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DEPARTMENT OF COMMERCE AND LABOR

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THIRTEENTH CENSUS OF THE UNITED STATES  
TAKEN IN THE YEAR 1910

VOLUME IX

MANUFACTURES

1909

REPORTS BY STATES, WITH STATISTICS  
FOR PRINCIPAL CITIES

PREPARED UNDER THE SUPERVISION OF WILLIAM M. STEUART  
CHIEF STATISTICIAN FOR MANUFACTURES



BUREAU OF THE CENSUS  
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1912

# THE CARRIAGE AND WAGON INDUSTRY.

## GENERAL STATISTICS.

**Summary for the United States: 1909.**—The industry "carriages and wagons and materials" includes the manufacture of all varieties of carriages, wagons, sleighs, and sleds (except children's carriages and sleds), and also the manufacture of parts and materials, such as bodies, tops, cushions, hubs, felloes, spokes, wheels, whiffletrees, carriage boots and aprons, axles, dashboards, neck yokes, whip sockets, etc. Many small carriage and wagon repair shops were not canvassed by the census, no such shop being included unless it made five or more complete vehicles during the census year, but a great deal of repair work was done incidentally by the establishments that were canvassed.

Table 1 distinguishes two classes of establishments: (1) Those whose chief products were complete carriages and wagons, and (2) those whose chief products were carriage and wagon parts or materials.

The 5,492 establishments in both branches of the industry gave employment in 1909 to an average of 82,944 persons, of whom 69,928 were wage earners, and paid \$45,555,126 in salaries and wages. The total cost of materials used in 1909 was \$81,951,288, which was equal to about half (51.3 per cent) of the total value of products (\$159,892,547), while the value added to materials by manufacture was \$77,941,259.

A considerable part of the value of products reported represents receipts for repair work.

Of the 5,492 establishments canvassed for 1909, 4,870, or 88.7 per cent, were engaged primarily in the manufacture of carriages and wagons, and of the total value of products, \$125,366,912, or 78.4 per cent, was contributed by this class of establishments.

	Total for the industry.	ESTABLISHMENTS ENGAGED PRIMARILY IN MANUFACTURING—	
		Carriages and wagons.	Carriage and wagon materials.
Number of establishments.....	5,492	4,870	622
Persons engaged in the industry.....	82,944	63,607	19,337
Proprietors and firm members.....	6,213	5,701	512
Salaried employees.....	6,803	5,306	1,497
Wage earners (average number).....	69,928	52,640	17,388
Primary horsepower.....	128,032	78,785	47,247
Capital.....	\$175,473,728	\$143,230,790	\$32,242,938
Expenses.....	139,176,014	109,052,007	30,124,007
Services.....	45,555,126	35,893,774	9,661,352
Salaries.....	7,960,207	6,272,626	1,687,581
Wages.....	37,594,919	29,621,148	7,973,771
Materials.....	81,951,288	63,890,422	18,060,866
Miscellaneous.....	11,669,600	9,267,811	2,401,789
Value of products.....	159,892,547	125,366,912	34,525,635
Value added by manufacture (value of products less cost of materials).....	77,941,259	61,476,490	16,464,769

**Comparison with earlier censuses.**—Table 2 summarizes the statistics of the industry for each census from 1879 to 1909, inclusive.

	CARRIAGES AND WAGONS AND MATERIALS.									
	Number or amount.					Per cent of increase. <sup>1</sup>				
	1909	1904	1899	1889	1879	1899-1909	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	5,492	5,588	6,792	5,111	4,253	-19.1	-1.7	-17.7	32.0	20.2
Persons engaged in the industry.....	82,944	90,761	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	-8.6	-5.5	-	-	-
Proprietors and firm members.....	6,213	6,575	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	-	-	-	-	-
Salaried employees.....	6,803	6,294	5,026	( <sup>2</sup> )	( <sup>2</sup> )	35.4	8.1	25.2	-	-
Wage earners (average number).....	69,928	77,832	73,812	66,521	52,896	-5.3	-10.2	5.5	( <sup>2</sup> )	( <sup>2</sup> )
Primary horsepower.....	128,032	106,159	83,771	49,458	10,813	50.4	18.7	26.7	69.4	357.4
Capital.....	\$175,473,728	\$152,344,657	\$128,961,660	\$108,483,418	\$45,008,211	36.1	15.2	18.1	21.1	136.6
Expenses.....	139,176,014	134,584,694	112,099,699	99,623,941	( <sup>2</sup> )	24.2	3.4	20.1	12.5	-
Services.....	45,555,126	44,943,700	38,324,427	39,896,254	21,721,619	18.9	1.4	17.3	-3.0	83.7
Salaries.....	7,960,207	6,581,021	4,769,114	( <sup>2</sup> )	( <sup>2</sup> )	67.3	21.0	38.3	-	-
Wages.....	37,594,919	38,362,679	33,565,313	( <sup>2</sup> )	( <sup>2</sup> )	12.0	-2.0	14.3	-	-
Materials.....	81,951,288	77,527,911	66,771,919	53,410,673	35,378,181	22.7	5.7	16.1	25.0	51.0
Miscellaneous.....	11,669,600	12,113,038	7,008,353	6,317,014	( <sup>2</sup> )	66.6	-3.7	73.0	10.9	-
Value of products.....	159,892,547	155,868,849	138,261,763	118,942,634	76,065,969	15.6	2.6	12.7	16.2	58.4
Value added by manufacture (value of products less cost of materials).....	77,941,259	78,340,938	71,489,844	65,531,961	39,687,788	9.0	-0.5	9.6	9.1	65.1

<sup>1</sup> A minus sign (-) denotes decrease. Where percentages are omitted, comparable figures are not available.  
<sup>2</sup> Comparable figures not available.      <sup>3</sup> Figures not strictly comparable.

The carriage and wagon industry has existed in this country since early colonial times, and its growth up to the census of 1904 about kept pace with the increase of population. The advent of the automobile, and later of the motor truck, has had a decidedly retarding

influence on the industry. Many establishments reported at censuses prior to 1909 or 1904 as manufacturing carriages and wagons have since turned wholly or in part to the manufacture of automobiles and have been assigned to the automobile industry.

The value of products reported for 1909, while more than double that in 1879, was only 15.6 per cent in excess of that in 1899. The greatest increase in value of products, \$43,876,665, or 58.4 per cent, was between 1879 and 1889. There was a moderate increase from 1899 to 1904 but only a very slight increase from 1904 to 1909. Between 1899 and 1909

there was a decrease in number of establishments and of wage earners, while seven of the items included in the table show a decrease between 1904 and 1909.

Summary, by states.—Table 3 summarizes by states the more important statistics of the industry, the states being arranged according to the value of products reported for 1909.

Table 3

CARRIAGES AND WAGONS AND MATERIALS.

STATE.	Number of establishments: 1909	Wage earners.			Value of products.			Value added by manufacture.			Per cent of increase. <sup>1</sup>								
		Average number: 1909	Per cent of total: 1909	Rank.	Amount: 1909	Per cent of total: 1909	Rank.	Amount: 1909	Per cent of total: 1909	Rank.	Wage earners (average number).			Value of products.			Value added by manufacture.		
											1909	1904	1899	1909	1904	1899	1909	1904	1899
United States...	5,492	69,928	100.0	.....	\$159,892,547	100.0	.....	\$77,941,259	100.0	.....	-5.3	-10.2	5.5	15.6	2.6	12.7	9.0	-0.5	9.6
Ohio.....	407	8,815	12.6	2	21,049,459	13.7	1	10,535,458	13.5	1	-24.4	-20.1	-5.4	-3.7	-8.6	5.3	-0.8	-5.5	4.0
Indiana.....	221	8,867	12.7	1	21,655,440	13.5	2	9,197,717	11.8	2	1.8	-5.7	7.9	37.0	12.4	21.8	26.7	9.6	15.6
Illinois.....	325	5,852	8.4	5	16,831,283	10.5	3	7,351,948	9.4	4	34.7	13.5	13.0	87.0	47.7	26.5	53.1	30.2	21.4
New York.....	610	6,116	8.7	4	13,202,531	8.3	4	7,483,813	9.6	3	-18.3	-22.5	5.4	-5.1	-0.2	4.6	-7.5	-11.4	4.4
Pennsylvania.....	655	7,498	10.7	3	12,748,383	8.0	5	7,041,358	9.0	5	17.2	0.5	16.6	21.9	10.9	9.9	13.4	6.8	6.2
Michigan.....	212	4,034	5.8	6	10,158,883	6.4	6	4,896,627	6.3	6	-34.0	-37.0	4.7	-21.2	-31.8	15.5	-3.2	-24.1	20.8
Wisconsin.....	286	3,437	4.9	7	8,899,171	5.6	7	3,776,572	4.8	7	-1.2	-6.7	5.9	26.5	10.0	15.0	3.2	-6.5	10.4
Missouri.....	243	3,202	4.7	8	8,468,856	5.3	8	3,609,026	4.6	8	10.5	4.4	5.8	31.4	10.3	19.1	8.0	5.0	2.8
Kentucky.....	161	2,777	4.0	9	5,141,107	3.2	9	2,428,601	3.1	9	23.6	1.6	21.7	40.3	-6.6	50.2	39.4	-9.8	54.5
Iowa.....	119	1,441	2.1	14	4,786,321	3.0	10	2,038,810	2.6	10	-15.8	11.0	-24.1	20.0	42.0	-15.5	-0.1	20.8	-17.3
North Carolina.....	138	1,629	2.3	11	3,282,634	2.1	11	1,389,128	1.8	14	.....	.....	71.6	.....	118.4	.....	.....	.....	101.4
New Jersey.....	256	1,601	2.3	12	3,250,456	2.0	12	1,970,097	2.5	11	-24.4	-19.4	-6.2	-17.0	-6.1	-11.6	-14.5	-3.7	-8.4
Massachusetts.....	177	1,539	2.2	13	3,184,835	2.0	13	1,903,054	2.4	12	-53.0	-39.2	-22.7	-49.4	-35.3	-21.7	-45.4	-34.2	-17.0
Tennessee.....	129	1,706	2.4	10	3,039,613	1.9	14	1,600,187	2.1	13	47.5	-9.7	63.3	79.7	-7.3	93.7	75.4	-0.6	76.3
Georgia.....	83	1,059	1.5	16	2,560,031	1.6	15	1,192,629	1.5	17	31.1	-5.0	38.0	94.4	11.2	74.9	52.4	10.4	38.1
Virginia.....	130	1,329	1.9	15	2,485,221	1.6	16	1,201,941	1.6	16	37.9	-0.2	38.2	56.7	8.4	44.5	34.8	0.7	22.9
Minnesota.....	134	868	1.2	18	2,174,705	1.4	17	1,191,707	1.5	18	-25.6	-6.0	-20.9	3.2	16.4	-11.4	4.2	19.1	-12.5
California.....	155	760	1.1	19	2,052,434	1.3	18	1,203,368	1.6	15	-17.7	-22.4	6.2	3.8	-12.8	19.0	0.2	-19.8	25.0
Arkansas.....	58	973	1.4	17	1,664,467	1.0	19	844,811	1.1	19	179.6	111.5	32.2	199.8	115.5	39.1	245.9	98.1	74.6
Maryland.....	126	757	1.1	20	1,330,088	0.8	20	788,890	1.0	20	-1.6	-20.0	23.0	34.2	-10.4	49.8	30.2	0.8	29.9
Connecticut.....	92	578	0.8	21	1,076,582	0.7	21	693,941	0.9	21	-64.8	-61.6	3.8	-66.0	-51.0	30.6	-63.9	-50.5	-27.0
Maine.....	150	472	0.7	22	966,093	0.6	22	568,935	0.7	22	37.2	2.8	33.4	34.2	1.0	32.8	23.7	2.3	25.8
Texas.....	50	412	0.6	25	829,726	0.5	23	510,543	0.7	23	.....	.....	64.0	.....	.....	56.7	.....	.....	.....
New Hampshire.....	44	420	0.6	24	733,755	0.5	24	388,185	0.5	25	-31.8	-19.4	-15.4	-10.0	-6.4	-13.5	-30.3	-21.8	-11.5
Washington.....	37	241	0.3	31	720,054	0.4	25	400,913	0.5	24	.....	.....	52.3	.....	49.4	70.3	.....	30.4	69.9
Alabama.....	35	424	0.6	23	683,880	0.4	26	380,849	0.5	26	-8.0	11.6	-17.6	14.0	-7.6	23.3	9.5	5.0	4.3
West Virginia.....	51	347	0.5	28	675,478	0.4	27	357,394	0.5	28	11.2	11.6	-0.3	37.8	5.6	30.4	27.5	5.3	21.1
Mississippi.....	41	365	0.5	26	641,957	0.4	28	308,213	0.5	27	60.1	14.8	39.5	112.6	30.0	63.6	115.2	31.0	64.3
Nebraska.....	22	200	0.3	34	576,918	0.4	29	325,748	0.4	29	61.3	33.3	21.0	133.6	81.4	28.7	107.6	71.6	21.0
Kansas.....	46	246	0.4	30	530,083	0.3	30	285,649	0.4	31	.....	.....	32.9	.....	32.1	.....	.....	.....	41.7
Louisiana.....	40	358	0.5	27	528,757	0.3	31	322,739	0.4	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Carolina.....	23	272	0.4	29	463,506	0.3	32	219,186	0.3	34	-20.0	-21.4	1.8	12.1	-15.3	32.4	5.8	-14.7	24.0
Florida.....	39	230	0.3	33	452,599	0.3	33	242,324	0.3	33	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rhode Island.....	40	238	0.3	32	421,913	0.3	34	258,746	0.3	32	-19.0	4.4	-22.4	-20.2	14.1	-30.1	-23.6	2.4	-25.4
Delaware.....	26	163	0.2	35	290,113	0.2	35	106,056	0.2	36	-41.4	-1.2	-40.6	-25.1	1.4	-26.1	-32.8	7.1	-37.2
Colorado.....	21	124	0.2	36	260,295	0.2	36	174,845	0.2	35	-28.7	-20.9	1.7	-32.5	-31.4	-1.6	-28.9	-28.9	.....
Oklahoma.....	19	123	0.2	37	232,880	0.1	37	152,006	0.2	37	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oregon.....	15	62	0.1	39	192,559	0.1	38	124,410	0.2	38	.....	.....	.....	70.8	43.0	19.5	.....	.....	.....
Vermont.....	38	94	0.1	38	158,200	0.1	39	100,479	0.1	39	-49.5	.....	.....	-44.6	.....	.....	.....	.....	.....
South Dakota.....	10	48	0.1	41	131,384	0.1	40	71,061	0.1	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dist. Columbia.....	6	59	0.1	40	128,107	0.1	41	81,104	0.1	40	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montana.....	4	28	( <sup>2</sup> )	42	78,609	( <sup>2</sup> )	42	49,682	0.1	42	.....	.....	.....	-26.2	.....	.....	.....	.....	.....
Wyoming.....	10	8	( <sup>2</sup> )	47	41,624	( <sup>2</sup> )	44	19,209	( <sup>2</sup> )	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Dakota.....	3	9	( <sup>2</sup> )	46	18,885	( <sup>2</sup> )	46	11,398	( <sup>2</sup> )	47	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other states.....	6	47	0.1	.....	102,072	0.1	.....	61,302	0.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> Percentages are based on figures in Table 19. A minus sign (—) denotes decrease. Percentages are omitted where comparable figures can not be given, or where the base is less than 100 for wage earners or less than \$100,000 for value of products or value added by manufacture.  
<sup>2</sup> Less than one-tenth of 1 per cent.

In determining the rank of the states all states are considered, regardless of whether or not they are shown separately in the table; hence some omissions occur in the several series of numbers indicating rank, as certain states included under "all other states" held a higher rank in some items than some of the states for which separate figures are given.

The carriage and wagon industry is well distributed throughout the United States, establishments being reported for all states except Nevada. In 1909, as in 1904, Ohio ranked first in respect to both value of

products and value added by manufacture, while in 1904 it ranked first in number of wage earners also. Indiana ranked second as to value of products in both years, and first as to number of wage earners in 1909. Most of the states held the same, or practically the same, rank in respect to value added by manufacture in 1909 as in respect to value of products, North Carolina and California being the most conspicuous exceptions. Illinois, which ranked third in importance, as measured by value of products, in 1909, showed a more rapid development in the industry

during the period from 1899 to 1909 than any other of the leading states, the number of wage earners increasing 34.7 per cent and the value of products 87 per cent. Higher percentages of increase during the period are shown, however, by some of the states of less importance in the industry, particularly Arkansas.

Sixteen of the states for which percentages of increase are given in the table show decreases between 1899 and 1909 in the number of wage earners, 10 in the value of products, and 10 in value added by manufacture. Of the 10 states with the greatest value of products in 1909, Ohio, New York, and Michigan reported a smaller number of wage earners, value of products, and value added by manufacture in that year than in 1899, while Iowa shows decreases in the number of wage earners and value added by manufacture, and Wisconsin a decrease in number of wage earners.

The diagram on page 6 shows graphically the value of products reported for the most important states in the industry in 1909 and 1899, and the map shows the distribution of the industry, by states, for 1909.

Persons engaged in the industry.—Table 4 shows, for 1909, the number of persons engaged in the industry, classified according to occupational status and sex, and in the case of wage earners, according to age. The sex and age classification of the average number of wage earners is estimated by the method described in the Introduction.

The average number of persons engaged in the industry as a whole during 1909 was 82,944, of whom 69,928, or 84.3 per cent, were wage earners, 8,844, or 10.7 per cent, proprietors and officials, and 4,172, or 5 per cent, clerks—the last-named class including other subordinate salaried employees.

Of the total number of persons engaged in the industry, 80,536, or 97.1 per cent, were males and 2,408, or 2.9 per cent, were females. Nearly half of the females were reported as clerks, of which class they constituted 28.3 per cent. The average number of boys under 16 years employed as wage earners was 524, or six-tenths of 1 per cent of the total number of wage earners reported.

There are some differences between the two branches of the industry with respect to the proportions in the several occupational classes and with respect to the sex and age distribution. Relatively more women and children were employed in the manufacture of carriage and wagon materials than in the manufacture of carriages and wagons.

The average number of wage earners in each state, as reported at the censuses of 1909, 1904, and 1899, is given in Table 19. The distribution of the average number by sex and age is not shown for the individual states, but Table 20 gives for 1909 such a distribution for the number employed on December 15, or the nearest representative day. Female wage earners were reported from only 26 states, the largest number, 272, being employed in Indiana.

In order to compare the distribution of persons engaged in the industry according to occupational status in 1909 with that in 1904 it is necessary to use the classification employed at the earlier census. (See Introduction.) Such a comparison is made for the industry as a whole in Table 5.

BRANCH OF INDUSTRY AND CLASS OF PERSONS.	PERSONS ENGAGED IN THE INDUSTRY: 1909		
	Total.	Male.	Female.
Carriages and wagons and materials.....	82,944	80,536	2,408
Proprietors and officials.....	8,844	8,706	138
Proprietors and firm members.....	6,213	6,103	110
Salaried officers of corporations.....	1,166	1,143	23
Superintendents and managers.....	1,465	1,460	5
Clerks.....	4,172	2,991	1,181
Wage earners (average number).....	69,928	68,839	1,089
16 years of age and over.....	69,397	68,315	1,082
Under 16 years of age.....	531	524	7
Carriages and wagons.....	63,607	61,827	1,780
Proprietors and officials.....	7,627	7,521	106
Proprietors and firm members.....	5,701	5,613	88
Salaried officers of corporations.....	853	837	16
Superintendents and managers.....	1,073	1,071	2
Clerks.....	3,440	2,494	946
Wage earners (average number).....	52,540	51,812	728
16 years of age and over.....	52,213	51,489	724
Under 16 years of age.....	327	323	4
Carriage and wagon materials.....	19,337	18,709	628
Proprietors and officials.....	1,217	1,185	32
Proprietors and firm members.....	512	490	22
Salaried officers of corporations.....	313	306	7
Superintendents and managers.....	392	389	3
Clerks.....	732	497	235
Wage earners (average number).....	17,388	17,027	361
16 years of age and over.....	17,184	16,826	358
Under 16 years of age.....	204	201	3

CLASS.	PERSONS ENGAGED IN THE INDUSTRY—BOTH BRANCHES COMBINED.				
	1909		1904		Per cent of increase: <sup>1</sup> 1904-1909
	Number.	Per cent distribution.	Number.	Per cent distribution.	
Total.....	82,944	100.0	90,751	100.0	-8.6
Proprietors and firm members.....	6,213	7.5	6,575	7.2	-5.5
Salaried employees.....	6,803	8.2	6,294	6.9	8.1
Wage earners (average number).....	69,928	84.3	77,882	85.8	-10.2

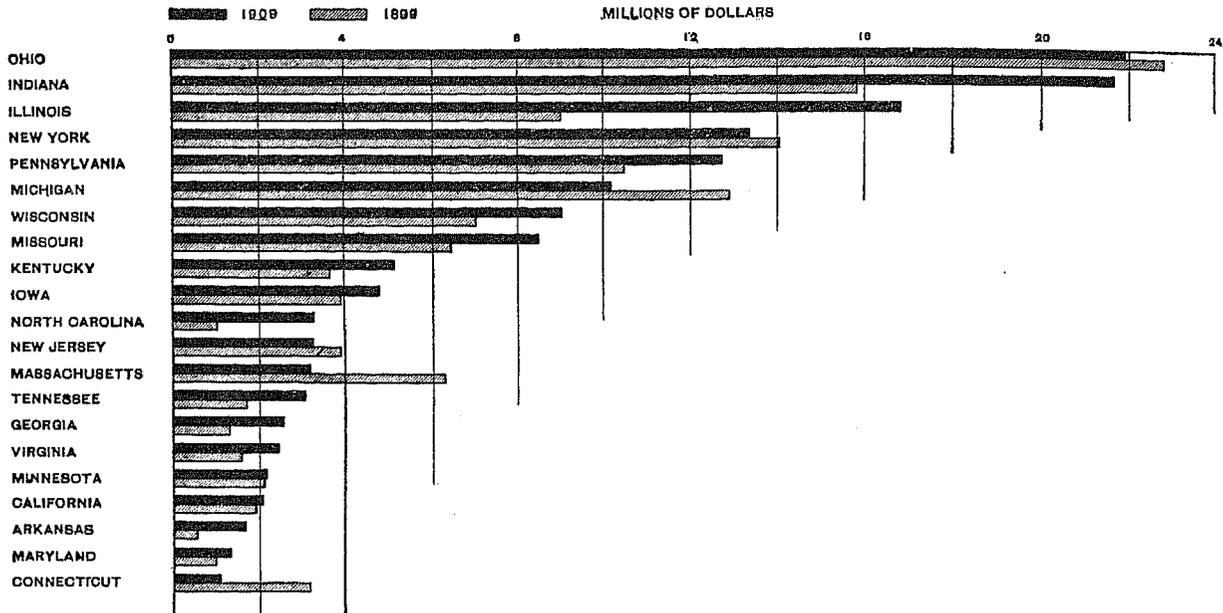
<sup>1</sup> A minus sign (-) denotes decrease.

Salaried employees increased 8.1 per cent during the period, proprietors and firm members and wage earners decreasing in number.

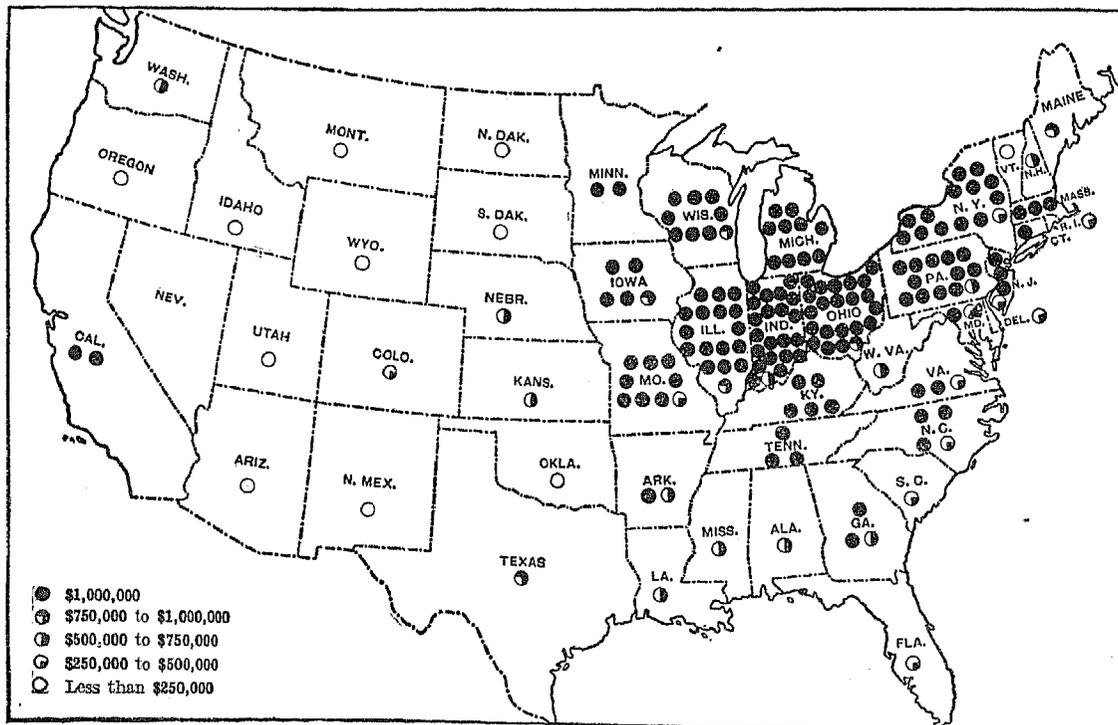
Table 6 shows the average number of wage earners in the industry distributed according to age, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899. (See Introduction.) The proportions of men, women, and children employed were practically the same at the three censuses.

MANUFACTURES.

THE CARRIAGE AND WAGON INDUSTRY—VALUE OF PRODUCTS, FOR LEADING STATES: 1909 AND 1899.



THE CARRIAGE AND WAGON INDUSTRY—VALUE OF PRODUCTS, BY STATES: 1909.



**Table 6**  
AVERAGE NUMBER OF WAGE EARNERS IN THE INDUSTRY—  
BOTH BRANCHES COMBINED.

CLASS.	1909		1904		1899	
	Num-ber.	Per cent distrib-ution.	Num-ber.	Per cent distrib-ution.	Num-ber.	Per cent distrib-ution.
	Total.....	69,928	100.0	77,882	100.0	73,812
16 years of age and over..	69,397	99.2	77,146	99.1	73,231	99.2
Male.....	68,315	97.7	75,943	97.5	72,158	97.8
Female.....	1,082	1.5	1,203	1.5	1,073	1.5
Under 16 years of age....	531	0.8	736	0.9	581	0.8

the 21 states in which an average of 500 or more wage earners were employed during the year.

The largest number of wage earners reported for any month of 1909 was 73,240, for May, and the smallest number, 66,567, for January, the minimum number being equal to 90.9 per cent of the maximum. In 1904 the maximum number, 83,753, was reported for April, and the minimum number, 73,413, for November, the latter number being equal to 87.7 per cent of the maximum. Both in 1909 and in 1904 a larger number of wage earners were employed during the spring than during other seasons. Of the 21 states shown for 1909, 7 reported the greatest activity in May and 5 in April, and 13 reported January as the month in which the smallest number was employed.

Wage earners employed, by months.—Table 7 gives the number of wage earners employed in the industry as a whole on the 15th (or the nearest representative day) of each month during the year 1909 for

**Table 7**  
WAGE EARNERS EMPLOYED IN THE INDUSTRY—BOTH BRANCHES COMBINED: 1909<sup>1</sup>

STATE.	Average number during the year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
		United States.....	69,928	66,567	69,390	71,775	72,892	73,240	72,181	69,618	68,328	67,894	67,949
Arkansas.....	973	837	861	916	889	958	907	965	973	1,098	1,062	1,081	1,080
California.....	760	677	686	719	771	806	821	819	800	785	762	741	729
Connecticut.....	578	521	537	579	625	641	635	605	589	558	556	552	541
Georgia.....	1,059	953	1,010	1,031	1,053	1,024	1,049	984	1,032	1,083	1,072	1,183	1,228
Illinois.....	5,852	5,345	5,738	5,919	6,013	6,089	6,017	5,735	5,724	5,820	5,816	5,933	6,060
Indiana.....	8,807	8,646	9,144	9,429	9,418	9,315	9,100	8,630	8,505	8,390	8,283	8,588	8,966
Iowa.....	1,441	1,323	1,435	1,475	1,589	1,573	1,554	1,516	1,466	1,433	1,323	1,293	1,310
Kentucky.....	2,777	2,740	2,848	2,876	2,913	2,908	2,787	2,759	2,738	2,679	2,648	2,648	2,790
Maryland.....	757	713	726	773	796	794	788	772	764	763	749	742	727
Massachusetts.....	1,539	1,422	1,449	1,505	1,668	1,720	1,714	1,600	1,551	1,521	1,457	1,389	1,382
Michigan.....	4,034	4,073	4,316	4,340	4,347	4,261	4,043	3,772	3,635	3,794	4,000	4,303	4,308
Minnesota.....	868	818	847	894	916	918	909	881	848	833	821	867	864
Missouri.....	3,302	3,085	3,320	3,533	3,548	3,517	3,418	3,332	3,306	3,197	3,172	3,109	3,127
New Jersey.....	1,601	1,497	1,507	1,546	1,610	1,637	1,636	1,651	1,655	1,636	1,622	1,617	1,608
New York.....	6,116	5,933	6,051	6,285	6,342	6,384	6,244	6,111	6,049	5,925	5,932	5,968	6,173
North Carolina.....	1,629	1,536	1,591	1,600	1,651	1,675	1,628	1,579	1,631	1,584	1,625	1,698	1,760
Ohio.....	8,815	8,540	9,043	9,489	9,574	9,596	9,267	8,565	7,944	8,011	8,332	8,472	8,947
Pennsylvania.....	7,498	7,188	7,273	7,440	7,614	7,804	7,832	7,871	7,763	7,233	7,208	7,300	7,344
Tennessee.....	1,706	1,555	1,561	1,677	1,690	1,622	1,743	1,658	1,719	1,795	1,791	1,831	1,822
Virginia.....	1,329	1,225	1,266	1,320	1,328	1,392	1,364	1,304	1,371	1,360	1,331	1,331	1,355
Wisconsin.....	3,437	3,239	3,336	3,389	3,426	3,469	3,501	3,439	3,406	3,510	3,561	3,550	3,417

<sup>1</sup> The month of maximum employment for each state is indicated by boldface figures and that of minimum employment by italic figures.

The months of maximum and minimum employment for 1909, and the number of wage earners reported for such months, are shown for each state in Table 20.

Prevailing hours of labor.—In Table 8 the wage earners have been classified according to the number of hours of labor per week prevailing in the establishments in which they are employed. In making this classification the average number of wage earners employed during the year in each establishment is classified as a total according to the hours prevailing in that establishment, even though a few employees worked a greater or less number of hours.

Approximately 40 per cent of the wage earners employed in the industry in 1909 were in establishments where the prevailing number of hours was 60 per week. Only 11.6 per cent were employed in establishments where the prevailing hours were less than 54 per week, and less than 1 per cent were in establishments working more than 60 hours per week.

**Table 8**  
AVERAGE NUMBER OF WAGE EARNERS IN THE INDUSTRY—  
BOTH BRANCHES COMBINED: 1909

STATE.	Total.	In establishments with prevailing hours—						
		48 and under.	Be-tween 48 and 54.	54.	Be-tween 54 and 60.	60.	Be-tween 60 and 72.	72 and over.
		United States.....	69,928	3,204	4,875	11,659	21,954	27,771
Arkansas.....	973	10	.....	34	180	746	3	.....
California.....	760	270	48	327	40	72	.....	3
Connecticut.....	578	6	6	288	125	153	.....	.....
Georgia.....	1,059	50	.....	14	142	847	3	3
Illinois.....	5,852	114	82	1,133	3,077	1,442	.....	4
Indiana.....	8,867	198	850	997	4,447	2,775	.....	.....
Iowa.....	1,441	49	157	287	63	786	120	.....
Kentucky.....	2,777	667	37	508	678	886	1	.....
Maryland.....	757	3	54	276	87	337	.....	.....
Massachusetts.....	1,539	18	498	704	172	147	.....	.....
Michigan.....	4,034	55	.....	53	2,105	1,821	.....	.....
Minnesota.....	868	3	25	36	182	622	.....	.....
Missouri.....	3,302	471	182	881	417	1,220	180	1
New Jersey.....	1,601	51	116	407	669	339	18	1
New York.....	6,116	224	1,410	1,329	1,235	1,918	.....	.....
North Carolina.....	1,629	19	8	32	252	1,306	4	8
Ohio.....	8,815	641	651	1,634	1,993	3,896	.....	.....
Pennsylvania.....	7,498	44	165	826	3,686	2,752	19	6
Tennessee.....	1,706	102	89	100	201	1,211	1	2
Virginia.....	1,329	3	7	343	168	788	9	11
Wisconsin.....	3,437	8	.....	119	1,241	2,069	.....	.....

Sixty hours per week was the most common working time reported in 13 of the 21 states for which separate data are shown. Three states, however—Massachusetts, California, and Connecticut—had more than half of their wage earners in establishments operating 54 hours or less per week; and California reported over one-third as employed in establishments operating 48 hours or less per week. Only 12 of the 21 states reported any wage earners working over 60 hours per week.

**Character of ownership.**—Table 9 presents data with respect to the character of ownership of the establishments in the industry.

The most important distinction shown is that between corporate and all other forms of ownership. In 1909, of the total number of establishments reported, 16.1 per cent were under corporate ownership, as compared with 14.4 per cent in 1904. While corporations thus controlled approximately one-sixth of the total number of establishments in 1909, the value of the products of these establishments represented 68.4 per cent of the total value of products of the industry, an appreciably larger proportion than in

1904. There was a pronounced decrease between 1904 and 1909 both in the number of establishments operated by firms and in the value of their products. There was a slight increase in the number of establishments operated by individuals but a decrease in value of their products.

CHARACTER OF OWNERSHIP.	CARRIAGES AND WAGONS AND MATERIALS.			
	Number of establishments.		Value of products.	
	1909	1904	1909	1904
Total.....	5,492	5,588	\$159,892,547	\$155,868,849
Individual.....	3,322	3,315	29,460,382	32,376,377
Firm.....	1,286	1,467	21,084,158	126,597,546
Corporation.....	884	806	109,348,007	96,894,926
Per cent of total.....	100.0	100.0	100.0	100.0
Individual.....	60.5	59.3	18.4	20.8
Firm.....	23.4	26.3	13.2	17.1
Corporation.....	16.1	14.4	68.4	62.2

<sup>1</sup> Includes two establishments reported under "other" ownership, to avoid disclosure of individual operations.

Table 10 gives statistics for establishments under each form of ownership, for the leading states.

STATE.	CARRIAGES AND WAGONS AND MATERIALS: 1909											
	Number of establishments owned by—			Wage earners in establishments owned by—			Value of products of establishments owned by—			Value added by manufacture in establishments owned by—		
	Individuals.	Firms.	Corporations.	Individuals.	Firms.	Corporations.	Individuals.	Firms.	Corporations.	Individuals.	Firms.	Corporations.
United States.....	3,322	1,286	884	15,476	9,824	44,628	\$29,460,382	\$21,084,158	\$109,348,007	\$17,594,760	\$11,297,135	\$49,049,384
Arkansas.....	19	18	21	119	164	690	155,646	277,761	1,231,060	105,785	165,027	573,999
California.....	101	39	15	418	163	179	1,148,932	454,141	454,361	649,534	282,550	271,284
Connecticut.....	63	18	11	313	87	178	559,631	174,592	342,359	363,054	120,480	210,407
Georgia.....	45	17	21	291	139	629	476,012	290,763	1,793,256	284,983	159,607	748,039
Illinois.....	201	69	55	797	421	4,634	1,714,435	1,052,885	14,068,903	1,000,483	586,986	5,764,479
Indiana.....	94	47	80	487	361	8,019	843,535	874,212	19,937,693	504,928	404,414	8,288,375
Iowa.....	64	35	20	253	393	795	522,717	1,541,056	2,722,548	304,702	712,184	1,021,924
Kentucky.....	80	41	40	376	338	2,063	639,403	650,126	3,945,578	335,009	292,871	1,800,721
Maryland.....	80	31	9	303	201	253	532,606	390,919	400,483	310,756	218,404	283,730
Massachusetts.....	129	34	14	841	443	255	1,618,801	1,046,547	519,487	1,038,312	562,243	302,499
Michigan.....	124	52	36	348	514	3,172	714,140	935,267	8,509,476	437,434	549,982	3,912,211
Minnesota.....	92	30	12	220	180	468	499,642	430,165	1,244,898	317,891	241,503	682,313
Missouri.....	109	70	64	417	368	2,517	721,434	767,542	6,979,880	448,509	428,970	2,731,547
New Jersey.....	192	50	14	882	344	375	1,983,819	610,052	656,585	1,172,471	401,120	397,097
New York.....	414	131	65	2,116	916	3,084	4,434,217	1,605,750	7,252,564	2,661,493	1,057,207	3,785,113
North Carolina.....	71	38	29	423	406	800	692,098	743,277	1,847,259	344,073	336,833	708,222
Ohio.....	183	97	127	1,256	1,164	6,395	2,345,765	2,858,841	16,744,853	1,348,446	1,312,097	7,874,015
Pennsylvania.....	437	153	65	2,329	1,889	3,780	3,936,477	2,695,014	6,116,892	2,399,065	1,403,898	3,238,395
Tennessee.....	46	44	30	284	297	1,125	404,778	505,542	2,129,293	216,434	307,132	1,076,621
Virginia.....	80	27	23	325	246	758	389,204	392,928	1,703,089	225,556	241,896	734,489
Wisconsin.....	184	70	32	457	249	2,731	987,657	820,939	7,090,575	537,027	315,695	2,883,850

In 1909, of the total number of wage earners in the industry, 15,476, or 22.1 per cent of the total, were employed in establishments under individual ownership; 9,824, or 14 per cent, in those under firm ownership; and 44,628, or 63.8 per cent, in those owned by corporations.

There was considerable variation among the states in the relative importance of the establishments under the different forms of ownership. Thus in Indiana, the second state in the industry as measured by value of products, establishments controlled by corporations constituted 36.2 per cent of the total number of

establishments, gave employment to 90.4 per cent of the wage earners, and reported 92.1 per cent of the total value of products. In Massachusetts, on the other hand, corporations controlled only 7.9 per cent of the establishments, and these gave employment to but 16.6 per cent of the wage earners, and contributed only 16.3 per cent of the total value of products. In Ohio, which led all other states in value of products, corporations controlled 31.2 per cent of the total number of establishments, reported 76.3 per cent of the total value of products, and gave employment to 72.5 per cent of the wage earners.

Size of establishments.—Table 11 presents statistics for establishments in the industry as a whole, classified according to the value of their products.

VALUE OF PRODUCTS PER ESTABLISHMENT.	CARRIAGES AND WAGONS AND MATERIALS.			
	Number of establishments.		Value of products.	
	1909	1904	1909	1904
Total.....	5,492	5,588	\$159,892,547	\$155,868,849
Less than \$5,000.....	2,114	2,098	5,458,031	5,774,443
\$5,000 and less than \$20,000.....	2,222	2,301	22,138,144	22,341,719
\$20,000 and less than \$100,000.....	845	859	35,231,090	34,920,022
\$100,000 and less than \$1,000,000.....	298	322	73,089,147	78,875,449
\$1,000,000 and over.....	13	8	23,926,135	13,957,216
Per cent of total.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	38.5	37.5	3.4	3.7
\$5,000 and less than \$20,000.....	40.5	41.2	13.8	14.3
\$20,000 and less than \$100,000.....	15.4	15.4	22.1	22.4
\$100,000 and less than \$1,000,000.....	5.4	5.8	45.7	50.6
\$1,000,000 and over.....	0.2	0.1	15.0	9.0

Of the 5,492 establishments reported for 1909, only 13 manufactured products valued at \$1,000,000 or over. In 1904 there were eight establishments of this class. Such establishments, however, reported 15 per cent of the total value of products in 1909 and 9 per cent in 1904. None of the other groups reported as large a percentage of the total value of products in

1909 as in 1904. Establishments whose products exceeded \$100,000 but were less than \$1,000,000 in value represented only 5.4 per cent of the total number of establishments, but reported 45.7 per cent of the total value of products in 1909. On the other hand, the small establishments—that is, those manufacturing products valued at less than \$20,000—constituted almost four-fifths (79 per cent) of the total number of establishments, but the value of their products was less than one-fifth (17.3 per cent) of the total.

The average value of products per establishment increased from \$27,393 in 1904 to \$29,114 in 1909, and the average value added by manufacture, as computed from the figures in Table 2, from \$14,019 to \$14,192, but the average number of wage earners per establishment shows a decrease from 13.9 in 1904 to 12.7 in 1909. In the carriage and wagon branch of the industry in 1909 the average value of products per establishment was \$25,743 and the average number of wage earners was 10.8. The corresponding figures for establishments making primarily carriage and wagon parts and materials were \$55,507 and 28.

Table 12 presents a classification of establishments according to the number of wage earners employed, for the leading states.

STATE.	CARRIAGES AND WAGONS AND MATERIALS: 1909																		
	Total.		Establishments employing—																
			No wage earners.		1 to 5 wage earners.		6 to 20 wage earners.		21 to 50 wage earners.		51 to 100 wage earners.		101 to 250 wage earners.		251 to 500 wage earners.		501 to 1,000 wage earners.		Over 1,000 wage earners.
Es-tab-lish-ments.	Wage earners (average number)	Es-tab-lish-ments.	Wage earners.	Es-tab-lish-ments.	Wage earners.	Es-tab-lish-ments.	Wage earners.	Es-tab-lish-ments.	Wage earners.	Es-tab-lish-ments.	Wage earners.	Es-tab-lish-ments.	Wage earners.	Es-tab-lish-ments.	Wage earners.	Es-tab-lish-ments.	Wage earners.	Es-tab-lish-ments.	Wage earners.
United States...	5,492	69,928	440	2,996	7,690	1,468	15,451	325	10,645	159	11,120	81	12,178	17	5,561	6	3,339	2	3,954
Arkansas.....	58	973	2	23	52	18	199	11	341	2	132	2	249						
California.....	155	760	5	110	294	37	392	3	74										
Connecticut.....	92	578	3	57	161	27	261	5	156										
Georgia.....	83	1,059	3	37	108	28	307	11	356	4	288								
Illinois.....	325	5,852	25	191	496	68	709	17	539	11	729	7	1,217	5	1,642	1	520		
Indiana.....	221	8,867	11	86	230	65	711	27	877	15	1,018	11	1,552	4	1,185	1	682	1	2,612
Iowa.....	119	1,441	13	59	156	34	367	7	280	3	193	3	445						
Kentucky.....	161	2,777	4	87	213	46	479	11	395	7	423	5	750						
Maryland.....	126	757	11	78	183	28	259	7	189	2	126								
Massachusetts.....	177	1,539	10	85	249	65	697	15	446	2	147								
Michigan.....	212	4,034	31	115	247	36	343	9	288	12	825	4	582	4	1,245	1	504		
Minnesota.....	134	868	22	89	200	13	133	6	201	3	221	1	113						
Missouri.....	243	3,302	22	130	334	61	643	16	555	9	629	4	603						
New Jersey.....	256	1,601	7	109	432	70	733	6	181	4	255								
New York.....	610	6,116	55	340	913	154	1,612	26	819	18	1,288	7	1,116	1	368				
North Carolina.....	138	1,629	7	70	150	38	412	17	557	5	408	1	102						
Ohio.....	407	8,815	9	167	511	135	1,449	48	1,706	27	1,983	21	3,166						
Pennsylvania.....	655	7,498	56	343	953	203	2,038	31	975	14	953	6	982	1	255				1,342
Tennessee.....	129	1,700	2	65	168	43	513	12	404	6	498	1	123						
Virginia.....	130	1,329	10	71	164	37	431	4	144	7	473	1	117						
Wisconsin.....	286	3,437	66	163	341	38	411	11	355	1	68	5	828	2	856	1	378		

Of the 5,492 establishments reported in 1909, 8 per cent employed no wage earners; 54.6 per cent employed from 1 to 5; 26.7 per cent from 6 to 20; and 5.9 per cent from 21 to 50. There were 159 establishments that employed from 51 to 100 wage earners, and 106 that employed over 100, of which 25 employed over 250. Most of these 25 large concerns were in Illinois, Indiana, and Michigan.

Of the total number of wage earners, 33.1 per cent were reported by establishments employing from

1 to 20, 31.1 per cent by establishments employing from 21 to 100, 25.4 per cent by establishments employing from 101 to 500, and 10.4 per cent by establishments employing more than 500 wage earners each.

Expenses.—As stated in the Introduction, the census statistics of expenses do not purport to give the total cost of manufacture, since they take no account of interest or depreciation. Facts of interest can be brought out, however, concerning the relative impor-

tance of the different classes of expenses which were reported. Table 2 shows the total expenses reported for the industry as a whole in 1909 to have been \$139,176,014, divided as follows: Materials, \$81,951,288, or 58.9 per cent; wages, \$37,594,919, or 27 per cent; salaries, \$7,960,207, or 5.7 per cent; and miscellaneous expenses, made up of taxes, rent of factory or works, advertising, ordinary repairs of buildings and machinery, insurance, traveling expenses, and other sundry expenses, \$11,669,600, or 8.4 per cent. The percentages represented by the several classes of expenses are shown for each of the two branches of the industry in Table 13.

CLASS OF EXPENSES.	PER CENT OF TOTAL REPORTED EXPENSES: 1909		
	The industry as a whole.	Carriages and wagons.	Carriage and wagon materials.
Total.....	100.0	100.0	100.0
Cost of materials.....	58.9	58.6	60.0
Salaries.....	5.7	5.8	5.6
Wages.....	27.0	27.2	26.5
Miscellaneous.....	8.4	8.5	8.0

There were considerable variations in the proportions represented by the different classes of expenses in the several states (see Table 20). Among the 21 principal states the proportion of the total expenses represented by salaries ranged from 3.2 per cent in New Jersey to 7 per cent in Kentucky; that represented by wages varied from 20.1 per cent in Iowa to 42.6 per cent in Connecticut; that represented by cost of materials from 43.8 per cent in Connecticut to 66.9 per cent in North Carolina; and that represented by miscellaneous expenses from 6.5 per cent in North Carolina to 11.1 per cent in Michigan. Variations in the proportions may in a measure be accounted for by the varying importance of repair work. In this branch of work few and inexpensive materials are used, while the element of labor, and consequently of wages, is very important. Thus in Connecticut, where a large proportion of the value of products represents receipts for repair work, the proportion of the total expenses formed by wages was above the average for the industry as a whole, while the proportion for cost of materials was considerably less than the average. Some establishments, on the other hand, make extensive use of parts purchased from other establishments, their work consisting largely of assembling. In such cases comparatively little labor is required and the cost of materials constitutes a very large proportion of the total expenses.

**Engines and power.**—The amount of power used in the industry was first reported at the census of 1869. Table 2 shows that the total horsepower used increased from 10,813 in 1879 to 126,032 in 1909. Table 14 shows the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by pur-

chased current), and their total horsepower, as reported at the censuses of 1909, 1904, and 1899. It also shows separately the total number and horsepower of electric motors, including those operated by current generated in the same establishment.

POWER.	CARRIAGES AND WAGONS AND MATERIALS.								
	Number of engines or motors.			Horsepower.			Per cent distribution of horsepower.		
	1909	1904	1899	1909	1904	1899	1909	1904	1899
<b>Primary power, total.....</b>	<b>6,501</b>	<b>2,496</b>	<b>2,219</b>	<b>126,032</b>	<b>106,159</b>	<b>83,771</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Owned.....	2,647	2,496	2,219	100,715	96,144	79,322	79.9	90.6	94.7
Steam.....	1,217	1,491	1,668	82,911	82,414	70,864	65.8	77.6	84.6
Gas.....	1,294	858	394	13,120	9,739	4,218	10.4	9.2	5.0
Water wheels.....	127	127	157	4,604	3,837	3,842	3.7	3.6	4.6
Water motors.....	9	20	( <sup>1</sup> )	63	80	( <sup>1</sup> )	( <sup>2</sup> )	0.1	.....
Other.....	.....	.....	.....	17	74	398	( <sup>2</sup> )	0.1	0.5
Rented.....	3,854	( <sup>3</sup> )	( <sup>1</sup> )	25,317	10,015	4,440	20.1	9.4	5.3
Electric.....	3,854	( <sup>3</sup> )	( <sup>1</sup> )	24,969	8,780	3,014	19.8	8.3	3.6
Other.....	.....	.....	.....	348	1,235	1,435	0.3	1.1	1.7
<b>Electric motors.....</b>	<b>4,805</b>	<b>507</b>	<b>156</b>	<b>39,424</b>	<b>16,434</b>	<b>5,805</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Run by current generated by establishment.....	951	507	156	14,455	7,654	2,701	36.7	46.6	48.1
Run by rented power.....	3,854	( <sup>3</sup> )	( <sup>1</sup> )	24,969	8,780	3,014	63.3	53.4	51.9

<sup>1</sup> Not reported. <sup>2</sup> Less than one-tenth of 1 per cent. <sup>3</sup> Figures not available.

The total primary power used in the industry increased from 83,771 horsepower in 1899 to 126,032 horsepower in 1909, or by 50.4 per cent. The most noticeable increase was in the power of electric motors operated by purchased current, which constituted 19.8 per cent of all power used in 1909, as compared with 3.6 per cent in 1899. There was also a marked increase in the relative importance of gas and other internal combustion engines. In 1909 the power of steam engines constituted by far the largest percentage of the total primary power, but it was relatively of much less importance in that year than in 1899.

The number and horsepower of electric motors run by current generated in the establishment also showed a very decided increase, although less relatively than in the case of motors operated by purchased current.

Table 15 shows for 1909 the amount of each of the several kinds of power and of the different kinds of fuel used in the industry in each of the 21 leading states.

The states which ranked highest with respect to the amount of power used in 1909 were Ohio, Indiana, Pennsylvania, New York, and Illinois, the five states which ranked highest in value of products. The total primary horsepower reported for these states in 1909 was 59,818, or 47.5 per cent of the total for the United States. In all of the 21 states except California, Massachusetts, and North Carolina steam was the most important primary power; in these three states rented electric power was most important. Gas and other internal combustion engines were more extensively used in Pennsylvania than in any other state.

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**Fuel consumed.**—As shown by Table 15, bituminous coal was the principal class of fuel used during 1909, 451,304 short tons being consumed, of which amount

Indiana used 20.5 per cent. Gas was also used to a considerable extent, the largest quantity for any state being reported from Pennsylvania.

**Table 15**

CARRIAGES AND WAGONS AND MATERIALS: 1909

STATE.	Primary horsepower.		Electric horsepower.		Fuel used.												
	Number of establishments reporting.	Total horsepower.	Owned by establishments reporting.				Rented.		Total, rented and generated by establishment reporting.	Generated in the establishment reporting.	Fuel used.						
			Total.	Steam engines.	Gas engines.	Water wheels and motors.	Other.	Elec. tric.			Other.	Coal.		Coke (short tons).	Wood (cords).	Oil, including gasoline (barrels).	Gas (1,000 feet).
<b>United States.....</b>	<b>3,583</b>	<b>126,032</b>	<b>100,715</b>	<b>82,911</b>	<b>13,120</b>	<b>4,667</b>	<b>17</b>	<b>24,969</b>	<b>348</b>	<b>39,424</b>	<b>14,455</b>	<b>52,258</b>	<b>451,304</b>	<b>18,741</b>	<b>13,503</b>	<b>44,178</b>	<b>477,367</b>
Arkansas.....	47	3,749	3,823	3,560	68	9	.....	121	.....	231	110	70	1,130	.....	78	79	38,381
California.....	118	957	110	19	82	.....	.....	847	.....	847	.....	218	1,617	.....	48	464	1,244
Connecticut.....	59	957	700	408	115	177	.....	257	.....	257	.....	832	1,752	2	177	171	5,446
Georgia.....	47	1,353	948	797	149	.....	.....	407	.....	802	395	70	3,927	16	.....	267	44
Illinois.....	239	9,084	7,136	5,993	583	590	.....	2,548	.....	3,895	1,347	637	47,599	3,483	97	6,745	3,122
Indiana.....	171	13,790	12,127	11,496	631	.....	.....	1,063	.....	5,590	3,933	78	92,691	1,421	907	17,458	5,730
Iowa.....	95	2,387	1,843	1,537	306	.....	.....	524	20	526	2	65	12,979	557	105	1,951	545
Kentucky.....	101	6,617	6,151	6,003	148	.....	.....	431	35	2,783	2,352	9	29,214	952	1,222	141	517
Maryland.....	55	879	601	500	101	.....	.....	278	.....	290	12	482	2,353	.....	33	115	457
Massachusetts.....	134	2,038	1,175	780	310	73	12	826	37	826	.....	858	4,532	45	249	454	37,559
Michigan.....	139	6,362	5,291	4,730	359	202	.....	1,061	10	1,610	549	126	35,477	633	1,619	765	76
Minnesota.....	97	1,657	1,271	872	399	.....	.....	380	6	522	142	288	5,354	132	233	397	185
Missouri.....	176	5,858	5,167	4,642	520	.....	.....	691	.....	939	248	172	14,050	165	1,105	407	3,442
New Jersey.....	123	1,645	1,311	865	372	74	.....	333	1	345	12	2,178	4,992	17	31	228	3,435
New York.....	352	10,029	8,391	5,278	1,302	1,811	.....	1,582	56	1,796	214	5,705	28,110	301	1,123	2,087	22,511
North Carolina.....	83	9,110	1,886	1,649	210	27	.....	7,224	.....	7,224	.....	722	3,985	75	2,453	334	.....
Ohio.....	299	14,771	13,546	11,686	1,847	13	.....	1,222	3	3,578	2,350	204	81,415	5,980	101	4,833	63,790
Pennsylvania.....	388	11,644	10,267	7,281	2,816	170	.....	1,106	111	2,740	1,574	36,240	30,824	1,291	200	1,852	107,446
Tennessee.....	91	4,537	4,267	4,060	167	40	.....	217	53	327	110	12	5,736	617	652	303	600
Virginia.....	66	2,032	1,726	1,435	194	97	.....	306	.....	308	2	34	4,879	80	715	228	141
Wisconsin.....	196	6,426	6,001	5,137	868	86	.....	335	.....	1,413	1,078	2,284	24,012	2,379	793	1,554	1,371
All other states.....	507	9,650	7,084	4,213	1,573	1,298	.....	2,550	16	2,566	19	974	14,640	559	1,556	3,288	181,324

## SPECIAL STATISTICS REGARDING PRODUCTS.

**The United States a whole.**—Table 16 presents statistics regarding the number and value of vehicles and the value of all other products, not only for establishments assigned to the industry "carriages and wagons and materials," but also for establishments in other industries which incidentally reported the manufacture of carriages and wagons or parts and materials.

**Table 16**

PRODUCTS.

KIND.	PRODUCTS.					
	Total.		Made by establishments in the industry.		Made by establishments in other industries.	
	Num-ber.	Value.	Num-ber.	Value.	Num-ber.	Value.
<b>All products.....</b>	<b>.....</b>	<b>\$164,420,558</b>	<b>.....</b>	<b>\$159,892,547</b>	<b>.....</b>	<b>\$4,528,011</b>
All vehicles: <sup>1</sup>						
1902.....	1,585,115	94,607,019	1,519,782	91,203,264	65,333	3,343,755
1904.....	97,802,866	1,711,529	97,190,093	.....	.....	612,173
Classes of vehicles, 1909:						
Carriages.....	848,319	43,835,053	828,411	47,756,118	14,908	1,078,935
Wagons.....	629,797	42,026,198	587,685	39,932,910	42,112	2,093,288
Public conveyances.....	2,327	944,882	2,243	939,267	104	5,615
Sleighs and sleds.....	109,108	2,231,767	100,899	2,065,850	8,209	165,917
Automobiles <sup>1</sup> .....	544	569,119	544	569,119	.....	.....
All other products, parts, repairs, etc., 1909.....	.....	69,813,539	.....	68,629,283	.....	1,184,256

<sup>1</sup> Exclusive of automobiles made by establishments not in the carriage and wagon industry.

The value of products reported for the industry itself in 1909 was \$159,892,547, and the value of similar products reported by establishments in other industries was \$4,528,011, giving a total of \$164,420,558. The number of vehicles made by establishments in the industry was

1,519,782 (this number including 544 automobiles), and by establishments in other industries (not including automobiles) 65,333, giving a total of 1,585,115.

The establishments in other industries which reported the production of carriages, wagons, etc., or parts thereof included establishments in the agricultural implement, automobile, foundry and machine-shop, lumber, and other industries. With respect to the item of \$1,184,256 reported as the value of carriage and wagon parts, repairs, etc., made by establishments in other industries, it should be stated that this is probably much less than the true value of carriage and wagon parts so made. Doubtless concerns which made the more important kinds of parts in considerable quantities reported them separately. The concerns making minor parts, particularly if they made them in small quantities, would be less likely to report them. Moreover, there are many articles which can be used as parts or materials in the carriage and wagon industry but which are also equally adapted for use in other industries.

At the census of 1904 detailed statistics were not secured regarding vehicles or parts manufactured by establishments outside of the carriage and wagon industry proper, but the total value of vehicles reported as made by such establishments, \$612,173, is shown in Table 16.

Table 17 presents, for 1909, 1904, and 1899, detailed statistics regarding the products of the establishments in the industry "carriages and wagons and materials."

Table 17	PRODUCT.	1909	1904	1899
	Total value of products.....	\$159,892,547	\$155,868,849	\$138,261,763
	Complete vehicles of all classes:			
	Number.....	1,519,782	1,711,529	1,594,465
	Value.....	\$91,263,264	\$97,190,093	\$85,910,177
	Carriages (family and pleasure):			
	Number.....	828,411	937,409	904,039
	Value.....	\$47,756,118	\$55,750,276	\$51,295,393
	Two-wheeled, number.....	63,532	29,544	29,089
	Four-wheeled, for one or two persons, number.....	637,898	769,635	728,163
	Four-wheeled, for three or more persons, number.....	126,981	138,230	147,387
	Wagons:			
	Number.....	587,685	643,755	570,428
	Value.....	\$39,932,910	\$37,195,230	\$31,080,738
	Business—			
	Number.....	154,631	133,422	( <sup>1</sup> )
	Value.....	\$16,440,816	( <sup>1</sup> )	( <sup>1</sup> )
	Light and package commodity, number.....	107,190	71,733	( <sup>1</sup> )
	Heavy and bulk commodity, number.....	32,780	31,956	( <sup>1</sup> )
	Handcarts, number.....	7,330	6,089	( <sup>1</sup> )
	Hearses, number.....	807	642	( <sup>1</sup> )
	Street sprinklers, number.....	952	109	( <sup>1</sup> )
	Street sweepers, number.....	101	48	( <sup>1</sup> )
	Other business wagons, number.....	5,471	22,845	( <sup>1</sup> )
	Farm (including carts or trucks)—			
	Number.....	429,952	505,025	( <sup>1</sup> )
	Value.....	\$22,615,875	( <sup>1</sup> )	( <sup>1</sup> )
	Government, municipal, etc.—			
	Number.....	3,102	5,308	( <sup>1</sup> )
	Value.....	\$876,219	( <sup>1</sup> )	( <sup>1</sup> )
	Ambulances, number.....	598	245	( <sup>1</sup> )
	Mail and mail carriers' wagons and carts, number.....	1,912	4,703	( <sup>1</sup> )
	Patrol (fire and police), hose wagons, and prison vans, number.....	592	360	( <sup>1</sup> )
	Public conveyances:			
	Number.....	2,243	2,711	2,218
	Value.....	\$939,267	\$1,314,952	\$1,114,090
	Cabs, hacks, and hansoms, number.....	1,715	1,888	1,808
	Hotel coaches, omnibuses, etc., number.....	528	823	410
	Sleighs and sleds:			
	Number.....	100,899	127,455	117,006
	Value.....	\$2,065,850	\$2,694,560	\$2,290,903
	Automobiles: <sup>2</sup>			
	Number.....	544	199	174
	Value.....	\$569,119	\$235,675	\$129,053
	Electric, number.....	46	( <sup>1</sup> )	( <sup>1</sup> )
	Gasoline, number.....	498	( <sup>1</sup> )	( <sup>1</sup> )
	All other products, including parts and amount received for repair work.....	\$68,629,283	\$58,678,156	\$52,351,566

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

<sup>2</sup> Manufactured in establishments devoted primarily to the manufacture of carriages and wagons.

The total value of products shown for the industry at each census involves a certain amount of duplication, due to the fact that carriage and wagon parts and materials manufactured by certain establishments in the industry are used by other establishments in the industry in making the completed vehicles. As shown in Table 1, the total value of products of establishments engaged exclusively or primarily in manufacturing carriage and wagon parts and materials in 1909 was \$34,525,635; the greater part of the products represented by this amount were doubtless used as materials in the industry, though some were, of course, used in small repair shops.

Of the total value of products of the industry in 1909, which amounted to \$159,892,547, the value of complete vehicles of all classes represented \$91,263,264, or 57.1 per cent, and the value of all other products, consisting chiefly of the value of parts and repair work, was \$68,629,283. The value of vehicles includes \$569,119 representing the value of automobiles made by establishments engaged primarily in the manufacture of carriages and wagons, but the great bulk of it

represents the value of carriages, wagons, sleighs, and sleds. Of the total value of vehicles turned out in 1909, that of family and pleasure carriages formed 52.3 per cent, that of wagons of all kinds 43.8 per cent, that of public conveyances 1 per cent, and that of sleighs and sleds 2.3 per cent.

The number of complete vehicles of all classes manufactured by the establishments in the industry increased from 1,594,465 in 1899 to 1,711,529 in 1904, but decreased to 1,519,782 in 1909, the decrease for the decade being 4.7 per cent, and that for the five-year period 1904-1909, 11.2 per cent. The value of the vehicles manufactured, however, was somewhat greater in 1909 than in 1899. This may be due to an increase in prices of vehicles, but it might readily be attributable, at least in part, to changes in the relative proportions of different classes and grades from the one year to the other. It should be noted, in fact, that each of the classes of vehicles listed in Table 17 includes a variety of types and grades, so that even if values were shown for each class, a comparison of the percentage of increase in the number with the percentage of increase in value would throw little light on the question of the movement of prices.

Between 1899 and 1904 the aggregate number and the value of family and pleasure carriages manufactured increased somewhat, but the number in 1909 was 8.4 per cent less than that in 1899 and the value 6.9 per cent less. Of the family and pleasure carriages, only those with two wheels show an increase in number during the decade.

The aggregate number and value of wagons manufactured increased materially from 1899 to 1904. The number, however, decreased between 1904 and 1909, although the value increased somewhat. The number of wagons made in 1909 was 3 per cent greater than the number made in 1899, and the value 28.5 per cent greater; as compared with 1904, however, there was a decrease of 8.7 per cent in number, and an increase of only 7.4 per cent in value.

The number of public conveyances manufactured also increased during the first five-year period, but decreased almost as much during the second period, and the value of such conveyances made in 1909 was less than in either of the two preceding census years. As before stated, the decrease between 1904 and 1909 in the number of carriages, wagons, and public conveyances manufactured is doubtless attributable to the increasing use of the automobile.

The number of sleighs and sleds manufactured shows a movement similar to that of carriages. It increased from 1899 to 1904, but decreased during the next five years, and in 1909 was 13.8 per cent less than in 1899.

The value of "all other products," consisting chiefly of the value of parts and the receipts for repair work, increased 31.1 per cent between 1899 and 1909.

It may be stated that, of the total value of products of establishments engaged primarily in manufacturing parts and materials, which amounted to \$34,525,635

in 1909, much the greater part is included in the item of \$68,629,283 shown in Table 17 as the value of "all other products." It is probable, therefore, that the value of "all other products" for establishments making complete vehicles was from \$35,000,000 to \$40,000,000, and that most of this represented receipts for repair work.

Vehicles turned out, by states.—Table 18 shows, by states, the number of the several general classes of vehicles manufactured by establishments in the carriage and wagon industry during 1909, 1904, and 1899, and the value of those manufactured during 1909. Data for establishments assigned to other industries are not included.

CARRIAGES AND WAGONS AND MATERIALS—VEHICLES MANUFACTURED, BY STATES.

Table 18 CLASS OF VEHICLES AND STATE.	NUMBER.			Value: 1909	CLASS OF VEHICLES AND STATE.	NUMBER.			Value: 1909
	1909	1904	1899			1909	1904	1899	
<b>CARRIAGES (FAMILY AND PLEASURE.)</b>					<b>WAGONS (BUSINESS, ETC.)—contd.</b>				
<b>United States.....</b>	<b>828,411</b>	<b>837,409</b>	<b>904,639</b>	<b>\$47,756,118</b>	Michigan.....	28,720	52,273	49,903	\$1,586,172
California.....	386	2,160	2,418	39,440	Minnesota.....	17,231	15,059	16,924	1,040,586
Connecticut.....	277	2,381	2,940	42,426	Mississippi.....	1,683	2,012	883	170,601
Georgia.....	21,974	20,919	7,509	1,221,340	Missouri.....	20,140	25,281	24,621	1,388,689
Illinois.....	101,875	56,075	50,979	5,907,089	Nebraska.....	1,074	916	203	111,047
Indiana.....	177,194	178,962	141,734	10,150,893	New Hampshire.....	1,049	1,188	2,394	191,965
Iowa.....	29,809	16,498	20,593	2,100,313	New Jersey.....	4,337	5,647	7,589	655,800
Kentucky.....	24,259	27,195	11,784	1,120,253	New York.....	21,937	19,879	22,775	2,032,813
Maine.....	2,551	2,802	2,294	200,208	North Carolina.....	20,248	23,553	12,316	852,983
Maryland.....	1,708	2,945	3,091	163,336	Ohio.....	28,882	40,905	44,315	2,733,608
Massachusetts.....	2,311	8,106	11,853	278,959	Pennsylvania.....	33,034	35,395	27,138	2,996,485
Michigan.....	91,558	174,889	193,254	4,453,090	Tennessee.....	12,499	20,241	11,666	716,597
Minnesota.....	1,880	3,662	6,361	156,000	Texas.....	1,243	718	1,050	164,623
Missouri.....	97,444	74,650	52,823	3,913,969	Virginia.....	18,835	19,195	9,638	775,528
New Hampshire.....	906	1,943	2,240	81,999	West Virginia.....	2,906	5,117	3,702	176,613
New Jersey.....	5,465	3,341	6,944	440,449	Wisconsin.....	92,011	83,916	70,211	4,833,561
New York.....	25,474	42,249	58,176	2,344,487	All other states.....	4,714	5,686	7,577	589,651
North Carolina.....	31,813	25,157	9,447	1,883,206					
Ohio.....	135,877	199,428	213,032	8,126,285	<b>PUBLIC CONVEYANCES.</b>				
Pennsylvania.....	23,395	33,467	41,400	1,738,125	<b>United States.....</b>	<b>2,243</b>	<b>2,711</b>	<b>2,218</b>	<b>939,267</b>
South Carolina.....	5,160	7,440	5,035	292,404	Connecticut.....	13	179	170	1,500
Tennessee.....	2,470	5,374	1,820	216,491	Illinois.....	148	70	40	107,955
Texas.....	2,513	100	750	169,775	Massachusetts.....	36	142	310	24,892
Virginia.....	13,720	19,366	12,941	785,458	Michigan.....	201	120	201	118,490
Wisconsin.....	24,726	23,466	36,323	1,519,096	New York.....	219	742	656	187,936
All other states.....	3,666	4,834	8,208	410,967	Ohio.....	657	217	41	206,458
					Pennsylvania.....	432	333	141	133,811
<b>WAGONS (BUSINESS, FARM, GOVERNMENT, ETC.)</b>					Tennessee.....	41	168	124	4,760
<b>United States.....</b>	<b>587,685</b>	<b>648,755</b>	<b>570,428</b>	<b>39,932,910</b>	Wisconsin.....	90	103	101	33,390
Alabama.....	4,588	12,512	9,523	236,024	All other states.....	406	637	635	120,075
Arkansas.....	7,415	1,625	1,149	436,663					
California.....	3,347	3,045	2,325	548,865	<b>SLEIGHS AND SLEDS.</b>				
Connecticut.....	1,786	1,944	1,427	220,237	<b>United States.....</b>	<b>100,899</b>	<b>127,455</b>	<b>117,005</b>	<b>2,065,850</b>
Florida.....	1,578	2,652	1,002	116,511	Illinois.....	2,517	5,007	1,880	43,014
Georgia.....	15,708	18,848	11,443	723,135	Indiana.....	1,101	1,378	3,834	20,483
Illinois.....	85,097	72,033	56,364	5,615,199	Iowa.....	8,094	2,766	4,020	130,108
Indiana.....	87,844	92,893	94,224	5,444,456	Maine.....	2,169	2,802	2,315	77,398
Iowa.....	26,495	22,815	31,473	1,432,147	Michigan.....	32,751	53,180	51,149	570,207
Kansas.....	1,166	1,004	995	113,963	Minnesota.....	10,954	10,003	7,530	185,059
Kentucky.....	25,911	49,266	39,362	1,745,448	New York.....	10,823	19,433	14,500	349,643
Louisiana.....	1,269	1,246	1,377	167,599	Ohio.....	7,589	8,479	3,555	78,542
Maine.....	2,259	1,764	1,172	198,434	Pennsylvania.....	3,210	5,551	5,509	90,619
Maryland.....	2,710	1,849	1,144	308,531	Washington.....	1,033	501	956	4,620
Massachusetts.....	3,360	3,278	3,944	688,368	Wisconsin.....	17,730	15,365	17,451	399,310
					All other states.....	2,938	2,990	4,307	116,847

Family and pleasure carriages were made in 44 of the 48 states of the Union in 1909. The five leading states in the manufacture of this class of vehicles, however, Indiana, Ohio, Illinois, Missouri, and Michigan, together reported 603,948 carriages, or 72.9 per cent of the total number for the United States. Of these five leading states, Illinois, Indiana, and Missouri show gains between 1899 and 1909 in the number made, while Michigan and Ohio show losses. Ohio was first in the number of these vehicles in 1899 and 1904, but was second in 1909, being outranked by Indiana. Of the 24 states for which the number of carriages is shown separately, 13 reported decreases in the number made in 1909 as compared with the number in 1899.

Wagons (business, farm, government, etc.) were made in 1909 in every state in which the carriage and wagon industry was conducted. The four leading states, Wisconsin, Indiana, Illinois, and Pennsylvania,

together reported the manufacture of 298,586 wagons, or 50.8 per cent of the total. Of the 31 states for which the numbers are given separately, 17 show an increase between 1899 and 1909 in the number made, and 14 a decrease. Illinois shows the greatest absolute increase and Michigan the largest decrease. Indiana, which was first in the number of wagons manufactured in 1899 and 1904, had in 1909 relinquished first place to Wisconsin, which state had held second place in this respect at the two preceding censuses. In value of vehicles of this class manufactured in 1909, Illinois ranked first, Indiana second, and Wisconsin third.

The most important states in the manufacture of public conveyances in 1909 were Ohio, Pennsylvania, New York, and Michigan.

While the manufacture of sleighs and sleds was reported in 33 states, 71.6 per cent of the total number were made in four states, Michigan, Wisconsin, Minnesota, and New York.

DETAILED STATISTICS, BY STATES.

The principal facts brought out by the census inquiry concerning the industry are presented by states in Tables 19 and 20.

Table 19 shows, for 1909, 1904, and 1899, the number of establishments, number of persons engaged in the

industry, primary horsepower, capital invested, salaries, wages, cost of materials, value of products, and value added by manufacture.

Table 20 gives the statistics of the industry for 1909 in somewhat greater detail.

CARRIAGES AND WAGONS AND MATERIALS—COMPARATIVE STATISTICS, BY STATES: 1909, 1904, AND 1899.

STATE.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture (value of products less cost of materials).
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).							
			Expressed in thousands.										
United States.....	1909	5,492	82,944	6,213	6,803	69,928	128,032	\$175,474	\$7,960	\$37,695	\$81,051	\$159,893	\$77,042
	1904	5,588	90,751	6,575	6,294	77,882	108,159	152,345	6,581	38,383	77,528	155,889	78,341
	1899	6,792	.....	.....	5,026	73,812	83,771	128,982	4,759	33,565	66,772	138,282	71,490
Alabama.....	1909	35	508	40	44	424	991	752	45	194	303	684	381
	1904	26	439	30	29	380	554	581	29	165	377	740	363
	1899	47	.....	.....	20	461	.....	436	19	140	252	600	349
Arkansas.....	1909	58	1,126	63	90	973	3,749	1,823	92	405	820	1,664	844
	1904	33	541	31	50	460	1,632	747	39	174	346	772	420
	1899	40	.....	.....	30	343	.....	400	16	111	311	555	244
California.....	1909	155	1,015	185	70	760	957	1,635	74	610	849	2,052	1,203
	1904	198	1,277	248	49	980	782	1,730	51	715	852	2,352	1,500
	1899	193	.....	.....	37	923	.....	1,603	44	502	776	1,976	1,200
Colorado.....	1909	21	158	25	9	124	125	160	8	87	85	260	175
	1904	135	225	39	9	177	84	263	9	130	133	379	246
	1899	240	.....	.....	11	174	.....	293	11	120	139	385	246
Connecticut.....	1909	92	720	99	43	578	957	1,226	41	372	383	1,077	694
	1904	109	1,730	122	101	1,607	1,329	2,326	131	767	793	2,196	1,403
	1899	135	.....	.....	112	1,644	.....	3,529	136	1,082	1,245	3,166	1,921
Delaware.....	1909	25	208	29	16	163	204	433	13	81	124	209	166
	1904	25	211	32	14	165	204	335	10	85	131	236	155
	1899	26	.....	.....	18	278	.....	504	16	130	140	387	247
District of Columbia.....	1909	6	75	10	6	59	27	134	4	40	47	128	81
	1904	6	59	6	1	52	57	50	2	25	22	76	53
	1899	5	.....	.....	1	42	.....	42	1	19	17	54	37
Florida.....	1909	39	309	51	28	230	354	427	20	136	210	453	243
	1904	131	247	42	9	196	169	222	6	102	124	344	220
	1899	181	.....	.....	3	131	.....	131	2	56	91	198	107
Georgia.....	1909	83	1,252	81	112	1,059	1,353	2,220	128	489	1,367	2,560	1,193
	1904	75	1,293	91	87	1,115	1,110	1,509	97	426	1,232	2,303	1,081
	1899	104	.....	.....	39	808	.....	825	31	257	534	1,317	783
Illinois.....	1909	325	6,746	349	545	5,852	9,694	17,859	644	3,588	9,479	16,831	7,352
	1904	324	5,931	361	465	5,155	7,293	12,005	534	2,778	5,746	11,392	5,046
	1899	361	.....	.....	345	4,345	.....	8,880	350	2,114	4,353	9,002	4,649
Indiana.....	1909	221	10,100	211	1,022	8,867	13,790	29,110	1,205	4,355	12,458	21,655	9,197
	1904	252	10,601	257	938	9,406	13,352	25,879	952	4,184	10,869	19,259	8,390
	1899	323	.....	.....	707	8,714	.....	19,798	683	3,525	8,553	15,811	7,238
Iowa.....	1909	119	1,828	158	229	1,441	2,387	4,468	232	828	2,748	4,786	2,038
	1904	113	1,632	137	197	1,298	1,915	3,392	194	602	1,684	3,371	1,687
	1899	124	.....	.....	163	1,711	.....	4,033	121	712	1,947	3,988	2,041
Kansas.....	1909	46	322	59	17	246	266	439	15	134	245	530	285
	1904	38	270	53	12	214	96	324	9	105	117	321	204
	1899	31	.....	.....	18	161	.....	173	10	68	99	243	144
Kentucky.....	1909	161	3,263	171	315	2,777	6,617	7,759	322	1,164	2,713	5,141	2,428
	1904	131	3,119	133	252	2,734	4,971	5,309	252	1,104	2,814	5,505	2,691
	1899	160	.....	.....	164	2,247	.....	3,734	159	809	1,922	3,664	1,742
Louisiana.....	1909	40	427	45	24	358	568	407	22	196	206	529	323
	1904	40	350	40	11	293	220	237	11	159	151	436	285
	1899	41	.....	.....	13	285	.....	260	8	119	128	360	232
Maine.....	1909	150	667	168	27	472	1,121	1,004	24	257	397	966	569
	1904	158	659	186	14	459	790	692	11	247	409	956	556
	1899	151	.....	.....	17	344	.....	612	11	175	278	720	442
Maryland.....	1909	126	960	154	49	757	879	1,192	45	372	541	1,330	789
	1904	119	1,153	160	52	946	985	1,219	37	415	698	1,485	737
	1899	115	.....	.....	33	709	.....	777	25	294	385	991	606
Massachusetts.....	1909	177	1,857	205	113	1,539	2,038	2,824	109	986	1,282	3,185	1,903
	1904	305	3,040	369	141	2,530	2,807	4,494	133	1,541	2,030	4,922	2,892
	1899	349	.....	.....	154	3,271	.....	5,985	131	1,708	2,803	6,289	3,486
Michigan.....	1909	212	4,707	240	433	4,034	6,362	10,189	532	2,240	5,262	10,159	4,897
	1904	215	7,231	233	598	6,400	8,411	11,302	583	3,053	8,440	14,889	6,449
	1899	271	.....	.....	450	6,111	.....	8,910	399	2,514	7,550	12,887	5,337

<sup>1</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>2</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

# THE CARRIAGE AND WAGON INDUSTRY.

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CARRIAGES AND WAGONS AND MATERIALS—COMPARATIVE STATISTICS, BY STATES: 1909, 1904, AND 1899—Contd.

STATE.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture (value of products less cost of materials).
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).							
Minnesota.....	1909	134	1,108	154	86	868	1,657	\$2,331	\$102	\$529	\$983	\$2,175	\$1,192
	1904	141	1,180	175	82	923	1,825	2,224	83	454	867	1,868	1,001
	1899	181			54	1,167		1,924	59	487	964	2,108	1,144
Mississippi.....	1909	41	454	50	39	365	1,350	649	41	154	274	642	368
	1904	24	375	24	33	318	1,003	473	31	132	213	494	281
	1899	30			9	228	211	183	7	88	302	302	171
Missouri.....	1909	243	3,940	277	361	3,302	5,858	7,883	459	1,781	4,860	8,469	3,609
	1904	248	3,765	293	309	3,163	3,431	5,756	347	1,720	4,261	7,678	3,417
	1899	378			222	2,989		4,687	247	1,471	3,122	6,446	3,324
Montana.....	1909	4	34	2	4	28	10	68	5	32	29	79	50
	1904	6	37	8	6	23	21	60	6	20	37	107	70
	1899	17			4	30		64	4	31	32	101	69
Nebraska.....	1909	22	247	23	24	200	224	450	20	131	251	577	326
	1904	20	188	27	11	150	101	212	9	87	128	318	190
	1899	29	197	62	11	124		134	9	67	90	247	157
New Hampshire.....	1909	44	493	44	29	420	1,231	1,067	31	240	346	734	388
	1904	48	603	53	29	521	1,253	1,141	31	297	291	754	493
	1899	59			33	618		1,261	31	320	349	906	557
New Jersey.....	1909	256	1,080	301	78	1,601	1,645	2,973	83	1,019	1,230	3,250	1,970
	1904	213	2,338	247	105	1,986	1,631	2,998	116	1,116	1,349	3,400	2,111
	1899	268			112	2,117		3,250	109	1,081	1,612	3,916	2,304
New York.....	1909	610	7,333	693	524	6,116	10,029	14,576	731	3,740	5,809	13,293	7,484
	1904	635	9,234	756	587	7,891	8,524	15,896	716	4,406	6,201	14,644	8,443
	1899	784			505	7,490		14,647	539	4,009	6,913	14,003	8,090
North Carolina.....	1909	138	1,922	160	133	1,629	9,110	3,168	150	603	1,894	3,283	1,389
	1904	<sup>2</sup> 125	1,597	160	64	1,373	1,310	2,010	60	482	1,229	2,304	1,075
	1899	<sup>2</sup> 157			29	800		861	19	236	521	1,055	534
Ohio.....	1909	407	10,350	414	1,121	8,815	14,771	20,398	1,282	4,647	11,414	21,949	10,635
	1904	456	12,555	495	1,033	11,027	16,936	19,295	1,069	5,269	12,856	24,003	11,147
	1899	568			954	11,658		17,235	842	5,020	12,181	22,803	10,622
Oklahoma.....	1909	19	153	22	13	123	319	172	12	72	81	233	152
	1904	<sup>1</sup> 8	52	8	1	43	15	54	1	23	26	67	41
	1899	<sup>1</sup> 7				27		24		9	11	37	28
Oregon.....	1909	15	84	16	6	62	52	65	7	55	68	193	125
	1904	17	84	17	4	63	100	102	1	42	54	135	81
	1899	19			2	50		70	(*)	35	43	113	70
Pennsylvania.....	1909	656	3,757	781	478	7,498	11,544	14,365	500	3,861	5,707	12,748	7,041
	1904	655	8,689	825	403	7,461	9,197	12,368	307	3,647	4,902	11,493	6,591
	1899	797			318	6,399		10,684	296	3,070	4,246	10,455	6,209
Rhode Island.....	1909	40	296	39	19	238	387	408	15	152	163	422	259
	1904	<sup>1</sup> 30	269	33	8	228	158	329	7	140	117	370	253
	1899	52			12	294		366	9	173	190	529	339
South Carolina.....	1909	23	317	25	20	272	272	453	25	104	244	464	220
	1904	38	404	42	16	346	320	502	20	118	200	548	258
	1899	56			14	340		314	12	91	206	414	208
South Dakota.....	1909	10	64	10	6	48	94	133	4	38	60	131	71
	1904	3	23	2	2	19	16	54	2	13	10	31	21
	1899	9				25		44		14	20	49	29
Tennessee.....	1909	120	1,992	150	136	1,706	4,537	3,006	180	693	1,439	3,040	1,601
	1904	97	2,148	109	150	1,889	4,408	2,617	158	759	1,668	3,278	1,610
	1899	95			77	1,157		1,138	71	395	779	1,692	913
Texas.....	1909	50	522	54	56	412	374	941	63	287	319	830	511
	1904	<sup>2</sup> 34	261	41	9	211	118	286	9	124	130	368	238
	1899	<sup>2</sup> 58			8	290		386	7	159	180	506	326
Vermont.....	1909	38	140	45	1	94	429	222	(*)	50	58	158	100
	1904	<sup>1</sup> 32	155	46	1	108	324	214	1	59	55	164	109
	1899	<sup>1</sup> 57			3	186		316	1	91	98	285	187
Virginia.....	1909	130	1,009	142	138	1,329	2,032	3,029	137	529	1,283	2,485	1,202
	1904	102	1,540	121	87	1,332	1,735	2,078	75	473	1,196	3,278	1,696
	1899	150			42	964		1,373	37	371	694	1,586	892
Washington.....	1909	37	317	46	30	241	254	538	33	203	319	720	401
	1904	<sup>1</sup> 25	249	36	12	201	130	230	11	168	185	482	294
	1899	<sup>1</sup> 25			8	132		98	9	89	110	283	173
West Virginia.....	1909	51	446	62	37	347	893	671	41	180	318	675	357
	1904	38	383	43	29	311	1,117	493	30	155	300	639	339
	1899	53			15	312		437	13	133	210	490	280
Wisconsin.....	1909	286	4,044	338	269	3,437	6,426	13,708	382	1,930	5,163	8,399	3,736
	1904	330	4,361	410	269	3,682	5,374	10,135	296	1,811	4,092	8,059	3,997
	1899	381			228	3,477		8,455	254	1,646	3,413	7,034	3,621
All other states.....	1909	19	89	22	3	64	96	132	3	51	70	164	94
	1904	26	189	28	15	146	406	202	15	75	119	270	151
	1899	45			22	167		200	11	79	134	309	175

<sup>1</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>2</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.  
<sup>3</sup> Less than \$500.

MANUFACTURES.

CARRIAGES AND WAGONS AND MATERIALS—

Table 20		PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
STATE.	Number of establishments.	Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners.			Total.	16 and over.		Under 16.				
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.	Female.			
								Maximum month.	Minimum month.								
1	United States .....	5,492	82,944	6,213	2,631	2,991	1,181	69,928	My 73,240	Ja 66,567	72,783	71,104	1,126	546	7	126,032	
2	Alabama .....	35	508	40	22	18	4	424	Oc 441	Au 402	431	421		10		991	
3	Arkansas .....	58	1,126	63	55	28	7	973	Se 1,096	Ja 837	1,114	1,101		13		3,749	
4	California .....	155	1,015	185	42	12	10	760	Je 821	Ja 677	741	733		8		957	
5	Colorado .....	21	153	25	6	3		124	Jy 142	Ja <sup>1</sup> 108	108	108				125	
6	Connecticut .....	92	720	99	23	12	8	578	My 641	Ja 521	547	545	2			957	
7	Delaware .....	25	208	29	9	5	2	163	My <sup>1</sup> 178	De 146	146	144	1	1		204	
8	District of Columbia .....	6	75	10	4	1	1	59	Se 71	Fe 47	52	52				27	
9	Florida .....	39	309	51	15	11	2	230	Je 243	De 214	238	230		8		354	
10	Georgia .....	83	1,252	81	49	59	4	1,059	De 1,228	Ja 953	1,228	1,186	4	38		1,353	
11	Illinois .....	325	6,746	349	188	260	97	5,852	My 6,099	Ja 5,345	6,094	5,975	106	13		9,634	
12	Indiana .....	221	10,100	211	276	516	230	8,867	Mh 9,429	Oc 8,283	8,974	8,597	272	105		13,790	
13	Iowa .....	119	1,828	158	65	120	44	1,441	Ap 1,589	No 1,293	1,349	1,326	21	2		2,387	
14	Kansas .....	46	322	59	6	6	5	246	Je 269	De 218	223	221	1	1		266	
15	Kentucky .....	161	3,263	171	128	142	45	2,777	Ap 2,613	No 2,642	2,868	2,747	109	11	1	6,617	
16	Louisiana .....	40	427	45	14	8	2	358	De 379	Je 340	379	378		1		568	
17	Maine .....	150	667	168	14	10	3	472	Fe <sup>1</sup> 526	Au 388	507	507				1,121	
18	Maryland .....	126	960	154	31	12	6	757	Ap 796	No 712	748	739		9		879	
19	Massachusetts .....	177	1,857	205	44	35	34	1,539	My 1,720	De 1,382	1,458	1,441	15	2		2,038	
20	Michigan .....	212	4,707	240	121	209	103	4,034	Ap 4,347	Au 3,512	4,349	4,270	75	4		6,362	
21	Minnesota .....	134	1,108	154	42	29	15	868	My 918	Ja 818	893	888	5			1,667	
22	Mississippi .....	41	454	50	20	18	1	365	No 420	Mh 308	1,489	1,488		1		1,350	
23	Missouri .....	243	3,940	277	166	145	50	3,302	Ap 3,548	Ja 3,035	3,245	3,162	71	11	1	5,858	
24	Montana .....	4	34	2	2	2		28	Je 34	Fe 23	24	24				19	
25	Nebraska .....	22	247	23	6	11	7	200	Ap 221	Ja 178	187	186	1			224	
26	New Hampshire .....	44	493	44	14	10	5	420	Ap 437	Au 400	437	435	2			1,231	
27	New Jersey .....	256	1,980	301	37	32	9	1,601	Au 1,655	Ja 1,497	1,632	1,630	1	1		1,645	
28	New York .....	610	7,333	693	192	257	75	6,116	My 6,384	Se 5,925	6,206	6,101	105			10,029	
29	North Carolina .....	133	1,922	160	75	44	14	1,629	De 1,750	Ja 1,536	1,756	1,671	8	74	3	9,110	
30	North Dakota .....	3	12	3				9	Mh <sup>1</sup> 10	Jy <sup>1</sup> 8	10	10				14	
31	Ohio .....	407	10,350	414	437	447	237	8,815	My 9,596	Au 7,944	9,051	8,757	241	52	1	14,771	
32	Oklahoma .....	19	158	22	8	4	1	123	Jy 134	Ja 114	121	121				319	
33	Oregon .....	15	84	16	4	2		62	Jy 65	Fe 57	62	62				52	
34	Pennsylvania .....	655	8,757	781	193	226	59	7,498	Je 7,932	Ja 7,188	7,455	7,338	33	84		11,544	
35	Rhode Island .....	40	296	39	10	2	7	238	Mh 262	Ja 214	220	217	1	2		387	
36	South Carolina .....	23	317	25	9	8	3	272	De 201	Au 245	291	258	5	23		272	
37	South Dakota .....	10	64	10	3	2	1	48	De 60	Fe 42	60	60				94	
38	Tennessee .....	129	1,992	150	82	38	16	1,706	No 1,833	Ja 1,555	1,892	1,875	4	13		4,537	
39	Texas .....	50	522	64	20	35	1	412	Ap 441	Ja 382	398	390	3	5		374	
40	Vermont .....	38	140	45		1		94	Fe 98	Au 91	97	96		1		493	
41	Virginia .....	130	1,609	142	68	57	13	1,329	My 1,392	Ja 1,225	1,410	1,383	7	19	1	2,032	
42	Washington .....	37	317	46	22	5	3	241	Au 285	Fe 209	223	223				254	
43	West Virginia .....	51	446	62	22	8	7	347	My 373	Au 331	362	357	1	4		893	
44	Wisconsin .....	286	4,044	338	84	142	43	3,457	Oc 3,561	Ja 3,230	3,650	3,594	32	24		6,428	
45	Wyoming .....	10	22	14				8	Mh <sup>1</sup> 9	Je <sup>1</sup> 6	9	9				10	
46	All other states <sup>2</sup> .....	6	55	5	3			47			49	48		1		72	

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

# THE CARRIAGE AND WAGON INDUSTRY.

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DETAILED STATISTICS, BY STATES: 1909.

Capital.	EXPENSES.										Value of products.	Value added by manufacture (value of products less cost of materials).
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$175,473,728	\$139,176,014	\$4,506,871	\$3,453,336	\$37,594,919	\$1,771,984	\$80,179,304	\$1,195,640	\$901,237	\$253,512	\$9,319,211	\$159,892,547	\$77,941,259
2 751,944	605,045	26,324	18,460	194,087	10,422	292,609	12,718	5,120	1,456	43,840	683,880	350,849
3 1,823,299	1,433,090	63,079	28,142	404,881	9,146	810,510	6,837	10,301	5,547	94,047	1,664,407	844,811
4 1,635,359	1,681,714	57,312	16,592	609,720	45,633	803,433	61,348	9,008	11,303	67,305	2,052,434	1,203,368
5 160,264	196,393	6,080	2,016	87,391	3,635	81,515	7,155	1,743	166	6,392	260,295	174,845
6 1,225,850	873,724	28,664	12,780	371,838	19,018	363,623	15,758	6,661	15,655	39,727	1,076,582	693,941
7 432,551	234,136	9,366	3,162	81,387	3,472	130,585	3,977	2,236	-----	9,951	290,113	166,050
8 133,720	95,120	2,882	1,084	40,331	924	46,079	1,820	523	-----	1,477	128,107	81,104
9 426,610	406,988	18,348	11,146	135,965	5,068	205,207	10,980	3,365	-----	17,209	452,509	242,324
10 2,219,901	2,162,620	75,734	51,867	489,036	21,365	1,346,037	21,960	16,705	30	139,586	2,560,031	1,192,629
11 17,858,786	14,810,093	343,145	300,393	3,588,016	182,268	9,297,067	105,562	85,148	4,865	903,634	16,831,283	7,351,948
12 29,110,185	19,437,036	695,411	599,627	4,354,584	207,322	12,250,401	23,548	103,075	10,007	1,193,061	21,655,440	9,197,717
13 4,468,233	4,123,887	111,875	120,089	827,785	42,272	2,705,239	24,671	31,988	15,116	244,552	4,780,321	2,038,810
14 438,815	447,561	6,900	7,884	133,863	5,496	239,338	5,905	4,319	375	43,781	530,453	285,649
15 7,759,088	4,627,490	189,725	132,592	1,163,685	55,815	2,656,691	16,238	42,008	4,474	366,362	5,141,107	2,423,601
16 407,273	450,727	15,100	6,806	196,281	8,225	197,793	6,012	1,505	-----	19,005	523,757	322,739
17 1,003,664	718,346	15,550	7,969	257,293	16,097	331,061	8,701	5,446	5,813	20,407	966,093	508,935
18 1,191,906	1,032,974	36,784	8,540	372,416	15,048	526,130	19,434	7,661	3,382	43,573	1,330,068	785,890
19 2,823,051	2,583,858	60,578	48,224	985,994	50,227	1,231,554	53,415	23,208	8,218	122,340	3,184,835	1,903,054
20 10,188,595	9,037,490	268,312	263,898	2,239,979	102,417	5,159,839	20,507	66,374	4,722	911,248	10,158,883	4,890,627
21 2,331,060	1,752,539	65,737	36,601	529,317	32,177	950,821	20,274	15,295	745	101,572	2,174,705	1,191,707
22 648,506	535,943	22,189	19,265	154,105	5,539	268,205	3,100	3,850	16,500	43,190	641,957	368,213
23 7,883,062	7,646,070	284,126	175,184	1,780,649	62,083	4,797,747	103,010	32,782	8,675	401,814	8,468,856	3,609,026
24 67,653	68,932	2,400	2,200	31,514	1,483	27,504	960	1,053	-----	1,818	78,669	49,682
25 459,187	427,495	6,819	13,660	130,589	6,345	244,825	4,322	2,253	300	18,382	576,918	325,748
26 1,066,747	665,258	19,960	11,364	239,898	13,359	332,211	6,597	6,900	925	34,044	733,755	388,135
27 2,973,362	2,573,416	57,394	25,110	1,018,617	43,053	1,236,706	44,966	16,778	3,321	127,471	3,250,456	1,970,697
28 14,576,400	11,359,828	376,948	354,079	3,739,940	172,032	5,636,686	239,547	72,991	38,658	728,017	13,292,531	7,483,813
29 3,168,231	2,830,604	100,358	49,358	602,527	27,384	1,866,122	10,521	22,990	4,298	147,046	3,282,634	1,359,128
30 23,685	15,165	-----	-----	6,940	787	6,700	-----	168	-----	570	18,885	11,398
31 20,397,675	19,320,042	726,241	555,688	4,647,200	211,381	11,202,620	125,421	119,657	22,129	1,709,705	21,940,459	10,535,458
32 172,487	184,715	10,000	2,410	72,481	3,382	77,492	6,340	1,542	10	11,058	232,880	152,006
33 64,965	146,059	6,000	1,200	55,473	3,851	64,398	11,050	354	-----	3,733	192,609	124,410
34 14,364,549	10,889,903	283,212	217,105	3,861,336	181,008	5,526,017	88,121	53,045	14,957	665,102	12,748,383	7,041,358
35 408,410	347,504	10,546	4,386	151,721	7,672	155,495	4,222	2,416	475	10,571	421,913	258,746
36 453,150	412,481	12,595	12,428	104,025	4,026	240,354	3,076	3,112	-----	32,865	463,566	219,186
37 133,121	108,348	2,900	1,380	37,952	3,824	56,499	70	1,215	13	4,495	131,384	71,061
38 3,005,804	2,541,308	114,980	44,563	693,307	22,549	1,416,877	22,021	15,893	40,313	170,805	3,039,613	1,600,187
39 940,529	700,069	36,496	26,829	267,071	12,415	306,768	14,855	5,211	70	30,354	829,726	510,543
40 222,257	114,605	312	-----	50,097	3,654	54,067	921	1,468	742	3,344	158,200	100,479
41 3,028,729	2,145,690	90,153	46,620	529,313	23,176	1,260,104	15,951	15,838	7,564	156,980	2,485,221	1,201,941
42 538,026	506,646	28,118	4,564	202,601	14,844	304,297	20,888	3,582	531	17,241	720,054	400,913
43 670,757	568,719	30,010	10,594	180,090	7,113	310,971	8,869	3,234	-----	17,829	675,478	357,394
44 13,706,422	8,147,998	184,431	197,150	1,929,904	101,389	5,061,210	11,852	72,248	2,027	587,787	8,899,171	3,736,572
45 32,740	21,239	-----	-----	7,978	577	21,838	360	201	-----	285	41,624	19,209
46 76,460	87,326	3,480	-----	35,733	2,711	38,059	2,400	707	-----	4,236	102,072	61,302

\* All other states embrace: Arizona, 1 establishment; Idaho, 1; New Mexico, 2; Utah, 2.