2,463,682		
$1,000,000 and over	83	66	65	37,530	32,963	27,029	962,318,134	659,271,808	566,889,445	119,977,949	94,231,296	66,604,346
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	.....	2.3	1.1	.....			.....	.....		.....		
$5,000 to $20,000	0.9	.....	.....	(2)			(2)	.....		(2)		
$20,000 to $100,000	6.3	3.4	5.3	0.1	5.1	9.0	(2)	0.3	2.3	(2)	2.2	4.4
$100,000 to $500,000	9.9	7.9	25.3	1.1			0.3	.....		0.7		
$500,000 to $1,000,000	8.1	11.4		4.1			0.7	1.2		2.0		
$1,000,000 and over	74.8	75.0	68.4	94.7	94.9	91.0	99.0	98.5	97.7	97.3	97.8	95.6

[1] Figures for 1914 and 1909 include only copper, lead, and zinc smelting and refining.

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

TABLE 9.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.[1]

POWER.	NUMBER OF ENGINES OR MOTORS.[2]		HORSEPOWER.					
			Amount.			Per cent distribution.		
	1919	1914	1919	1914	1909	1919	1914	1909
Primary power, total	5,224	2,326	459,479	261,419	206,537	100.0	100.0	100.0
Owned	660	674	287,983	214,507	173,295	62.7	82.1	83.9
Steam[3]	592	621	276,310	201,486	157,923	60.1	77.1	76.5
Engines	483	(4)	157,639	(4)	(4)	34.3	.....	.....
Turbines	109	(4)	118,671	(4)	(4)	25.8	.....	.....
Internal-combustion engines	58	34	3,773	2,721	2,455	0.8	1.0	1.2
Water wheels and turbines	10	19	7,900	10,300	12,917	1.7	3.9	6.3
Rented	4,564	1,652	171,496	46,912	33,242	37.3	17.9	16.1
Electric	4,564	1,652	168,599	46,912	33,242	36.7	17.9	16.1
Other	.....	.....	2,897	.....	.....	0.6	.....	.....
Electric	9,340	4,988	278,416	132,504	75,843	100.0	100.0	100.0
Rented	4,564	1,652	168,599	46,912	33,242	60.6	35.4	43.8
Generated by establishments reporting	4,776	3,336	109,817	85,592	42,601	39.4	64.6	56.2

[1] Figures for 1914 and 1909 include only copper, lead, and zinc smelting and refining.
[2] Figures not available for 1909.
[3] Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.
[4] Figures not available.

TABLE 10.—FUEL CONSUMED, BY STATES: 1919.

INDUSTRY AND STATE.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
	Anthracite[1] (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States, smelting and refining (nonferrous metals):						
1919	1,029,632	2,576,981	996,065	2,897,326	4,468	25,078,502
1914	955,246	2,237,205	1,226,677	2,636,122	(2)	22,437,360
Copper smelting and refining:						
1919						
Smelting only	179,026	1,088,511	397,762	2,539,631	3,490	712,817
Refining only	1,632	460,546	306,058	1,894,748	64	.....
Smelting and refining	66,911	394,010	41,851	107,081	2,972	708,184
1914	110,483	233,955	49,853	537,802	454	4,633
Lead smelting and refining:	299,480	812,196	744,256	2,303,755	(2)	10,615
1919						
Smelting only	7,276	292,806	321,442	201,881	207	20,940
Smelting and refining[3]	2,658	215,817	277,577	26,999	127	10,049
1914	4,618	76,989	43,865	174,882	80	10,891
Zinc smelting and refining:	.....	358,484	389,826	186,556	(2)	90,656
1919						
Pigs, bars, plates, and sheets	835,129	1,123,590	238,432	6,197	449	24,343,053
All other	795,904	1,020,013	236,587	6,197	339	22,788,806
1914	39,225	103,577	1,845	.....	110	1,554,847
	655,766	1,066,525	92,595	145,811	(2)	22,336,039

[1] Includes some semianthracite.

[2] Included in figures for fuel oils.

[3] Includes "Refining only."

TABLE 10.—FUEL CONSUMED, BY STATES: 1919—Continued.

INDUSTRY AND STATE.	COAL. Anthracite[1] (tons, 2,240 pounds).	COAL. Bituminous (tons, 2,000 pounds).	Coke (tons, 2,000 pounds).	Fuel oils, (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
Smelting and refining, metals not elsewhere specified: [2] 1919	8,201	72,074	38,429	149,617	322	1,092
Arizona: Copper	101	19,062	142,257	1,735,118	162	.....
Arkansas: Zinc	.....	24,456	6,266	5,952	.....	3,559,386
California: Copper	.....	.....	15,377	50,190	.....	.....
Colorado:						
Zinc	26,636	34,715	1,223	.....	.....	.....
Other	2,658	.....	.....	.....	.....	5,897
Illinois:						
Zinc	58,233	591,106	101,208	11	335	.....
Other	.....	27,757	32,753	2,348	.....	.....
Indiana	5,824	80,059	4,729	20,830	80	1,869
Kansas: Zinc	.....	19,390	11,209	.....	.....	5,251,309
Missouri	.....	39,751	28,173	13,292	179	2,644
New Jersey:						
Copper	126,271	291,325	57,879	118,304	248	708,453
Other	8,129	32,705	31,217	139,529	.....	847
Oklahoma: Zinc	41,228	102,005	31,353	.....	110	15,526,316
Pennsylvania	651,029	205,053	81,138	.....	.....	6,962
Utah: Lead	.....	91,995	130,477	4,600	.....	.....
All other states	109,523	1,017,602	320,806	807,152	3,354	14,819

[1] Includes some semianthracite.

[2] Includes antimony, tin, nickel, molybdenum, etc.

SPECIAL STATISTICS.

Products.—The products of the smelting and refining industries are included in the reports of the United States Geological Survey, which give the production of the various metals and allied products. Because of the duplication in values carried by the census reports, the production data for the various metals can not be coordinated with the products as reported for the smelting and refining industries, either as a group, or for the component industries. Gold and silver are important factors in the products of the copper smelting and refining industry and the lead smelting and refining industry, and in each case there is extensive duplication in the smelter returns and the reports for the refineries on account of the product of the one becoming material for the other. Moreover, the gold and silver production comes in part from industrial operations not classed as smelting and refining.

GENERAL TABLES.

Comparative summary, by states.—Table 11 gives for 1919, 1914, and 1909 the most significant data for the copper, lead, and zinc smelting and refining industries. Comparative figures for prior census years are not available for other nonferrous metals.

Detailed statement for the industries, by states.—Table 12 presents for 1919 the statistics in detail for the smelting and refining (nonferrous) industries for each state for which figures can be shown without the disclosure of individual operations.

TABLE 11.—COMPARATIVE SUMMARY FOR COPPER, LEAD, AND ZINC SMELTING AND REFINING, BY STATES: 1919, 1914, AND 1909.

INDUSTRY AND STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages. (Expressed in thousands.)	Cost of materials. (Expressed in thousands.)	Value of products. (Expressed in thousands.)
Total	1919	98	37,579	447,779	$52,686	$833,799	$952,020
	1914	88	34,733	261,419	28,983	572,745	669,139
	1909	95	29,707	206,537	23,037	510,725	580,418
Copper smelting and refining.	1919	34	17,345	321,610	25,723	584,410	651,102
	1914	37	17,731	194,980	16,149	379,157	444,022
	1909	38	15,628	158,126	13,396	333,532	378,806
Arizona	1919	10	3,112	86,253	4,772	78,669	94,184
	1914	9	2,906	41,993	2,969	34,380	53,438
	1909	8	3,129	29,042	2,776	29,242	41,059
New Jersey	1919	4	4,066	49,683	5,346	231,413	244,269
	1914	4	3,344	42,735	2,247	153,863	159,199
	1909	4	2,322	22,320	1,335	118,936	125,651
All other states	1919	20	10,167	185,674	15,605	274,328	312,649
	1914	24	11,481	110,252	10,933	190,914	231,385
	1909	26	10,177	106,764	9,285	185,354	212,096
Lead smelting and refining.	1919	25	6,438	52,565	9,180	179,374	196,795
	1914	22	7,385	29,734	6,134	154,015	171,579
	1909	28	7,424	26,954	5,431	151,963	167,406
Utah	1919	3	1,749	14,110	2,700	23,738	27,518
	1914	3	1,882	12,150	1,795	18,066	21,752
Lead smelting and refining—Continued. All other states	1919	22	4,689	38,455	$6,480	$155,636	$169,277
	1914	19	5,503	17,584	4,339	135,949	149,827
Zinc smelting and refining.	1919	39	13,796	73,604	17,783	70,015	104,123
	1914	29	9,617	36,705	6,700	39,573	53,538
	1909	29	6,655	21,457	4,210	25,230	34,206
Illinois	1919	7	4,224	19,796	4,994	18,453	24,954
	1914	8	3,573	16,253	2,571	14,200	18,421
	1909	5	1,922	7,485	1,275	6,496	9,004
Kansas	1919	3	717	3,523	886	4,664	6,038
	1914	5	811	3,474	633	4,213	5,259
	1909	12	1,821	5,298	1,136	8,877	10,857
Oklahoma	1919	11	2,272	6,952	3,174	14,550	19,518
	1914	6	1,641	4,143	1,310	7,879	9,939
	1909	3	566	1,181	343	2,133	3,002
All other states	1919	18	6,583	43,333	8,729	32,348	53,613
	1914	10	3,592	12,835	2,186	13,281	19,919
	1909	9	2,346	7,493	1,456	7,724	11,343

TABLE 12.—DETAILED STATEMENT,

	Industry and state.	Number of establishments.	Persons engaged in the industry. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	Wage earners Dec. 15 or nearest representative day. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Capital.
	SMELTING AND REFINING, NONFERROUS METALS.														
1	United States—Total	111	44,271	2	1,212	2,801	636	39,620	Ja 50,502	Je 36,110	39,662	39,414	246	2	*Dollars.* 543,341,935
2	Copper smelting and refining	34	19,654	.....	517	1,518	274	17,345	Ja 23,627	Au 15,351	16,997	16,937	60	.....	308,680,268
3	Lead smelting and refining	25	7,354	1	234	569	112	6,438	Ja 8,054	Se 5,723	6,331	6,322	9	.....	115,676,768
4	Zinc smelting and refining	39	14,903	.....	292	595	220	13,796	Ja 16,159	Je 12,250	14,147	14,131	14	2	98,757,355
5	Smelting and refining, metals not elsewhere specified.	13	2,360	1	169	119	30	2,041	Ja 2,662	Ap 1,783	2,187	2,024	163	.....	20,227,544
6	Arizona	10	3,620	.....	111	364	33	3,112	Ja 3,914	My 2,662	3,111	3,101	10	.....	83,013,194
7	Arkansas	3	568	.....	9	10	2	547	De 587	Ap 462	587	587	.....	.....	1,801,151
8	Colorado	11	1,781	.....	38	90	11	1,642	Ja 2,089	Se 1,341	1,630	1,628	2	.....	14,122,249
9	Illinois	10	5,634	.....	152	186	32	5,264	Ja 5,774	No 4,715	5,080	5,031	49	.....	34,525,295
10	Indiana	4	685	.....	36	53	22	574	Ja 919	Je 380	594	590	4	.....	6,129,943
11	Missouri	4	1,236	.....	55	106	43	1,032	No 1,264	Mh 723	1,245	1,245	.....	.....	15,076,240
12	New Jersey	9	6,064	1	270	455	118	5,220	Ja 6,590	Se 4,747	4,928	4,771	157	.....	81,707,507
13	Pennsylvania	5	4,908	.....	49	269	139	4,451	Ja 5,069	Oc 4,011	4,568	4,557	9	2	42,638,891
14	All other states [3]	55	19,775	1	492	1,268	236	17,778	.....	.....	17,919	17,904	15	.....	264,327,465
	COPPER SMELTING AND REFINING.														
1	United States	34	19,654	.....	517	1,518	274	17,345	Ja 23,627	Au 15,351	16,997	16,937	60	.....	308,680,268
2	Smelting only	21	9,029	.....	246	761	103	7,919	Ja 10,982	Au 6,743	7,998	7,979	19	.....	171,825,621
3	Refining only	4	5,956	.....	135	334	87	5,400	Ja 7,540	Je 4,546	4,870	4,839	31	.....	72,206,839
4	Smelting and refining	9	4,669	.....	136	423	84	4,026	Ja 5,105	De 3,377	4,129	4,119	10	.....	64,647,808
5	Arizona	10	3,620	.....	111	364	33	3,112	Ja 3,914	My 2,662	3,111	3,101	10	.....	83,013,194
6	California	3	355	.....	27	26	13	289	Ja 602	Se 127	217	217	.....	.....	6,138,439
7	New Jersey	4	4,661	.....	137	357	101	4,066	Ja 4,926	De 3,624	3,624	3,584	40	.....	67,694,831
8	All other states [4]	17	11,018	.....	242	771	127	9,878	.....	.....	10,045	10,035	10	.....	151,833,804
	LEAD SMELTING AND REFINING.														
1	United States	25	7,354	1	234	569	112	6,438	Ja 8,054	Se 5,723	6,331	6,322	9	.....	115,676,768
2	Smelting only	18	5,487	1	146	419	82	4,839	Ja 6,101	Se 4,167	4,936	4,931	5	.....	57,992,579
3	Smelting and refining [5]	7	1,867	.....	88	150	30	1,599	Ja 1,953	De 1,354	1,395	1,391	4	.....	57,684,189
4	Utah	3	1,980	.....	42	170	19	1,749	Ja 2,253	Je 1,514	1,698	1,697	1	.....	18,152,457
5	All other states [6]	22	5,374	1	192	399	93	4,689	.....	.....	4,633	4,625	8	.....	97,524,311
	ZINC SMELTING AND REFINING.														
1	United States	39	14,903	.....	292	595	220	13,796	Ja 16,159	Je 12,250	14,147	14,131	14	2	98,757,355
2	Pigs, bars, plates, and sheets	33	13,914	.....	241	538	207	12,928	Ja 15,103	Je 11,405	13,119	13,103	14	2	87,770,508
3	All other	6	989	.....	51	57	13	868	Ja 1,056	Oc 398	1,028	1,028	.....	.....	10,986,847
4	Arkansas	3	568	.....	9	10	2	547	De 587	Ap 462	587	587	.....	.....	1,801,151
5	Colorado	4	444	.....	15	22	2	405	Ja 533	Jy 272	485	484	1	.....	1,495,237
6	Illinois	7	4,506	.....	110	148	24	4,224	Ja 4,791	No 3,622	4,085	4,084	1	.....	29,894,439
7	Kansas	3	775	.....	29	18	11	717	Fe 842	Oc 637	688	688	.....	.....	4,372,328
8	Oklahoma	11	2,410	.....	47	66	25	2,272	Ja 2,956	Jy 1,972	2,446	2,445	1	.....	12,045,470
9	All other states [7]	11	6,200	.....	82	331	156	5,631	.....	.....	5,856	5,843	11	2	49,148,730
	SMELTING AND REFINING, METALS NOT ELSEWHERE SPECIFIED.														
1	United States [8]	13	2,360	1	169	119	30	2,041	Ja 2,662	Ap 1,783	2,187	2,024	163	.....	20,227,544

[1] Includes water wheels and turbines (irrespective of ownership of water supply).
[2] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft belt or transmitted power from neighboring power plants).
[3] All other states embrace: California, 5 establishments; Connecticut, 1; Idaho, 1; Iowa, 1; Kansas, 4; Maryland, 1; Michigan, 4; Montana, 4; Nebraska, 1; Nevada, 2; New York, 3; Ohio, 1; Oklahoma, 12; Tennessee, 2; Texas, 1; Utah, 5; Virginia, 1; West Virginia, 3; Washington, 2; and Wisconsin, 1.
[4] All other states embrace: Maryland, 1 establishment; Michigan, 4; Montana, 3; Nevada, 2; New York, 1; Tennessee, 2; Texas, 1; Utah, 1; Virginia, 1; and Washington, 1.

BY STATES: 1919.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.						Electric horsepower generated in establishments reporting.	
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
SMELTING AND REFINING, NONFERROUS METALS.																	
Dollars. 5,478,048	*Dollars.* 5,933,604	*Dollars.* 55,649,412	*Dollars.* 472,171	*Dollars.* 46,628	*Dollars.* 6,908,585	*Dollars.* 813,802,718	*Dollars.* 34,953,196	*Dollars.* 972,093,552	*Dollars.* 123,337,638	459,479	157,639	118,671	3,773	7,900	171,496	109,817	1
2,545,376	3,350,969	25,723,371	222,176	12,022	3,399,101	565,167,149	19,243,024	651,101,591	66,691,418	321,610	106,520	79,766	425	7,550	127,349	56,906	2
1,026,786	1,075,000	9,179,615	249,995	13,923	1,022,881	173,697,163	5,676,483	196,794,519	17,420,873	52,565	17,880	7,025	84	350	27,226	8,206	3
1,265,631	1,195,838	17,783,278	.....	17,100	1,760,487	60,568,127	9,446,601	104,122,938	34,108,210	73,604	28,802	28,030	3,264	.....	13,508	39,488	4
640,255	311,797	2,963,148	.....	3,583	726,116	14,370,279	587,088	20,074,504	5,117,137	11,700	4,437	3,850	.....	.....	3,413	5,217	5
683,844	972,262	4,771,998	98,454	1,022	1,302,241	71,670,919	6,997,987	94,184,312	15,515,406	86,253	27,545	39,089	225	.....	19,394	19,082	6
28,675	22,685	698,155	.....	.....	7,864	3,319,948	286,919	4,423,398	816,531	1,283	550	.....	.....	.....	733	155	7
141,383	214,807	1,884,005	240,216	600	259,321	14,028,595	1,172,200	18,893,444	3,692,649	12,504	5,000	502	.....	.....	7,002	3,383	8
540,314	399,849	6,442,044	.....	1,000	516,204	26,548,146	3,006,162	39,047,198	9,492,890	23,063	11,547	5,667	140	.....	5,709	7,050	9
148,275	82,257	1,050,528	.....	.....	63,808	7,246,869	424,658	9,620,344	1,948,817	5,382	4,252	208	.....	.....	832	922	10
179,362	175,018	989,333	.....	.....	194,253	7,458,335	501,039	9,217,888	1,258,514	7,319	2,100	3,475	.....	.....	1,744	.....	11
951,244	943,541	7,211,939	.....	3,590	674,501	237,286,832	2,984,920	256,944,808	16,673,056	55,404	35,737	15,408	50	.....	4,209	20,795	12
398,785	527,016	5,882,292	.....	.....	981,962	21,264,335	3,037,403	42,370,748	18,069,010	33,045	6,615	21,333	50	.....	5,047	25,772	13
2,406,166	2,596,169	26,719,118	133,501	40,416	2,908,431	424,978,739	16,541,908	497,391,412	55,870,765	235,226	64,293	32,899	3,308	7,900	126,826	32,658	14
COPPER SMELTING AND REFINING.																	
2,545,376	3,350,969	25,723,371	222,176	12,022	3,399,101	565,167,149	19,243,024	651,101,591	66,691,418	321,610	106,520	79,766	425	7,550	127,349	56,906	1
1,404,443	1,838,417	12,258,730	222,176	11,022	2,089,665	144,444,887	11,610,281	186,670,898	30,615,730	173,996	57,815	48,775	375	1,400	65,631	28,322	2
541,248	670,466	7,423,290	.....	.....	549,964	255,081,621	3,600,814	278,567,944	19,885,509	50,908	28,560	19,933	.....	.....	2,415	14,445	3
599,685	842,086	6,041,351	.....	1,000	759,472	165,640,641	4,031,929	185,862,749	16,190,179	96,706	20,145	11,058	50	6,150	59,303	14,139	4
683,844	972,262	4,771,998	98,454	1,022	1,302,241	71,670,919	6,997,987	94,184,312	15,515,406	86,253	27,545	39,089	225	.....	19,394	19,082	5
159,295	52,771	428,241	.....	.....	74,164	1,344,798	392,353	2,531,602	794,451	5,843	375	.....	.....	.....	5,468	.....	6
445,715	683,177	5,345,591	.....	.....	280,920	228,660,121	2,753,313	244,268,519	12,855,085	49,683	32,775	12,858	50	.....	4,000	15,822	7
1,256,522	1,642,759	15,177,541	123,722	11,000	1,741,776	263,491,311	9,099,371	310,117,158	37,526,476	179,831	45,825	27,819	150	7,550	98,487	22,002	8
LEAD SMELTING AND REFINING.																	
1,026,786	1,075,000	9,179,615	249,995	13,923	1,022,881	173,697,163	5,676,483	196,794,519	17,420,873	52,565	17,880	7,025	84	350	27,226	8,206	1
620,684	796,967	6,646,469	240,385	2,340	800,058	58,427,136	4,489,827	74,952,572	12,035,609	42,372	13,300	4,825	84	350	23,813	5,832	2
406,102	278,033	2,533,146	9,610	11,583	222,823	115,270,027	1,186,656	121,841,947	5,385,264	10,193	4,580	2,200	.....	.....	3,413	2,374	3
225,160	294,320	2,700,111	.....	.....	162,679	21,604,498	2,133,231	27,518,050	3,780,321	14,110	8,225	2,150	.....	.....	3,735	4,365	4
801,626	780,680	6,479,504	249,995	13,923	860,202	152,092,665	3,543,252	169,276,469	13,640,552	38,455	9,655	4,875	84	350	23,491	3,841	5
ZINC SMELTING AND REFINING.																	
1,265,631	1,195,838	17,783,278	.....	17,100	1,760,487	60,568,127	9,446,601	104,122,938	34,108,210	73,604	28,802	28,030	3,264	.....	13,508	39,488	1
1,075,593	1,081,750	16,135,100	.....	15,000	1,699,418	54,667,706	8,937,179	95,662,585	32,057,700	66,540	27,437	28,030	3,264	.....	7,809	39,098	2
190,038	114,088	1,648,178	.....	2,100	61,069	5,900,421	509,422	8,460,353	2,050,510	7,064	1,365	.....	.....	.....	5,699	390	3
28,675	22,685	698,155	.....	.....	7,864	3,319,948	286,919	4,423,398	816,531	1,283	550	.....	.....	.....	733	155	4
47,178	36,125	412,263	.....	600	16,715	706,993	189,281	1,443,347	547,073	2,071	950	2	.....	.....	1,119	1,916	5
417,086	320,331	4,993,880	.....	.....	366,679	15,812,236	2,641,012	24,953,952	6,500,704	19,796	10,747	5,667	140	.....	3,242	7,050	6
83,148	33,821	885,584	.....	15,000	50,652	3,996,232	667,339	6,037,920	1,374,349	3,523	1,190	625	1,190	.....	518	70	7
167,582	133,530	3,174,486	.....	.....	242,191	12,743,825	1,806,153	19,517,566	4,967,588	6,052	3,945	5	1,315	.....	1,687	2,545	8
521,962	649,346	7,618,910	.....	1,500	1,076,386	23,988,893	3,855,897	47,746,755	19,901,965	39,979	11,420	21,731	619	.....	6,209	27,752	9
SMELTING AND REFINING, METALS NOT ELSEWHERE SPECIFIED.																	
640,255	311,797	2,963,148	.....	3,583	726,116	14,370,279	587,088	20,074,504	5,117,137	11,700	4,437	3,850	.....	.....	3,413	5,217	1

[5] Includes "Refining only."
[6] All other states embrace: California, 1 establishment; Colorado, 5; Idaho, 1; Illinois, 2; Indiana, 2; Kansas, 1; Missouri, 3; Montana, 1; Nebraska, 1; Ohio, 1; Oklahoma, 1; Pennsylvania, 1; Washington; 1, and Wisconsin, 1.
[7] All other states embrace: Indiana, 2 establishments; Iowa, 1; New Jersey, 1; Pennsylvania, 3; Utah, 1; and West Virginia, 3.
[8] Distribution of establishments, by states: California, 1; Colorado, 2; Connecticut, 1; Illinois, 1; Missouri, 1; New Jersey, 4; New York, 2; and Pennsylvania, 1.

NEEDLES, PINS, AND HOOKS AND EYES.

GENERAL STATISTICS.

General character of the industry.—This report presents statistics for the manufacture of (1) needles, which include knitting-machine needles, sewing-machine needles, and darning, canvas, and bag needles; (2) pins, including common or toilet pins, safety pins, and metal hairpins; (3) hooks and eyes, and snap fasteners.

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

In addition to the total value of products for 1919, as shown in this table, needles, pins, and hooks and eyes, to the value of $1,613,849, were produced as subsidiary products by establishments engaged primarily in the manufacture of other products. The value of such manufactures, however, is not included in the total value of products shown for this industry.

Principal states, ranked by value of products.—Connecticut, as shown by Table 2, was preeminently the leading state in 1919, as it has been for a number of preceding censuses. In 1919 this state, with 25 per per cent of the number of establishments, reported 43.4 per cent of the total number of wage earners and 47.4 per cent of the total value of products. Massachusetts, second in importance, contributed 14.8 per cent and 14.3 per cent, respectively, of these two latter items. The industry is strongly centralized in New England, with a total value of products of $20,883,458, or 71.3 per cent of the total for the industry.

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

Wage earners, by months.—As shown by Table 4, the number of wage earners employed in the industry ranged from a maximum of 10,052 in December to a minimum of 8,823 in May, the minimum number being equivalent to 87.8 per cent of the maximum. This table also shows the predominance of female wage earners which represented 51.6 per cent of the total wage earners employed in the industry in 1919. Figures are given separately for all states reporting over 350 wage earners, and for a number of the states showing a large proportion of females. The number of males and females for the United States is also shown.

Average number of wage earners, by prevailing hours of labor per week, for states.—Table 5 shows a marked shortening of the working day for the industry since 1914. In that year only 3.6 per cent were reported as employed fewer than 54 hours per week as against 53 per cent in 1919. In 1914 the "60" group constituted 14.3 per cent of the total wage earners, as compared with six-tenths of 1 per cent in 1919.

Size of establishments, by average number of wage earners, for states.—Analysis of Table 6 discloses the fact that 27 establishments, or 29.3 per cent of the total number in the industry, employed more than 100 wage earners each, a total of 7,664, or 82.5 per cent of the total wage earners in 1919.

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." The statistics in Table 7 show the degree of concentration of production in large establishments. In 1919 the groups "$500,000 to $1,000,000" and "$1,000,000 and over" included 15 establishments, or 16.3 per cent of the total number for the industry, employed 5,998 wage earners, or 64.6 per cent of the total average number, and reported products to the value of $20,064,491, or 68.4 per cent of the total value of products.

Character of ownership.—Table 8 emphasizes the predominance of the corporate form of ownership. Corporations owned 71.7 per cent of the total number of establishments for the industry in 1919, employed 94.1 per cent of the total average number of wage earners, and reported 95.1 per cent of the value of products. During the five-year period 1914 to 1919 the average number of wage earners in corporations

increased 3,514, or 67.1 per cent, and the value of products $20,110,470, or 259.1 per cent.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 9, there was an increase in the total horsepower for the industry of 3,654 horsepower, or 75.9 per cent, due largely to an increase of 2,687 horsepower, or 324.1 per cent, in rented power, since owned power increased only 967 horsepower, or 24.3 per cent, during the five-year period.

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

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

	1919	1914	1909	1904	1899	1889	PER CENT OF INCREASE. 1914–1919	1909–1914	1904–1909	1899–1904	1889–1899
Number of establishments	92	49	49	46	52	55	.....	.....	.....	.....	.....
Persons engaged	10,389	5,750	4,978	4,196	2,834	(1)	80.7	15.5	18.6	.....	.....
Proprietors and firm members	39	20	27	31	46	(1)	.....	.....	.....	.....	.....
Salaried employees	1,056	391	313	200	135	96	170.1	24.9	56.5	48.1	40.6
Wage earners (average number)	9,294	5,339	4,638	3,965	2,653	1,827	74.1	15.1	17.0	49.5	45.2
Primary horsepower	8,467	4,813	4,542	2,440	2,103	1,183	75.9	6.0	86.1	16.0	77.8
Capital	$26,324,627	$9,424,203	$6,705,118	$5,331,939	$4,617,552	$2,269,707	179.3	40.6	25.8	15.5	103.4
Salaries and wages	11,316,031	3,104,749	2,457,728	1,848,741	1,214,571	876,446	264.5	26.3	32.9	52.2	38.6
Salaries	2,506,250	598,138	393,350	252,818	147,207	120,891	319.0	52.1	55.6	71.7	21.8
Wages	8,809,781	2,506,611	2,064,378	1,595,923	1,067,364	755,555	251.5	21.4	29.4	49.5	41.3
Paid for contract work	206,216	40,571	35,779	.....	1,594	(1)	408.3	13.4	.....	.....	.....
Rent and taxes	1,781,687	222,374	166,712	(2) 142,788	104,734	(1)	701.2	33.4	16.8	.....	.....
Cost of materials	10,227,199	3,241,657	2,328,674	1,583,644	1,227,997	776,057	215.5	39.2	47.0	29.0	58.2
Value of products	29,304,995	7,890,879	6,694,095	4,750,589	3,237,982	2,109,469	271.4	17.9	40.9	46.7	53.5
Value added by manufacture (3)	19,077,796	4,649,222	4,365,421	3,166,945	2,009,985	1,333,412	310.3	6.5	37.8	57.6	50.7

(1) Figures not available. (2) Exclusive of internal revenue. (3) Value of products less cost of materials.

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

STATE.	Number of establishments.	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	92	9,294	100.0	...	$29,305	100.0	...	$19,078	100.0	..
Connecticut	23	4,037	43.4	1	13,904	47.4	1	8,287	43.4	1
Massachusetts	7	1,375	14.8	2	4,194	14.3	2	2,995	15.7	2
Illinois	3	351	3.8	7	1,941	6.6	3	1,185	6.2	4
Pennsylvania	8	739	8.0	4	1,724	5.9	4	1,123	5.9	5
New Hampshire	9	983	10.6	3	$1,705	5.8	5	$1,550	8.1	3
New York	19	497	5.3	5	1,664	5.7	6	1,016	5.3	6
New Jersey	10	418	4.5	6	1,204	4.1	7	724	3.8	7
Michigan	3	142	1.5	11	668	2.3	8	547	2.9	8
All other states	10	752	8.1	...	2,301	7.9	...	1,651	8.7	..

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

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	Female.
All classes	1919	10,389	5,220	5,169	50.2	49.8
	1914	5,750	2,928	2,822	50.9	49.1
	1909	4,978	2,553	2,425	51.3	48.7
Proprietors and officials	1919	432	422	10	97.7	2.3
	1914	135	133	2	98.5	1.5
	1909	136	131	5	96.3	3.7
Proprietors and firm members	1919	39	38	1	97.4	2.6
	1914	20	19	1	95.0	5.0
	1909	27	26	1	96.3	3.7
Salaried officers of corporations	1919	119	118	1	99.2	0.8
	1914	55	54	1	98.2	1.8
	1909	46	44	2	95.7	4.3
Superintendents and managers	1919	274	266	8	97.1	2.9
	1914	60	60	.....	100.0	.....
	1909	63	61	2	96.8	3.2
Clerks and other subordinate salaried employees.	1919	663	299	364	45.1	54.9
	1914	276	154	122	55.8	44.2
	1909	204	123	81	60.3	39.7
Wage earners (average number)	1919	9,294	4,499	4,795	48.4	51.6
	1914	5,339	2,641	2,698	49.5	50.5
	1909	4,638	2,299	2,339	49.6	50.4
16 years of age and over	1919	8,893	4,387	4,506	49.3	50.7
	1914	5,086	2,562	2,524	50.4	49.6
	1909	4,282	2,117	2,165	49.4	50.6
Under 16 years of age	1919	401	112	289	27.9	72.1
	1914	253	79	174	31.2	68.8
	1909	356	182	174	51.1	48.9

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

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

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919	9,294	9,008	8,994	8,949	8,824	*8,823*	8,925	9,314	9,587	9,525	9,692	9,835	10,052	87.8
Males	4,499	4,301	*4,230*	4,241	4,244	4,256	4,381	4,429	4,581	4,702	4,769	4,875	4,979	85.0
Females	4,795	4,707	4,764	4,708	4,580	4,567	*4,544*	4,885	5,006	4,823	4,923	4,960	5,073	89.6
1914	5,339	5,497	5,474	5,445	5,421	5,405	5,268	5,318	*5,199*	5,288	5,279	5,258	5,216	94.6
1909	4,638	*4,370*	4,424	4,567	4,668	4,704	4,604	4,496	4,652	4,702	4,759	4,789	4,921	88.8
Connecticut	4,037	3,941	3,959	4,054	3,971	*3,929*	3,981	4,009	4,086	4,093	4,094	4,144	4,183	93.9
Illinois	351	340	356	345	354	349	340	344	339	*338*	348	381	378	88.7
Massachusetts	1,375	1,360	1,268	*1,217*	1,223	1,288	1,299	1,305	1,396	1,455	1,489	1,542	1,658	73.4
New Hampshire	983	983	931	924	*918*	940	933	962	1,010	994	1,043	1,077	1,086	84.1
New Jersey	418	504	484	429	390	*361*	367	386	420	418	418	412	427	71.6
New York	497	467	482	492	*443*	445	475	535	521	512	509	532	551	80.4
Pennsylvania	739	*612*	729	695	715	646	650	875	893	751	820	752	730	68.5
States showing large proportion of females.														Per ct. av. is of state.
Connecticut	1,797	*1,723*	1,762	1,835	1,793	1,765	1,781	1,834	1,866	1,842	1,806	1,785	1,772	44.5
Illinois	250	243	264	249	259	250	239	242	239	*238*	239	271	267	71.2
Massachusetts	751	813	732	680	*677*	736	718	695	736	751	774	819	881	54.6
New Hampshire	575	584	538	523	*508*	547	547	565	601	581	618	639	649	58.5
New Jersey	242	300	295	255	231	*207*	215	233	257	236	229	218	228	57.9
New York	244	246	254	276	219	219	*216*	260	256	241	225	243	273	49.1
Pennsylvania	556	463	581	552	556	473	*452*	672	672	535	619	550	547	75.2

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

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
			44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.
United States	1919	9,294	837	104	1,372	2,612	324	3,992	53
	1914	5,339	(2)	(2)	20	171	1,178	3,206	764
	1909	4,638	(2)	(2)	24	35	423	1,815	2,341
Connecticut	1919	4,037	.....	.....	.....	115	124	3,765	33
	1914	3,068	.....	.....	.....	127	.....	2,189	752
Illinois [3]	1919	351	.....	104	.....	247	.....	.....	.....
Massachusetts	1919	1,375	812	.....	129	434	.....	.....	.....
	1914	535	.....	.....	.....	.....	535	.....	.....
New Hampshire	1919	983	.....	.....	840	.....	97	46	.....
	1914	366	.....	.....	.....	.....	.....	366	.....
New Jersey	1919	418	.....	.....	25	243	.....	150	.....
	1914	515	(2)	(2)	1	.....	.....	514	.....
New York	1919	497	19	.....	57	406	1	14	.....
	1914	230	.....	.....	.....	28	202	.....	.....
Pennsylvania [3]	1919	739	2	.....	78	592	53	14	.....

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

[2] Corresponding figures not available.

[3] Figures not available for 1914.

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

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States 1919	92	9,294	4	14	34	20	268	17	636	10	692	20	3,014	3	1,245	3	2,107	1	1,298
1914	49	5,339	.....	8	22	12	158	9	297	7	500	7	1,054	3	977	3	2,331	.....	.....
Connecticut	23	4,037	.....	3	6	4	56	4	130	5	352	4	670	.....	.....	2	1,525	1	1,298
Illinois	3	351	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	351	.....	.....	.....	.....	.....	.....
Massachusetts	7	1,375	.....	1	1	2	24	.....	.....	.....	.....	1	105	3	1,245	.....	.....	.....	.....
New Hampshire	9	983	.....	1	2	.....	.....	2	85	1	97	5	799	.....	.....	.....	.....	.....	.....
New Jersey	10	418	1	1	2	5	69	1	38	.....	.....	2	309	.....	.....	.....	.....	.....	.....
New York	19	497	1	5	15	6	75	5	182	.....	.....	2	225	.....	.....	.....	.....	.....	.....
Pennsylvania	8	739	1	1	2	2	24	2	78	1	53	.....	.....	.....	.....	1	582	.....	.....

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

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes	92	49	49	9,294	5,339	4,638	$29,304,995	$7,890,879	$6,694,095	$19,077,796	$4,649,222	$4,365,421
Less than $5,000	8	6	10	12	19	31	15,473	17,082	28,675	8,832	12,608	23,086
$5,000 to $20,000	14	10	13	72	107	123	151,922	125,690	145,800	94,910	94,250	106,188
$20,000 to $100,000	23	17	14	541	706	729	1,221,526	790,821	641,960	763,251	557,099	529,217
$100,000 to $500,000	32	15	12	2,671	[1] 4,507	3,755	7,851,583	[1] 6,957,286	5,877,660	5,555,766	[1] 3,985,265	3,706,930
$500,000 to $1,000,000	8	1	.....	1,596	.....	.....	5,491,630	.....	.....	3,771,006	.....	.....
$1,000,000 and over	7	.....	.....	4,402	.....	.....	14,572,861	.....	.....	8,884,031	.....	.....
	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	8.7	12.2	20.4	0.1	0.4	0.7	0.1	0.2	0.4	0.1	0.3	0.5
$5,000 to $20,000	15.2	20.4	26.5	0.8	2.0	2.7	0.5	1.6	2.2	0.5	2.0	2.4
$20,000 to $100,000	25.0	34.7	28.6	5.8	13.2	15.7	4.2	10.0	9.6	4.0	12.0	12.1
$100,000 to $500,000	34.8	30.7	24.5	28.7	84.4	81.0	26.8	88.2	87.8	29.1	85.7	84.9
$500,000 to $1,000,000	8.7	2.0	.....	17.2	.....	.....	18.7	.....	.....	19.8	.....	.....
$1,000,000 and over	7.6	.....	.....	47.4	.....	.....	49.7	.....	.....	46.6	.....	.....

[1] Includes the group "$500,000 to $1,000,000."

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

CHARACTER OF OWNERSHIP.	Census year.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
All classes	1919	92	9,294	$29,304,995	$19,077,796
	1914	49	5,339	7,890,879	4,649,222
Individual	1919	16	436	1,203,319	757,001
	1914	4	23	24,019	19,279
Corporation	1919	66	8,749	27,871,058	18,167,552
	1914	39	5,235	7,760,588	4,550,623
All other	1919	10	109	230,618	153,243
	1914	6	81	106,272	79,320
Per cent distribution:					
Individual	1919	17.4	4.7	4.1	4.0
	1914	8.2	0.4	0.3	0.4
Corporation	1919	71.7	94.1	95.1	95.2
	1914	79.6	98.1	98.3	97.9
All other	1919	10.9	1.2	0.8	0.8
	1914	12.2	1.5	1.3	1.7

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

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	758	298	179	8,467	4,813	4,542	100.0	100.0	100.0
Owned	43	37	40	4,951	3,984	3,644	58.5	82.8	80.2
Steam	28	26	27	4,125	3,359	3,102	48.7	69.8	68.3
Engines	25	(1)	(1)	3,492	(1)	(1)	41.2	(1)	(1)
Turbines	3			633			7.5		
Internal-combustion engines	1	1	4	4	5	112	(2)	0.1	2.5
Water wheels and turbines	14	10	9	822	620	430	9.7	12.9	9.5
Rented	715	261	139	3,516	829	898	41.5	17.2	19.8
Electric	715	261	139	3,472	799	860	41.0	16.6	18.9
Other	.....	.....	.....	44	30	38	0.5	0.6	0.8
Electric	931	393	197	5,903	2,447	1,667	100.0	100.0	100.0
Rented	715	261	139	3,472	799	860	58.8	32.7	51.6
Generated by establishments reporting	216	132	58	2,431	1,648	807	41.2	67.3	48.4

[1] Not reported separately.

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

TABLE 10.—FUEL CONSUMED: 1919 AND 1914.

FUEL.	QUANTITY.		FUEL.	QUANTITY.	
	1919	1914		1919	1914
Coal	25,813	19,608	Fuel oils ..... barrels	1,693	1,130
Anthracite ..... tons 2,240 lbs	4,420	4,630	Gasoline and other volatile oils ..... barrels	652	(1)
Bituminous ..... tons 2,000 lbs	21,393	14,978	Gas ..... 1,000 cubic feet	26,790	7,627
Coke ..... tons 2,000 lbs	16	46			

[1] Included in figures for fuel oils.

SPECIAL STATISTICS.

Detailed statistics of quantity and value.—Table 11 gives detailed statistics of the quantities and values of the different varieties of products for the industry as reported at the censuses of 1919, 1914, 1904, and 1899. Statistics of this character were not called for at the census of 1909.

The production of needles in the United States, consisting almost entirely of knitting-machine and sewing-machine needles, amounted to 264,060 thousands in 1919, valued at $6,015,839. Of this amount, 163,906 thousands, or 62.1 per cent, were knitting-machine needles, valued at $4,186,327.

Common or toilet pins were reported in pounds and packs at the censuses of 1919 and 1914, but by the gross at previous censuses; therefore, no comparison can be made to show the increased quantity, but the value increased 499.2 per cent during the period from 1899 to 1919.

Of the 92 establishments reported in 1919, 25 manufactured knitting-machine needles; 2, sewing-machine needles; 11, common or toilet pins; 10, metal hairpins; 10, safety pins; 12, hooks and eyes; and 38, snap fasteners and clasps.

Connecticut reported $13,904,286, or 47.4 per cent, of the total value of all products manufactured in 1919; $2,260,239, or 81 per cent, of the common or toilet pins; $486,849, or 32.9 per cent, of the metal hairpins; and $347,239, or 41.7 per cent, of the hooks and eyes. The 9 establishments in New Hampshire practically confine their operations to the production of knitting-machine needles, in which it is the leading state, reporting a product in 1919 to the value of $1,639,088, or 39.2 per cent of the United States total. Connecticut ranks second in this variety of product, and was also the leading state in the production of safety pins.

In 1919 "All other products" included eyelets, paper boxes, hook and eye tape, paper clips, laundry pins, brass goods, piano and player hardware, metal hose supporter trimmings, and machinery of various kinds for use in the industry.

TABLE 11.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919, 1914, 1904, AND 1899.

	1919	1914	1904	1899
Products, total value [1]	$29,304,995	$7,890,879	$4,750,589	$3,237,982
Needles:				
Total thousands	264,060	168,734	204,505	161,356
Total value	$6,015,839	$1,278,444	$1,140,924	$1,027,949
Knitting-machine—				
Latch—				
Thousands	121,184	46,165	44,762	39,764
Value	$3,845,431	$492,387	$422,655	$414,504
Spring—				
Thousands	42,722	47,934	47,921	44,246
Value	$340,896	$129,397	$118,223	$114,660
All other needles, including sewing-machine—				
Thousands	100,154	74,635	111,822	77,346
Value	$1,829,512	$656,660	$600,046	$498,785
Pins:				
Common or toilet—				
Total quantity	(2)	(2)	[3] 132,632,232	[3] 47,338,429
Total value	$2,789,735	$1,248,757		
Made of steel wire—				
Pounds	2,798,633	641,121		
Value	$1,120,823	$163,907		
Packs of 3,360	1,342,119	1,825,673		
Value	$400,379	$182,585	$1,129,006	$465,605
Made of brass wire—				
Pounds	740,797	1,186,397		
Value	$617,017	$375,780		
Packs of 3,600	1,089,307	1,638,035		
Value	$651,516	$526,485		
Hairpins, made of metal—				
Gross	24,310,433	9,242,012	1,704,900	1,189,104
Value	$1,480,992	$528,362	$109,245	$78,155
Safety pins—				
Gross	8,427,719	4,744,303	2,550,650	1,640,284
Value	$2,977,498	$936,663	$829,386	$354,294
Hooks and eyes:				
Great gross	745,819	1,076,177		
Value	$833,321	$1,394,745		
Made of steel wire—				
Great gross	582,647	654,714	(4)	(4)
Value	$654,321	$761,476		
Made of brass wire—				
Great gross	163,172	421,463		
Value	$179,000	$633,269		
Snap fasteners and clasps: [5]				
Great gross	2,122,541			
Value	$7,438,551			
Made of iron and steel—				
Great gross	1,080,276	(6)	(6)	(6)
Value	$4,700,846			
Made of other metals—				
Great gross	1,042,265			
Value	$2,737,705			
All other products, value	$7,769,059	$2,503,908	$1,542,028	$1,311,979

[1] In addition, needles, pins, and hooks and eyes, to the value of $1,613,849 in 1919; $1,155,144 in 1914; $942,506 in 1904; and $536,742 in 1899; were produced as subsidiary products by establishments engaged primarily in the manufacture of other products.
[2] Reported in pounds and packs of 3,360 and 3,600 in 1919 and 1914.
[3] Reported in gross in 1904 and 1899.
[4] Included in "All other products" in 1904 and 1899.
[5] In addition, 428,775 great gross of snap fasteners and clasps, valued at $556,654, were manufactured in the button and other industries in 1919.
[6] Included in "All other products" in 1914, 1904, and 1899.

GENERAL TABLES.

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

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

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

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	92	9,294	8,467	$8,810	$10,227	$29,305
	1914	49	5,339	4,813	2,507	3,242	7,891
	1909	49	4,638	4,542	2,064	2,320	6,694
Connecticut	1919	23	4,037	4,355	4,209	5,617	13,904
	1914	12	3,068	3,235	1,548	2,339	5,109
	1909	8	2,648	3,190	1,311	1,697	4,236
Massachusetts	1919	7	1,375	980	1,337	1,199	4,194
	1914	4	535	390	268	190	577
New Hampshire	1919	9	983	459	824	155	1,705
	1914	6	366	247	159	47	260
	1909	7	438	217	171	38	275
New Jersey	1919	10	418	571	$351	$480	$1,204
	1914	7	515	329	215	201	597
	1909	7	557	524	230	184	620
New York	1919	19	497	620	420	648	1,664
	1914	6	230	187	92	102	307
	1909	9	133	157	50	93	290
All other states	1919	24	1,984	1,482	1,069	2,128	6,634
	1914	14	625	425	225	363	1,041
	1909	18	862	454	302	317	1,273

TABLE 13.—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— Maximum month.	Number, 15th day of— Minimum month.		Male.	Female.	Male	Female		Officials.	Clerks, etc.	Wage earners.
United States	92	10,389	39	393	299	364	9,294	De 10,052	My 8,823	9,839	4,670	4,746	119	304	$26,324,627	$1,626,083	$880,167	$8,809,781
Connecticut	23	4,542	11	196	109	189	4,037	De 4,183	My 3,929	4,250	2,428	1,616	66	140	11,604,691	580,014	382,075	4,208,987
Illinois	3	465	....	20	57	37	351	No 381	Se 338	382	108	195	7	72	1,263,708	223,075	159,092	284,358
Massachusetts	7	1,492	1	42	34	40	1,375	De 1,658	Mh 1,217	1,370	482	856	13	19	4,337,347	257,568	61,191	1,337,310
Michigan	3	162	....	11	2	7	142	De 158	Ap 130	148	90	58	.....	.....	440,871	74,797	12,347	135,863
New Hampshire	9	1,021	4	17	7	10	983	De 1,086	Ap 913	1,092	435	649	4	4	1,189,174	53,304	20,595	823,628
New Jersey	10	463	5	14	11	15	418	Ja 504	My 361	428	104	210	5	19	1,044,413	48,288	26,921	350,530
New York	19	574	9	42	13	13	497	De 551	Ap 443	558	279	274	3	2	1,604,810	127,883	36,207	420,488
Pennsylvania	8	824	3	20	37	25	739	Au 893	Ja 612	730	176	534	7	13	2,625,047	95,812	79,105	533,644
All other states [1]	10	846	6	31	29	28	752	.....	.....	881	478	354	14	35	2,124,566	165,342	102,634	714,973

STATE.	EXPENSES—continued.					Value of products.	Value added by manufacture.	POWER.						
	For contract work.	Rent and taxes.		For materials.				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.	Owned.				Rented.[3]	
									Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[2]		
United States	$206,216	$96,224	$1,685,463	$9,826,308	$400,891	$29,304,995	$19,077,796	8,467	3,492	633	4	822	3,516	2,431
Connecticut	57,099	9,870	709,221	5,395,552	221,891	13,904,286	8,286,843	4,355	2,416	350	.....	655	934	1,615
Illinois	.....	10,969	49,937	738,352	18,067	1,941,030	1,184,611	193	.....	.....	.....	.....	193	.....
Massachusetts	1,521	10,744	281,573	1,143,054	55,764	4,194,263	2,995,445	980	50	.....	.....	.....	930	.....
Michigan	.....	650	47,621	112,089	8,744	667,935	547,102	204	35	.....	.....	.....	169	.....
New Hampshire	6,620	12,781	327,879	139,053	16,210	1,704,998	1,549,735	459	25	15	.....	160	259	.....
New Jersey	47,069	6,981	16,604	460,435	19,847	1,203,961	723,679	571	216	268	.....	.....	87	480
New York	62,271	21,557	109,539	625,354	22,784	1,603,745	1,015,607	620	325	.....	.....	.....	295	180
Pennsylvania	.....	4,755	31,310	588,940	12,657	1,724,194	1,122,597	250	150	.....	4	.....	96	156
All other states [1]	31,036	17,917	111,779	623,479	24,927	2,300,583	1,652,177	835	275	.....	.....	7	553	.....

[1] All other states embrace: Maryland, 1 establishment; Missouri, 1; Ohio, 2; Oregon, 1; Rhode Island, 4; Vermont, 1.
[2] Chiefly water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[3] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

TABLE 17.—DETAILED STATEMENT FOR THE

	STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female	Wage earners. Average number.	Number, 15th day of— Maximum month.	Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female	Capital.
	AUTOMOBILE BODIES AND PARTS.															
1	United States	2,515	153,182	2,129	5,775	7,748	4,974	132,556	De 157,335	Ja [2] 108,857	160,081	151,588	8,065	363	65	*Dollars.* 470,497,552
2	Alabama	9	114	9	8	8	.....	89	Oc 97	Mh [3] 83	111	111	.....	.....	.....	226,415
3	Arkansas	14	107	15	3	4	2	83	De [3] 111	Ap 61	111	100	10	1	.....	167,868
4	California	253	2,199	284	98	66	70	1,681	De 1,921	Ja 1,439	1,953	1,881	68	4	.....	3,412,328
5	Colorado	20	272	30	20	5	5	212	Jy 227	Ja 182	238	220	5	2	11	335,601
6	Connecticut	53	1,392	50	73	54	51	1,164	De 1,494	Ja 863	1,504	1,420	43	20	21	4,924,071
7	Delaware	5	22	8	3	.....	.....	11	Se [3] 12	Ja [3] 10	11	11	.....	.....	.....	75,006
8	District of Columbia	5	34	5	3	1	.....	25	De 30	Mh 21	30	28	2	.....	.....	102,002
9	Florida	8	58	11	1	1	1	44	Je [3] 46	Mh 38	44	44	.....	.....	.....	106,050
10	Georgia	27	279	29	20	13	8	209	De 240	Fe [3] 169	243	210	30	3	.....	430,471
11	Idaho	5	17	5	3	1	1	7	(4) 7	(4) 7	8	8	.....	.....	.....	26,569
12	Illinois	204	6,509	136	397	352	326	5,298	De 6,361	Ja 4,298	6,353	5,929	405	14	5	16,911,058
13	Indiana	145	17,367	99	651	706	682	15,229	No 16,587	Fe 12,865	17,692	16,548	1,081	55	8	54,604,095
14	Iowa	37	569	37	34	19	19	460	No 598	Ap 348	553	482	59	12	.....	1,234,487
15	Kansas	28	145	43	5	3	4	90	De 118	Fe 74	119	116	3	.....	.....	421,693
16	Kentucky	17	447	15	23	12	9	388	Je [3] 397	No 379	389	382	6	1	.....	1,045,283
17	Louisiana	10	206	10	7	12	3	174	Au 197	Fe 152	196	196	.....	.....	.....	321,854
18	Maine	6	56	3	6	1	6	40	Au 48	Ja 28	45	45	.....	.....	.....	47,981
19	Maryland	35	326	36	21	28	8	233	Se 249	Ja 216	251	246	5	.....	.....	701,289
20	Massachusetts	88	4,026	67	147	111	160	3,541	De 3,856	Je 3,152	4,177	3,953	179	44	1	9,661,243
21	Michigan	203	54,905	91	1,696	2,672	1,398	49,048	No 61,438	Ja 36,649	60,175	57,016	3,107	52	.....	186,318,075
22	Minnesota	48	537	44	43	26	19	405	De 454	Ja 328	481	467	14	.....	.....	979,377
23	Mississippi	4	75	2	9	7	1	56	De 83	Ja 35	82	78	4	.....	.....	126,176
24	Missouri	78	1,771	65	108	178	45	1,375	De 1,576	Ja 1,137	1,618	1,583	27	2	6	3,151,817
25	Montana	6	11	7	.....	.....	.....	4	Je [3] 6	Fe [3] 2	4	3	1	.....	.....	16,167
26	Nebraska	20	425	12	32	29	25	327	Oc 412	Mh 252	488	446	41	1	.....	2,755,430
27	New Hampshire	4	7	3	.....	.....	.....	4	(4) 4	(4) 4	4	4	.....	.....	.....	17,828
28	New Jersey	110	3,782	101	124	221	176	3,160	De 3,717	Fe 2,461	3,746	3,532	214	.....	.....	8,923,205
29	New York	316	18,168	266	792	763	658	15,689	Oc 16,725	Je 14,237	17,446	16,548	880	12	6	50,791,593
30	North Carolina	7	56	11	1	.....	.....	44	Je 49	Mh 40	42	42	.....	.....	.....	50,132
31	North Dakota	5	18	4	2	.....	.....	12	Oc [3] 16	Ja [3] 10	15	15	.....	.....	.....	27,282
32	Ohio	237	19,561	161	727	1,244	759	16,670	De 21,679	Fe 12,635	21,607	20,203	1,319	81	4	65,425,652
33	Oklahoma	18	142	17	9	5	6	105	Se 113	Ja 92	102	95	7	.....	.....	175,674
34	Oregon	17	70	22	1	1	.....	46	Jy 55	Ja 31	50	48	1	1	.....	115,256
35	Pennsylvania	177	11,815	166	389	697	289	10,274	De 12,895	Ja 8,329	12,850	12,574	231	45	.....	37,375,912
36	Rhode Island	18	225	17	15	3	11	179	De 203	Fe 151	208	196	12	.....	.....	486,787
37	South Carolina	6	48	8	2	1	3	34	De [3] 37	Je 30	36	35	.....	1	.....	57,469
38	South Dakota	4	10	5	.....	.....	.....	5	My [3] 6	Oc [3] 4	5	5	.....	.....	.....	5,109
39	Tennessee	17	547	15	19	18	9	486	Oc 631	Ja 377	561	536	25	.....	.....	843,259
40	Texas	72	620	85	30	12	13	480	De 573	Fe 412	581	560	17	4	.....	975,356
41	Utah	6	69	6	3	4	.....	56	Jy 71	Ja 46	39	39	.....	.....	.....	90,355
42	Virginia	19	168	14	16	7	5	126	Oc 141	Ja [3] 105	137	110	27	.....	.....	370,484
43	Washington	58	377	58	22	9	12	276	My [3] 292	Fe 247	275	270	5	.....	.....	731,895
44	Wisconsin	80	5,580	48	211	454	189	4,678	No 5,523	Fe 3,821	5,454	5,208	235	8	3	15,870,932
45	All other states [5]	7	50	9	1	.....	1	39	.....	.....	47	45	2	.....	.....	60,954

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

AUTOMOBILES, INCLUDING BODIES AND PARTS.

GENERAL STATISTICS.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

	1919	1914	1909	1904	1899	PER CENT OF INCREASE.[1]			
						1914–1919	1909–1914	1904–1909	1899–1904
Number of establishments	2,830	1,271	743	178	57	122.7	71.1	317.4	.....
Persons engaged	399,104	145,951	85,359	13,333	(2)	171.4	71.0	540.2	.....
Proprietors and firm members	2,165	760	405	103	(2)	184.9	87.7	293.2	.....
Salaried employees	50,824	18,099	9,233	1,181	268	180.8	96.0	681.8	340.7
Wage earners (average number)	343,115	127,092	75,721	12,049	2,241	170.0	67.8	528.4	437.7
Primary horsepower	544,242	173,684	75,550	10,109	3,164	213.4	129.9	647.4	219.5
Capital	$1,780,948,952	$407,729,915	$173,837,111	$23,083,860	$5,768,857	336.8	134.5	653.1	300.1
Salaries and wages	593,305,517	127,452,553	58,173,291	8,416,217	1,615,428	365.5	119.1	591.2	421.0
Salaries	102,184,144	25,525,679	9,479,424	1,257,259	294,770	300.3	169.3	654.0	326.5
Wages	491,121,373	101,926,874	48,693,867	7,158,958	1,320,658	381.8	109.3	580.2	442.1
Paid for contract work	1,758,343	3,954,924	550,329	1,060,576	(2)	−55.5	618.6	−48.1	.....
Rent and taxes	150,195,962	5,152,314	1,483,432	[3] 209,656	(2)	2,815.1	247.3	.....	.....
Cost of materials	1,940,678,876	356,207,930	131,645,736	13,151,365	1,804,287	444.8	170.6	901.0	628.9
Value of products	3,080,073,979	632,831,474	249,202,075	30,033,536	4,748,011	386.7	153.9	729.7	532.5
Value added by manufacture [4]	1,139,395,103	276,623,544	117,556,339	16,882,171	2,943,724	311.9	135.3	596.3	473.5

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

TABLE 2.—SUMMARY OF THE INDUSTRY: 1919.

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

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

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

STATE.	Number of establishments	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	2,830	343,115	100.0	....	$3,080,074	100.0	....	$1,139,395	100.0	...
Michigan	271	175,985	51.3	1	1,620,383	52.6	1	660,016	58.0	1
Ohio	281	45,882	13.4	2	379,436	12.3	2	128,456	11.3	2
New York	344	30,483	8.9	3	211,137	6.9	3	75,340	6.6	3
Indiana	172	25,773	7.5	4	179,065	5.8	4	61,298	5.4	4
Wisconsin	95	13,585	4.0	6	119,381	3.9	5	44,204	3.9	5
Pennsylvania	202	14,708	4.3	5	113,820	3.7	6	37,691	3.3	6
Illinois	229	8,805	2.6	7	104,883	3.4	7	30,930	2.7	7
Missouri	86	3,240	0.9	10	71,940	2.3	8	16,996	1.5	9
New Jersey	116	5,519	1.6	8	54,671	1.8	9	17,586	1.5	8
California	265	3,008	0.9	11	44,362	1.4	10	14,044	1.2	10
Massachusetts	96	4,530	1.3	9	27,032	0.9	12	10,750	0.9	11
Iowa	43	564	0.2	18	$3,297	0.1	20	$1,328	0.1	19
Rhode Island	18	179	0.1	29	685	(1)	29	481	0.1	28
Alabama	9	89	(1)	31	263	(1)	33	170	(1)	30
Oregon	17	46	(1)	34	259	(1)	34	141	(1)	32
Florida	8	44	(1)	35	207	(1)	36	116	(1)	34
Mississippi	4	56	(1)	33	178	(1)	37	106	(1)	36
Utah	6	56	(1)	33	166	(1)	38	110	(1)	35
Maine	6	40	(1)	36	87	(1)	40	63	(1)	39
Delaware	5	11	(1)	41	64	(1)	41	48	(1)	41
North Dakota	5	12	(1)	40	63	(1)	42	35	(1)	42
Montana	6	4	(1)	43	34	(1)	44	18	(1)	44
Idaho	5	7	(1)	42	22	(1)	46	14	(1)	45
All other states	541	10,489	3.1	....	148,639	4.8	....	38,854	3.4	...

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

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

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

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

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

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States	343,115	***283,491***	289,172	300,583	314,775	317,499	331,797	351,746	365,274	378,284	389,274	396,441	399,044	71.0
1919:														
Males	328,178	***269,921***	276,086	287,359	301,001	303,159	317,753	337,084	350,205	362,143	372,043	378,755	382,627	70.5
Females	14,937	13,570	***13,086***	13,224	13,774	14,340	14,044	14,662	15,069	16,141	17,231	17,686	16,417	74.0
1914	127,092	126,974	131,142	135,773	**137,954**	132,641	122,706	119,548	125,692	127,525	128,109	***117,990***	119,050	85.5
1909	75,721	***62,724***	66,806	71,142	73,752	75,481	76,176	76,549	78,468	77,445	77,280	82,956	89,886	69.8
California	3,008	***2,212***	2,529	2,659	2,825	3,089	3,133	3,080	3,051	3,231	3,355	3,475	3,457	63.7
Illinois	8,805	***7,315***	7,438	7,734	7,993	8,199	8,432	8,796	9,324	9,748	10,061	10,278	**10,342**	70.7
Indiana	25,773	21,864	***21,654***	23,067	24,291	25,315	26,109	26,652	26,953	27,296	27,056	29,239	**29,800**	72.6
Iowa	564	499	512	481	***468***	524	558	590	560	593	647	687	649	68.1
Massachusetts	4,530	4,261	4,359	4,363	***3,325***	4,183	4,222	4,361	4,683	4,780	5,024	4,983	**5,316**	72.0
Michigan	175,985	***136,212***	141,638	148,451	157,192	164,804	173,827	183,074	191,121	199,436	204,409	**206,635**	205,021	65.9
Missouri	3,240	***2,800***	2,828	2,919	3,071	3,180	3,312	3,352	3,390	3,382	3,503	3,555	3,588	78.0
New Jersey	5,519	5,269	4,935	4,873	***4,838***	4,982	5,086	5,085	5,847	6,025	6,125	6,190	**6,373**	75.9
New York	30,483	***27,845***	28,208	28,200	29,812	29,307	29,808	31,307	31,730	32,427	**33,189**	31,905	31,998	83.9
Ohio	45,882	42,261	41,334	42,819	43,779	***35,503***	38,058	44,863	47,484	49,440	52,559	55,074	**57,610**	61.3
Pennsylvania	14,708	***12,084***	12,719	12,743	13,135	14,024	14,402	14,635	15,319	15,828	16,422	17,324	**17,861**	67.7
Wisconsin	13,585	12,057	***11,735***	12,309	13,143	13,712	13,842	13,953	13,944	14,071	14,744	14,793	**14,717**	79.3

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

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States	1919	343,115	8,482	5,718	136,737	126,087	18,344	44,742	2,982	23
	1914	127,092	(2)	(2)	14,317	27,993	17,791	54,344	12,614	33
	1909	75,721	(2)	(2)	330	2,253	22,734	26,669	22,280	1,455
Automobiles	1919	210,559	3,674	2,957	94,880	82,747	9,911	15,807	583	.....
	1914	79,307	(2)	(2)	13,033	19,993	10,782	28,573	6,936	20
Automobile bodies and parts	1919	132,556	4,808	2,761	41,857	43,340	8,433	28,935	2,399	23
	1914	47,785	(2)	(2)	1,284	8,030	7,009	25,771	5,678	13
California	1919	3,008	286	50	1,990	523	158	1	.....	.....
	1914	731	(2)	(2)	371	87	270	2	.....	1
Illinois	1919	8,805	959	168	1,709	3,734	955	1,204	76	.....
	1914	2,545	(2)	(2)	183	530	833	897	93	.....
Indiana	1919	25,773	24	481	7,609	5,367	1,727	10,345	220	.....
	1914	7,219	(2)	(2)	312	1,174	195	3,439	2,099	.....
Iowa [3]	1919	564	.....	.....	61	30	298	145	30	.....
Massachusetts	1919	4,530	254	415	1,415	2,316	107	3	.....	20
	1914	3,439	(2)	(2)	18	363	1,984	1,004	70	.....
Michigan	1919	175,985	724	1,909	78,290	79,479	9,848	5,372	363	.....
	1914	67,538	(2)	(2)	12,464	9,359	3,528	33,648	8,539	.....
Missouri	1919	3,240	971	15	873	850	358	142	31	.....
	1914	504	(2)	(2)	14	181	208	7	31	.....
New Jersey	1919	5,519	745	1,021	2,451	1,049	144	108	1	.....
	1914	2,520	(2)	(2)	18	1,037	774	677	14	.....
New York	1919	30,483	570	57	16,174	9,060	936	2,485	301	.....
	1914	12,122	(2)	(2)	128	3,937	6,189	1,151	715	2
Ohio	1919	45,882	3,077	1,191	18,258	14,011	1,472	7,277	596	.....
	1914	18,752	(2)	(2)	476	10,138	2,674	4,963	501	.....
Pennsylvania	1919	14,708	51	23	2,867	2,125	367	8,567	707	1
	1914	3,083	(2)	(2)	15	654	295	1,961	135	23
Wisconsin	1919	13,585	531	.....	305	4,882	43	7,712	112	.....
	1914	4,889	(2)	(2)	83	128	55	4,431	192	.....

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

[2] Corresponding figures not available.

[3] Not shown separately in 1914.

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

STATE.		TOTAL.		ESTABLISHMENTS EMPLOYING—																	
		Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
				Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States	1919	2,830	343,115	219	1,143	2,644	632	7,349	333	10,918	169	12,231	142	22,895	85	29,037	53	37,064	54	220,077
	1914	1,271	127,092	51	457	1,156	321	3,745	161	5,369	88	6,083	103	16,180	49	18,377	21	15,607	20	60,575
Automobiles	1919	315	210,559	5	27	84	37	487	58	2,077	42	2,926	50	8,155	44	15,215	19	12,900	33	168,715
	1914	300	79,307	.....	55	159	74	942	44	1,491	34	2,382	46	7,564	23	8,703	10	7,501	14	50,565
Automobile bodies and parts.	1919	2,515	132,556	214	1,116	2,560	595	6,862	275	8,841	127	9,305	92	14,740	41	14,722	34	24,164	21	51,362
	1914	971	47,785	51	402	997	247	2,803	117	3,878	54	3,701	57	8,616	26	9,674	11	8,106	6	10,010
California		265	3,008	25	161	361	51	551	20	684	4	266	2	353	2	793	.....	.....	.....	.....
Illinois		229	8,805	17	73	183	63	751	35	1,181	23	1,576	11	1,615	2	622	5	2,877	.....	.....
Indiana		172	25,773	10	55	104	32	415	18	628	13	933	18	3,017	17	6,234	5	3,427	4	11,015
Iowa		43	564	4	18	39	12	153	7	216	2	156	.....	.....	.....	.....	.....	.....	.....	.....
Massachusetts		96	4,530	3	34	77	28	354	12	380	7	496	7	1,079	4	1,221	1	923	.....	.....
Michigan		271	175,985	10	52	114	46	558	34	1,153	34	2,702	31	5,067	22	7,661	15	11,080	27	147,650
Missouri		86	3,240	5	34	77	30	377	8	284	2	138	3	546	2	649	2	1,169	.....	.....
New Jersey		116	5,519	7	60	128	25	254	13	450	4	354	2	342	2	819	1	858	2	2,314
New York		344	30,483	25	145	300	76	950	50	1,580	20	1,363	8	1,339	7	2,628	7	4,722	6	17,541
Ohio		281	45,882	20	73	180	62	719	40	1,312	26	1,848	25	3,790	15	5,238	13	8,945	7	23,850
Pennsylvania		202	14,708	15	80	201	53	603	19	635	10	699	13	1,852	7	2,296	1	859	4	7,563
Wisconsin		95	13,585	7	31	65	20	235	14	418	9	672	6	1,025	2	627	3	2,204	3	8,339

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

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes	2,830	1,271	743	343,115	127,092	75,721	$3,080,073,979	$632,831,474	$249,202,075	$1,139,395,103	$276,623,544	$117,556,339
Less than $5,000	399	218	89	239	285	117	1,126,486	615,026	240,866	693,183	398,063	137,971
$5,000 to $20,000	859	356	170	2,286	1,641	841	9,287,644	3,814,757	1,937,965	5,669,720	2,351,440	1,098,508
$20,000 to $100,000	773	337	228	9,558	5,919	4,831	35,677,864	15,948,577	10,760,970	20,942,831	8,675,055	5,886,751
$100,000 to $500,000	433	231	200	21,139	26,735	24,340	95,597,621	66,279,738	65,875,412	46,627,401	39,059,028	32,057,814
$500,000 to $1,000,000	96	30		11,978			67,250,339	20,984,032		28,565,800		
$1,000,000 and over	270	99	56	297,915	92,512	45,592	2,871,134,025	525,189,344	170,386,862	1,036,896,168	226,139,958	78,375,295
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	14.1	17.2	12.0	0.1	0.2	0.2	(1)	0.1	0.1	0.1	0.1	0.1
$5,000 to $20,000	30.4	28.0	22.9	0.7	1.3	1.1	0.3	0.6	0.8	0.5	0.9	0.9
$20,000 to $100,000	27.3	26.5	30.7	2.8	4.7	6.4	1.2	2.5	4.3	1.8	3.1	5.0
$100,000 to $500,000	15.3	18.2	26.9	6.2	21.0	32.1	3.1	10.5	26.4	4.1	14.1	27.3
$500,000 to $1,000,000	3.4	2.4		3.5			2.2	3.3		2.5		
$1,000,000 and over	9.5	7.8	7.5	86.8	72.8	60.2	93.2	83.0	68.4	91.0	81.8	66.7

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

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

STATE.	Census year.	Number of establishments owned by—			Average number of wage earners.						Value of products.						
					Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.		
		Individuals.	Corporations	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations	All others.
United States	1919	1,115	1,248	467	343,115	6,307	333,866	2,942	1.8	97.3	0.9	$3,080,073,979	$28,681,496	$3,037,127,519	$14,264,964	0.9	98.6	0.5
	1914	357	736	178	127,092	1,851	123,759	1,482	1.5	97.4	1.2	632,831,474	5,730,714	622,299,324	4,801,436	0.9	98.3	0.8
	1909	162	478	103	75,721	1,641	71,568	2,512	2.2	94.5	3.3	249,202,075	4,184,086	235,802,964	9,214,425	1.7	94.6	3.7
Automobiles	1919	14	292	9	210,559	209	210,181	169	0.1	99.8	0.1	2,387,003,287	1,298,981	2,384,898,510	1,705,796	0.1	99.9	0.1
	1914	25	263	12	79,307	286	78,892	129	0.4	99.5	0.2	503,230,137	1,168,674	501,426,483	634,980	0.2	99.6	0.1
Automobile bodies and parts.	1919	1,101	956	458	132,556	6,098	123,635	2,773	4.6	93.3	2.1	692,170,692	27,382,515	652,229,009	12,559,168	4.0	94.2	1.8
	1914	332	473	166	47,785	1,565	44,867	1,353	3.3	93.9	2.8	129,601,337	4,562,040	120,872,841	4,166,456	3.5	93.3	3.2
California	1919	160	46	59	3,008	796	1,851	361	26.5	61.5	12.0	44,362,046	3,814,705	38,640,285	1,907,056	8.6	87.1	4.3
	1914	61	18	19	731	215	364	152	29.4	49.8	20.8	2,458,843	634,683	1,457,262	366,898	25.8	59.3	14.9
Illinois	1919	76	124	29	8,805	584	7,953	268	6.6	90.3	3.0	104,883,442	2,918,279	99,975,559	1,989,604	2.8	95.3	1.9
	1914	18	54	19	2,545	130	2,198	217	5.1	86.4	8.5	11,018,162	441,607	9,994,802	581,753	4.0	90.7	5.3
Indiana	1919	43	101	28	25,773	331	25,323	119	1.3	98.3	0.5	179,064,863	1,033,368	177,529,137	502,358	0.6	99.1	0.3
	1914	13	69	4	7,219	42	7,165	12	0.6	99.3	0.2	29,389,088	92,030	29,269,556	27,502	0.3	99.6	0.1
Iowa [1]	1919	18	16	9	564	71	442	51	12.6	78.4	9.0	3,297,013	312,796	2,761,749	222,468	9.5	83.8	6.7
Massachusetts	1919	40	43	13	4,530	259	4,071	200	5.7	89.9	4.4	27,031,604	926,740	25,416,410	688,454	3.4	94.0	2.5
	1914	19	35	12	3,439	206	3,019	214	6.0	87.8	6.2	11,198,790	657,088	9,942,047	599,655	5.9	88.8	5.4
Michigan	1919	46	203	22	175,985	653	175,217	115	0.4	99.6	0.1	1,620,383,356	3,802,539	1,616,065,035	515,782	0.2	99.7	(2)
	1914	32	166	7	67,538	151	67,252	135	0.2	99.6	0.2	398,289,022	520,618	397,394,128	374,276	0.1	99.8	0.1
Missouri	1919	32	40	14	3,240	161	3,000	79	5.0	92.6	2.4	71,939,496	617,125	71,066,564	255,807	0.9	98.8	0.4
	1914	5	15	5	504	22	462	20	4.4	91.7	4.0	2,182,911	50,414	2,087,688	44,809	2.3	95.6	2.1
New Jersey	1919	61	36	19	5,519	242	5,200	77	4.4	94.2	1.4	54,671,352	1,028,583	53,279,996	362,773	1.9	97.5	0.7
	1914	15	29	9	2,520	35	2,399	86	1.4	95.2	3.4	8,257,416	91,366	7,971,181	174,869	1.1	96.8	2.1
New York	1919	129	157	58	30,483	676	29,485	322	2.2	96.7	1.1	211,137,158	2,584,255	207,150,081	1,402,817	1.2	98.1	0.7
	1914	79	135	33	12,122	513	11,379	230	4.2	93.9	1.9	42,115,276	1,338,142	39,388,156	1,388,978	3.2	93.5	3.3
Ohio	1919	73	168	40	45,882	476	45,016	390	1.0	98.1	0.9	379,436,478	3,050,546	374,178,326	2,207,606	0.8	98.6	0.6
	1914	18	77	7	18,752	188	18,521	43	1.0	98.8	0.2	85,710,585	846,119	84,747,433	117,033	1.0	98.9	0.1
Pennsylvania	1919	85	82	35	14,708	592	13,921	195	4.0	94.6	1.3	113,820,134	2,196,432	110,830,568	793,134	1.9	97.4	0.7
	1914	26	87	17	3,083	125	2,804	154	4.1	91.0	5.0	10,084,083	298,423	9,352,988	432,672	3.0	92.7	4.3
Wisconsin	1919	23	59	13	13,585	97	13,465	23	0.7	99.1	0.2	119,380,641	400,623	118,854,283	125,735	0.3	99.6	0.1
	1914	10	31	2	4,889	[3] 39	4,850	.....	0.8	99.2	.....	18,478,196	[3] 118,750	18,359,446	.....	0.6	99.4	.....

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

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

POWER.	Number of engines or motors.			Horsepower.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	36,767	9,314	2,548	544,242	173,684	75,550	100.0	100.0	100.0
Owned	711	469	473	159,705	70,719	46,612	29.3	40.7	61.7
Steam	496	317	273	146,212	60,233	39,325	26.9	34.7	52.1
Engines	446	(1)	(1)	78,343	(1)	(1)	14.4	.....	.....
Turbines	50	(1)	(1)	67,869	(1)	(1)	12.5	.....	.....
Internal-combustion engines	200	146	192	12,927	10,075	7,000	2.4	5.8	9.3
Water wheels, turbines, and motors	15	6	8	566	411	287	0.1	0.2	0.4
Rented	36,056	8,845	2,075	384,537	102,965	28,938	70.7	59.3	38.3
Electric	36,056	8,845	2,075	379,388	102,156	27,641	69.7	58.8	36.6
Other	.....	.....	.....	5,149	809	1,297	0.9	0.5	1.7
Electric	49,122	11,218	2,932	490,560	135,818	41,829	100.0	100.0	100.0
Rented	36,056	8,845	2,075	379,388	102,156	27,641	77.3	75.2	66.1
Generated by establishments reporting	13,066	2,373	857	111,172	33,662	14,188	22.7	24.8	33.9

[1] Not shown separately.

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

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

[1] Included in figures for fuel oils.

SPECIAL STATISTICS.

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

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

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

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

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

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

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

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

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

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

CLASS AND STATE.	NUMBER.			VALUE.		
	1919	1914	1909	1919	1914	1909
All classes:[1]	1,683,916	569,054	126,593	$1,554,881,496	$458,957,843	$164,269,324
Passenger vehicles	1,557,480	543,679	121,868	1,324,458,676	413,859,379	155,821,331
Touring cars	1,226,127	451,267	76,114	980,987,982	346,134,147	113,403,188
Illinois	57,524	2,686	2,059	37,710,222	3,350,538	2,746,214
Indiana	49,740	13,034	6,838	60,976,271	16,574,132	10,710,289
Michigan	509,830	367,092	43,855	483,103,499	251,600,056	51,365,984
New York	76,971	5,945	5,440	56,003,880	9,499,111	12,296,292
Ohio	157,354	49,421	6,479	123,097,625	44,800,434	14,307,360
Wisconsin	54,098	8,825	(2)	48,234,757	10,831,327	(2)
Closed cars	156,504	10,809	4,002	200,525,718	21,832,536	10,182,029
Illinois	8,372	282	325	6,419,553	785,152	896,110
Indiana	6,325	503	439	9,728,908	1,071,392	772,401
Michigan	54,573	6,610	1,539	89,900,677	10,636,264	3,803,616
New York	13,805	792	296	21,510,692	2,811,947	1,174,335
Ohio	22,349	2,010	1,072	30,913,944	4,251,172	2,526,801
Wisconsin	7,213	(2)	.....	7,976,349	(2)	.....
Runabouts	120,098	81,603	36,204	80,523,340	45,802,696	28,030,479
Michigan	27,015	63,381	18,173	32,622,730	33,307,852	18,399,937
New York	6,017	1,037	1,097	3,256,166	1,434,925	1,539,659
Ohio	12,137	7,117	2,900	8,673,108	4,783,840	2,948,588
Roadsters	53,535	(3)	(3)	60,366,181	(3)	(3)
Indiana	2,926	.....	.....	5,285,021	.....	.....
Michigan	35,321	.....	.....	37,208,278	.....	.....
New York	1,917	.....	.....	2,556,512	.....	.....
Ohio	5,807	.....	.....	7,341,309	.....	.....
All other varieties	1,216	.....	[4] 5,548	2,055,455	.....	[4] 4,205,635
Business vehicles	126,436	25,375	4,725	230,422,820	45,098,464	8,447,993
Delivery wagons	18,122	4,391	1,362	16,570,473	4,749,889	1,918,856
Michigan	12,912	1,295	401	11,294,203	970,569	319,071
New York	1,320	511	139	1,604,263	846,639	282,989
Trucks	102,437	19,551	1,366	194,166,484	34,774,336	3,165,512
California	1,456	159	.....	3,380,927	410,417	.....
Illinois	5,011	1,072	28	8,814,354	1,810,824	46,955
Indiana	3,572	445	43	6,212,756	788,107	109,492
Iowa	421	(2)	(2)	847,152	(2)	(2)
Michigan	47,442	4,684	372	70,169,104	7,220,321	994,311
New York	9,016	2,250	475	24,738,980	4,670,608	889,724
Ohio	10,427	7,598	202	23,255,457	13,611,631	386,945
Pennsylvania	7,688	771	(2)	18,176,703	1,772,095	(2)
Wisconsin	8,910	677	(2)	20,565,491	1,168,596	(2)
All other varieties[5]	5,877	1,433	1,497	19,685,863	5,574,230	3,363,625
Illinois	731	37	(2)	1,802,847	77,103	(2)
Michigan	1,963	10	144	2,615,237	30,192	289,458
New York	632	521	406	5,270,760	2,495,887	1,020,183
Ohio	869	312	135	4,099,022	1,312,283	290,200

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

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

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

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

CLASS.	AUTOMOBILES.				CLASS.	AUTOMOBILES.			
	Number.			Value.		Number.			Value.
	Gasoline.	Electricity.	Steam.			Gasoline.	Electricity.	Steam.	
All classes: [1]					All other passenger vehicles:				
1919	1,680,327	3,183	406	$1,554,881,496	1919	1,216	.....	.....	$2,055,455
1914	563,984	4,669	401	458,957,843	1914 [3]	.....	.....	.....	.....
1909	120,393	3,826	2,374	164,269,324	1909	4,888	660	.....	4,205,635
Touring cars:					Delivery wagons:				
1919	1,225,741	.....	386	980,087,982	1919	17,272	850	.....	16,570,473
1914	451,008	3	256	346,134,147	1914	4,139	228	24	4,749,889
1909	73,883	243	1,988	113,403,188	1909	1,645	217	.....	1,918,856
Closed cars:					Trucks:				
1919	154,411	2,073	20	200,525,718	1919	102,185	252	.....	194,166,484
1914	7,707	3,102	.....	21,832,536	1914	18,428	1,121	2	34,774,336
1909	2,088	1,914	.....	10,182,020	1909	1,090	276	.....	3,165,512
Runabouts:					All other business vehicles: [4]				
1919	120,098	.....	.....	80,523,340	1919	5,869	8	.....	19,685,863
1914	81,388	143	72	45,892,696	1914	1,314	72	47	5,574,239
1909	35,347	496	361	28,030,479	1909	1,452	20	25	3,363,625
Roadsters:									
1919	53,535	.....	.....	60,366,181					
1914 [2]	.....	.....	.....	.....					
1909 [2]	.....	.....	.....	.....					

[1] Includes, in 1919, 4,660 automobiles valued at $7,794,495 made as subsidiary products by establishments classified in other industries, but does not include, in 1914, 3,985 automobiles valued at $6,099,631, and, in 1909, 694 automobiles, valued at $830,080 made in establishments of this character.
[2] Included with "Runabouts."
[3] Figures not available.
[4] Includes public conveyances, Government and municipal vehicles.

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

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

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

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

GENERAL TABLES.

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

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

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

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

TABLE 17.—DETAILED STATEMENT FOR THE

	STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.		Wage earners. Number, 15th day of— Minimum month.		WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.
	AUTOMOBILES, INCLUDING BODIES AND PARTS.																	
1	United States	2,830	396,104	2,165	12,206	24,354	14,264	343,115	De	399,044	Ja	283,491	403,209	386,504	15,980	651	68	*Dollars.* 1,780,948,95[illegible]
2	Alabama	9	114	9	8	8	.....	89	Oc	97	Mh [3]	83	111	111	.....	.....	.....	226,41[illegible]
3	California	205	3,841	290	180	229	134	3,008	No	3,475	Ja	2,212	3,492	3,394	94	4	.....	15,403,34[illegible]
4	Delaware	5	22	8	3	.....	.....	11	Se [3]	12	Ja [3]	10	11	11	.....	.....	.....	75,00[illegible]
5	Florida	8	58	11	1	1	1	44	Je [3]	46	Mh	38	44	44	.....	.....	.....	106,05[illegible]
6	Idaho	5	17	5	3	1	1	7	(4)	7	(4)	7	8	8	.....	.....	.....	26,56[illegible]
7	Illinois	229	10,964	141	631	829	558	8,805	De	10,342	Ja	7,315	10,338	9,827	484	22	5	43,584,352
8	Indiana	172	29,529	102	1,019	1,443	1,192	25,773	De	29,800	Fe	21,634	30,818	28,726	1,975	109	8	109,303,857
9	Iowa	43	720	38	53	34	31	564	No	687	Ap	468	653	582	59	12	.....	2,454,623
10	Maine	6	56	3	6	1	6	40	Au	43	Ja	28	45	45	.....	.....	.....	47,981
11	Massachusetts	96	5,293	69	241	217	236	4,530	De	5,316	Ap	3,825	5,637	5,383	203	50	1	16,932,750
12	Michigan	271	197,881	95	4,780	10,702	6,229	175,985	No	206,635	Ja	136,212	205,753	197,826	7,697	230	.....	992,513,968
13	Mississippi	4	75	2	9	7	1	56	De	83	Ja	35	82	78	4	.....	.....	126,176
14	Missouri	86	4,151	65	221	511	117	3,240	De	3,588	Ja	2,800	3,602	3,505	89	2	6	12,746,250
15	Montana	6	11	7	.....	.....	.....	4	Je [3]	6	Fe [3]	2	4	3	1	.....	.....	16,167
16	New Jersey	116	6,625	101	215	520	270	5,519	De	6,373	Ap	4,838	6,402	6,127	275	.....	.....	20,501,896
17	New York	344	36,486	267	1,632	2,526	1,578	30,483	Oc	33,189	Ja	27,845	32,794	31,354	1,216	18	6	122,510,513
18	North Dakota	5	18	4	2	.....	.....	12	Oc [3]	16	Ja [3]	10	15	15	.....	.....	.....	27,282
19	Ohio	281	53,321	163	1,442	3,651	2,183	45,882	De	57,610	My	35,303	58,604	55,857	2,662	81	4	256,466,062
20	Oregon	17	70	22	1	1	.....	46	Jy	55	Ja	31	50	48	1	1	.....	115,256
21	Pennsylvania	202	17,157	168	557	1,191	533	14,708	De	17,861	Ja	12,084	17,958	17,564	346	48	.....	65,547,945
22	Rhode Island	18	225	17	15	3	11	179	De	203	Fe	151	208	196	12	.....	.....	486,787
23	Utah	6	69	6	3	4	.....	56	Jy	71	Ja	46	39	39	.....	.....	.....	90,355
24	Wisconsin	95	16,353	54	560	1,458	696	13,585	No	14,793	Fe	11,735	14,609	14,047	550	9	3	62,754,803
25	All other states [5]	541	13,045	518	624	927	487	10,489	.....		.....		11,932	11,514	318	65	35	58,883,871
	AUTOMOBILES.																	
1	United States	315	242,922	36	6,431	16,606	9,290	210,559	De	241,709	Ja	174,634	243,128	234,916	7,921	288	3	1,310,451,400
2	California	12	1,642	6	82	163	64	1,327	No	1,606	Ja	773	1,539	1,513	26	.....	.....	11,991,021
3	Illinois	25	4,455	5	234	477	232	3,507	No	4,040	Ja	3,017	3,985	3,898	79	8	.....	26,673,294
4	Indiana	27	12,162	3	368	737	510	10,544	De	13,247	Fe	8,769	13,126	12,178	894	54	.....	54,699,762
5	Iowa	6	151	1	19	15	12	104	Je	131	Au	64	100	100	.....	.....	.....	1,220,136
6	Massachusetts	8	1,267	2	91	105	76	989	De	1,460	Ja	521	1,460	1,430	24	6	.....	7,271,507
7	Michigan	68	142,976	4	3,084	8,120	4,831	126,937	De	145,241	Ja	99,563	145,578	140,810	4,590	178	.....	806,195,893
8	Missouri	8	2,383	.....	113	333	72	1,865	De	2,012	Ja	1,663	1,984	1,922	62	.....	.....	9,594,433
9	New Jersey	6	2,843	.....	91	299	94	2,359	Ja	2,793	Ap	2,035	2,656	2,595	61	.....	.....	11,578,691
10	New York	28	18,318	1	840	1,763	920	14,794	Oc	16,464	Mh	12,672	15,348	15,006	336	6	.....	71,718,920
11	Ohio	44	33,760	2	715	2,407	1,424	29,212	De	35,931	My	20,274	36,997	35,654	1,343	.....	.....	191,041,010
12	Pennsylvania	25	5,342	2	168	494	244	4,434	De	4,966	Ja	3,755	5,108	4,990	115	3	.....	28,172,033
13	Wisconsin	15	10,773	6	349	1,004	507	8,907	Oc	9,307	Fe	7,914	9,155	8,839	315	1	.....	46,883,031
14	All other states [6]	43	6,850	4	274	688	304	5,580	.....		.....		6,092	5,981	76	32	3	43,410,769

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

AUTOMOBILE INDUSTRY, BY STATES: 1919.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.						Electric horsepower generated in establishments reporting.	
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines)	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
AUTOMOBILES, INCLUDING BODIES AND PARTS.																	
Dollars. 54,509,015	*Dollars.* 47,675,129	*Dollars.* 491,121,373	*Dollars.* 1,758,343	*Dollars.* 4,165,823	*Dollars.* 146,030,139	*Dollars.* 1,918,993,810	*Dollars.* 21,685,066	*Dollars.* 3,080,073,979	*Dollars.* 1,139,395,103	544,242	78,343	67,869	12,927	566	384,537	111,172	1
9,439	7,489	86,440	.....	6,930	1,671	82,651	10,005	262,680	170,024	236	3	.....	.....	.....	233	.....	2
497,650	413,531	4,065,288	103,455	268,265	1,459,173	30,180,342	137,396	44,362,046	14,044,308	3,313	.....	.....	76	.....	3,237	.....	3
4,731	.....	16,691	500	980	327	14,835	969	64,013	48,209	51	.....	.....	12	.....	39	.....	4
1,717	1,380	59,751	.....	6,056	655	89,234	1,720	207,281	116,327	26	.....	.....	3	.....	23	.....	5
180	402	5,333	.....	926	389	7,969	129	22,026	13,928	11	.....	.....	5	.....	6	.....	6
2,220,698	1,834,213	11,138,806	133,379	466,799	3,663,368	73,476,977	476,831	104,883,442	30,929,634	15,098	1,065	670	248	.....	13,115	455	7
3,949,498	2,820,779	29,853,445	200,543	208,046	6,785,851	115,556,006	2,210,941	179,064,863	61,297,916	39,481	7,026	3,375	230	.....	28,850	5,450	8
127,340	93,646	595,433	24,694	25,614	30,366	1,937,923	31,031	3,297,013	1,328,059	713	150	.....	.....	.....	563	58	9
6,902	2,274	40,313	.....	3,242	251	22,539	1,598	86,879	62,742	64	.....	.....	.....	.....	64	.....	10
822,617	459,079	5,829,241	22,214	103,686	966,535	16,037,464	244,237	27,031,604	10,749,903	4,441	840	225	32	.....	3,344	310	11
28,046,185	22,278,738	272,989,442	389,057	927,729	92,224,827	948,815,835	10,951,596	1,620,383,356	660,615,925	284,127	37,539	59,177	8,567	18	178,826	84,259	12
15,512	6,527	48,987	.....	3,360	5,662	70,083	1,866	177,677	105,728	211	140	.....	.....	.....	71	.....	13
510,933	667,080	3,721,360	7,670	112,650	2,690,551	54,820,054	123,400	71,939,496	16,996,042	3,506	993	.....	40	.....	2,473	554	14
.....	.....	6,430	.....	2,080	175	14,892	592	33,893	18,409	18	.....	.....	.....	.....	18	.....	15
782,369	908,953	7,657,577	6,930	133,159	2,022,447	36,763,886	321,131	54,671,352	17,586,335	9,185	960	3,500	565	.....	4,160	2,720	16
5,499,093	4,280,828	39,311,532	127,799	695,547	5,749,817	134,262,538	1,534,363	211,137,153	75,340,252	42,474	8,212	332	493	540	32,897	6,326	17
900	.....	22,945	.....	1,570	246	26,054	1,689	62,928	35,185	26	.....	.....	.....	.....	26	.....	18
5,921,820	7,540,549	63,410,248	158,033	326,272	12,027,180	247,803,314	3,177,590	379,436,478	128,455,568	79,039	8,555	440	877	.....	69,167	3,723	19
1,650	360	71,358	.....	12,718	1,434	113,705	3,940	258,678	141,033	93	.....	.....	.....	.....	93	.....	20
1,714,960	2,290,889	18,849,194	26,518	333,739	4,115,507	75,274,855	854,037	113,820,134	37,691,242	23,363	3,540	150	729	5	18,939	1,323	21
39,806	13,061	192,727	2,332	13,496	14,413	194,396	9,463	684,605	480,746	280	.....	.....	5	.....	275	.....	22
7,200	5,500	61,430	.....	9,286	1,149	54,277	1,943	166,246	110,026	40	.....	.....	.....	.....	40	.....	23
2,422,526	2,202,765	19,634,048	9,290	90,947	7,245,194	74,145,532	1,030,626	119,380,641	44,204,483	22,892	5,710	.....	559	.....	16,623	4,198	24
1,904,789	1,847,086	13,453,354	546,529	412,726	7,022,951	109,228,449	557,967	148,639,495	38,853,079	15,554	3,610	.....	486	3	11,455	1,796	25
AUTOMOBILES.																	
34,591,682	32,624,122	312,165,870	198,142	1,262,023	126,893,916	1,565,694,602	12,956,972	2,387,903,287	809,251,713	287,323	45,423	59,109	861	.....	181,930	93,426	1
227,554	297,976	1,809,924	18,088	28,351	1,392,479	26,949,006	77,055	36,626,893	9,600,832	1,332	.....	.....	48	.....	1,284	.....	2
867,257	979,259	4,664,716	49,985	120,157	3,167,141	60,867,016	164,756	77,018,464	15,986,692	6,263	380	670	.....	.....	5,213	72	3
1,484,404	1,340,025	12,480,913	6,093	102,269	4,936,045	77,158,346	539,399	107,347,614	29,649,869	13,564	2,830	.....	.....	.....	10,734	626	4
48,196	32,989	126,342	15,690	3,485	7,834	1,141,106	11,407	1,584,605	431,492	161	.....	.....	.....	.....	161	.....	5
248,592	176,899	1,239,542	.....	1,200	708,358	9,506,827	62,979	12,548,222	2,978,416	1,160	125	.....	.....	.....	1,035	40	6
21,405,794	17,128,611	197,768,186	100	642,476	83,140,040	801,202,501	8,002,488	1,332,076,498	522,871,509	180,702	22,620	57,707	146	.....	100,229	79,625	7
205,794	480,445	2,303,753	.....	26,368	2,500,153	50,052,993	71,253	62,624,650	12,500,404	1,470	500	.....	.....	.....	970	554	8
285,923	567,091	3,506,642	.....	12,890	1,525,833	30,529,043	153,366	39,580,664	8,878,255	3,246	300	.....	.....	.....	2,946	379	9
3,004,010	2,645,172	20,006,509	.....	76,323	3,889,804	100,645,015	598,934	140,721,999	39,478,050	14,498	4,895	332	.....	.....	9,271	5,478	10
3,513,285	5,147,108	41,443,839	97,566	53,798	9,910,381	196,354,341	2,084,620	287,045,832	88,606,871	37,473	6,113	400	228	.....	30,732	3,061	11
608,533	1,075,566	5,703,126	1,432	121,747	2,632,401	51,220,062	200,847	68,490,911	17,070,002	5,413	628	.....	220	.....	4,505	140	12
1,708,090	1,391,040	13,257,349	1,762	8,190	6,324,586	61,074,320	683,930	95,030,129	33,271,879	14,864	5,025	.....	11	.....	9,828	1,663	13
984,250	1,361,941	7,855,029	7,426	64,769	6,758,861	98,994,026	305,938	127,227,406	27,927,442	7,177	2,007	.....	208	.....	4,962	1,788	14

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

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

TABLE 17.—DETAILED STATEMENT FOR THE

	STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female	Wage earners. Average number.	Number, 15th day of— Maximum month.	Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female	Capital.
	AUTOMOBILE BODIES AND PARTS.															
1	United States	2,515	153,182	2,129	5,775	7,748	4,974	132,556	De 157,335	Ja [2] 108,857	160,081	151,588	8,065	363	65	*Dollars.* 470,497,552
2	Alabama	9	114	9	8	8	.....	89	Oc 97	Mh [3] 83	111	111	.....	.....	.....	226,415
3	Arkansas	14	107	15	3	4	2	83	De [3] 111	Ap 61	111	100	10	1	.....	167,868
4	California	253	2,199	284	98	66	70	1,681	De 1,921	Ja 1,439	1,953	1,881	68	4	.....	3,412,328
5	Colorado	20	272	30	20	5	5	212	Jy 227	Ja 182	238	220	5	2	11	335,601
6	Connecticut	53	1,392	50	73	54	51	1,164	De 1,494	Ja 863	1,504	1,420	43	20	21	4,924,071
7	Delaware	5	22	8	3	.....	.....	11	Se [3] 12	Ja [3] 10	11	11	.....	.....	.....	75,006
8	District of Columbia	5	34	5	3	1	.....	25	De 30	Mh 21	30	28	2	.....	.....	102,002
9	Florida	8	58	11	1	1	1	44	Je [3] 46	Mh 38	44	44	.....	.....	.....	106,050
10	Georgia	27	279	29	20	13	8	209	De 240	Fe [3] 169	243	210	30	3	.....	430,471
11	Idaho	5	17	5	3	1	1	7	(4) 7	(4) 7	8	8	.....	.....	.....	26,569
12	Illinois	204	6,509	136	397	352	326	5,298	De 6,361	Ja 4,298	6,353	5,929	405	14	5	16,911,058
13	Indiana	145	17,367	99	651	706	682	15,229	No 16,587	Fe 12,865	17,692	16,548	1,081	55	8	54,604,095
14	Iowa	37	569	37	34	19	19	460	No 598	Ap 348	553	482	59	12	.....	1,234,487
15	Kansas	28	145	43	5	3	4	90	De 118	Fe 74	119	116	3	.....	.....	421,693
16	Kentucky	17	447	15	23	12	9	388	Je [3] 397	No 379	389	382	6	1	.....	1,045,283
17	Louisiana	10	206	10	7	12	3	174	Au 197	Fe 152	196	196	.....	.....	.....	321,854
18	Maine	6	56	3	6	1	6	40	Au 48	Ja 28	45	45	.....	.....	.....	47,981
19	Maryland	35	326	36	21	28	8	233	Se 249	Ja 216	251	246	5	.....	.....	701,289
20	Massachusetts	88	4,026	67	147	111	160	3,541	De 3,856	Je 3,152	4,177	3,953	179	44	1	9,661,243
21	Michigan	203	54,905	91	1,696	2,672	1,398	49,048	No 61,438	Ja 36,649	60,175	57,016	3,107	52	.....	186,318,075
22	Minnesota	48	537	44	43	26	19	405	De 454	Ja 328	481	467	14	.....	.....	979,377
23	Mississippi	4	75	2	9	7	1	56	De 83	Ja 35	82	78	4	.....	.....	126,176
24	Missouri	78	1,771	65	108	178	45	1,375	De 1,576	Ja 1,137	1,618	1,583	27	2	6	3,151,817
25	Montana	6	11	7	.....	.....	.....	4	Je [3] 6	Fe [3] 2	4	3	1	.....	.....	16,167
26	Nebraska	20	425	12	32	29	25	327	Oc 412	Mh 252	488	446	41	1	.....	2,755,430
27	New Hampshire	4	7	3	.....	.....	.....	4	(4) 4	(4) 4	4	4	.....	.....	.....	17,828
28	New Jersey	110	3,782	101	124	221	176	3,160	De 3,717	Fe 2,461	3,746	3,532	214	.....	.....	8,923,205
29	New York	316	18,168	266	792	763	658	15,689	Oc 16,725	Je 14,237	17,446	16,548	880	12	6	50,791,593
30	North Carolina	7	56	11	1	.....	.....	44	Je 49	Mh 40	42	42	.....	.....	.....	50,132
31	North Dakota	5	18	4	2	.....	.....	12	Oc [3] 16	Ja [3] 10	15	15	.....	.....	.....	27,282
32	Ohio	237	19,561	161	727	1,244	759	16,670	De 21,679	Fe 12,635	21,607	20,203	1,319	81	4	65,425,652
33	Oklahoma	18	142	17	9	5	6	105	Se 113	Ja 92	102	95	7	.....	.....	175,674
34	Oregon	17	70	22	1	1	.....	46	Jy 55	Ja 31	50	48	1	1	.....	115,256
35	Pennsylvania	177	11,815	166	389	697	289	10,274	De 12,895	Ja 8,329	12,850	12,574	231	45	.....	37,375,912
36	Rhode Island	18	225	17	15	3	11	179	De 203	Fe 151	208	196	12	.....	.....	486,787
37	South Carolina	6	48	8	2	1	3	34	De [3] 37	Je 30	36	35	.....	1	.....	57,469
38	South Dakota	4	10	5	.....	.....	.....	5	My [3] 6	Oc [3] 4	5	5	.....	.....	.....	5,109
39	Tennessee	17	547	15	19	18	9	486	Oc 631	Ja 377	561	536	25	.....	.....	843,259
40	Texas	72	620	85	30	12	13	480	De 573	Fe 412	581	560	17	4	.....	975,356
41	Utah	6	69	6	3	4	.....	56	Jy 71	Ja 46	39	39	.....	.....	.....	90,355
42	Virginia	19	168	14	16	7	5	126	Oc 141	Ja [3] 105	137	110	27	.....	.....	370,484
43	Washington	58	377	58	22	9	12	276	My [3] 292	Fe 247	275	270	5	.....	.....	731,895
44	Wisconsin	80	5,580	48	211	454	189	4,678	No 5,523	Fe 3,821	5,454	5,208	235	8	3	15,870,932
45	All other states [5]	7	50	9	1	.....	1	39	.....	.....	47	45	2	.....	.....	60,954

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

AUTOMOBILE INDUSTRY, BY STATES: 1919—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.							Electric horsepower generated in establishments reporting.
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines)	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
AUTOMOBILE BODIES AND PARTS.																	
Dollars. 19,917,333	*Dollars.* 15,051,007	*Dollars.* 178,955,503	*Dollars.* 1,560,201	*Dollars.* 2,903,800	*Dollars.* 19,136,223	*Dollars.* 353,299,208	*Dollars.* 8,728,094	*Dollars.* 692,170,692	*Dollars.* 330,143,390	256,919	32,920	8,760	12,066	566	202,607	17,746	1
9,439	7,489	86,440	.....	6,930	1,671	82,651	10,005	262,680	170,024	236	3	.....	.....	.....	233	.....	2
7,800	7,629	62,262	.....	6,980	530	139,678	2,918	253,654	111,058	236	.....	.....	.....	.....	236	.....	3
270,096	115,555	2,255,364	85,367	239,914	66,694	3,231,336	60,341	7,735,153	4,443,476	1,981	.....	.....	28	.....	1,953	.....	4
36,300	7,172	276,302	17,828	21,412	7,690	332,356	9,040	819,280	477,884	219	.....	.....	.....	.....	219	.....	5
278,908	147,142	1,465,134	3,000	58,721	88,933	3,026,007	65,995	6,197,757	3,105,755	1,745	370	.....	43	.....	1,332	8	6
4,731	.....	16,691	500	980	327	14,835	960	64,013	48,209	51	.....	.....	12	.....	39	.....	7
6,500	1,000	30,483	200	2,040	623	39,146	828	101,663	61,689	21	.....	.....	.....	.....	21	.....	8
1,717	1,380	59,751	.....	6,056	655	89,234	1,720	207,281	116,327	26	.....	.....	3	.....	23	.....	9
57,645	29,560	222,772	2,000	22,161	12,401	704,406	8,974	1,133,544	420,164	302	25	.....	37	.....	240	.....	10
180	402	5,333	.....	926	389	7,969	129	22,026	13,928	11	.....	.....	5	.....	6	.....	11
1,353,441	854,954	6,474,090	83,394	346,642	496,227	12,609,961	312,075	27,864,978	14,942,942	8,835	685	.....	248	.....	7,902	383	12
2,465,094	1,480,754	17,372,532	194,450	105,777	1,849,806	38,397,660	1,671,542	71,717,249	31,648,047	25,917	4,196	3,375	230	.....	18,116	4,824	13
79,644	60,657	469,091	9,004	22,129	22,532	796,817	19,624	1,713,008	896,567	552	150	.....	.....	.....	402	58	14
7,533	6,246	93,045	.....	6,680	6,910	172,612	5,891	415,962	237,459	176	25	.....	2	.....	149	.....	15
63,326	24,836	410,887	.....	4,180	17,978	660,253	23,889	1,365,882	681,740	816	.....	.....	73	.....	743	.....	16
22,540	16,595	184,114	.....	9,210	3,143	429,945	5,281	731,887	296,661	672	238	.....	25	.....	409	.....	17
6,902	2,274	40,313	.....	3,242	251	22,539	1,598	86,879	62,742	64	.....	.....	.....	.....	64	.....	18
49,102	55,992	278,635	2,871	16,355	10,998	425,208	12,515	1,034,364	596,641	422	.....	.....	69	.....	353	.....	19
574,025	282,180	4,589,699	22,214	102,486	258,177	6,530,637	181,258	14,483,382	7,771,487	3,281	715	225	32	.....	2,309	270	20
6,640,391	5,150,127	75,221,256	388,957	285,253	9,084,787	147,613,334	2,949,108	288,306,858	137,744,416	103,425	14,919	1,470	8,421	18	78,597	4,634	21
80,979	38,904	456,559	2,955	35,768	23,417	850,290	26,896	1,763,048	885,862	611	.....	.....	4	.....	607	.....	22
15,512	6,527	48,987	.....	3,360	5,662	70,083	1,866	177,677	105,728	211	140	.....	.....	.....	71	.....	23
305,139	186,635	1,417,607	7,670	86,282	190,398	4,767,061	52,147	9,314,846	4,495,638	2,036	493	.....	40	.....	1,503	.....	24
.....	.....	6,430	.....	2,080	175	14,892	592	33,893	18,409	18	.....	.....	.....	.....	18	.....	25
94,964	64,160	361,049	1,744	19,360	26,842	1,019,454	17,590	1,723,167	686,123	597	100	.....	15	.....	482	.....	26
.....	.....	3,131	.....	196	338	3,214	567	11,175	7,394	27	.....	.....	.....	.....	27	.....	27
496,446	341,862	4,150,935	6,330	120,269	496,614	6,234,843	167,765	15,110,688	8,708,080	5,939	660	3,500	565	.....	1,214	2,341	28
2,495,083	1,635,656	19,305,023	127,799	619,224	1,860,013	33,617,523	935,429	70,415,154	35,862,202	27,976	3,317	.....	493	540	23,626	848	29
750	.....	41,747	.....	3,927	288	36,220	2,020	114,538	76,298	82	.....	.....	.....	.....	82	.....	30
900	.....	22,945	.....	1,570	246	26,054	1,689	62,928	35,185	26	.....	.....	.....	.....	26	.....	31
2,408,535	2,393,441	21,966,409	60,467	272,474	2,116,799	51,448,973	1,092,976	92,390,646	39,848,697	41,566	2,442	40	649	.....	38,435	662	32
24,598	9,485	137,835	.....	14,060	6,306	164,489	5,274	428,072	258,309	105	.....	.....	.....	.....	105	.....	33
1,650	360	71,358	.....	12,718	1,434	113,705	3,940	258,678	141,033	93	.....	.....	.....	.....	93	.....	34
1,106,427	1,215,323	13,146,068	25,086	211,992	1,483,106	24,054,793	653,190	45,329,223	20,621,240	17,950	2,912	150	509	5	14,374	1,183	35
39,806	13,061	192,727	2,332	13,496	14,413	194,396	9,463	684,605	480,746	280	.....	.....	5	.....	275	.....	36
4,699	3,415	32,436	1,500	1,995	477	103,265	2,829	138,286	32,192	57	.....	.....	.....	.....	57	.....	37
.....	.....	6,395	.....	920	166	7,170	637	26,216	18,409	12	.....	.....	.....	.....	12	.....	38
51,769	23,150	417,187	3,862	15,530	21,187	558,651	20,503	1,351,979	772,825	1,020	845	.....	.....	.....	175	.....	39
51,817	25,741	557,163	600	60,706	18,695	736,417	16,433	1,881,349	1,128,499	626	.....	.....	2	.....	624	.....	40
7,200	5,500	61,430	.....	9,286	1,149	54,277	1,943	166,246	110,026	40	.....	.....	.....	.....	40	.....	41
24,677	7,118	113,483	374	8,248	2,080	303,679	4,714	527,053	218,660	124	.....	.....	8	3	113	.....	42
53,632	16,024	402,079	502,169	36,608	14,711	448,588	16,621	1,226,303	761,094	429	.....	.....	.....	.....	429	.....	43
714,436	811,725	6,376,699	7,528	82,757	920,608	13,071,212	346,696	24,350,512	10,932,604	8,028	685	.....	548	.....	6,795	2,535	44
3,000	976	45,627	.....	2,900	377	73,375	2,614	166,910	90,921	78	.....	.....	.....	.....	78	.....	45

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

AUTOMOBILE REPAIRING.

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

TABLE 18.—DETAILED STATEMENT FOR THE

	STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.		Wage earners. Number, 15th day of— Minimum month.		WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male.	Under 16. Female.	Capital.
	AUTOMOBILE REPAIRING.																	
1	United States	15,507	82,635	18,566	3,288	2,753	2,967	55,061	Au	59,004	Ja	48,702	58,085	57,454	393	238	.....	*Dollars.* 141,123,954
2	Alabama	132	692	157	22	22	11	480	De	510	Ja	418	511	509	.....	2	.....	835,049
3	Arizona	81	374	95	18	16	14	231	De	269	Fe [3]	211	279	279	.....	.....	.....	602,394
4	Arkansas	79	395	109	13	5	7	261	De [3]	270	Fe [3]	250	276	271	4	1	.....	452,326
5	California	1,648	8,827	2,168	186	214	267	5,992	De	6,426	Ja	5,483	6,491	6,426	38	27	.....	13,190,952
6	Colorado	401	2,164	455	90	64	60	1,495	Au	1,757	Ja	1,261	1,487	1,477	4	6	.....	3,536,680
7	Connecticut	301	1,590	294	102	39	82	1,073	Au	1,149	Ja	957	1,113	1,091	20	2	.....	2,706,780
8	Delaware	15	61	13	3	3	1	41	Je	46	De	39	37	37	.....	.....	.....	92,010
9	District of Columbia	27	285	26	18	14	13	214	Ja	229	Je [3]	209	209	209	.....	.....	.....	739,427
10	Florida	79	380	96	12	8	5	259	De	278	Fe	247	288	287	.....	1	.....	378,180
11	Georgia	195	1,216	243	54	36	20	863	De	916	Ja	785	921	904	13	4	.....	1,169,481
12	Idaho	119	546	151	28	14	11	342	Je	396	Ja	291	356	353	.....	3	.....	1,032,440
13	Illinois	785	4,627	963	194	160	190	3,120	Jy	3,282	Ja	2,918	3,231	3,191	37	3	.....	8,017,459
14	Indiana	358	1,454	439	64	16	50	885	Au	951	Ja	779	926	919	5	2	.....	1,954,600
15	Iowa	579	2,311	735	81	51	89	1,355	Au	1,532	Ja	1,119	1,430	1,409	19	2	.....	4,412,673
16	Kansas	325	1,392	424	33	33	32	870	Se	926	Ja	814	945	938	7	.....	.....	1,855,890
17	Kentucky	190	923	233	31	10	35	614	De	666	Ja	543	694	692	2	.....	.....	1,460,607
18	Louisiana	128	779	151	43	41	21	523	No	576	Mh	457	574	567	2	5	.....	1,146,743
19	Maine	161	665	180	29	19	37	400	Jy [3]	510	Ja	286	425	421	4	.....	.....	1,005,944
20	Maryland	212	1,617	233	101	117	65	1,101	De	1,201	Ja	995	1,207	1,201	3	3	.....	3,315,160
21	Massachusetts	279	2,057	247	60	85	83	1,582	Je	1,687	Ja	1,378	1,620	1,596	17	7	.....	2,707,250
22	Michigan	259	1,454	322	48	50	66	968	Au	1,064	Ja	774	1,047	1,032	11	4	.....	2,904,986
23	Minnesota	592	2,935	799	128	72	94	1,842	Jy	2,131	Ja	1,453	1,921	1,911	8	2	.....	5,345,601
24	Mississippi	76	289	100	3	3	6	177	Au [3]	196	Ap	157	195	188	1	6	.....	306,663
25	Missouri	417	2,014	523	95	54	59	1,283	Se	1,344	Ja	1,173	1,350	1,338	8	4	.....	3,202,785
26	Montana	255	908	309	32	21	26	520	Jy	623	Ja	413	524	524	.....	.....	.....	1,242,893
27	Nebraska	499	1,897	661	32	20	50	1,134	Se	1,319	Ja	989	1,170	1,164	4	2	.....	3,506,061
28	Nevada	17	74	18	4	3	4	45	Se	50	Ja	35	47	47	.....	.....	.....	88,734
29	New Hampshire	48	232	52	9	4	10	157	Au	192	Ja	121	163	161	2	.....	.....	371,782
30	New Jersey	493	2,393	492	90	84	100	1,627	Jy	1,747	Ja	1,473	1,693	1,665	6	22	.....	4,328,592
31	New Mexico	51	212	56	3	6	.....	147	No	166	Ja	136	161	161	.....	.....	.....	322,988
32	New York	999	8,815	981	457	652	528	6,197	Au	6,528	Ja	5,552	6,449	6,413	34	2	.....	16,134,597
33	North Carolina	309	1,844	345	151	32	33	1,283	De	1,338	Ja	1,201	1,332	1,313	6	13	.....	3,116,635
34	North Dakota	139	500	159	20	10	8	303	Jy	392	Ja	203	293	291	2	.....	.....	1,723,901
35	Ohio	540	3,463	623	144	100	166	2,430	Oc	2,798	Ja	2,156	2,503	2,467	26	10	.....	5,811,464
36	Oklahoma	129	715	166	41	33	20	455	Se	498	Ja	403	497	490	.....	7	.....	1,066,264
37	Oregon	229	1,163	294	46	57	39	727	Se	810	Ja	608	813	797	12	4	.....	1,492,590
38	Pennsylvania	1,359	7,607	1,582	253	284	263	5,225	Au	5,505	Ja	4,797	5,473	5,385	39	49	.....	15,264,528
39	Rhode Island	99	493	104	14	7	19	349	Je	381	Ja	319	341	340	1	.....	.....	551,167
40	South Carolina	183	820	202	47	31	14	532	De	588	Fe	493	599	596	.....	3	.....	2,137,904
41	South Dakota	362	1,341	491	13	15	28	794	Au	936	Ja	625	820	814	3	3	.....	2,519,901
42	Tennessee	163	894	211	38	15	27	603	Jy	634	Fe	549	641	635	5	1	.....	1,640,910
43	Texas	334	1,856	448	86	42	26	1,254	Oc	1,340	Ja	1,133	1,373	1,353	8	12	.....	2,881,206
44	Utah	125	626	134	42	12	12	426	Au	506	Ja	304	462	458	2	2	.....	665,938
45	Vermont	88	430	98	11	5	19	297	Jy	345	Ja	233	306	303	2	1	.....	828,852
46	Virginia	116	582	146	23	20	17	376	Se	392	Ja	357	394	392	2	.....	.....	820,617
47	Washington	562	2,591	638	119	65	82	1,687	Se	1,840	Ja	1,456	1,844	1,829	13	2	.....	3,997,777
48	West Virginia	158	694	181	38	29	25	421	Au	481	Fe [3]	351	457	452	1	4	.....	1,377,855
49	Wisconsin	673	2,844	851	95	44	116	1,738	Au	1,909	Ja	1,485	1,821	1,784	22	15	.....	6,007,889
50	Wyoming	139	583	168	24	16	17	363	Au	451	Ja	277	376	374	.....	2	.....	850,829

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

vulcanizing of tires in factories classified as in the rubber-goods industry.

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

AUTOMOBILE-REPAIRING INDUSTRY, BY STATES: 1919.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.						Electric horsepower generated in establishments reporting.	
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines)	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
AUTOMOBILE REPAIRING.																	
Dollars.	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*								
6,237,721	5,265,398	71,613,471	1,409,553	7,846,451	1,808,906	84,013,410	3,635,443	224,652,159	137,003,306	82,691	1,721	42	17,571	132	63,225	518	1
48,114	27,026	583,618	400	58,583	16,366	615,619	25,357	1,742,915	1,101,939	990	.....	.....	297	2	691	.....	2
21,459	24,340	356,575	.....	48,006	7,253	350,295	16,814	1,013,243	646,134	422	.....	.....	35	.....	387	.....	3
20,277	10,660	277,418	.....	31,744	3,927	275,734	15,860	838,386	547,292	605	.....	.....	183	.....	422	.....	4
353,012	462,364	8,299,952	348,266	1,048,230	102,042	8,963,093	303,485	24,893,910	15,627,332	8,424	8	.....	482	2	7,932	6	5
170,153	125,599	1,955,265	22,823	194,409	71,295	2,027,350	94,917	5,679,480	3,557,213	2,229	31	6	494	2	1,696	16	6
179,260	106,335	1,333,965	13,208	172,541	34,597	1,598,716	91,228	4,545,446	2,855,502	1,093	10	.....	135	.....	948	2	7
4,962	4,033	50,577	535	9,170	844	45,187	2,164	140,632	93,281	40	.....	.....	19	.....	21	.....	8
35,522	54,361	229,085	2,000	23,080	5,826	388,905	12,719	884,002	482,378	158	.....	.....	2	.....	156	.....	9
25,180	14,728	296,762	133	32,569	6,750	231,318	13,367	740,200	495,605	590	202	.....	97	4	287	5	10
95,448	54,159	1,033,516	8,280	99,001	25,755	1,047,855	41,524	2,738,649	1,649,270	1,181	46	.....	296	.....	839	2	11
50,500	27,333	533,594	.....	47,024	12,290	517,265	25,627	1,445,754	902,862	485	.....	.....	26	1	458	3	12
384,064	321,854	4,006,019	23,130	472,873	77,073	5,881,787	220,797	13,951,423	7,848,839	4,278	72	.....	608	.....	3,598	14	13
98,344	51,193	1,067,146	6,615	105,417	26,918	1,217,716	67,442	3,352,031	2,066,873	1,692	28	10	401	.....	1,253	7	14
134,473	121,874	1,736,347	8,811	187,061	39,918	2,187,167	144,038	5,806,835	3,474,730	3,232	10	.....	803	.....	2,419	4	15
56,503	46,487	1,171,665	18,980	99,809	22,131	1,211,941	63,480	3,288,214	2,012,793	2,129	10	.....	522	.....	1,597	6	16
56,015	36,676	773,127	386	74,053	22,065	902,584	39,355	2,389,396	1,447,457	1,261	19	.....	550	2	690	10	17
53,393	32,876	547,578	2,240	41,423	12,243	623,975	24,173	1,548,329	900,181	834	30	.....	295	.....	509	.....	18
32,421	28,548	464,292	.....	35,836	11,990	439,244	28,318	1,276,609	809,047	773	8	.....	186	.....	579	.....	19
208,767	150,606	1,288,909	37,201	100,753	48,750	2,316,773	52,524	4,874,344	2,505,047	1,094	4	.....	119	.....	971	.....	20
149,437	186,701	2,044,460	9,500	203,359	88,343	1,948,460	95,160	5,972,500	3,928,880	1,424	.....	.....	125	.....	1,299	.....	21
98,485	114,589	1,288,441	15,982	114,734	48,883	1,780,480	82,461	4,226,691	2,363,750	1,362	2	.....	182	.....	1,178	.....	22
207,516	119,399	2,295,942	44,932	247,594	63,755	1,993,318	170,650	9,282,481	7,118,513	2,830	22	.....	743	.....	2,065	23	23
2,100	6,472	215,637	3,273	23,360	7,062	163,014	13,111	686,164	510,039	472	.....	.....	248	.....	224	8	24
161,907	88,622	1,587,597	52,312	202,309	26,131	1,988,887	88,563	5,212,137	3,134,687	1,976	14	.....	598	.....	1,364	9	25
45,242	40,596	774,973	177	98,655	22,280	544,688	60,597	2,038,836	1,433,551	1,187	19	.....	291	5	872	1	26
60,064	56,962	1,553,812	7,030	126,059	37,883	1,820,985	107,309	4,549,978	2,621,684	2,822	18	.....	1,062	.....	1,742	17	27
10,060	6,470	79,432	.....	10,440	1,300	70,462	4,603	221,372	146,307	118	.....	.....	9	.....	109	.....	28
9,106	9,740	189,723	.....	20,801	3,863	323,414	11,515	682,679	347,750	220	.....	.....	20	35	165	.....	29
169,428	161,378	2,144,190	12,866	242,635	47,386	2,204,678	107,622	6,129,747	3,817,447	2,083	105	.....	388	.....	1,590	6	30
2,250	4,950	202,945	170	17,232	4,882	158,837	13,629	494,597	322,131	359	.....	.....	91	.....	268	.....	31
1,071,989	1,197,146	8,087,997	92,910	1,193,816	206,497	10,041,435	342,062	25,310,348	14,926,851	5,897	43	.....	759	5	5,090	2	32
307,808	82,830	1,702,371	16,240	128,784	35,445	1,743,369	64,252	5,002,201	3,194,670	1,748	16	.....	710	2	1,020	.....	33
27,156	15,524	367,920	1,173	23,907	18,161	505,501	40,420	1,231,981	686,060	767	.....	.....	323	.....	444	21	34
271,286	230,647	3,311,759	38,435	283,977	86,497	4,344,652	149,745	10,245,408	5,751,011	3,678	180	.....	735	.....	2,763	6	35
92,440	58,417	602,889	3,735	62,584	14,908	869,346	32,754	2,108,455	1,206,355	1,041	4	.....	452	.....	585	10	36
78,713	80,884	1,027,133	405,620	107,166	15,305	745,746	44,360	2,604,602	1,814,496	1,202	2	.....	196	11	993	3	37
527,491	523,794	6,864,510	146,049	698,728	110,659	8,068,450	295,523	20,682,253	12,318,280	7,109	621	.....	1,431	9	5,048	90	38
25,257	25,630	390,368	100	40,542	13,368	317,050	19,845	1,081,085	744,190	342	50	.....	31	.....	261	.....	39
75,109	35,191	631,369	976	65,580	36,223	788,879	29,972	1,984,432	1,165,581	851	16	.....	202	.....	633	113	40
18,867	36,287	1,154,245	2,592	82,312	27,922	1,146,865	85,173	3,346,613	2,114,575	2,082	14	.....	867	.....	1,201	19	41
70,261	23,128	668,462	583	64,235	16,064	1,013,503	30,774	2,329,353	1,285,076	1,025	10	.....	218	9	788	.....	42
147,831	61,704	1,468,665	2,569	200,953	41,465	2,111,978	73,444	5,301,804	3,116,382	1,693	34	.....	431	.....	1,228	21	43
66,120	20,817	524,001	300	64,867	8,000	563,591	25,791	1,537,194	947,812	596	10	.....	37	.....	549	1	44
17,270	16,365	326,221	.....	18,465	10,678	654,867	19,132	1,820,513	1,146,514	459	.....	.....	114	21	324	47	45
32,440	36,729	423,183	.....	55,142	13,502	781,738	18,928	1,640,891	840,225	409	.....	.....	87	.....	322	2	46
219,555	145,848	2,494,747	36,906	276,852	60,592	2,311,886	103,136	6,952,681	4,537,659	2,311	32	.....	225	.....	2,054	1	47
53,962	43,727	529,944	4,925	55,647	15,796	811,614	25,891	2,299,659	1,462,154	1,071	.....	4	459	.....	608	12	48
148,524	113,553	2,053,358	16,353	183,358	105,706	2,782,589	168,677	6,804,739	3,923,473	3,216	4	22	728	19	2,437	17	49
42,080	20,246	601,762	237	49,876	10,727	570,604	36,255	1,660,287	1,053,428	837	27	.....	259	3	548	13	50

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

CARRIAGES AND WAGONS AND MATERIALS.

GENERAL STATISTICS.

General character of the industry.—This report presents statistics for establishments engaged in the manufacture of carriages, wagons, sleighs, sleds (except children's carriages and sleds), and parts. Some establishments which are included were engaged chiefly in manufacturing materials and parts, building only a few vehicles, while others were engaged in repair work only.

Carriages and wagons and materials were also made by establishments engaged primarily in the manufacture of other products to the value of $13,920,648 in 1919 and $4,492,615 in 1914. The value of such manufactures, however, is not included in the total value of products shown for the carriage and wagon industry, except in Table 12.

Comparative summary.—Table 1 summarizes the statistics for each census since 1899, with percentages of increase or decrease for each five-year period.

With a few exceptions decreases are noticeable at each succeeding census since 1909. The addition of the Federal income tax since 1914 will account for the increase in "Rent and taxes."

Summary of the industry.—Table 2 summarizes the statistics for the industry as a whole for 1919, and gives separate figures for the three classes of establishments: (1) Factories engaged in manufacturing carriages and wagons, (2) factories making carriage and wagon materials, and (3) factories doing repair work only.

Of the 2,544 establishments from which returns were received in 1919, 1,130, or 44.4 per cent, were engaged primarily in the manufacture of the complete vehicle and reported 69.4 per cent of the total value of products; establishments manufacturing carriage and wagon materials reported 22.6 per cent, and factories doing repair work only 8 per cent of the total value of products reported for the industry.

Principal states, ranked by value of products.—Illinois, as shown by Table 3, is the leading state in the manufacture of carriages and wagons. In 1919 this state reported 10.9 per cent of the total number of wage earners, and 12.6 per cent of the total value of products. Indiana, second in importance, contributed 9 per cent and 10.8 per cent, respectively, of these two items. Ohio, the third ranking state, and Kentucky, fourth in rank, were not far behind the two leading states. Of the states engaged in the manufacture of carriages and wagons, a great majority are located east of the Mississippi River, the only states of importance west of the river being Missouri, Minnesota, Arkansas, and Iowa, in the order named.

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

Wage earners, by months, for states.—As shown by Table 5, the number of wage earners employed in the industry month by month ranged from a maximum of 25,766 in October to a minimum of 23,713 in April, the minimum number being equivalent to 92 per cent of the maximum. Figures are given for all states in the combined industry reporting an average of over 350 wage earners, that could be shown without disclosing operations of individual establishments, while for the United States the number of males and of females is also shown.

Prevailing hours of labor.—Table 6 shows that the reduction in number of wage earners from 1914 to 1919 occurred in the groups in which the prevailing hours of labor were 54 per week or more. In 1914, 16.4 per cent were reported as employed fewer than 54 hours per week as against 34 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 24.9 per cent of the total wage earners, as compared with 21.2 per cent in 1919.

Size of establishments, by average number of wage earners, for states.—Analysis of Table 7 discloses the significant fact that in 1919, 1,946 establishments, or 76.5 per cent of the total number for the industry, employed fewer than 6 wage earners each, while only 3,011, or 12.2 per cent of the total number of wage earners, were employed therein, evidencing the predominance of small establishments based upon the average number of wage earners.

Size of establishments, by value of products.—At the censuses of 1909 and 1914 establishments with products valued at "$100,000 to $1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "$100,000 to $500,000," and "$500,000 to $1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from returns for 1914. Table 8, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. In 1919 establishments reporting products valued at more than $100,000 employed 16,708 wage earners, or 67.7 per cent of the total average number, and reported products to the value of $90,884,218, or 76.9 per cent of the total value of products.

Character of ownership.—Table 9 shows that the individual form of ownership predominated in number of establishments only. Individuals owned 64.2 per cent of the total number of establishments for the industry in 1919. Corporations owned only 14.2 per cent of the total number of establishments, but employed 72 per cent of the total average number of wage earners, and reported 77.8 per cent of the value of products.

Number and horsepower of types of prime movers.—From 1914 to 1919, as shown by Table 10, there was a decrease in the total horsepower for the industry of 47,883 horsepower, or 42.5 per cent, the decrease being throughout all types of power.

Fuel consumed.—Table 11 shows the principal kinds of fuel used for the industry in 1919 and 1914, and gives separately the amounts consumed in states requiring considerable quantities of fuel for manufacturing purposes. In 1919, of the total reported for bituminous coal, Illinois consumed 21.1 per cent; of the total reported for anthracite coal, Pennsylvania, New York, and Massachusetts consumed 46.4 per cent.

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

	1919	1914	1909	1904	1899	PER CENT OF INCREASE.[1]			
						1914-1919	1909-1914	1904-1909	1899-1904
Number of establishments	2,544	5,057	5,492	5,588	6,792	−49.7	−7.9	−1.7	−17.7
Persons engaged	30,697	64,446	82,944	90,751	(2)	−52.4	−22.3	−8.6	.....
Proprietors and firm members	2,867	5,629	6,213	6,575	(2)	−49.1	−9.4	−5.5	.....
Salaried employees	3,148	6,426	6,803	6,294	5,026	−51.0	−5.5	8.1	25.2
Wage earners (average number)	24,682	52,391	69,928	77,882	73,812	−52.9	−25.1	−10.2	5.5
Primary horsepower	64,666	112,549	126,032	106,159	83,771	−42.5	−10.7	18.7	26.7
Capital	$96,924,074	$177,643,015	$175,473,728	$152,344,657	$128,961,660	−45.4	1.2	15.2	18.1
Salaries and wages	30,897,048	40,331,426	45,555,126	44,943,700	38,324,427	−23.4	−11.5	1.4	17.3
Salaries	5,836,882	7,773,964	7,960,207	6,581,021	4,759,114	−24.9	−2.3	21.0	38.3
Wages	25,060,166	32,557,462	37,594,919	38,362,679	33,565,313	−23.0	−13.4	−2.0	14.3
Paid for contract work	182,039	209,303	253,512	249,327	(2)	−13.1	−17.4	1.7	.....
Rent and taxes	3,457,248	2,359,532	2,096,877	[3] 2,081,834	(2)	46.5	12.5	.....	.....
Cost of materials	63,097,129	65,718,795	81,951,288	77,527,911	66,771,919	−4.0	−19.8	5.7	16.1
Value of products	118,228,541	131,546,997	159,892,547	155,868,849	138,261,763	−10.1	−17.7	2.6	12.7
Value added by manufacture [4]	55,131,412	65,828,202	77,941,259	78,340,938	71,489,844	−16.2	−15.5	−0.5	9.6

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

TABLE 2.—SUMMARY OF THE INDUSTRY: 1919.

	Total for the industry.	ESTABLISHMENTS ENGAGED PRIMARILY IN—		
		Manufacturing carriages and wagons.	Manufacturing carriage and wagon materials.	Repair work only.
Number of establishments	2,544	1,130	258	1,156
Persons engaged	30,697	19,249	7,429	4,019
Proprietors and firm members	2,867	1,265	212	1,390
Salaried employees	3,148	2,265	708	175
Wage earners (average number)	24,682	15,719	6,509	2,454
Primary horsepower	64,666	34,666	23,700	6,300
Capital	$96,924,074	$71,701,095	$17,971,206	$7,251,773

	Total for the industry.	ESTABLISHMENTS ENGAGED PRIMARILY IN—		
		Manufacturing carriages and wagons.	Manufacturing carriage and wagon materials.	Repair work only.
Salaries and wages	$30,897,048	$20,741,019	$6,972,315	$3,183,714
Salaries	5,836,882	4,272,980	1,305,544	258,358
Wages	25,060,166	16,468,039	5,666,771	2,925,356
Paid for contract work	182,039	117,149	17,448	47,442
Rent and taxes	3,457,248	2,505,433	635,084	316,731
Cost of materials	63,097,129	44,912,172	14,734,673	3,450,284
Value of products	118,228,541	82,013,326	26,765,316	9,449,899
Value added by manufacture	55,131,412	37,101,154	12,030,643	5,999,615

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

STATE.	Number of establishments.	WAGE EARNERS.			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	2,544	24,682	100.0	....	$118,229	100.0	....	$55,131	100.0	...
Illinois	107	2,692	10.9	1	14,863	12.6	1	6,730	12.2	1
Indiana	100	2,216	9.0	2	12,785	10.8	2	4,316	7.8	5
Ohio	152	2,213	9.0	3	10,946	9.3	3	5,292	9.6	2
Kentucky	71	1,977	8.0	4	10,510	8.9	4	4,641	8.4	4
Wisconsin	124	1,498	6.1	7	9,455	8.0	5	4,948	9.0	3
Tennessee	66	1,665	6.7	5	6,691	5.7	6	2,921	5.3	7
North Carolina	109	1,327	5.4	8	6,392	5.4	7	2,829	5.1	8
Pennsylvania	356	1,564	6.3	6	5,534	4.7	8	3,192	5.8	6
Missouri	122	1,155	4.7	10	5,413	4.6	9	2,386	4.3	10
New York	274	1,169	4.7	9	5,095	4.3	10	2,793	5.1	9
Iowa	68	493	2.0	14	2,155	1.8	15	1,147	2.1	15
Massachusetts	50	491	2.0	15	1,672	1.4	17	995	1.8	16
Michigan	46	367	1.5	17	1,523	1.3	18	809	1.5	18
Mississippi	19	276	1.1	19	$1,105	0.9	19	$648	1.2	19
Alabama	42	307	1.2	18	1,073	0.9	20	557	1.0	20
Connecticut	56	168	0.7	22	677	0.6	24	352	0.6	23
Louisiana	24	166	0.7	23	491	0.4	26	271	0.5	26
Rhode Island	28	74	0.3	29	208	0.2	31	141	0.3	31
South Carolina	19	63	0.3	30	183	0.2	32	107	0.2	32
Florida	13	57	0.2	31	166	0.1	33	97	0.2	33
Vermont	23	35	0.1	33	130	0.1	34	80	0.1	34
Oregon	4	17	0.1	37	77	0.1	38	47	0.1	39
Delaware	5	15	0.1	39	72	0.1	39	50	0.1	38
Montana	4	7	(1)	40	65	0.1	40	31	0.1	41
Utah	3	16	0.1	38	41	(1)	42	24	(1)	42
New Mexico	4	6	(1)	41	31	(1)	44	21	(1)	44
All other	655	4,648	18.8	....	20,876	17.6	....	9,706	17.6	...

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

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

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
CARRIAGES AND WAGONS AND MATERIALS.	1919	30,697	29,441	1,256	95.9	4.1
	1914	64,446	62,173	2,273	96.5	3.5
	1909	82,944	80,536	2,408	97.1	2.9
Proprietors and officials	1919	4,276	4,172	104	97.6	2.4
	1914	7,716	7,583	133	98.3	1.7
	1909	8,844	8,706	138	98.4	1.6
Proprietors and firm members	1919	2,867	2,790	77	97.3	2.7
	1914	5,629	5,526	103	98.2	1.8
	1909	6,213	6,103	110	98.2	1.8
Salaried officers of corporations	1919	555	535	20	96.4	3.6
	1914	981	951	30	96.9	3.1
	1909	1,166	1,143	23	98.0	2.0
Superintendents and managers	1919	854	847	7	99.2	0.8
	1914	1,106	1,106	.....	100.0	.....
	1909	1,465	1,460	5	99.7	0.3
Clerks and other subordinate salaried employees.	1919	1,739	1,089	650	62.6	37.4
	1914	4,339	2,972	1,367	68.5	31.5
	1909	4,172	2,991	1,181	71.7	28.3
Wage earners (average number)	1919	24,682	24,180	502	98.0	2.0
	1914	52,391	51,618	773	98.5	1.5
	1909	69,928	68,839	1,089	98.4	1.6
16 years of age and over	1919	24,594	24,101	493	98.0	2.0
	1914	52,253	51,482	771	98.5	1.5
	1909	69,397	68,315	1,082	98.4	1.6
Under 16 years of age	1919	88	79	9	89.8	10.2
	1914	138	136	2	98.6	1.4
	1909	531	524	7	98.7	1.3
CARRIAGES AND WAGONS, INCLUDING REPAIRS.	1919	23,268	22,388	880	96.2	3.8
	1914	51,913	50,120	1,793	96.5	3.5
	1909	63,607	61,827	1,780	97.2	2.8
Proprietors and officials	1919	3,690	3,595	95	97.4	2.6
	1914	6,879	6,763	116	98.3	1.7
	1909	7,627	7,521	106	98.6	1.4
Proprietors and firm members	1919	2,655	2,585	70	97.4	2.6
	1914	5,289	5,198	91	98.3	1.7
	1909	5,701	5,613	88	98.5	1.5
Salaried officers of corporations	1919	390	372	18	95.4	4.6
	1914	752	727	25	96.7	3.3
	1909	853	837	16	98.1	1.9
Superintendents and managers	1919	645	638	7	98.9	1.1
	1914	838	838	.....	100.0	.....
	1909	1,073	1,071	2	99.8	0.2
Clerks and other subordinate salaried employees.	1919	1,405	894	511	63.6	36.4
	1914	3,730	2,550	1,180	68.4	31.6
	1909	3,440	2,494	946	72.5	27.5
Wage earners (average number)	1919	18,173	17,899	274	98.5	1.5
	1914	41,304	40,807	497	98.8	1.2
	1909	52,540	51,812	728	98.6	1.4
16 years of age and over	1919	18,110	17,845	265	98.5	1.5
	1914	41,220	40,723	497	98.8	1.2
	1909	52,213	51,489	724	98.6	1.4
Under 16 years of age	1919	63	54	9	85.7	14.3
	1914	84	84	.....	100.0	.....
	1909	327	323	4	98.8	1.2
CARRIAGE AND WAGON MATERIALS.	1919	7,429	7,053	376	94.9	5.1
	1914	12,533	12,053	480	96.2	3.8
	1909	19,337	18,709	628	96.8	3.2
Proprietors and officials	1919	586	577	9	98.5	1.5
	1914	837	820	17	98.0	2.0
	1909	1,217	1,185	32	97.4	2.6
Proprietors and firm members	1919	212	205	7	96.7	3.3
	1914	340	328	12	96.5	3.5
	1909	512	490	22	95.7	4.3
Salaried officers of corporations	1919	165	163	2	98.8	1.2
	1914	229	224	5	97.8	2.2
	1909	313	306	7	97.8	2.2
Superintendents and managers	1919	209	209	.....	100.0	.....
	1914	268	268	.....	100.0	.....
	1909	392	389	3	99.2	0.8
Clerks and other subordinate salaried employees.	1919	334	195	139	58.4	41.6
	1914	609	422	187	69.3	30.7
	1909	732	497	235	67.9	32.1
Wage earners (average number)	1919	6,509	6,281	228	96.5	3.5
	1914	11,087	10,811	276	97.5	2.5
	1909	17,388	17,027	361	97.9	2.1
16 years of age and over	1919	6,484	6,256	228	96.5	3.5
	1914	11,033	10,759	274	97.5	2.5
	1909	17,184	16,826	358	97.9	2.1
Under 16 years of age	1919	25	25	.....	100.0	.....
	1914	54	52	2	96.3	3.7
	1909	204	201	3	98.5	1.5

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

[The month of maximum employment 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	24,682	23,809	23,980	23,831	*23,713*	23,937	24,104	24,778	25,327	25,511	25,766	25,763	25,665	92.0
Males	24,180	23,365	23,514	23,353	*23,229*	23,440	23,565	24,240	24,785	24,977	25,275	25,258	25,159	91.9
Females	502	*444*	466	478	484	497	539	538	542	534	491	505	506	81.9
1914	52,391	52,504	55,272	56,729	57,316	56,386	55,450	53,942	52,871	50,202	47,357	*45,014*	45,550	78.5
1909	69,928	*66,567*	69,390	71,795	72,892	**73,240**	72,181	69,618	68,326	67,894	67,949	68,857	70,427	90.9
Illinois	2,692	2,753	2,649	2,600	2,498	2,468	*2,346*	2,563	2,684	2,892	3,021	2,954	2,877	77.6
Indiana	2,216	2,261	2,251	2,075	*2,048*	2,102	2,205	2,208	2,275	2,273	2,303	2,276	2,315	88.5
Iowa	493	*419*	422	462	454	483	512	495	500	535	534	530	570	73.5
Kentucky	1,977	1,937	1,968	1,961	*1,817*	1,880	1,857	1,941	2,004	2,057	2,061	2,096	2,145	84.7
Massachusetts	491	*413*	458	521	514	**524**	516	498	490	498	481	482	497	78.8
Michigan	367	402	386	377	351	335	333	*327*	377	369	375	381	391	81.3
Missouri	1,155	1,135	*1,113*	1,118	1,152	1,150	1,130	1,163	1,165	1,121	1,199	**1,220**	1,194	91.2
New York	1,169	*1,069*	1,082	1,137	1,169	1,166	1,203	1,196	1,255	1,230	1,191	1,164	1,166	85.2
North Carolina	1,327	1,361	1,361	1,367	1,354	1,367	1,401	1,381	1,255	*1,252*	1,272	1,278	1,275	89.4
Ohio	2,213	*1,893*	1,998	2,063	2,167	2,212	2,273	2,302	2,255	2,334	2,318	2,345	2,396	79.0
Pennsylvania	1,564	*1,470*	1,511	1,540	1,566	1,568	**1,605**	1,598	1,601	1,583	1,579	1,564	1,583	91.6
Tennessee	1,665	1,603	1,623	1,613	1,646	*1,593*	1,609	1,671	1,747	1,735	1,796	1,664	1,680	88.7
Wisconsin	1,498	**1,586**	1,500	1,496	1,439	*1,409*	1,412	1,435	1,518	1,528	1,564	1,576	1,513	88.8

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

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States	1919	24,682	382	117	2,120	5,769	2,571	8,476	5,238	9
	1914	52,391	(2)	(2)	3,200	5,360	9,780	20,986	12,958	98
	1909	69,928	(2)	(2)	3,204	4,875	11,659	21,954	27,771	465
Illinois	1919	2,692	13	.....	123	1,656	115	524	261	.....
	1914	4,861	(2)	(2)	434	240	922	2,487	778	.....
Indiana	1919	2,216	.....	.....	182	313	236	1,060	395	.....
	1914	7,306	(2)	(2)	300	492	399	5,144	960	11
Iowa	1919	493	.....	.....	21	7	14	181	270	.....
	1914	994	(2)	(2)	123	142	256	124	349	.....
Kentucky	1919	1,977	.....	5	3	809	245	667	245	3
	1914	1,897	(2)	(2)	269	235	418	282	693	.....
Massachusetts	1919	491	25	9	278	150	27	2	.....	.....
	1914	1,348	(2)	(2)	31	598	617	94	8	.....
Michigan	1919	367	.....	.....	3	60	112	141	51	.....
	1914	1,417	(2)	(2)	66	29	196	526	598	2
Missouri	1919	1,155	103	2	66	210	63	382	320	.....
	1914	2,560	(2)	(2)	96	501	363	921	679	.....
New York	1919	1,169	98	8	269	183	138	343	130	.....
	1914	3,911	(2)	(2)	167	1,049	1,039	903	751	2
North Carolina	1919	1,327	4	.....	43	7	1	445	825	2
	1914	1,462	(2)	(2)	8	4	50	410	989	1
Ohio	1919	2,213	4	.....	67	594	135	1,185	228	.....
	1914	5,997	(2)	(2)	828	589	1,115	2,013	1,452	.....
Pennsylvania	1919	1,564	30	7	177	530	196	504	117	3
	1914	6,370	(2)	(2)	119	532	974	3,653	1,080	12
Tennessee	1919	1,665	12	.....	19	175	344	324	791	.....
	1914	1,371	(2)	(2)	85	30	248	387	616	5
Wisconsin	1919	1,498	8	.....	15	68	50	1,139	218	.....
	1914	2,638	(2)	(2)	16	78	89	1,021	534	.....

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

[2] Corresponding figures not available.

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

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States..1919..	2,544	24,682	485	1,461	3,011	370	3,833	112	3,652	73	5,122	33	4,808	7	2,457	3	1,799	.....	.....
1914..	5,057	52,391	509	3,006	7,244	1,087	11,291	271	8,625	113	7,911	55	8,145	11	3,729	3	1,648	2	3,798
Illinois	107	2,692	22	57	112	11	112	5	187	3	227	6	744	2	621	1	689	.....	.....
Indiana	100	2,216	10	48	100	19	209	13	403	5	335	4	631	.....	.....	1	538	.....	.....
Iowa	68	493	20	34	65	8	76	4	144	1	89	1	119	.....	.....	.....	.....	.....	.....
Kentucky	71	1,977	8	39	81	10	96	5	147	2	134	6	947	.....	.....	1	572	.....	.....
Massachusetts	50	491	4	23	55	17	195	4	126	2	115	.....	.....	.....	.....	.....	.....	.....	.....
Michigan	46	367	7	28	65	6	48	2	79	3	175	.....	.....	.....	.....	.....	.....	.....	.....
Missouri	122	1,155	24	66	146	21	197	4	118	5	403	2	291	.....	.....	.....	.....	.....	.....
New York	274	1,169	53	187	361	24	223	6	202	2	121	2	262	.....	.....	.....	.....	.....	.....
North Carolina	109	1,327	12	68	179	15	189	8	254	4	314	1	130	1	261	.....	.....	.....	.....
Ohio	152	2,213	23	70	173	33	328	15	474	8	535	2	305	1	398	.....	.....	.....	.....
Pennsylvania	356	1,564	89	218	448	35	348	5	171	9	597	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee	66	1,665	4	24	58	19	215	11	368	6	447	1	140	1	437	.....	.....	.....	.....
Wisconsin	124	1,498	37	64	108	13	131	4	120	3	186	1	213	2	740	.....	.....	.....	.....

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

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes	2,544	5,057	5,492	24,682	52,391	69,928	$118,228,541	$131,546,997	$159,892,547	$55,131,412	$65,828,202	$77,941,259
Less than $5,000	1,021	2,255	2,114	619	2,842	2,954	2,671,195	5,713,772	5,458,031	1,779,553	3,869,385	3,530,630
$5,000 to $20,000	954	1,879	2,222	2,801	9,638	12,708	9,405,712	18,376,368	22,138,144	5,903,983	11,867,599	13,930,594
$20,000 to $100,000	366	676	845	4,554	12,933	17,187	15,267,416	28,580,230	35,281,090	8,373,536	15,003,673	18,420,065
$100,000 to $500,000	154	220	298	7,530	19,480	27,915	34,408,683	42,841,876	73,089,147	14,776,880	24,060,845	32,662,798
$500,000 to $1,000,000	33	17		3,766			20,874,348	12,567,312		8,827,979		
$1,000,000 and over	16	10	13	5,412	7,498	9,164	35,541,187	23,467,439	23,926,135	15,469,481	11,026,700	9,397,172
	PER CENT DISTRIBUTION.											
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than $5,000	40.1	44.6	38.5	2.5	5.4	4.2	2.3	4.3	3.4	3.2	5.9	4.5
$5,000 to $20,000	37.5	37.2	40.5	11.3	18.4	18.2	8.0	14.0	13.8	10.7	18.0	17.9
$20,000 to $100,000	14.4	13.4	15.4	18.5	24.7	24.6	12.9	21.7	22.1	15.2	22.8	23.6
$100,000 to $500,000	6.1	4.4	5.4	30.5	37.2	39.9	29.2	32.6	45.7	26.8	36.5	41.9
$500,000 to $1,000,000	1.3	0.3		15.3			17.5	9.6		16.0		
$1,000,000 and over	0.6	0.2	0.2	21.9	14.3	13.1	30.1	17.8	15.0	28.1	16.8	12.1

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

STATE.	Census year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.							VALUE OF PRODUCTS.						
					Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.		
		Individuals.	Corporations	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.
United States	1919	1,633	360	551	24,682	4,311	17,764	2,607	17.5	72.0	10.6	$118,228,541	$15,466,336	$91,934,062	$10,828,143	13.1	77.8	9.2
	1914	3,191	748	1,118	52,391	11,886	33,473	7,032	22.7	63.9	13.4	131,546,997	23,676,952	92,100,236	15,769,809	18.0	70.0	12.0
	1909	3,322	884	1,286	69,928	15,476	44,628	9,824	22.1	63.8	14.0	159,892,547	29,460,382	109,348,007	21,084,158	18.4	68.4	13.2
Illinois	1919	66	19	22	2,692	142	2,441	109	5.3	90.7	4.0	14,863,433	523,223	13,868,295	471,915	3.5	93.3	3.2
	1914	173	55	68	4,861	491	4,023	347	10.1	82.8	7.1	15,192,466	1,074,655	13,302,150	815,661	7.1	87.6	5.4
Indiana	1919	54	33	13	2,216	141	2,004	71	6.4	90.4	3.2	12,785,145	384,623	11,968,172	432,350	3.0	93.6	3.4
	1914	94	64	35	7,306	401	6,657	248	5.5	91.1	3.4	21,568,651	714,956	20,274,995	578,700	3.3	94.0	2.7
Iowa	1919	38	10	20	493	61	261	171	12.4	52.9	34.7	2,155,382	228,477	1,004,655	922,250	10.6	46.6	42.8
	1914	43	20	30	994	146	552	296	14.7	55.5	29.8	3,436,716	300,938	1,968,844	1,166,934	8.8	57.3	34.0
Kentucky	1919	36	18	17	1,977	101	1,803	73	5.1	91.2	3.7	10,509,775	349,637	9,989,932	170,206	3.3	95.1	1.6
	1914	71	33	26	1,897	274	1,523	100	14.4	80.3	5.3	4,647,467	484,689	3,930,932	231,846	10.4	84.6	5.0
Massachusetts	1919	28	8	14	491	136	170	185	27.7	34.6	37.7	1,672,091	436,376	603,895	631,820	26.1	36.1	37.8
	1914	129	13	33	1,348	633	280	435	47.0	20.8	32.3	2,821,874	1,326,753	570,307	924,814	47.0	20.2	32.8
Michigan	1919	27	8	11	367	56	272	39	15.3	74.1	10.6	1,522,891	183,823	1,186,631	152,437	12.1	77.9	10.0
	1914	111	24	42	1,417	329	853	235	23.2	60.2	16.6	3,774,827	742,965	2,543,444	488,418	19.7	67.4	12.9
Missouri	1919	73	19	30	1,155	210	845	100	18.2	73.2	8.7	5,413,110	678,729	4,373,692	360,689	12.5	80.8	6.7
	1914	120	50	53	2,560	383	2,029	148	15.0	79.3	5.8	6,850,955	779,822	5,678,839	392,294	11.4	82.9	5.7
New York	1919	190	18	66	1,169	412	603	154	35.2	51.6	13.2	5,095,290	1,732,757	2,620,268	742,265	34.0	51.4	14.6
	1914	431	53	120	3,911	1,700	1,509	702	43.5	38.6	17.9	8,759,119	3,515,157	3,805,221	1,438,741	40.1	43.4	16.4
North Carolina	1919	63	24	22	1,327	272	840	215	20.5	63.3	16.2	6,391,590	1,003,545	4,389,011	999,034	15.7	68.7	15.6
	1914	71	29	37	1,462	407	771	284	27.8	52.7	19.4	3,133,082	596,542	1,946,969	589,571	19.0	62.1	18.8
Ohio	1919	74	43	35	2,213	481	1,600	132	21.7	72.3	6.0	10,945,610	1,887,073	8,491,216	567,321	17.2	77.6	5.2
	1914	146	105	90	5,997	817	4,516	664	13.6	75.3	11.1	16,192,449	1,739,475	12,454,694	1,998,280	10.7	76.9	12.3
Pennsylvania	1919	275	21	60	1,564	582	677	305	37.2	43.3	19.5	5,533,837	2,042,323	2,409,486	1,082,028	36.9	43.5	19.6
	1914	496	45	146	6,370	2,011	3,235	1,124	31.6	50.8	17.6	12,261,637	3,663,959	6,468,984	2,128,694	29.9	52.8	17.4
Tennessee	1919	24	23	19	1,665	95	1,409	161	5.7	84.6	9.7	6,690,647	258,202	5,888,419	544,026	3.9	88.0	8.1
	1914	45	25	38	1,371	167	906	298	12.2	66.1	21.7	2,677,381	267,059	1,932,603	477,719	10.0	72.2	17.8
Wisconsin	1919	77	14	33	1,498	138	1,282	78	9.2	85.6	5.2	9,455,268	524,309	8,649,515	281,444	5.5	91.5	3.0
	1914	106	25	54	2,638	302	2,120	216	11.4	80.4	8.2	7,544,321	639,369	6,350,783	554,169	8.5	84.2	7.3

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

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	5,390	9,159	6,501	64,666	112,549	126,032	100.0	100.0	100.0
Owned	967	1,985	2,647	43,989	79,782	100,715	68.0	70.9	79.9
Steam[1]	358	782	1,217	37,786	66,093	82,928	58.4	58.7	65.8
Engines	350	(2)	(2)	35,482	(2)	(2)	54.9	.....	.....
Turbines	8	(2)	(2)	2,304	(2)	(2)	3.6	.....	.....
Internal-combustion engines	571	1,109	1,294	4,762	10,557	13,120	7.4	9.4	10.4
Water wheels, turbines, and motors	38	94	136	1,441	3,132	4,667	2.2	2.8	3.7
Rented	4,423	7,174	3,854	20,677	32,767	25,317	32.0	29.1	20.1
Electric	4,423	7,174	3,854	19,999	32,654	24,969	30.9	29.0	19.8
Other	.....	.....	.....	678	113	348	1.0	0.1	0.3
Electric	5,325	8,238	4,805	32,751	46,384	39,424	100.0	100.0	100.0
Rented	4,423	7,174	3,854	19,999	32,654	24,969	61.1	70.4	63.3
Generated by establishments reporting	902	1,064	951	12,752	13,730	14,455	38.9	29.6	36.7

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

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

STATE.	Census year.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
		Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States	1919	8,678	180,258	8,626	32,165	11,720	145,747
	1914	47,516	379,432	12,269	64,567	(1)	234,191
Illinois	1919	204	37,969	719	7,636	1,148	1,786
	1914	1,207	47,874	1,592	8,856	(1)	7,346
Indiana	1919	56	22,788	2,090	12,000	100	5,052
	1914	169	82,752	2,966	22,511	(1)	8,313
Iowa	1919	50	6,804	29	204	116	.....
	1914	39	10,760	118	211	(1)	997
Kentucky	1919	.....	21,196	272	2,797	381	1,079
	1914	13	30,525	609	144	(1)	1,840
Massachusetts	1919	732	1,638	28	3	66	1,554
	1914	867	5,240	71	141	(1)	2,999
Michigan	1919	74	2,385	.....	1	3	300
	1914	133	11,006	183	142	(1)	480
Missouri	1919	163	4,811	126	1	188	1,939
	1914	675	7,504	163	379	(1)	4,129
New York	1919	1,421	6,028	1,068	1,564	321	3,661
	1914	3,694	21,137	137	1,854	(1)	14,228
North Carolina	1919	169	2,623	110	209	609	.....
	1914	95	3,320	438	330	(1)	10
Ohio	1919	277	16,115	393	2,658	496	42,341
	1914	306	57,563	1,238	11,521	(1)	62,467
Pennsylvania	1919	1,873	7,280	288	479	454	8,402
	1914	31,768	29,641	1,431	9,066	(1)	100,508
Tennessee	1919	3	4,513	22	11	50	160
	1914	211	6,792	540	156	(1)	544
Wisconsin	1919	177	22,225	2,149	541	6,202	711
	1914	154	23,422	1,656	1,269	(1)	1,436
All other states	1919	3,479	22,983	1,332	4,061	1,586	78,771
	1914	5,185	41,896	1,127	7,987	(1)	28,894

[1] Included in figures for fuel oils.

SPECIAL STATISTICS.

Detailed statistics of number and value.—Table 12 shows statistics for 1919, 1914, and 1909, regarding the number and value of vehicles and value of all other products and receipts from repairs, reported by establishments engaged primarily in the manufacture of carriages and wagons, parts, and repairs, together with similar statistics for establishments engaged primarily in other industries which incidentally reported the manufacture of carriages and wagons or parts and materials.

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

KIND.	PRODUCTS.					
	Number.			Value.		
	1919	1914	1909	1919	1914	1909
Establishments reporting	2,666	5,286	5,613	.....	.....	.....
All products	.....	.....	.....	$132,149,189	$136,039,612	$164,420,558
All vehicles	708,107	1,177,415	1,584,571	66,468,654	72,283,698	94,037,900
Carriages	14,851	550,401	843,319	1,605,040	34,193,368	48,835,053
Buggies	230,015			21,017,131		
Wagons	426,502	572,409	629,797	42,412,833	36,533,152	42,026,198
Public conveyances	277	1,284	2,347	105,452	325,164	944,882
Sleighs and sleds	36,462	53,321	109,108	1,268,198	1,232,014	2,231,767
All other products, parts, repairs, etc	.....	.....	.....	62,865,569	63,755,914	70,382,658
Made by establishments in the industry.						
Establishments reporting	2,544	5,057	5,492	.....	.....	.....
All products	.....	.....	.....	118,228,541	131,546,997	159,892,547
All vehicles	608,833	1,124,903	1,519,238	56,174,332	69,324,182	90,694,145
Carriages	13,704	538,071	828,411	1,562,023	33,329,879	47,756,118
Buggies	202,105			18,114,423		
Wagons [1]	356,837	533,601	587,685	35,183,807	34,506,942	39,932,910
Public conveyances	194	1,221	2,243	76,957	279,656	939,267
Sleighs and sleds	35,993	52,010	100,899	1,237,122	1,207,705	2,065,850
All other products, parts, repairs, etc	.....	.....	.....	62,054,209	62,222,815	69,198,402
Made by establishments in other industries.						
Establishments reporting	122	229	121	.....	.....	.....
All products	.....	.....	.....	13,920,648	4,492,615	4,528,011
All vehicles	99,274	52,512	65,333	10,294,322	2,959,516	3,343,755
Carriages	1,147	12,330	14,908	103,017	863,489	1,078,935
Buggies	27,910			2,902,708		
Wagons	69,565	38,808	42,112	7,229,026	2,026,210	2,093,288
Public conveyances	83	63	104	28,495	45,508	5,615
Sleighs and sleds	469	1,311	8,209	31,076	24,309	165,917
All other parts, materials, and repair work	.....	.....	.....	3,626,326	1,533,099	1,184,256

[1] Includes 11,593 pushcarts and hand trucks valued at $295,561 in 1919.

In addition to the $118,228,541 reported as the value of products by the 2,544 establishments engaged primarily in the manufacture of carriages and wagons, parts and supplies, in 1919, 122 establishments engaged primarily in other branches of industry reported similar products to the value of $13,920,648. Thus the total value of these products for 1919 amounted to $132,149,189, as compared with $136,039,612 for 1914, a decrease of 2.9 per cent. From 1909 to 1919 there was a decrease in the value of products of $32,271,369, or 19.6 per cent. There were 708,107 vehicles of all kinds manufactured during 1919, including those made as subsidiary products of establishments engaged primarily in other industries, as compared to 1,177,415 in 1914, a decrease of 39.8 per cent, and a decrease of 876,464 vehicles, or 55.3 per cent in the number manufactured in 1919 as compared with the number reported in 1909.

The 122 establishments which manufactured carriages, wagons, and materials as a subsidiary product in 1919 were engaged chiefly in the production of automobile bodies and parts and agricultural implements. The increase in the value of products for such establishments is due to the fact that a number of large companies, as the demand decreased for products of this industry, turned to other industries, carriages and wagons becoming a subsidiary product. Many factories discontinued manufacturing such products even as a subsidiary product.

Detailed statistics of kind, number, and value.—Table 13 presents for 1919, 1914, 1909, and 1904 detailed statistics of all products manufactured by establishments engaged in the industry. The product of factories making parts to be used in the manufacture of carriages and wagons is included in "All other products," of the table. This combination gives a complete product for the industry, although it involves a certain amount of duplication, as a part of the product of establishments manufacturing parts and supplies is used in the factories making carriages and wagons. The amount received for repair work for all establishments is included in the value given for "All other products."

The total value of all products for the industry in 1919 was $118,228,541. Of this amount, the value of completed vehicles was $56,174,332, or 47.5 per cent. Of the total number of completed vehicles produced in 1919, wagons represented 58.6 per cent; carriages, buggies, and light pleasure vehicles, 35.4 per cent; and sleighs and sleds, 5.9 per cent.

Of the total value of completed vehicles, wagons represented 62.7 per cent; carriages, buggies, and light pleasure vehicles, 35 per cent, and sleighs and sleds, 2.2 per cent.

The manufacture of complete vehicles of all kinds by establishments classified in this industry decreased 11.2 per cent in number and 6.5 per cent in value from 1904 to 1909, and 26 per cent in number and 23.6

per cent in value from 1909 to 1914, while for the period of 1914 to 1919 the decrease was 45.9 per cent in number and 19 per cent in value.

TABLE 13.—DETAILED STATISTICS OF NUMBER AND VALUE: 1919, 1914, 1909, AND 1904.

CLASS.	1919	1914	1909	1904
Products, total value	$118,228,541	$131,546,997	$159,892,547	$155,868,849
Complete vehicles of all classes:				
Number	608,833	1,124,903	1,519,238	1,711,330
Value	$56,174,332	$69,324,182	$90,694,145	$96,955,018
Carriages (family and pleasure):				
Number	13,704	538,071	828,411	937,409
Value	$1,562,023	$33,329,879	$47,756,118	$55,750,276
Buggies and light pleasure vehicles:				
Number	202,105			
Value	$18,114,423			
Wagons:				
Number	356,837	533,601	587,685	643,755
Value	$35,183,807	$34,506,942	$39,932,910	$37,195,230
Business—				
Number	51,018	139,621	154,631	133,422
Value	$6,919,695	$13,022,860	$16,440,816	(1)
Light and package commodity, number	18,132	81,393	107,190	71,733
Heavy and bulky commodity, number	19,044	31,458	32,780	31,956
Pushcarts, number	11,593	14,937	7,330	6,089
Hearses, number	301	402	807	642
Street sprinklers, number	38	197	1,053	157
Other business wagons, number	1,910	11,234	5,471	22,845
Farm (including carts and trucks)—				
Number	303,231	384,663	429,952	505,025
Value	$27,567,838	$19,708,423	$22,615,875	(1)
Government, municipal, etc.—				
Number	2,588	9,317	3,102	5,308
Value	$696,274	$1,775,659	$876,219	(1)
Ambulances, number	1,568	346	598	245
Mail and mail-carriers' wagons and carts, number	1,007	5,549	1,912	4,703
Patrol wagons (fire and police), hose wagons, and prison vans, number	13	3,422	592	360
Public conveyances:				
Number	194	1,221	2,243	2,711
Value	$76,957	$279,656	$939,267	$1,314,952
Sleighs and sleds:				
Number	35,993	52,010	100,899	127,455
Value	$1,237,122	$1,207,705	$2,065,850	$2,694,560
All other products, including parts and amount received for repair work, value [2]	$62,054,209	$62,222,815	$69,198,402	$58,913,831

[1] Not reported separately.
[2] Includes 1,659 automobiles, valued at $1,705,159 in 1919; 1,123, valued at $574,925 in 1914; 544 valued at $569,119 in 1909; and 199 valued at $235,675 in 1904, manufactured in establishments devoted primarily to the manufacture of carriages and wagons.

Comparative summary, by class of vehicles, by states.—Table 14 shows, by states, the number of the several general classes of vehicles manufactured by establishments engaged primarily in the manufacture of carriages and wagons during 1919, 1914, 1909, and 1904, and the value of those manufactured in 1919. In 1914, 38 states reported the manufacture of 538,071 carriages, buggies, and light pleasure vehicles, as compared with 25 states reporting the manufacture of 215,809 in 1919, a decrease of 59.9 per cent in number of vehicles. In 1919 the states reporting the manufacture of wagons were 41, producing 345,244 vehicles, while in 1914, 43 states reported the production of wagons to the number of 533,601, a decrease of 35.3 per cent.

TABLE 14.—COMPARATIVE SUMMARY, BY CLASS OF VEHICLE, BY STATES: 1919, 1914, 1909, AND 1904.

CLASS AND STATE.	NUMBER.				Value, 1919.
	1919	1914	1909	1904	
CARRIAGES, BUGGIES, AND LIGHT PLEASURE VEHICLES.					
United States	215,809	538,071	828,411	937,409	$19,676,446
Georgia	14,445	20,071	21,974	20,919	1,585,921
Illinois	6,011	81,477	101,875	56,075	484,916
Indiana	71,510	143,042	177,194	178,962	5,670,400
Iowa	2,187	13,844	29,809	16,498	340,185
Kentucky	38,504	31,925	24,259	27,195	3,618,041
Maine	123	1,389	2,551	2,802	11,905
Maryland	154	827	1,708	2,945	16,740
Michigan	3,706	25,265	91,558	174,889	341,606
Missouri	18,260	53,552	97,444	74,650	1,452,995
New York	597	15,220	25,474	42,249	61,118
North Carolina	24,556	29,098	31,813	25,157	2,600,846
Ohio	17,644	71,972	135,877	199,428	1,592,768
Pennsylvania	751	15,551	23,395	33,467	74,962
Tennessee	4,366	3,067	2,470	5,374	629,402
Virginia	12,117	15,144	13,720	19,366	1,120,286
Wisconsin	142	5,814	24,726	23,466	17,770
All other states	736	11,313	22,504	33,967	56,585
WAGONS (BUSINESS, FARM, GOVERNMENT, ETC.).					
United States	[1] 345,244	533,601	587,685	643,755	[1] 34,888,246
Alabama	5,518	3,537	4,588	12,512	584,918
Arkansas	12,686	5,726	7,415	1,625	1,091,798
California	638	1,868	3,347	3,045	44,147
Connecticut	83	1,139	1,786	1,944	10,545
Florida	373	848	1,578	2,652	25,366
Georgia	6,295	7,805	15,708	18,848	667,697
Illinois	93,499	118,202	85,097	72,033	8,798,285
Indiana	21,733	75,530	87,844	92,893	1,528,051
Iowa	8,024	16,865	26,495	22,815	609,241
Kentucky	27,044	23,434	25,911	49,266	2,720,925
Louisiana	804	1,170	1,269	1,246	109,571
Maine	676	2,226	2,259	1,764	139,557
Maryland	735	2,861	2,719	1,849	57,198
Massachusetts	221	3,082	3,360	3,278	113,246
Michigan	1,172	11,454	28,720	52,273	107,462
Minnesota	12,087	12,315	17,231	15,059	1,311,053
Mississippi	3,566	1,115	1,683	2,012	662,551
Missouri	17,293	21,456	20,140	25,281	1,896,403
New Hampshire	26	769	1,049	1,188	3,869
New Jersey	469	3,687	4,337	5,647	209,037
New York	5,097	19,656	21,937	19,879	1,026,066
North Carolina	32,272	20,030	26,248	23,553	2,417,702
Ohio	2,381	25,417	28,882	40,905	526,176
Pennsylvania	7,126	32,983	33,634	35,395	1,073,937
Tennessee	13,093	8,126	12,409	20,241	1,299,736
Texas	360	1,681	1,243	718	122,818
Virginia	20,022	20,575	18,835	19,195	2,176,656
West Virginia	2,124	3,819	2,906	5,117	319,255
Wisconsin	49,267	81,238	92,011	83,916	5,166,408
All other states	560	4,992	6,954	7,606	68,482
PUBLIC CONVEYANCES.					
United States	194	1,221	2,243	2,711	76,957
SLEIGHS AND SLEDS.					
United States	35,993	52,010	100,899	127,455	1,237,122
Iowa	2,654	1,330	8,094	(2)	75,864
Maine	800	1,549	2,169	2,802	41,447
Michigan	2,791	12,205	32,751	53,180	141,346
Minnesota	11,654	10,270	10,954	10,003	334,399
New York	628	6,801	10,823	19,433	28,904
Ohio	657	3,907	7,589	8,479	16,502
Pennsylvania	178	2,404	3,210	5,551	11,938
Wisconsin	16,236	11,221	17,720	15,365	557,681
All other states	395	2,323	7,589	12,642	29,041

[1] Excludes 11,593 pushcarts and hand trucks valued at $295,561.
[2] Included in "All other states."

GENERAL TABLES.

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

Table 16 presents, for 1919, statistics in detail for the industry as a whole, for "carriages and wagons, including repairs," and for "carriage and wagon materials," for each state that can be shown separately without the possibility of disclosing the operations of individual establishments.

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

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	2,544	24,682	64,666	$25,060	$63,007	$118,229
	1914	5,057	52,391	112,549	32,557	65,719	131,547
	1909	5,492	69,928	126,032	37,595	81,951	159,893
Alabama	1919	42	307	912	296	516	1,073
	1914	63	385	1,051	233	304	707
	1909	35	424	991	194	303	684
Connecticut	1919	56	168	483	182	325	677
	1914	84	452	945	311	411	996
	1909	92	578	957	372	383	1,077
Delaware	1919	5	15	29	22	23	72
	1914	28	118	181	67	68	197
	1909	25	163	204	81	124	290
Florida	1919	13	57	98	70	69	166
	1914	46	169	203	115	95	305
	1909	39	230	354	136	210	453
Illinois	1919	107	2,692	7,621	3,238	8,134	14,863
	1914	296	4,861	12,285	3,405	8,368	15,192
	1909	325	5,852	9,684	3,588	9,479	16,831
Indiana	1919	100	2,216	6,392	2,063	8,469	12,785
	1914	193	7,306	15,257	4,386	10,725	21,569
	1909	221	8,867	13,790	4,355	12,458	21,655
Iowa	1919	68	493	1,689	432	1,008	2,155
	1914	93	994	2,120	636	1,903	3,437
	1909	119	1,441	2,387	828	2,748	4,786
Kentucky	1919	71	1,977	5,599	1,862	5,869	10,510
	1914	130	1,897	5,748	999	2,554	4,647
	1909	161	2,777	6,617	1,164	2,713	5,141
Louisiana	1919	24	166	350	146	220	491
	1914	31	333	849	178	238	509
	1909	40	358	568	196	206	529
Massachusetts	1919	50	491	901	550	677	1,672
	1914	175	1,348	1,953	781	1,140	2,822
	1909	177	1,539	2,038	986	1,282	3,185
Michigan	1919	46	367	1,134	389	714	1,523
	1914	177	1,417	2,739	982	1,928	3,775
	1909	212	4,034	6,362	2,240	5,262	10,159
Mississippi	1919	19	276	706	236	457	1,105
	1914	23	210	1,074	101	223	479
	1909	41	365	1,350	154	274	642
Missouri	1919	122	1,155	2,516	$1,130	$3,027	$5,413
	1914	223	2,560	4,528	1,636	3,832	6,851
	1909	243	3,302	5,858	1,781	4,860	8,469
Montana	1919	4	7	27	10	34	65
	1914	5	20	26	23	17	56
	1909	4	28	19	32	29	79
New York	1919	274	1,169	3,436	1,240	2,302	5,095
	1914	604	3,911	8,530	2,711	3,577	8,759
	1909	610	6,116	10,029	3,740	5,809	13,293
North Carolina	1919	109	1,327	2,808	1,178	3,562	6,392
	1914	137	1,462	2,176	644	1,777	3,133
	1909	138	1,629	2,608	603	1,894	3,283
Ohio	1919	152	2,213	5,361	2,255	5,654	10,946
	1914	341	5,997	13,381	3,839	8,561	16,192
	1909	407	8,815	14,771	4,647	11,414	21,949
Pennsylvania	1919	356	1,564	3,281	1,727	2,342	5,534
	1914	687	6,370	10,906	3,780	5,442	12,262
	1909	655	7,498	11,544	3,861	5,707	12,748
Rhode Island	1919	28	74	230	78	67	208
	1914	47	271	487	180	181	509
	1909	40	238	387	152	163	422
South Carolina	1919	19	63	112	74	77	183
	1914	18	209	313	110	273	500
	1909	23	272	272	104	244	464
Tennessee	1919	66	1,665	5,634	1,402	3,770	6,691
	1914	108	1,371	4,221	674	1,297	2,677
	1909	129	1,706	4,537	693	1,439	3,040
Vermont	1919	23	35	346	20	49	130
	1914	31	60	340	36	44	118
	1909	38	94	420	50	58	158
Wisconsin	1919	124	1,498	3,975	1,786	4,507	9,455
	1914	185	2,638	5,502	1,827	4,259	7,544
	1909	286	3,437	6,426	1,930	5,163	8,809
All other states	1919	666	4,687	11,026	4,665	11,225	21,025
	1914	1,332	8,032	17,725	4,903	8,502	18,311
	1909	1,432	10,165	23,850	5,708	9,729	21,657

TABLE 16.—DETAILED STATEMENT,

	STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Number, 15th day of— Maximum month.	Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male	Under 16. Female	Capital.
	CARRIAGES AND WAGONS AND MATERIALS.															
1	United States	2,544	30,697	2,867	1,409	1,089	650	24,682	Oc 25,766	Ap 23,713	26,112	25,506	520	77	9	$96,924,074
2	Alabama	42	387	47	18	12	3	307	Ap 323	Ja 281	320	319	.....	1	.....	1,162,955
3	Connecticut	56	241	52	13	6	2	168	Ja [3] 174	No 161	166	166	.....	.....	.....	484,814
4	Delaware	5	24	5	4	.....	.....	15	([4]) 15	([4]) 15	16	16	.....	.....	.....	101,502
5	Florida	13	78	17	3	.....	1	57	De 68	Ja 49	75	74	1	.....	.....	158,178
6	Illinois	107	3,169	112	142	143	80	2,692	Oc 3,021	Je 2,345	2,847	2,830	11	6	.....	15,920,767
7	Indiana	100	2,659	85	102	130	126	2,216	De 2,315	Ap 2,048	2,348	2,215	115	18	.....	9,087,122
8	Iowa	68	702	82	40	65	22	493	De 570	Ja 419	565	558	7	.....	.....	2,589,664
9	Kentucky	71	2,389	73	138	128	73	1,977	De 2,145	Ap 1,817	2,170	2,124	45	1	.....	8,728,690
10	Louisiana	24	216	30	11	6	3	166	No 183	Ja 154	176	175	1	.....	.....	406,997
11	Massachusetts	50	603	62	25	13	12	491	My 524	Ja 413	498	486	3	9	.....	1,064,621
12	Michigan	46	452	51	18	5	11	367	Ja 402	Jy 327	371	367	4	.....	.....	1,388,948
13	Mississippi	19	336	20	19	19	2	276	No 318	Fe 231	290	290	.....	.....	.....	701,050
14	Missouri	122	1,422	141	62	48	16	1,155	No 1,220	Fe 1,113	1,196	1,186	8	2	.....	4,198,002
15	Montana	4	10	3	.....	.....	.....	7	Se 9	De 5	5	4	.....	1	.....	68,865
16	New Mexico	4	12	5	.....	1	.....	6	([4]) 6	([4]) 6	6	6	.....	.....	.....	14,925
17	New York	274	1,666	336	63	59	39	1,169	Au 1,255	Ja 1,069	1,250	1,207	40	3	.....	5,806,304
18	North Carolina	109	1,593	111	103	39	13	1,327	Je 1,401	Se 1,252	1,435	1,422	10	3	.....	5,158,876
19	Ohio	152	2,707	147	142	114	91	2,213	De 2,396	Ja 1,893	2,390	2,221	168	1	.....	7,451,358
20	Oregon	4	22	5	.....	.....	.....	17	Jy 22	My [3] 15	19	18	.....	1	.....	22,832
21	Pennsylvania	356	2,106	409	83	29	21	1,564	Je 1,605	Ja 1,470	1,564	1,546	5	13	.....	4,956,283
22	Rhode Island	28	113	29	6	.....	4	74	Mh 85	De 62	62	62	.....	.....	.....	165,748
23	South Carolina	19	86	22	1	.....	.....	63	Ja 68	Oc [3] 59	67	67	.....	.....	.....	132,378
24	Tennessee	66	1,881	74	87	37	18	1,665	Oc 1,796	My 1,593	1,740	1,719	21	.....	.....	4,003,279
25	Utah	3	18	2	.....	.....	.....	16	De 20	Ja 13	20	20	.....	.....	.....	65,396
26	Vermont	23	67	31	1	.....	.....	35	Se 38	Mh 31	39	39	.....	.....	.....	141,630
27	Wisconsin	124	1,835	152	85	76	24	1,498	Ja 1,586	My 1,409	1,555	1,525	14	7	9	7,487,837
28	All other states [5]	655	5,903	764	243	159	89	4,648	.....	.....	4,922	4,844	67	11	.....	15,455,053
	CARRIAGES AND WAGONS, INCLUDING REPAIRS.															
1	United States	2,286	23,268	2,655	1,035	894	511	18,173	No 18,707	Ap 17,667	18,955	18,621	273	52	9	$78,952,868
2	Alabama	38	353	44	14	11	3	281	My 296	Ja 262	280	279	.....	1	.....	1,122,623
3	California	29	163	37	3	7	4	112	De 121	Ja 96	121	120	.....	1	.....	417,508
4	Colorado	6	40	5	2	.....	.....	33	De 36	Ap [3] 31	36	36	.....	.....	.....	53,585
5	Connecticut	49	207	46	10	5	1	145	Au 153	Ja 140	144	144	.....	.....	.....	394,004
6	Delaware	5	24	5	4	.....	.....	15	([4]) 15	([4]) 15	16	16	.....	.....	.....	101,502
7	Florida	13	78	17	3	.....	1	57	De 68	Ja 49	75	74	1	.....	.....	158,178
8	Georgia	66	852	69	51	38	11	683	Au 758	Ja 514	713	694	19	.....	.....	1,796,651
9	Illinois	99	2,724	104	122	123	72	2,303	Oc 2,580	Je 1,963	2,453	2,440	10	3	.....	14,486,030
10	Indiana	79	1,777	74	63	107	99	1,434	No 1,479	Ap 1,331	1,508	1,421	77	10	.....	6,473,479
11	Iowa	60	573	78	25	54	17	399	De 457	Fe 348	452	445	7	.....	.....	2,181,674
12	Kansas	10	21	13	.....	.....	.....	8	([4]) 8	([4]) 8	8	8	.....	.....	.....	46,273
13	Kentucky	52	1,794	56	95	121	66	1,456	De 1,537	Ap 1,323	1,560	1,515	44	1	.....	7,229,923
14	Louisiana	21	184	24	11	2	3	144	No 161	Ja 132	154	153	1	.....	.....	365,949
15	Maine	58	211	65	8	3	4	131	Au [3] 137	Ja 124	140	139	1	.....	.....	563,219
16	Maryland	42	206	57	3	3	1	142	No 146	Oc 138	145	145	.....	.....	.....	310,018
17	Massachusetts	43	508	49	22	11	10	416	Mh 455	Ja 347	415	412	1	2	.....	879,341
18	Michigan	39	303	47	12	5	7	232	Ja 266	My 213	211	208	3	.....	.....	914,069
19	Minnesota	67	712	72	36	23	16	565	No 608	Je 522	613	609	4	.....	.....	2,845,567
20	Mississippi	14	235	15	12	19	2	187	No 211	Fe 164	203	203	.....	.....	.....	614,227
21	Missouri	113	1,117	137	44	39	12	885	No 948	Fe 834	913	906	5	2	.....	3,431,037
22	Montana	4	10	3	.....	.....	.....	7	Se 9	De 5	5	4	.....	1	.....	68,865
23	Nebraska	9	20	12	.....	.....	.....	8	Se 9	Ja 7	8	8	.....	.....	.....	30,875
24	New Hampshire	10	95	13	3	2	1	76	Ap 79	De 73	75	75	.....	.....	.....	196,766
25	New Jersey	118	491	143	14	7	5	322	Au 334	Ja 306	329	327	1	1	.....	1,253,300
26	New Mexico	4	12	5	.....	1	.....	6	([4]) 6	([4]) 6	6	6	.....	.....	.....	14,925
27	New York	256	1,371	318	52	52	21	928	Au 972	No 874	960	934	25	1	.....	4,787,460
28	North Carolina	101	1,471	107	93	37	13	1,221	Je 1,297	Au 1,144	1,314	1,301	10	3	.....	4,981,346
29	North Dakota	3	7	4	.....	.....	.....	3	Jy [3] 4	Ja [3] 2	3	3	.....	.....	.....	17,406
30	Ohio	119	1,317	125	84	62	52	994	Mh 1,066	Oc 929	940	918	22	.....	.....	3,818,584
31	Oklahoma	11	35	16	2	.....	1	16	Au [3] 18	De [3] 14	16	16	.....	.....	.....	40,400
32	Oregon	4	22	5	.....	.....	.....	17	Jy 22	My [3] 15	19	18	.....	1	.....	22,832
33	Pennsylvania	337	1,894	393	65	29	19	1,388	Au [3] 1,427	Ja 1,300	1,385	1,368	5	12	.....	4,436,793
34	Rhode Island	25	103	25	6	.....	4	68	Mh 79	De 56	56	56	.....	.....	.....	133,073
35	South Carolina	19	86	22	1	.....	.....	63	Ja 68	Oc [3] 59	67	67	.....	.....	.....	132,378
36	South Dakota	31	74	34	4	.....	1	35	Oc [3] 37	Mh 32	36	36	.....	.....	.....	187,690

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

BY STATES: 1919.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.							Electric horsepower generated in establishments reporting.
											Owned.						
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[1]	Rented.[2]		
$3,708,655	$2,128,227	$25,060,166	$182,039	$613,455	$2,843,793	$61,647,415	$1,449,714	$118,228,541	$55,131,412	64,666	35,482	2,304	4,762	1,441	20,677	12,752	1
33,836	21,515	296,286	.....	8,376	17,203	497,164	18,538	1,072,916	557,214	912	680	.....	69	.....	163	.....	2
27,518	7,092	182,251	1,053	9,861	4,427	312,640	12,843	677,473	351,990	483	115	.....	120	60	188	.....	3
4,282	.....	21,530	.....	794	1,359	21,800	1,026	72,360	49,534	29	.....	.....	4	.....	25	.....	4
4,800	314	70,033	7,379	1,320	1,682	66,737	2,630	165,894	96,527	98	.....	.....	12	.....	86	20	5
391,082	266,725	3,238,033	35,342	42,472	418,635	7,930,386	203,533	14,863,433	6,729,514	7,621	3,160	2,150	56	200	2,055	1,820	6
277,233	197,666	2,063,427	1,539	17,640	264,361	8,346,365	123,011	12,785,145	4,315,769	6,392	3,260	70	116	.....	2,946	1,032	7
87,481	71,927	432,165	1,565	15,806	18,336	967,403	40,689	2,155,382	1,147,290	1,689	749	.....	147	.....	793	14	8
265,058	238,972	1,862,077	1,337	7,018	189,818	5,762,432	106,076	10,509,775	4,641,267	5,599	4,230	.....	151	.....	1,218	2,391	9
14,547	6,539	146,297	.....	4,526	4,339	211,384	8,596	490,531	270,551	350	95	.....	16	.....	239	8	10
68,015	25,816	550,040	116	31,921	15,921	639,825	37,372	1,672,091	994,894	901	302	.....	78	18	503	.....	11
46,404	16,508	389,242	1,515	5,454	32,881	688,183	25,700	1,522,891	809,008	1,134	475	.....	35	27	597	.....	12
58,711	32,771	235,837	13,575	1,438	64,858	447,278	9,790	1,105,211	648,143	706	467	.....	79	.....	160	.....	13
220,100	78,987	1,130,481	9,758	40,707	112,015	2,978,235	48,882	5,413,110	2,385,993	2,516	1,054	.....	218	.....	1,244	416	14
.....	.....	10,312	.....	300	1,309	33,193	837	65,135	31,105	27	.....	.....	3	.....	24	.....	15
.....	336	11,081	.....	1,380	253	9,138	752	30,900	21,010	21	.....	.....	.....	.....	21	.....	16
161,485	106,159	1,239,533	19,306	106,035	173,347	2,207,328	94,957	5,095,290	2,793,005	3,436	933	4	330	334	1,835	275	17
272,684	77,728	1,178,225	23,265	9,681	125,124	3,514,306	47,966	6,391,590	2,829,318	2,808	1,970	20	348	10	460	655	18
405,583	223,703	2,254,790	10,082	62,959	272,326	5,531,939	122,245	10,945,610	5,291,426	5,361	3,023	.....	660	.....	1,678	604	19
.....	.....	24,004	.....	3,106	206	29,304	1,503	77,394	46,587	32	.....	.....	.....	.....	32	.....	20
209,477	68,939	1,727,012	16,789	71,914	47,220	2,245,921	95,759	5,533,837	3,102,157	3,281	1,160	.....	708	49	1,364	.....	21
9,428	2,387	78,231	175	5,280	2,398	61,401	5,482	208,224	141,341	230	24	.....	51	38	117	.....	22
2,080	.....	73,909	.....	2,711	1,817	73,607	2,999	183,253	106,647	112	14	.....	30	.....	68	.....	23
247,000	74,974	1,402,142	1,616	16,341	152,554	3,729,543	40,718	6,690,647	2,920,386	5,634	5,106	45	106	.....	377	1,218	24
.....	.....	19,088	.....	300	548	16,401	936	41,064	23,727	28	.....	.....	.....	.....	28	.....	25
1,800	.....	29,483	.....	796	1,423	46,351	3,094	129,828	80,383	346	.....	.....	52	215	79	12	26
269,843	154,900	1,786,288	17,019	19,491	332,455	4,371,015	136,009	9,455,268	4,948,244	3,975	3,176	15	270	62	452	2,751	27
630,208	454,269	4,608,369	20,608	125,768	586,978	10,908,136	257,771	20,874,289	9,708,382	10,945	5,489	.....	1,103	428	3,925	1,536	28

CARRIAGES AND WAGONS, INCLUDING REPAIRS.

$2,773,967	$1,757,371	$19,393,395	$164,591	$539,453	$2,282,711	$47,210,301	$1,152,155	$91,463,225	$43,100,769	40,966	17,919	2,169	4,294	896	15,688	9,868	1
25,855	19,111	276,718	.....	8,216	16,570	452,796	17,786	983,483	512,901	697	480	.....	54	.....	163	.....	2
5,664	13,948	145,789	400	8,762	2,315	205,794	11,542	463,775	246,439	336	.....	.....	.....	1	335	.....	3
3,956	.....	46,130	900	2,340	958	41,700	1,828	108,598	65,070	55	.....	.....	.....	.....	55	.....	4
19,843	6,759	153,972	1,053	8,921	3,477	218,231	9,135	519,933	292,567	356	35	.....	120	60	141	.....	5
4,282	.....	21,530	.....	794	1,359	21,800	1,026	72,360	49,534	29	.....	.....	4	.....	25	.....	6
4,800	314	70,033	7,379	1,320	1,682	66,737	2,630	165,894	96,527	98	.....	.....	12	.....	86	20	7
144,621	119,423	702,000	.....	17,561	62,602	2,052,397	29,655	3,544,259	1,462,207	910	385	.....	74	.....	451	384	8
337,468	234,574	2,859,097	35,342	42,376	353,413	6,923,194	186,069	12,997,031	5,887,768	6,350	2,145	2,150	49	200	1,806	1,820	9
168,886	138,681	1,351,398	1,539	16,402	182,829	6,346,983	49,981	9,268,688	2,871,724	2,809	1,390	.....	104	.....	1,315	32	10
43,104	55,168	332,971	1,565	13,920	14,588	611,497	29,728	1,544,383	903,158	1,251	624	.....	138	.....	489	14	11
.....	.....	11,134	.....	803	739	19,004	1,053	53,783	33,726	33	.....	.....	.....	.....	33	.....	12
209,240	226,003	1,420,146	1,157	6,023	150,137	5,030,569	88,190	8,751,095	3,632,336	3,610	2,635	.....	123	.....	852	2,333	13
14,547	3,143	134,277	.....	4,226	3,948	170,378	8,180	414,407	235,849	282	35	.....	16	.....	231	8	14
13,600	7,540	149,298	1,130	4,636	7,367	571,312	12,390	902,252	318,550	491	45	.....	188	.....	258	.....	15
4,020	3,530	163,118	515	4,774	6,642	171,766	6,783	454,963	276,414	209	.....	.....	36	.....	173	.....	16
58,192	20,440	464,712	116	24,581	12,799	492,374	28,852	1,323,571	802,345	552	65	.....	59	.....	428	.....	17
23,291	11,992	252,379	1,515	5,406	21,945	419,839	15,991	1,016,954	531,124	565	125	.....	25	2	413	.....	18
89,092	71,365	648,005	.....	9,581	76,294	1,450,372	49,318	2,969,738	1,470,048	1,501	970	.....	120	.....	411	915	19
46,411	32,771	172,564	4,508	1,388	63,677	365,904	9,680	933,042	557,398	534	295	.....	79	.....	160	.....	20
175,930	67,669	930,946	9,545	33,423	87,217	2,423,345	40,560	4,445,838	1,981,933	1,528	514	.....	193	.....	821	416	21
.....	.....	10,312	.....	300	1,309	33,193	837	65,135	31,105	27	.....	.....	3	.....	24	.....	22
.....	.....	9,007	.....	300	429	8,795	1,083	34,639	24,761	68	.....	.....	38	.....	30	.....	23
5,700	3,048	60,319	.....	1,470	2,150	54,857	4,712	191,936	132,367	366	135	.....	39	22	170	.....	24
29,415	15,300	406,884	12,963	13,667	14,880	553,784	26,214	1,401,847	821,849	632	44	.....	201	25	362	.....	25
.....	336	11,081	.....	1,380	253	9,138	752	30,900	21,010	21	.....	.....	.....	.....	21	.....	26
113,508	81,860	988,951	17,314	101,150	132,921	1,627,923	76,607	3,877,956	2,173,426	2,475	648	4	313	274	1,236	270	27
249,470	74,650	1,095,570	23,090	8,681	118,315	3,272,458	41,382	5,992,423	2,678,585	2,418	1,635	.....	348	10	425	655	28
.....	.....	5,986	.....	990	87	4,402	461	20,751	15,888	11	.....	.....	8	.....	3	.....	29
243,941	123,844	1,072,636	10,082	47,350	174,984	2,334,197	58,455	5,014,008	2,621,356	1,928	182	.....	465	.....	1,281	11	30
2,400	500	16,748	.....	1,570	506	11,909	1,515	46,584	33,160	68	.....	.....	36	.....	32	.....	31
.....	.....	24,004	.....	3,106	206	29,304	1,503	77,394	46,587	32	.....	.....	.....	.....	32	.....	32
183,077	67,303	1,577,352	16,309	68,952	40,480	1,828,536	82,775	4,830,159	2,918,848	2,704	820	.....	647	37	1,200	.....	33
9,428	2,387	70,693	175	5,280	2,224	54,904	4,843	187,919	128,172	211	24	.....	43	38	106	.....	34
2,080	.....	73,909	.....	2,711	1,817	73,607	2,999	183,253	106,647	112	14	.....	30	.....	68	.....	35
6,900	568	48,672	.....	3,360	3,440	84,664	5,652	214,141	123,825	176	.....	.....	47	.....	129	.....	36

[1] Same number reported throughout the year.
[2] All other states embrace: Arkansas, 26 establishments; California, 32; Colorado, 7; Georgia, 71; Kansas, 12; Maine, 60; Maryland, 43; Minnesota, 70; Nebraska, 10; New Hampshire, 13; New Jersey, 122; North Dakota, 4; Oklahoma, 12; South Dakota, 32; Texas, 18; Virginia, 66; Washington, 14; West Virginia, 39; and Wyoming, 4.

TABLE 16.—DETAILED STATEMENT

	STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Female.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male	Under 16. Female	Capital.
	CARRIAGES, AND WAGONS, INCLUDING REPAIRS—Continued.															
1	Tennessee	47	720	65	33	14	10	598	Au 661	Ja 534	616	611	5	.....	.....	$1,955,713
2	Texas	15	126	19	5	2	2	98	Au [3] 101	Mh [3] 93	99	98	.....	1	.....	204,803
3	Utah	3	18	2	.....	.....	.....	16	De 20	Ja 13	20	20	.....	.....	.....	65,396
4	Vermont	23	67	31	1	.....	.....	35	Se 38	Mh 31	39	39	.....	.....	.....	141,630
5	Virginia	63	943	79	35	32	20	777	De 866	Ap 696	874	856	16	2	.....	2,725,562
6	Washington	13	36	16	.....	.....	.....	20	Mh [3] 21	No [3] 18	20	19	.....	1	.....	73,629
7	West Virginia	36	200	48	7	1	7	137	No 140	Oc 133	139	137	2	.....	.....	449,682
8	Wisconsin	118	1,777	142	82	75	24	1,454	Ja 1,558	My 1,349	1,500	1,470	14	7	9	7,406,366
9	All other states [4]	14	291	14	8	9	2	258	.....	.....	269	267	.....	2	.....	1,421,637
	CARRIAGE AND WAGON MATERIALS.															
1	United States	258	7,429	212	374	195	139	6,509	Oc 7,095	Mh 5,856	7,157	6,885	247	25	.....	$17,971,206
2	Alabama	4	34	3	4	1	.....	26	De 40	Ja 19	40	40	.....	.....	.....	40,332
3	Arkansas	15	720	7	30	11	3	669	No 792	Mh 550	711	708	.....	3	.....	1,166,228
4	Connecticut	7	34	6	3	1	1	23	Ja 34	Oc 19	22	22	.....	.....	.....	89,910
5	Illinois	8	445	8	20	20	8	389	Au 437	Ap 339	394	390	1	3	.....	1,434,737
6	Indiana	21	882	11	39	23	27	782	Oc 868	Mh 696	840	794	38	8	.....	2,613,643
7	Iowa	8	129	4	15	11	5	94	De 113	Ja 70	113	113	.....	.....	.....	407,990
8	Kentucky	19	595	17	43	7	7	521	De 608	Fe [3] 455	610	609	1	.....	.....	1,498,767
9	Louisiana	3	32	6	.....	4	.....	22	Oc [3] 24	Se [3] 18	22	22	.....	.....	.....	41,048
10	Massachusetts	7	95	13	3	2	2	75	Se [3] 84	Fe 60	83	74	2	7	.....	185,280
11	Michigan	7	149	4	6	.....	4	135	De 160	Jy 106	160	159	1	.....	.....	474,879
12	Mississippi	5	101	5	7	.....	.....	89	Au 112	Ja 64	87	87	.....	.....	.....	86,823
13	Missouri	9	305	4	18	9	4	270	Fe 279	Jy 256	283	280	3	.....	.....	766,965
14	New York	18	295	18	11	7	18	241	No 290	Ja 173	290	273	15	2	.....	1,018,844
15	North Carolina	8	122	4	10	2	.....	106	De [3] 116	My 97	121	121	.....	.....	.....	177,530
16	Ohio	33	1,390	22	58	52	39	1,219	De 1,461	Ja 904	1,450	1,303	146	1	.....	3,632,774
17	Pennsylvania	19	212	16	18	.....	2	176	De 181	Ja 170	179	178	.....	1	.....	519,490
18	Rhode Island	3	10	4	.....	.....	.....	6	(5) 6	(5) 6	6	6	.....	.....	.....	32,675
19	Tennessee	19	1,161	9	54	23	8	1,067	Oc 1,139	Je 1,033	1,124	1,108	16	.....	.....	2,047,566
20	Wisconsin	6	58	10	3	1	.....	44	My 60	Oc [3] 24	55	55	.....	.....	.....	81,471
21	All other states [6]	39	660	41	32	21	11	555	.....	.....	567	543	24	.....	.....	1,654,254

[1] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[2] Chiefly electric motors operated by rented power (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).
[3] Same number reported for one or more other months.
[4] All other states embrace: Arkansas, 11 establishments; and Wyoming, 3.

BY STATES: 1919—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.							
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.						Electric horsepower generated in establishments reporting.	
											Owned.				Rented.[2]		
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.[1]			
CARRIAGES, AND WAGONS, INCLUDING REPAIRS—Continued.																	
$92,936	$38,068	$525,815	$125	$16,201	$36,114	$1,407,910	$40,216	$2,577,390	$1,129,264	1,117	653	.....	97	.....	367	115	1
8,920	1,985	92,611	.....	3,960	2,425	101,714	4,926	280,600	173,960	96	.....	.....	22	.....	74	.....	2
.....	.....	19,088	.....	360	548	16,401	936	41,064	23,727	28	.....	.....	.....	.....	28	.....	3
1,800	.....	29,483	.....	796	1,423	46,351	3,094	129,828	80,383	346	.....	.....	52	215	79	12	4
129,995	128,875	740,773	.....	18,275	286,140	2,181,173	33,555	4,054,170	1,839,442	1,042	379	.....	69	.....	594	30	5
.....	.....	33,583	72	2,712	1,097	29,901	4,214	99,546	65,431	66	.....	.....	6	.....	60	.....	6
14,370	15,586	151,175	500	5,843	10,094	309,644	10,373	626,213	306,196	479	200	.....	127	.....	152	7	7
268,785	154,117	1,750,035	17,019	14,511	331,406	4,300,811	134,436	9,315,834	4,880,587	3,653	2,916	15	260	12	450	2,741	8
17,540	16,513	271,931	278	1,015	48,905	778,675	10,238	1,235,488	446,575	694	526	.....	40	.....	119	85	9
CARRIAGE AND WAGON MATERIALS.																	
$934,088	$370,856	$5,666,771	$17,448	$74,002	$561,082	$14,437,114	$297,559	$26,765,316	$12,030,643	23,700	17,563	135	468	545	4,989	2,884	1
7,981	2,404	19,568	.....	160	633	44,368	752	89,433	44,313	215	200	.....	15	.....	.....	.....	2
56,314	15,072	406,927	3,750	1,212	28,067	935,333	6,976	1,807,497	865,188	1,961	1,875	.....	.....	.....	86	100	3
7,675	333	28,279	.....	940	950	94,409	3,708	157,540	59,423	127	80	.....	.....	.....	47	.....	4
53,614	32,151	378,936	.....	96	65,222	1,007,192	17,464	1,866,402	841,746	1,271	1,015	.....	7	.....	249	.....	5
108,347	58,985	711,529	.....	1,238	81,532	1,999,382	73,030	3,516,457	1,444,045	3,583	1,870	70	12	.....	1,631	1,000	6
44,377	16,759	99,194	.....	1,886	3,748	355,906	10,961	610,999	244,132	438	125	.....	9	.....	304	.....	7
55,818	12,969	441,931	180	995	39,681	731,863	17,886	1,758,880	1,008,931	1,989	1,595	.....	28	.....	366	58	8
.....	3,396	12,020	.....	300	391	41,006	416	76,124	34,702	68	60	.....	.....	.....	8	.....	9
9,823	5,376	85,328	.....	7,340	3,122	147,451	8,520	348,520	192,549	349	237	.....	19	18	75	.....	10
23,113	4,516	136,863	.....	48	10,936	268,344	9,709	505,937	227,884	569	350	.....	10	25	184	.....	11
12,300	.....	63,273	9,067	50	1,181	81,314	110	172,169	90,745	172	172	.....	.....	.....	.....	.....	12
44,170	11,318	199,535	213	7,284	24,708	554,890	8,322	967,272	404,060	988	540	.....	25	.....	423	.....	13
47,977	24,299	250,582	1,992	4,885	40,426	579,405	18,350	1,217,334	619,579	961	285	.....	17	60	599	5	14
23,214	3,078	82,655	175	1,000	6,809	241,850	6,584	399,167	150,733	390	335	20	.....	.....	35	.....	15
161,642	99,859	1,182,154	.....	15,609	97,342	3,197,742	63,790	5,931,602	2,670,070	3,433	2,841	.....	195	.....	397	593	16
26,400	1,636	149,660	480	2,962	6,740	417,385	12,984	703,678	273,309	577	340	.....	61	12	164	.....	17
.....	.....	7,538	.....	.....	174	6,497	639	20,305	13,169	19	.....	.....	8	.....	11	.....	18
154,064	36,906	876,327	1,491	140	116,440	2,321,633	502	4,113,257	1,791,122	4,517	4,453	45	9	.....	10	1,103	19
1,058	783	36,253	.....	4,980	1,049	70,204	1,573	139,434	67,657	322	260	.....	10	50	2	10	20
96,801	41,016	498,219	100	22,877	31,841	1,340,940	35,283	2,363,509	987,286	1,751	930	.....	43	380	398	15	21

[5] Same number reported throughout the year.

[6] All other states embrace: California, 3 establishments; Colorado, 1; Georgia, 5; Kansas, 2; Maine, 2; Maryland, 1; Minnesota, 3; Nebraska, 1; New Hampshire, 3; New Jersey, 4; North Dakota, 1; Oklahoma, 1; South Dakota, 1; Texas, 3; Virginia, 3; Washington, 1; West Virginia, 3; and Wyoming, 1.

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." Figures in detail will be found in Table 14.

Wage earners, for months, for states.—As shown by Table 5, the number of wage earners employed in the industry ranged from a maximum of 11,653 in December to a minimum of 10,166 in February, the minimum number being 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, for 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 operations. 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

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.—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.[1] 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	−81.0
Proprietors and firm members	16	47	78	81	209	.....	.....	.....	−61.2
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	14,806	8,753	5,932	5,730	19,847	69.2	47.6	3.5	−71.1
Capital	$35,362,150	$18,134,950	$9,780,102	$5,883,458	$29,783,659	95.0	85.4	66.2	−80.2
Salaries and wages	14,963,593	5,913,270	3,490,561	2,322,201	9,943,052	153.1	69.4	50.3	−76.6
Salaries	2,200,358	1,174,520	582,362	350,798	1,753,235	87.3	101.7	66.0	−80.0
Wages	12,763,235	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	78,195	41,517	−98.3	24.2	−38.1	88.3
Rent and taxes	3,318,546	279,577	72,303	[2] 88,416	[2] 329,090	1,087.0	286.7	.....	−73.1
Cost of materials	25,985,915	10,927,654	5,082,569	2,628,146	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 [3]	27,119,980	11,306,608	5,615,998	2,525,094	15,123,857	139.9	101.3	122.4	−83.3

[1] A minus sign (−) denotes decrease; percentages are omitted where base is less than 100. [2] Exclusive of internal revenue. [3] Value of products less cost of materials.

TABLE 2.—SUMMARY OF THE INDUSTRY: 1919.

	Total.	Motorcycles, including parts.	Bicycles, including parts.		Total.	Motorcycles, including parts.	Bicycles, including parts.
Number of establishments	51	20	31	Salaries and wages	$14,963,593	$7,377,669	$7,585,924
				Salaries	2,200,358	1,086,111	1,114,247
Persons engaged	12,200	6,411	5,789	Wages	12,763,235	6,291,558	6,471,677
Proprietors and firm members	16	6	10				
Salaried employees	1,298	703	595	Paid for contract work	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
				Cost of materials	25,985,915	14,109,049	11,876,866
Primary horsepower	14,806	6,278	8,528	Value of products	53,105,895	28,609,327	24,496,568
Capital	$35,362,150	$19,250,836	$16,111,314	Value added by manufacture	27,119,980	14,500,278	12,619,702

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

STATE.	Number of establishments	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.	STATE.	Number of establishments	WAGE EARNERS. Average number.	Per cent distribution.	Rank.	VALUE OF PRODUCTS. Amount (expressed in thousands).	Per cent distribution.	Rank.	VALUE ADDED BY MANUFACTURE. Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	51	10,886	100.0	...	$53,106	100.0	...	$27,120	100.0	..	Indiana	5	439	4.0	7	$2,968	5.6	6	$1,131	4.2	7
											New York	7	674	6.2	6	2,865	5.4	7	1,350	5.0	6
Massachusetts	8	3,000	27.6	1	16,000	30.1	1	7,591	28.0	1	Pennsylvania	4	310	2.8	8	1,305	2.5	8	444	1.6	8
Ohio	9	2,480	22.8	2	10,874	20.5	2	5,744	21.2	2	All other states	11	2,901	26.6	...	14,242	26.8	...	7,981	29.4	..
Illinois	7	1,082	9.9	4	4,852	9.1	4	2,879	10.6	4											

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

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL. Male.	PER CENT OF TOTAL. Female.
All classes	1919	12,200	10,518	1,682	86.2	13.8
	1914	7,753	7,346	407	94.8	5.2
	1909	5,017	4,853	164	96.7	3.3
Proprietors and officials	1919	392	385	7	98.2	1.8
	1914	273	268	5	98.2	1.8
	1909	206	204	2	99.0	1.0
Proprietors and firm members	1919	16	16	.....	100.0	.....
	1914	47	44	3	93.6	6.4
	1909	78	77	1	98.7	1.3
Salaried officers of corporations	1919	85	84	1	98.8	1.2
	1914	66	64	2	97.0	3.0
	1909	50	50	.....	100.0	.....
Superintendents and managers	1919	291	285	6	97.9	2.1
	1914	160	160	.....	100.0	.....
	1909	78	77	1	98.7	1.3
Clerks and other subordinate salaried employees.	1919	922	460	462	49.9	50.1
	1914	800	534	266	66.8	33.2
	1909	374	256	118	68.4	31.6
Wage earners (average number)	1919	10,886	9,673	1,213	88.9	11.1
	1914	6,680	6,544	136	98.0	2.0
	1909	4,437	4,393	44	99.0	1.0
16 years of age and over	1919	10,752	9,593	1,159	89.2	10.8
	1914	6,640	6,506	134	98.0	2.0
	1909	4,353	4,315	38	99.1	0.9
Under 16 years of age	1919	134	80	54	59.7	40.3
	1914	40	38	2	95.0	5.0
	1909	84	78	6	92.9	7.1

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

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

STATE.	Average number employed during year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Per cent minimum is of maximum.
United States:														
1919	10,886	11,258	*10,166*	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	*8,853*	9,381	9,750	9,838	9,658	9,537	9,506	9,447	9,847	10,244	**10,434**	84.8
Females	1,213	1,677	1,313	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	**9,177**	8,840	8,300	7,872	6,270	5,351	4,792	*4,338*	4,608	5,360	6,414	47.2
1909	4,437	*3,991*	4,134	4,428	4,638	4,868	**4,996**	4,318	4,223	4,214	4,245	4,451	4,738	79.9
Illinois	1,082	1,195	*416*	999	1,247	**1,262**	1,219	1,173	1,146	1,063	1,087	1,084	1,093	33.0
Indiana	439	438	458	482	485	465	415	399	*367*	403	422	440	**494**	74.3
Massachusetts	3,000	3,019	3,047	2,984	3,066	3,081	2,980	2,969	2,924	*2,794*	2,928	3,080	**3,128**	89.3
New York	674	674	*657*	678	693	**705**	676	676	672	670	659	*657*	671	93.2
Ohio	2,480	**2,995**	2,616	2,392	2,264	2,285	*2,224*	2,236	2,328	2,402	2,561	2,709	2,748	74.3
States showing large proportion of females.														Per ct. av. is of state.
Massachusetts	406	425	**427**	413	416	405	383	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 SELECTED STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE— 44 and under.	Between 44 and 48.	48.[1]	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States	1919	10,886	30	....	3,356	2,896	959	3,518	127	....
	1914	6,680	(2)	(2)	42	444	1,722	4,404	66	2
	1909	4,437	(2)	(2)	12	11	1,262	1,473	1,677	2
Illinois [3]	1919	1,082	1	....	853	160	68	.....	.....	....
Indiana	1919	439	....	....	.....	88	.....	351	.....	....
	1914	203	(2)	(2)	38	.....	.....	165	.....	....
Massachusetts [3]	1919	3,000	....	....	2,220	45	572	163	.....	....
New York	1919	674	....	....	14	426	78	155	1	....
	1914	653	(2)	(2)	2	.....	224	393	34	....
Ohio	1919	2,480	....	....	160	130	220	1,970	.....	....
	1914	752	....	....	.....	78	199	467	6	2

[1] Includes 48 and under for 1914 and 1909. [2] Corresponding figures not availabe. [3] Figures not available for 1914.

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

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments	Establishments	Wage earners.	Establishments	Wage earners.	Establishments	Wage earners.	Establishments	Wage earners.	Establishments	Wage earners.	Establishments	Wage earners.	Establishments	Wage earners.	Establishments	Wage earners.
United States.....1919..	51	10,886	4	9	20	3	38	6	187	10	744	10	1,614	3	990	3	1,944	3	5,349
1914..	78	6,680	6	30	59	12	137	10	288	7	557	5	740	6	2,200	.....	.....	2	2,699
Illinois.....	7	1,082	1	1	1	.....	.....	1	22	1	68	2	347	.....	.....	1	644	.....	.....
Indiana.....	5	439	.....	2	6	.....	.....	.....	.....	1	87	2	346	.....	.....	.....	.....	.....	.....
Massachusetts.....	8	3,000	.....	1	3	.....	.....	2	68	2	137	.....	.....	1	262	1	572	1	1,958
New York.....	7	674	.....	2	2	1	14	.....	.....	2	149	1	155	1	354	.....	.....	.....	.....
Ohio.....	9	2,480	1	.....	.....	.....	.....	.....	.....	3	221	3	509	1	374	.....	.....	1	1,376

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

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes.....	51	78	95	10,886	6,680	4,437	$53,105,895	$22,234,262	$10,698,507	$27,119,980	$11,306,608	$5,615,998
Less than $5,000.....	6	23	34	4	16	39	16,346	54,377	94,688	9,326	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	135,866
$20,000 to $100,000.....	6	16	17	85	349	251	259,947	876,139	681,434	150,076	453,565	358,631
$100,000 to $500,000.....	14	11	22	954	1,899	4,067	4,185,986	2,689,208	9,696,708	1,810,249	2,515,344	5,059,694
$500,000 to $1,000,000.....	10	5		1,329			7,216,137	3,175,371		3,106,464		
$1,000,000 and over.....	10	6		8,507	4,332		41,387,140	15,241,518		22,016,397	8,188,320	
	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	6.4	0.6	4.0	6.4
$100,000 to $500,000.....	27.5	14.1	23.2	8.8	28.4	91.7	7.9	12.1	90.6	6.7	22.2	90.1
$500,000 to $1,000,000.....	19.6	6.4		12.2			13.6	14.3		11.5		
$1,000,000 and over.....	19.6	7.7		78.1	64.9		77.9	68.5		81.2	72.4	

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

TABLE 9.—CHARACTER OF OWNERSHIP: 1919 AND 1914.

CHARACTER OF OWNERSHIP.	Census year.	Number of establishments.	Average number of wage-earners.	Value of products.	Value added by manufacture.
All classes.....	1919	51	10,886	$53,105,895	$27,119,980
	1914	78	6,680	22,234,262	11,306,608
Individual.....	1919	10	28	127,070	68,933
	1914	24	55	204,314	93,293
Corporation.....	1919	37	10,477	51,335,671	26,031,203
	1914	42	6,413	21,416,617	10,893,235
All other.....	1919	4	381	1,643,154	1,019,844
	1914	12	212	613,331	320,080

CHARACTER OF OWNERSHIP.	Census year.	Number of establishments.	Average number of wage-earners.	Value of products.	Value added by manufacture.
Per cent distribution:					
Individual.....	1919	19.6	0.3	0.2	0.3
	1914	30.8	0.8	0.9	0.8
Corporation.....	1919	72.5	96.2	96.7	96.0
	1914	53.8	96.0	96.3	96.3
All other.....	1919	7.8	3.5	3.1	3.8
	1914	15.4	3.2	2.8	2.8

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

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Per cent distribution.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909
Primary power, total	989	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	2,560	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	319	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	11,633	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

[1] Not reported separately.

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

STATE.	Census year.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
		Anthracite (tons, 2,240 pounds).	Bituminous, (tons, 2,000 pounds).				
United States	1919	5,365	38,280	3,008	22,013	2,380	117,642
	1914	2,497	21,467	924	8,113	(1)	111,108
Illinois	1919	.....	5,405	.....	920	.....	5,409
	1914	17	2,492	.....	687	(1)	2,706
Indiana	1919	.....	7,655	.....	1,809	381	10,146
	1914	.....	2,600	.....	800	(1)	73,561
Massachusetts	1919	4,840	4,662	.....	7,190	1,704	14,830
	1914	578	4,048	39	.....	.....	560
New York	1919	97	2,675	.....	1,800	1	6,073
	1914	218	3,356	885	10	(1)	18,787
Ohio	1919	.....	10,532	3,000	4,534	198	76,982
	1914	.....	5,734	.....	3,555	(1)	12,336
All other states	1919	428	7,351	8	5,700	96	4,202
	1914	1,684	3,237	.....	3,061	(1)	3,158

[1] 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 increased 171,646, or 57.4 per cent, and the value $8,520,023, or 226.8 per cent.

Wisconsin led 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
All products, value[1]	$53,105,895	$22,234,262	$10,698,567	$5,153,240
Motorcycles:				
Number	59,214	62,154	18,628	2,300
Value	$16,170,055	$12,161,775	$3,015,988	$354,980
Bicycles:				
Number	470,675	299,029	168,824	225,309
Value	$12,277,341	$3,757,318	$2,436,996	$3,203,505
Motorcycle parts, including side and delivery cars, value	$11,423,592	$6,315,169	$5,245,583	$1,594,755
Bicycle parts, value	4,974,668			
All other products, including repairs, value	8,254,239			

[1] 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 $2,089,329; 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.

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

TABLE 13.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
					Expressed in thousands.		
United States	1919	51	10,886	14,806	$12,763	$25,986	$53,106
	1914	78	6,680	8,753	4,739	10,928	22,234
	1909	95	4,437	5,932	2,908	5,083	10,699
Illinois	1919	7	1,082	1,370	1,329	1,973	4,852
	1914	13	911	1,041	751	2,260	4,065
	1909	14	910	775	600	972	1,777
Indiana	1919	5	439	805	512	1,837	2,968
	1914	4	203	485	117	359	675
Massachusetts	1919	8	3,000	3,050	3,238	8,408	16,000
	1914	6	2,135	2,104	1,567	3,194	7,021
	1909	10	843	899	580	1,378	2,706
New York	1919	7	674	1,017	$856	$1,515	$2,865
	1914	16	653	991	454	840	1,650
	1909	20	558	406	345	522	1,165
Ohio	1919	9	2,480	4,289	3,339	5,130	10,874
	1914	9	752	1,051	518	1,634	2,931
	1909	6	942	1,895	686	1,066	2,308
Pennsylvania	1919	4	310	265	345	862	1,305
	1914	8	156	122	111	186	352
	1909	11	341	205	193	339	597
All other states	1919	11	2,901	4,010	3,144	6,261	14,242
	1914	22	1,870	2,059	1,221	2,455	5,540
	1909	34	843	1,752	504	806	2,146

TABLE 14.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY. Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc. Male.	Clerks, etc. Females.	Wage earners. Average number.	Wage earners. Number, 15th day of— Maximum month.	Wage earners. Number, 15th day of— Minimum month.	WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY. Total.	16 and over. Male.	16 and over. Female.	Under 16. Male	Under 16. Female	Capital.	EXPENSES. Salaries and wages. Officials.	EXPENSES. Salaries and wages. Clerks, etc.
United States	51	12,200	16	376	460	462	10,886	De 11,653	Fe 10,166	11,616	10,357	1,121	86	52	$35,362,150	$1,299,488	$900,870
Motorcycles, including parts	20	6,411	6	197	273	233	5,702	De 6,025	Fe 4,836	6,088	5,451	591	25	21	19,250,836	616,688	469,423
Bicycles, including parts	31	5,789	10	179	187	229	5,184	Ja 5,819	Jy 4,736	5,528	4,906	530	61	31	16,111,314	682,800	431,447
Illinois	7	1,179	.....	33	35	29	1,082	My 1,262	Fe 416	1,137	1,097	40	.....	.....	2,456,460	216,698	44,500
Indiana	5	494	2	18	19	16	439	De 494	Au 367	496	494	2	.....	.....	1,512,873	89,215	46,500
Massachusetts	8	3,444	3	126	165	150	3,000	De 3,128	Se 2,794	3,128	2,664	377	49	38	10,154,259	275,167	326,401
New York	7	711	4	15	6	12	674	My 705	No[1] 657	671	643	28	.....	.....	1,795,897	85,975	24,357
Ohio	9	2,780	1	96	92	111	2,480	Ja 2,995	Je 2,224	2,747	2,492	255	.....	.....	8,447,379	273,305	238,406
Pennsylvania	4	351	.....	10	17	14	310	No 351	Ja 264	371	344	22	5	.....	773,310	30,224	42,888
All other states[2]	11	3,241	6	78	126	130	2,901	.....	.....	3,066	2,623	397	32	14	10,221,972	328,904	177,818

STATE.	EXPENSES—continued. Salaries and wages—Con. Wage earners.	For contract work.	Rent and taxes. Rent of factory.	Rent and taxes. Taxes, Federal, state, county, and local.	For materials. Principal materials.	For materials. Fuel and rent of power.	Value of products.	Value added by manufacture.	POWER. Primary horsepower. Total.	Owned. Steam engines (not turbine).	Owned. Steam turbines.	Owned. Internal-combustion engines.	Owned. Water power.[3]	Rented.[4]	Electric horsepower generated in establishments reporting.
United States	$12,763,235	$1,036	$152,606	$3,165,940	$25,346,673	$639,242	$53,105,895	$27,119,980	14,806	3,700	270	77	90	10,669	1,350
Motorcycles, including parts	6,291,558	.....	99,834	2,073,489	13,802,281	306,768	28,609,327	14,500,278	6,278	1,090	.....	74	90	5,024	1,000
Bicycles, including parts	6,471,677	1,036	52,772	1,092,451	11,544,392	332,474	24,496,568	12,619,702	8,528	2,610	270	3	.....	5,645	350
Illinois	1,329,104	.....	97,615	73,000	1,937,440	35,997	4,852,039	2,878,602	1,370	925	270	.....	.....	175	965
Indiana	511,618	.....	2,628	110,802	1,801,525	35,486	2,968,160	1,131,049	805	.....	.....	.....	.....	805	.....
Massachusetts	3,238,280	.....	10,281	876,683	8,229,016	179,342	15,999,501	7,591,143	3,050	575	.....	.....	90	2,385	385
New York	855,603	.....	4,576	41,336	1,476,150	38,992	2,864,829	1,349,687	1,017	300	.....	15	.....	702	.....
Ohio	3,339,074	1,036	7,643	513,059	4,965,313	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[2]	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	.....

[1] Same number reported for one or more other months.
[2] All other states embrace: Connecticut, 3 establishments; Michigan, 2; Washington, 1; and Wisconsin, 5.
[3] Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
[4] Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants)