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## STONE, CLAY, AND GLASS PRODUCTS

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## CLAY PRODUCTS.

General character of the industry.—The present report embraces the establishments engaged primarily in the manufacture of (1) brick and tile, terracotta, and fire-clay products; and (2) pottery. Table 1 presents the comparative statistics for the consolidated industry for the census years 1879 to 1919, inclusive, with percentages of increase for the census periods; and Table 2 the general statistics for the

two component industries, "brick and tile, terracotta, and fire-clay products," and "pottery," for the census years 1919 and 1914, with percentages of increase for the respective industries and the per cent each is of the combined industry. At the census of 1909 and prior thereto, terracotta and fire-clay products were included with pottery.

TABLE 1.—CLAY PRODUCTS—COMPARATIVE SUMMARY 1879-1919.

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	2,754	3,589	5,037	5,507	6,423	6,535	6,383	-23.3	-28.7	-8.5	-14.3	-1.7	2.4
Persons engaged.....	117,195	139,530	146,786	131,736	118,492	(2)	(2)	-16.6	-4.3	11.4	11.2	.....	.....
Proprietors and firm members.....	1,832	2,933	4,737	5,845	7,596	(2)	(2)	-37.5	-38.1	-19.0	-23.1	.....	.....
Salaried employees.....	10,514	9,710	9,853	7,442	6,203	(2)	(2)	8.3	3.8	25.7	43.0	.....	.....
Wage earners (average number).....	104,849	126,887	132,696	118,449	105,093	123,156	76,576	-17.4	-4.4	12.0	12.1	(*)	(*)
Primary horsepower.....	434,836	465,152	451,186	360,280	252,502	131,821	(2)	-6.5	3.1	25.2	42.7	91.5	.....
Capital.....	\$422,606,325	\$324,664,093	\$316,022,470	\$230,882,077	\$148,038,323	\$108,705,670	\$35,039,939	30.2	2.7	36.9	56.0	36.2	210.0
Salaries and wages.....	129,920,702	84,828,260	78,144,116	61,981,883	44,611,265	.....	.....	53.2	8.6	26.1	38.9	.....	.....
Salaries.....	21,844,339	13,252,512	11,252,037	8,158,213	5,036,105	(2)	(2)	64.8	17.8	37.9	62.0	.....	.....
Wages.....	108,076,363	71,575,748	66,892,079	53,823,670	39,575,070	(2)	(2)	51.0	7.0	24.3	36.0	.....	.....
Paid for contract work.....	645,097	739,210	777,724	394,451	275,000	(2)	(2)	-12.6	-5.0	97.2	42.9	.....	.....
Rents and taxes.....	8,074,036	2,178,745	1,820,840	1,447,248	1,408,625	(2)	(2)	271.0	19.5	25.8	2.7	.....	.....
Cost of materials.....	88,282,189	54,754,734	45,647,007	32,907,961	22,921,384	18,257,098	12,683,867	61.2	20.0	38.7	43.6	25.5	43.9
Value of products.....	283,342,106	172,864,051	168,895,365	135,352,854	95,533,862	89,827,785	41,810,920	63.9	2.3	24.8	41.7	6.4	115.0
Value added by manufacture <sup>2</sup> .....	195,059,917	118,109,317	123,248,358	102,444,893	72,612,478	71,569,787	29,127,023	65.2	-4.2	20.3	41.1	1.5	140.0

<sup>1</sup> A minus sign (-) denotes decrease.  
<sup>2</sup> Figures not available.

<sup>3</sup> Figures not strictly comparable.  
<sup>4</sup> Exclusive of internal revenue.

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

TABLE 2.—CLAY PRODUCTS—COMPONENT INDUSTRIES: 1919 AND 1914.

	BRICK AND TILE, TERRA-COTTA AND FIRE-CLAY PRODUCTS.					POTTERY.				
	1919	1914	Per cent of increase, <sup>1</sup> 1914-1919	Per cent of the clay products industry.		1919	1914	Per cent of increase, <sup>1</sup> 1914-1919	Per cent of the clay products industry.	
				1919	1914				1919	1914
Number of establishments.....	2,414	3,239	-25.5	87.7	90.9	340	350	-2.9	12.3	9.1
Persons engaged.....	86,503	110,772	-21.9	73.8	78.8	30,692	28,758	3.1	26.2	21.2
Proprietors and firm members.....	1,649	2,721	-39.4	90.0	92.8	183	212	-13.7	10.0	7.2
Salaried employees.....	7,839	7,869	6.9	75.5	81.0	2,575	1,841	39.9	24.5	19.0
Wage earners (average number).....	76,915	100,182	-23.2	73.4	79.0	27,934	26,705	4.6	26.6	21.0
Primary horsepower.....	405,740	442,813	-8.4	93.3	95.2	29,090	22,339	30.2	6.7	4.8
Capital.....	\$355,848,355	\$279,800,012	27.2	84.2	86.2	\$66,757,970	\$44,704,081	47.3	15.8	13.8
Salaries and wages.....	94,086,992	65,453,573	43.8	72.4	77.2	35,823,710	19,372,687	84.9	27.6	23.8
Salaries.....	15,840,907	10,546,155	50.2	72.5	79.6	6,003,432	2,706,357	122.0	27.5	20.4
Wages.....	78,250,085	54,907,418	42.5	72.4	78.7	29,820,278	16,666,330	78.9	27.6	23.3
Paid for contract work.....	528,613	696,104	-24.1	81.8	94.2	117,384	43,106	172.0	18.2	5.8
Rent and taxes.....	5,234,049	1,802,619	181.0	64.8	85.6	2,839,987	314,126	804.0	35.2	14.4
Cost of materials.....	67,488,113	42,723,178	58.0	76.4	78.0	20,794,076	12,081,556	72.8	23.6	22.0
Value of products.....	208,422,920	135,921,445	53.3	73.6	78.6	74,919,188	36,942,806	103.0	26.4	21.4
Value added by manufacture <sup>2</sup> .....	140,934,807	99,198,267	51.2	72.3	78.9	54,125,110	24,911,050	117.0	27.7	21.1

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

<sup>2</sup> Value of products less cost of materials.

# BRICK AND TILE, TERRA-COTTA, AND FIRE-CLAY PRODUCTS.

## GENERAL STATISTICS.

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

**Persons engaged in the industry.**—The age classification of the average number of wage earners in Table 4 is an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 14.

**Wage earners, by months.**—The statistics for wage earners, Table 5, are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions existing during the year. The females employed as wage earners constituted but 1.5 per cent of the total number.

**Prevailing hours of labor.**—The statistics presented in Table 6 show a very material reduction in the hours of labor per week. In 1914, 52.7 per cent of the wage earners were employed in plants where the prevailing hours of labor per week were 60 or over, as compared with 34 per cent in 1919. On the other hand, 23.6 per cent in 1919 were employed in establishments where the prevailing hours of labor were 48 per week or less and 10.9 per cent in 1914.

**Size of establishments, by average number of wage earners.**—The industry is one of relatively small units, as shown in Table 7, the average number of wage earners per establishment being 31 in 1914 and 32 in 1919, no material change. In 1919 the establishments employing over 250 wage earners reported 9.2 per cent of the total number, and in 1914, 15.5 per cent.

**Size of establishments, by value of products.**—The grouping by value of products necessarily reflects the general increase in values. The average value of products per establishment increased from \$42,000 in 1914 to \$86,000 in 1919, but the increase is

essentially due to high prices, for on a quantity basis the production of the various products was, in general, materially less in 1919 than in 1914. This condition accounts for the changes from lower to higher groups, as shown in Table 8.

**Character of ownership.**—Table 9 presents the statistics for establishments classified according to form of ownership. The industry includes a large number of individual establishments, and likewise those classed as "All others," which consists primarily of firms; but the decrease in the total number of establishments in 1919 as compared with 1914 is chiefly in these two groups. The number of establishments owned by individuals shows a decrease of 42 per cent and the "All others" group 41 per cent, while the corporations show a decrease of but 8 per cent. The "Corporations" group employed 84.3 per cent of the wage earners in 1919 and 80.6 per cent in 1914, and reported 86 per cent of the products in 1919 and 83 per cent in 1914.

**Number and horsepower of types of prime movers.**—Table 10 presents the power statistics for the industry for 1919 and 1914. Electric power is a growing factor, and of the total primary power, 32.9 per cent was utilized in the form of electric power in 1919, this including electric motor equipment operated with purchased current, specified as rented, and secondary electric or that generated by the establishment, as compared with 20 per cent in 1914. In 1909 the industry, which did not include products other than brick and tile, utilized 7 per cent of the primary power in electric motors.

**Fuel consumed.**—Table 11 presents the statistics for fuel, by kinds and by states. The figures for gas include both natural and manufactured gas, the former being the chief factor in the natural-gas states.

## MANUFACTURES.

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

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States.....	2,414	76,915	100.0	....	\$208,423	100.0	....	\$140,936	100.0	....	Minnesota.....	34	799	1.0	23	\$2,293	1.1	23	\$1,484	1.1	23
Pennsylvania.....	303	15,897	20.7	1	43,842	21.0	1	27,830	19.4	1	Massachusetts.....	35	739	1.0	24	1,818	0.9	24	1,293	0.9	24
Ohio.....	341	12,060	15.7	2	32,173	15.4	2	22,212	15.8	2	Washington.....	35	664	0.9	25	1,733	0.9	25	1,227	0.9	25
Illinois.....	144	5,627	7.3	3	17,504	8.4	3	12,734	9.0	3	Oklahoma.....	22	628	0.8	26	1,079	0.8	26	1,030	0.7	26
Missouri.....	65	4,469	5.8	4	11,456	5.5	4	7,538	5.4	4	Wisconsin.....	50	414	0.5	31	1,241	0.6	27	851	0.6	28
New Jersey.....	67	3,544	4.6	6	10,127	4.9	5	7,349	5.2	5	South Carolina.....	23	566	0.7	27	1,156	0.6	28	699	0.5	31
Indiana.....	151	3,648	4.7	5	9,881	4.8	6	6,444	4.6	7	Utah.....	21	440	0.6	29	1,144	0.6	29	900	0.6	27
New York.....	118	3,246	4.2	7	8,813	4.2	7	5,574	4.7	6	Arkansas.....	21	354	0.5	33	1,074	0.5	30	766	0.6	30
Iowa.....	113	2,452	3.2	8	8,127	3.9	8	5,438	3.9	8	Nebraska.....	29	402	0.5	32	1,065	0.5	31	825	0.6	29
Kentucky.....	47	2,349	3.1	9	5,686	2.7	9	3,682	2.6	9	Mississippi.....	28	472	0.6	28	925	0.5	32	633	0.4	32
California.....	60	1,747	2.3	10	5,211	2.5	10	3,387	2.4	10	Louisiana.....	18	434	0.6	30	741	0.4	33	534	0.4	33
Texas.....	58	1,663	2.2	11	4,167	2.0	11	2,833	2.0	11	Maine.....	19	254	0.3	34	704	0.3	34	445	0.3	34
Georgia.....	47	1,617	2.1	12	3,734	1.8	12	2,467	1.8	13	Montana.....	14	145	0.2	35	505	0.3	35	305	0.2	36
Kansas.....	29	1,136	1.5	18	3,407	1.6	13	2,208	1.6	14	New Hampshire.....	9	189	0.2	35	465	0.2	36	360	0.3	35
Michigan.....	48	852	1.1	20	3,339	1.6	14	2,521	1.6	12	Oregon.....	23	152	0.2	37	336	0.2	37	294	0.2	37
North Carolina.....	95	1,338	1.7	14	3,212	1.6	15	2,206	1.6	15	North Dakota.....	5	140	0.2	39	303	0.1	38	227	0.2	39
Maryland.....	30	1,207	1.6	17	3,207	1.5	16	2,095	1.5	16	Idaho.....	12	109	0.1	40	303	0.1	39	231	0.2	38
Alabama.....	42	1,359	1.8	13	3,088	1.5	17	2,055	1.5	17	Delaware.....	11	85	0.1	43	223	0.1	40	150	0.1	41
Tennessee.....	46	1,265	1.6	16	2,783	1.3	18	1,901	1.3	18	Wyoming.....	10	46	0.1	44	195	0.1	41	153	0.1	40
Virginia.....	45	1,331	1.7	15	2,738	1.3	19	1,888	1.3	19	Arizona.....	13	99	0.1	41	188	0.1	43	132	0.1	43
Colorado.....	43	812	1.1	22	2,505	1.2	20	1,731	1.2	21	Florida.....	11	156	0.2	36	181	0.1	44	127	0.1	44
West Virginia.....	36	1,032	1.3	19	2,316	1.1	21	1,531	1.1	22	South Dakota.....	3	23	(1)	46	64	(1)	45	43	(1)	46
Connecticut.....	30	835	1.1	21	2,294	1.1	22	1,831	1.3	20	All other states.....	10	189	0.2	....	312	0.1	....	226	0.2	....

1 Less than one-tenth of 1 per cent.

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

CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.		CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.	
					Male.	Fe- male.						Male.	Fe- male.
All classes.....	1919	80,503	84,075	2,428	97.2	2.8	Clerks and other subordinate salaried employees.....	1919	3,589	2,446	1,143	68.2	31.8
	1914	110,772	108,644	2,128	98.1	1.9		1914	3,885	3,103	782	79.9	20.1
	1909	85,704	86,234	550	99.3	0.7		1909	1,733	1,434	299	82.7	17.3
Proprietors and officials.....	1919	5,999	5,871	128	97.9	2.1	Wage earners (average number).....	1919	76,915	75,758	1,157	98.5	1.5
	1914	6,705	6,548	157	97.7	2.3		1914	100,182	98,993	1,189	98.8	1.2
	1909	7,503	7,353	150	98.0	2.0		1909	76,528	76,447	81	99.9	0.1
Proprietors and firm members.....	1919	1,649	1,578	71	95.7	4.3	16 years of age and over.....	1919	76,447	75,303	1,144	98.5	1.5
	1914	2,721	2,602	119	95.6	4.4		1914	99,327	98,179	1,148	98.9	1.1
	1909	4,285	4,149	136	96.8	3.2		1909	75,258	75,178	80	99.9	0.1
Salaried officers of corporations...	1919	1,664	1,613	51	96.9	3.1	Under 16 years of age.....	1919	468	455	13	97.2	2.8
	1914	1,560	1,526	34	97.8	2.2		1914	855	814	41	95.2	4.8
	1909	1,118	1,107	11	99.0	1.0		1909	1,270	1,269	1	99.9	(1)
Superintendents and managers...	1919	2,686	2,680	6	99.8	0.2							
	1914	2,424	2,420	4	99.8	0.2							
	1909	2,100	2,097	3	99.8	0.2							

1 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.]

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	Octo- ber.	Novem- ber.	Decem- ber.	
United States:														
1919.....	76,915	56,190	<i>55,888</i>	60,269	70,332	79,561	84,952	88,715	90,929	90,615	88,913	81,997	74,641	61.4
Males.....	75,758	55,209	<i>54,898</i>	59,317	69,319	78,474	83,804	87,496	89,691	89,329	87,592	80,664	73,309	61.2
Females.....	1,157	981	<i>974</i>	952	1,013	1,087	1,148	1,219	1,238	1,286	1,321	1,333	1,332	73.1
1914.....	100,182	77,966	<i>76,468</i>	83,720	101,780	117,738	123,877	123,554	121,503	113,269	99,043	85,952	76,724	61.7
Alabama.....	1,359	1,368	1,340	1,350	<i>1,296</i>	1,381	1,298	1,314	1,424	1,398	1,427	1,383	1,329	90.8
Arizona.....	99	<i>55</i>	58	88	101	102	106	149	137	146	134	91	41	23.5
Arkansas.....	354	<i>167</i>	182	234	306	370	400	434	476	460	435	377	347	35.1
California.....	1,747	<i>1,818</i>	1,241	1,369	1,619	1,712	1,837	1,953	2,003	1,921	1,923	2,044	2,124	57.3
Colorado.....	812	<i>405</i>	<i>572</i>	650	686	847	982	1,068	966	929	884	884	754	43.6
Connecticut.....	835	<i>593</i>	<i>583</i>	443	752	1,061	1,130	1,149	1,122	1,062	992	828	695	34.2
Delaware.....	85	<i>40</i>	<i>40</i>	51	87	114	123	98	117	113	90	90	48	32.5
Florida.....	156	<i>139</i>	142	149	154	160	149	156	166	161	169	169	158	82.2
Georgia.....	1,617	<i>1,217</i>	<i>1,337</i>	1,383	1,555	1,621	1,586	1,713	1,775	1,802	1,872	1,819	1,724	65.0
Idaho.....	109	<i>44</i>	<i>43</i>	44	72	145	184	180	167	146	114	92	77	23.4

## BRICK AND TILE, TERRA-COTTA, AND FIRE-CLAY PRODUCTS.

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

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.	
Illinois.....	5,627	3,239	3,257	3,842	4,937	5,768	6,245	6,629	6,879	7,005	7,443	6,733	5,547	43.5
Indiana.....	3,648	2,418	2,621	2,766	3,367	3,931	4,189	4,192	4,289	4,495	4,404	3,774	3,300	54.5
Iowa.....	2,452	1,104	1,223	1,908	2,470	2,872	3,103	3,131	3,199	3,144	2,995	2,542	1,733	34.5
Kansas.....	1,136	630	713	822	1,049	1,120	1,304	1,337	1,409	1,398	1,374	1,358	1,118	44.7
Kentucky.....	2,349	2,116	1,981	2,090	2,363	2,370	2,349	2,631	2,675	2,747	2,702	2,165	2,092	72.1
Louisiana.....	434	211	209	249	466	499	485	529	534	549	523	483	470	38.1
Maine.....	254	108	117	131	167	306	398	393	409	373	339	181	126	26.4
Maryland.....	1,207	943	981	978	1,034	1,270	1,275	1,275	1,400	1,370	1,383	1,343	1,232	67.4
Massachusetts.....	739	380	347	339	536	860	1,034	1,109	1,116	932	838	688	652	29.2
Michigan.....	852	498	521	630	769	1,029	1,082	1,040	1,060	1,049	950	826	764	47.0
Minnesota.....	799	348	381	397	616	841	1,077	1,146	1,150	1,115	977	880	660	30.3
Mississippi.....	472	335	348	369	480	512	540	555	612	573	501	458	381	54.7
Missouri.....	4,469	3,462	3,534	3,623	4,172	4,664	4,764	4,835	4,952	5,026	5,292	4,781	4,503	65.2
Montana.....	145	76	98	104	161	191	225	281	195	137	138	118	66	26.1
Nebraska.....	402	100	155	232	409	522	575	613	627	608	456	362	164	15.9
New Hampshire.....	169	42	45	50	136	335	309	320	287	201	146	95	62	12.5
New Jersey.....	3,544	2,483	2,190	2,325	2,732	3,207	3,659	4,077	4,398	4,498	4,422	4,198	4,198	49.4
New York.....	3,240	1,381	1,294	1,458	2,444	3,755	4,415	4,906	4,557	4,255	4,016	3,577	3,194	27.4
North Carolina.....	1,338	762	759	950	1,440	1,622	1,577	1,703	1,793	1,752	1,565	1,258	873	41.8
North Dakota.....	140	114	114	118	121	129	204	208	169	134	162	119	88	42.3
Ohio.....	12,060	9,488	9,452	10,163	11,193	12,217	13,014	13,067	13,510	13,817	13,606	12,817	11,771	68.3
Oklahoma.....	628	349	502	543	618	710	689	706	758	711	679	641	633	45.6
Oregon.....	152	87	29	34	92	129	237	267	275	224	211	157	142	9.8
Pennsylvania.....	15,897	15,710	14,715	14,637	15,048	15,211	15,618	16,201	16,685	17,046	16,504	16,575	16,413	85.0
South Carolina.....	566	403	402	482	528	555	563	619	701	733	699	570	528	54.8
South Dakota.....	23	8	8	8	22	38	39	37	30	29	29	27	16	7.7
Tennessee.....	1,265	822	811	925	1,084	1,275	1,480	1,504	1,679	1,609	1,470	1,308	1,213	48.3
Texas.....	1,663	1,070	1,197	1,354	1,627	1,795	1,831	1,880	2,059	1,847	1,747	1,794	1,740	52.4
Utah.....	440	261	274	337	377	445	530	554	594	580	494	434	400	43.9
Virginia.....	1,331	899	930	1,002	1,224	1,329	1,455	1,559	1,614	1,663	1,615	1,420	1,262	54.1
Washington.....	664	405	589	492	544	680	755	837	818	804	818	757	672	46.1
West Virginia.....	1,032	738	738	903	993	1,047	1,158	1,198	1,183	1,196	1,179	1,018	933	65.8
Wisconsin.....	414	94	96	111	252	589	738	727	709	624	470	349	200	12.7
Wyoming.....	46	7	6	20	45	62	77	70	75	70	40	29	40	6.6

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

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
		44 and under.	Between 44 and 48.	48.1	Between 48 and 54.	54.	Between 54 and 60.	60.			44 and under.	Between 44 and 48.	48.1	Between 48 and 54.	54.	Between 54 and 60.	60.
United States..1919..	76,915	1,971	500	15,676	6,971	16,342	9,275	25,392	Montana.....	145	16	.....	91	.....	26	.....	5
.....1914..	100,182	(2)	(2)	10,883	4,489	18,188	13,844	51,046	Nebraska.....	402	15	.....	80	.....	3	.....	407
Alabama.....	1,359	108	8	11	19	137	341	547	New Hampshire.....	169	.....	.....	54	.....	115	.....	.....
Arizona.....	99	14	.....	39	.....	46	.....	.....	New Jersey.....	3,544	201	.....	308	1,067	1,300	537	131
Arkansas.....	354	.....	.....	72	46	236	.....	.....	New York.....	3,240	111	.....	1,165	288	767	284	631
California.....	1,747	.....	.....	893	32	810	12	.....	North Carolina.....	1,338	91	52	119	88	1	408	551
Colorado.....	812	181	.....	200	.....	367	.....	47	North Dakota.....	140	.....	.....	7	85	.....	48	.....
Connecticut.....	835	27	13	150	142	421	.....	82	Ohio.....	12,060	76	76	1,624	1,587	2,552	2,052	3,900
Delaware.....	85	.....	.....	3	16	2	6	58	Oklahoma.....	628	.....	15	110	.....	27	19	339
Florida.....	156	26	12	15	13	3	87	.....	Oregon.....	152	.....	.....	120	.....	13	19	.....
Georgia.....	1,617	.....	85	80	62	218	270	902	Pennsylvania.....	15,897	393	31	3,049	1,245	2,787	2,370	5,964
Idaho.....	109	.....	.....	72	.....	18	6	13	South Carolina.....	566	30	30	.....	35	19	121	311
Illinois.....	5,627	34	30	2,274	621	1,240	95	1,332	South Dakota.....	23	.....	.....	.....	.....	.....	23	.....
Indiana.....	3,648	58	.....	586	570	1,518	161	755	Tennessee.....	1,265	5	5	53	14	149	259	780
Iowa.....	2,452	.....	.....	152	5	553	21	1,721	Texas.....	1,663	8	.....	355	39	197	137	927
Kansas.....	1,136	48	25	96	.....	458	43	460	Utah.....	440	1	.....	395	.....	37	7	.....
Kentucky.....	2,349	36	74	606	198	302	458	615	Virginia.....	1,331	98	.....	228	34	374	70	527
Louisiana.....	434	8	34	17	.....	12	79	197	Washington.....	664	.....	.....	595	.....	61	.....	8
Maine.....	254	.....	.....	4	12	144	.....	94	West Virginia.....	1,032	87	10	447	.....	176	91	151
Maryland.....	1,207	51	.....	432	28	40	149	507	Wisconsin.....	414	.....	.....	49	.....	72	26	267
Massachusetts.....	739	45	.....	355	127	196	.....	13	Wyoming.....	46	.....	.....	29	10	.....	.....	5
Michigan.....	852	121	.....	278	113	101	114	125	All other states.....	139	3	.....	32	.....	101	.....	.....
Minnesota.....	799	.....	.....	132	.....	157	.....	510									
Mississippi.....	472	14	.....	67	9	47	33	301									
Missouri.....	4,469	65	.....	259	582	644	1,009	1,910									

\* Includes 48 and under in 1914.

\* Corresponding figures not available.

## MANUFACTURES.

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

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
				Establishments.	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.....	2,414	76,915	31	638	1,792	736	9,096	592	20,220	260	18,125	139	20,580	14	4,686	4	2,416	.....	.....
1914.....	3,239	100,182	30	1,031	2,928	996	11,910	650	21,315	320	22,416	173	20,122	31	9,986	7	4,504	1	1,001
Alabama.....	42	1,359	.....	11	44	13	161	10	353	5	300	2	248	1	253	.....	.....	.....	.....
Arizona.....	13	99	2	5	12	6	87	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arkansas.....	21	354	.....	7	12	10	120	2	85	2	137	.....	.....	.....	.....	.....	.....	.....	.....
California.....	60	1,747	1	13	29	22	296	16	549	6	486	2	387	.....	.....	.....	.....	.....	.....
Colorado.....	43	812	2	17	41	15	182	7	233	.....	.....	2	356	.....	.....	.....	.....	.....	.....
Connecticut.....	30	835	1	2	4	9	143	15	424	1	52	2	212	.....	.....	.....	.....	.....	.....
Delaware.....	11	85	.....	7	19	3	31	1	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Florida.....	11	156	.....	3	13	6	77	2	66	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Georgia.....	47	1,617	.....	12	38	10	124	12	445	10	664	3	346	.....	.....	.....	.....	.....	.....
Idaho.....	12	109	1	5	20	5	54	1	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Illinois.....	144	5,627	3	40	107	27	265	35	1,154	26	1,810	11	1,634	2	657	.....	.....	.....	.....
Indiana.....	161	3,648	1	68	188	33	380	27	959	14	910	7	945	1	260	.....	.....	.....	.....
Iowa.....	113	2,452	1	47	160	32	357	15	541	14	880	4	514	.....	.....	.....	.....	.....	.....
Kansas.....	29	1,136	1	1	2	6	90	14	530	6	384	1	130	.....	.....	.....	.....	.....	.....
Kentucky.....	47	2,349	.....	8	26	13	170	15	443	3	262	7	1,087	1	356	.....	.....	.....	.....
Louisiana.....	18	434	.....	1	5	13	172	2	52	1	78	1	127	.....	.....	.....	.....	.....	.....
Maine.....	19	254	1	9	18	5	56	3	79	.....	.....	1	101	.....	.....	.....	.....	.....	.....
Maryland.....	30	1,207	.....	6	30	9	118	8	258	5	411	2	390	.....	.....	.....	.....	.....	.....
Massachusetts.....	35	730	.....	3	7	21	264	9	351	2	117	.....	.....	.....	.....	.....	.....	.....	.....
Michigan.....	48	852	.....	17	28	19	210	8	292	3	210	1	112	.....	.....	.....	.....	.....	.....
Minnesota.....	34	799	.....	5	15	20	264	5	165	3	210	1	145	.....	.....	.....	.....	.....	.....
Mississippi.....	28	472	2	9	35	10	105	6	216	.....	.....	1	116	.....	.....	.....	.....	.....	.....
Missouri.....	65	4,469	.....	14	38	14	153	15	527	9	624	10	1,664	1	312	2	1,151	.....	.....
Montana.....	14	145	.....	7	21	6	84	1	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nebraska.....	29	402	.....	10	29	12	158	7	215	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire.....	9	109	.....	1	1	5	66	3	102	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Jersey.....	67	3,544	1	8	16	13	198	26	870	7	583	11	1,528	1	351	.....	.....	.....	.....
New York.....	118	3,246	1	14	48	45	625	44	1,341	12	870	2	362	.....	.....	.....	.....	.....	.....
North Carolina.....	95	1,338	1	32	93	43	496	16	494	2	127	1	128	.....	.....	.....	.....	.....	.....
North Dakota.....	5	140	.....	1	1	2	27	1	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio.....	341	12,060	5	112	306	65	779	81	2,983	56	3,891	18	2,756	4	1,345	.....	.....	.....	.....
Oklahoma.....	22	628	.....	3	10	9	155	7	245	3	218	.....	.....	.....	.....	.....	.....	.....	.....
Oregon.....	23	152	1	12	28	10	124	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania.....	303	15,897	3	25	83	85	1,103	103	3,545	44	3,104	38	5,651	3	1,146	2	1,265	.....	.....
South Carolina.....	23	566	.....	4	7	.....	93	11	367	1	99	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota.....	3	23	.....	1	5	2	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee.....	46	1,265	.....	17	56	15	160	8	299	2	131	4	619	.....	.....	.....	.....	.....	.....
Texas.....	58	1,663	.....	9	28	21	266	19	614	7	502	2	253	.....	.....	.....	.....	.....	.....
Utah.....	21	440	.....	12	20	4	51	2	59	1	73	2	237	.....	.....	.....	.....	.....	.....
Virginia.....	45	1,331	.....	8	21	18	233	13	468	4	277	2	332	.....	.....	.....	.....	.....	.....
Washington.....	35	664	.....	10	27	14	166	9	346	2	125	.....	.....	.....	.....	.....	.....	.....	.....
West Virginia.....	36	1,032	1	6	14	14	175	8	256	6	385	1	202	.....	.....	.....	.....	.....	.....
Wisconsin.....	50	414	2	26	59	17	163	4	125	1	67	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming.....	10	46	.....	7	21	3	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
	1919	1914	1919	1914	1919	1914	1919	1914
All classes.....	2,414	3,239	76,915	100,182	\$208,422,920	\$135,921,445	\$140,934,807	\$93,198,267
Less than \$5,000.....	301	901	568	2,641	858,127	2,359,272	605,351	1,789,845
\$5,000 to \$20,000.....	623	1,031	3,804	10,848	6,744,243	10,994,434	4,813,242	8,140,098
\$20,000 to \$100,000.....	874	961	19,413	35,473	43,800,044	44,703,952	30,159,764	30,598,125
\$100,000 to \$500,000.....	568	342	40,660	.....	116,641,940	.....	79,842,346	.....
\$500,000 to \$1,000,000.....	39	2	8,377	51,220	25,650,833	77,363,787	16,617,829	52,670,199
\$1,000,000 and over.....	9	2	4,093	.....	14,721,733	.....	8,890,275	.....
PER CENT DISTRIBUTION.								
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	12.5	27.8	0.7	2.7	0.4	1.7	0.4	1.9
\$5,000 to \$20,000.....	25.8	31.8	4.9	10.8	3.2	8.1	3.4	8.8
\$20,000 to \$100,000.....	36.2	29.7	25.2	35.4	21.0	32.9	21.4	32.8
\$100,000 to \$500,000.....	23.5	10.5	52.9	.....	56.0	.....	56.7	.....
\$500,000 to \$1,000,000.....	1.6	0.1	10.9	51.1	12.3	57.3	11.8	56.5
\$1,000,000 and over.....	0.4	0.1	5.3	.....	7.1	.....	6.3	.....

## BRICK AND TILE, TERRA-COTTA, AND FIRE-CLAY PRODUCTS.

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

STATE.	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.						
	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.		Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.		Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.				
United States.1919..	598	1,415	401	76,915	6,757	64,857	5,301	8.8	84.3	6.9	\$208,422,920	\$15,621,257	\$179,095,183	\$13,706,480	7.5	85.9	6.6				
1914..	1,026	1,536	677	100,182	10,722	80,770	8,690	10.7	80.6	8.7	135,921,445	12,209,359	112,835,690	10,877,387	9.0	83.0	8.0				
Alabama.....	11	24	7	1,359	317	956	80	23.3	70.3	6.3	3,088,485	533,817	2,394,514	160,154	17.3	77.5	5.2				
Arizona.....	10	2	1	99	66	133	.....	66.7	33.3	.....	188,034	152,744	135,290	.....	81.2	18.7	.....				
Arkansas.....	5	11	5	354	5	264	85	1.4	74.6	24.0	1,073,969	14,295	930,994	128,680	1.3	86.7	12.0				
California.....	17	39	4	1,747	160	1,556	41	8.6	89.1	2.3	5,211,390	409,079	4,587,068	125,243	9.6	88.0	2.4				
Colorado.....	11	28	4	812	27	767	18	3.3	94.5	2.2	2,504,658	96,927	2,360,041	47,690	3.9	94.2	1.9				
Connecticut.....	8	19	3	835	122	684	29	14.6	81.9	3.5	2,294,001	322,607	1,875,479	95,915	14.1	81.8	4.2				
Delaware.....	7	3	1	85	155	30	.....	64.7	35.3	.....	222,740	131,259	91,481	.....	58.9	41.1	.....				
Florida.....	2	2	7	150	.....	124	.....	.....	84.6	79.5	181,430	.....	20,426	152,004	.....	16.2	83.8	.....			
Georgia.....	14	29	4	1,617	250	1,262	75	15.5	79.9	4.6	3,733,823	609,944	2,924,205	199,674	16.3	78.3	5.3				
Idaho.....	5	6	1	109	124	85	.....	22.0	78.0	.....	302,987	156,703	246,284	.....	18.7	81.3	.....				
Illinois.....	37	84	23	5,627	430	4,428	769	7.6	78.7	13.7	17,564,017	1,188,742	14,006,185	2,369,090	6.8	79.7	13.5				
Indiana.....	41	79	31	3,648	187	3,322	139	5.1	91.1	3.8	9,880,579	412,253	9,076,439	391,887	4.2	91.9	4.0				
Iowa.....	24	61	28	2,452	84	2,050	312	3.4	83.8	12.7	8,127,157	218,074	6,783,312	1,125,771	2.7	83.5	13.9				
Kansas.....	4	23	2	1,136	1206	930	.....	18.2	81.9	.....	3,407,019	153,606	2,854,323	.....	16.2	83.8	.....				
Kentucky.....	8	30	9	2,349	46	2,105	108	2.0	93.4	4.6	5,686,473	109,343	5,363,918	216,212	1.9	94.3	3.8				
Louisiana.....	10	8	.....	434	120	314	.....	27.0	72.4	.....	740,610	170,788	569,822	.....	23.1	76.9	.....				
Maine.....	8	9	2	254	140	214	.....	15.8	84.3	.....	704,484	134,880	569,604	.....	19.2	80.9	.....				
Maryland.....	6	21	3	1,207	68	1,107	32	5.6	91.7	2.7	3,207,465	166,166	2,997,103	44,196	5.2	93.4	1.4				
Massachusetts.....	9	22	4	739	122	579	38	16.5	78.3	5.1	1,817,512	266,727	1,488,411	62,374	14.7	81.9	3.4				
Michigan.....	13	25	10	852	127	618	107	14.9	72.5	12.6	3,339,381	612,464	2,401,191	325,726	18.3	71.9	9.8				
Minnesota.....	5	19	10	799	37	625	137	4.6	78.2	17.1	2,293,396	58,450	1,885,486	349,460	2.5	82.2	15.2				
Mississippi.....	15	5	8	472	144	114	214	30.5	24.2	45.3	925,222	240,011	186,392	498,819	25.9	20.1	53.9				
Missouri.....	15	45	5	4,469	508	3,910	42	11.4	87.7	0.9	11,455,779	1,408,645	9,078,961	88,173	12.3	87.1	0.6				
Montana.....	2	9	3	145	.....	129	* 16	.....	89.0	11.0	505,053	.....	478,388	* 26,665	.....	94.9	5.1	.....			
Nebraska.....	8	14	7	402	75	289	38	18.7	71.9	9.5	1,066,264	235,256	719,595	110,413	22.1	67.5	10.4				
New Hampshire.....	6	3	.....	169	67	102	.....	39.6	60.4	.....	465,204	190,214	274,990	.....	40.9	59.1	.....				
New Jersey.....	15	48	4	3,544	194	3,252	98	5.5	91.8	2.8	10,127,176	449,435	9,454,447	223,294	4.4	93.4	2.2				
New York.....	33	63	22	3,246	527	2,201	518	16.2	67.8	16.0	8,813,281	1,279,829	6,212,910	1,320,542	14.5	70.5	15.0				
North Carolina.....	35	31	29	1,338	297	763	278	22.2	57.0	20.8	3,211,892	632,471	1,973,851	605,570	19.7	61.5	18.9				
North Dakota.....	1	3	1	140	.....	* 140	.....	100.0	.....	.....	308,550	.....	* 308,550	.....	100.0	.....	.....				
Ohio.....	64	215	62	12,060	402	10,961	607	4.1	90.9	5.0	32,172,576	672,210	30,149,117	1,351,249	2.1	93.7	4.2				
Oklahoma.....	1	19	2	628	.....	573	* 55	.....	91.2	8.8	1,679,129	.....	1,568,628	* 110,501	.....	93.4	6.6	.....			
Oregon.....	14	5	4	152	47	82	23	30.9	53.9	15.1	385,581	106,904	240,472	38,205	27.7	62.4	9.9				
Pennsylvania.....	41	224	38	15,897	611	14,461	825	3.8	91.0	5.2	43,842,120	1,430,812	39,933,828	2,477,480	3.3	91.1	5.6				
South Carolina.....	9	8	6	566	147	298	121	26.0	52.6	21.4	1,155,681	319,019	564,402	272,260	27.6	48.8	23.6				
South Dakota.....	.....	3	.....	23	.....	23	.....	100.0	.....	.....	63,571	.....	63,571	.....	100.0	.....	.....				
Tennessee.....	15	22	9	1,265	285	936	44	22.5	74.0	3.5	2,782,689	641,676	2,073,087	87,906	23.1	74.4	2.4				
Texas.....	15	39	4	1,603	375	1,209	79	22.5	72.7	4.8	4,166,571	764,203	3,260,899	151,469	18.3	78.0	3.6				
Utah.....	7	9	5	440	13	399	28	3.0	90.7	6.4	1,144,021	20,605	1,072,120	51,296	1.8	93.7	4.5				
Virginia.....	13	23	9	1,331	324	943	64	24.3	70.8	4.8	2,738,298	513,333	2,093,613	131,352	18.7	76.5	4.8				
Washington.....	6	23	6	604	53	574	37	8.0	86.4	5.6	1,782,566	132,646	1,544,384	105,536	7.4	86.6	5.9				
West Virginia.....	4	31	1	1,032	128	1,004	.....	2.7	97.3	.....	2,316,288	141,028	2,275,260	.....	1.8	98.2	.....				
Wisconsin.....	19	18	13	414	70	284	60	16.9	68.6	14.5	1,240,606	207,778	841,677	191,151	16.7	67.8	15.4				
Wyoming.....	4	4	2	46	125	21	.....	54.3	45.7	.....	194,851	182,892	111,959	.....	42.6	57.4	.....				
All other states.....	1	7	2	139	.....	130	* 9	.....	93.5	6.5	311,361	.....	295,881	* 15,480	.....	95.0	5.0	.....			

\* Includes the group "All others."

\* Includes the group "Individuals."

\* Includes the groups "Individuals" and "All others."

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

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.				POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.			
			Amount.		Per cent distribution.					Amount.		Per cent distribution.	
	1919	1914	1919	1914	1919	1914		1919	1914	1919	1914	1919	1914
Primary power, total.....	6,587	6,583	405,740	442,813	100.0	100.0	Primary power—Continued.						
Owned.....	3,179	4,671	299,311	377,785	73.8	85.3	Rented.....	3,408	1,912	106,435	65,028	26.2	14.7
Steam.....	2,769	4,034	281,815	357,285	69.5	80.7	Electric.....	3,408	1,912	105,846	64,695	26.1	14.6
Engines.....	2,727	4,064	277,574	357,285	68.4	80.7	Other.....			589	833	0.1	0.1
Turbines.....	42		4,241		1.0		Electric.....	4,838	3,690	133,354	88,406	100.0	100.0
Internal-combustion engines.....	409	591	17,456	20,145	4.3	4.5	Rented.....	3,408	1,912	105,846	64,695	79.4	78.2
Water wheels, turbines, and motors.....	1	16	40	355	(1)	0.1	Generated by establishments reporting.....	1,430	1,178	27,508	23,711	20.6	26.8

\* Less than one-tenth of 1 per cent.

## MANUFACTURES.

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

STATE.	COAL.		Coke (ton 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (bar- rels).	Gas (1,000 cubic feet).	STATE.	COAL.		Coke (ton, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (bar- rels).	Gas (1,000 cubic feet).
	Anthra- cite <sup>1</sup> (ton, 2,240 pounds).	Bitumi- nous (ton, 2,000 pounds).						Anthra- cite <sup>1</sup> (ton, 2,240 pounds).	Bitumi- nous (ton, 2,000 pounds).				
United States:							Mississippi.....	250	26,426		168		
1919.....	128,252	6,894,745	34,510	1,200,682	10,250	10,009,521	Missouri.....	885	305,175	616	119,024	121	3,055
1914.....	246,138	8,566,947	65,375	1,849,583	( <sup>2</sup> )	15,472,771	Montana.....		14,931		12	76	
Alabama.....		125,617	1,321	10	89		Nebraska.....	130	27,970	380	115	351	
Arizona.....		2,290		3,531			New Hampshire.....	812	3,937		1	26	
Arkansas.....		2,398		1,018	2	953,681	New Jersey.....	20,258	199,878	3,700	8,397	262	12
California.....	100	5,432	10	411,800	192	407,969	New York.....	48,058	117,713	1,488	4,086	4,238	14,656
Colorado.....	431	83,076	237	22	1		North Carolina.....	1,200	77,833	1,205	300	16	
Connecticut.....	1,684	13,077	100	240	533		North Dakota.....		15,165				
Delaware.....	650	4,956			1		Ohio.....	2,453	1,493,487	947	7,742	2,064	886,210
Florida.....		20		30	69		Oklahoma.....		27,587		11,138		1,964,706
Georgia.....	300	141,231	4,422	166	146		Oregon.....		3,016		942	5	
Idaho.....		5,889					Pennsylvania.....	36,426	1,429,426	1,164	378	1,515	2,367,663
Illinois.....	4,949	745,465	2,069	153,405	3,171		South Carolina.....		29,186			629	
Indiana.....		506,237	1,002	6,036	583	7,600	South Dakota.....		2,789			2	
Iowa.....		336,750	180	9,100	3,429		Tennessee.....		131,686	2,872		22	
Kansas.....		88,392		10,474	1,154,527		Texas.....	2,403	30,725	6,944	345,670	146	925,530
Kentucky.....		234,710	416	300	670	303,261	Utah.....		28,573				
Louisiana.....		909	168	51,930	30	65,228	Virginia.....	70	109,420		85	174	
Maine.....	20	5,516			90		Washington.....		54,269	1,370	1,150	39	
Maryland.....	178	88,526		150	13		West Virginia.....	254	86,159		6	2	929,973
Massachusetts.....	4,956	10,614	78		444		Wisconsin.....	1,050	25,768	2,181	8,800	105	
Michigan.....	94	82,933	30	114,122	183		Wyoming.....		1,235	1,235	7,133		20,000
Minnesota.....	635	67,212	300	65	253		All other states.....	6	4,698	75	12,124	2	

<sup>1</sup> Includes some semianthracite.<sup>2</sup> Included in figures for fuel oils.

## SPECIAL STATISTICS

Products.—Table 12 presents comparative statistics for products, by kind and states, for 1919 and 1914. The total value of products here given, from the reports of the Geological Survey, is not strictly comparable with the value of products for the

industry as reported by the census in other tables. The latter includes all products of the establishments irrespective of their character, and the former includes production by establishments engaged primarily in other lines of manufacture.

TABLE 12.—PRODUCTS: 1919 AND 1914.

[Reported by the Geological Survey.]

	1919		1914			1919		1914	
	Quantity.	Value.	Quantity.	Value.		Quantity.	Value.	Quantity.	Value.
Total value.....		\$208,403,514		\$129,582,848	North Dakota.....		\$303,657		\$266,046
Alabama.....		3,077,766		1,557,481	Ohio.....		33,771,197		21,815,392
Arizona.....		188,034		156,107	Oklahoma.....		2,190,129		788,314
Arkansas.....		1,229,296		432,586	Oregon.....		378,963		560,271
California.....		4,922,739		4,116,358	Pennsylvania.....		42,443,802		20,100,495
Colorado.....		2,680,277		1,032,685	South Carolina.....		1,058,196		557,977
Connecticut and Rhode Island.....		2,350,329		1,229,037	South Dakota.....		73,571		57,711
Delaware and District of Columbia.....		284,429		303,584	Tennessee.....		2,832,740		1,449,120
Florida.....		185,135		240,094	Texas.....		4,357,673		2,222,240
Georgia.....		3,772,632		2,242,073	Utah.....		1,143,134		676,142
Idaho and Nevada.....		310,192		110,864	Virginia.....		2,724,629		1,472,343
Illinois.....		16,473,770		12,538,374	Washington.....		1,766,362		1,809,491
Indiana.....		10,441,902		6,503,207	West Virginia.....		2,711,098		1,830,947
Iowa.....		8,107,601		6,388,995	Wisconsin.....		1,203,767		943,909
Kansas.....		3,426,002		1,905,961	Wyoming.....		194,350		64,942
Kentucky.....		5,501,070		2,286,980	Common brick.....	Thousands. 4,761,881	63,584,748	Thousands. 7,145,809	43,763,554
Louisiana.....		759,388		422,062	Pennsylvania.....		450,144		688,178
Maine.....		612,562		914,808	New York.....		479,505		908,868
Maryland.....		2,247,062		1,640,017	Illinois.....		567,714		941,343
Massachusetts.....		1,940,825		1,462,453	Ohio.....		293,757		436,117
Michigan.....		3,699,929		2,434,872	North Carolina.....		187,979		183,648
Minnesota.....		2,287,906		1,944,886	Michigan.....		200,352		269,154
Mississippi.....		934,827		515,797	New Jersey.....		213,250		349,434
Missouri.....		11,016,333		6,074,340	Virginia.....		155,526		187,102
Montana.....		462,875		440,519	Connecticut and Rhode Island.....		143,280		171,289
Nebraska.....		1,038,668		640,955	Georgia.....		165,572		214,979
New Hampshire and Vermont.....		712,551		473,913	Texas.....		155,026		182,695
New Jersey.....		10,225,430		8,353,296	Tennessee.....		111,776		137,406
New Mexico.....		234,218		206,914	California.....		126,892		221,243
New York.....		8,835,231		6,923,141	Maryland.....		86,643		1,806,800
North Carolina.....		3,238,249		1,447,994	Massachusetts.....		84,003		139,632



TABLE 12.—PRODUCTS: 1919 AND 1914—Continued.

[Reported by the Geological Survey.]

	1919		1914			1919		1914	
	Quantity.	Value.	Quantity.	Value.		Quantity.	Value.	Quantity.	Value.
<b>Common brick—Con.</b>	<i>Thousands.</i>		<i>Thousands.</i>			<i>Tons.</i>		<i>Tons.</i>	
Indiana.....	102,817	\$1,242,029	180,701	\$1,061,935	Drain tile.....	1,241,168	\$10,945,943	.....	\$8,522,039
Oklahoma.....	99,697	1,232,791	74,391	374,774	Iowa.....	335,587	3,127,378	.....	3,180,836
Alabama.....	86,465	1,183,917	110,731	638,606	Ohio.....	246,158	2,042,452	.....	1,589,565
Missouri.....	82,010	1,159,198	109,029	1,157,852	Indiana.....	249,300	1,885,218	.....	1,332,002
Arkansas.....	64,465	952,843	58,921	378,395	Illinois.....	154,194	1,203,530	.....	1,041,927
Wisconsin.....	71,904	947,124	115,056	799,109	Michigan.....	68,907	737,124	.....	421,941
Iowa.....	66,632	941,489	143,534	1,087,746	Minnesota.....	32,114	347,082	.....	143,104
South Carolina.....	67,331	935,482	89,143	505,839	Utah.....	10,775	170,320	.....	25,911
Mississippi.....	57,115	880,014	72,978	400,311	Wisconsin.....	17,527	143,899	.....	60,924
Nebraska.....	62,194	727,278	81,691	519,991	Tennessee.....	11,767	128,961	.....	48,551
Colorado.....	55,357	723,527	33,717	211,037	New York.....	11,269	113,859	.....	66,217
Louisiana.....	50,547	715,779	63,768	387,517	Kentucky.....	17,285	108,854	.....	51,845
Kansas.....	62,189	700,800	106,930	486,854	Missouri.....	10,218	90,163	.....	143,245
West Virginia.....	46,079	704,954	88,022	450,242	Colorado.....	8,669	90,000	.....	53,971
Kentucky.....	53,215	693,114	90,124	594,514	California.....	6,053	76,480	.....	30,284
Minnesota.....	56,010	655,024	132,688	883,791	Washington.....	7,291	57,509	.....	48,750
Washington.....	44,438	627,015	51,657	351,557	Oregon.....	4,110	41,527	.....	68,115
New Hampshire and Ver- mont.....	33,959	583,636	55,206	443,913	New Jersey.....	1,703	15,108	.....	31,043
Utah.....	29,270	411,096	33,493	270,564	Delaware and District of Columbia.....	1,074	9,509	.....	.....
Maine.....	19,530	322,546	39,961	311,924	Pennsylvania.....	1,005	8,005	.....	14,730
Delaware and District of Columbia.....	13,006	225,346	32,501	259,079	West Virginia.....	370	2,587	.....	3,733
Oregon.....	18,435	192,931	27,433	210,298	Other states.....	45,083	536,322	.....	165,455
Wyoming.....	10,581	189,985	4,733	50,656					
Idaho and Nevada.....	14,052	189,522	12,638	101,410	<b>Sewer pipe.....</b>	<b>1,155,131</b>	<b>10,754,832</b>	.....	<b>14,014,767</b>
Florida.....	16,067	185,135	41,901	230,377	Ohio.....	481,219	6,198,589	.....	4,691,719
Arizona.....	11,744	174,234	15,994	139,324	Missouri.....	142,038	2,036,278	.....	1,236,236
Montana.....	13,302	170,959	26,732	270,738	Pennsylvania.....	115,152	1,290,815	.....	940,384
New Mexico.....	13,059	149,006	11,148	94,570	Georgia.....	62,372	927,467	.....	647,733
North Dakota.....	7,672	85,703	16,857	140,784	Indiana.....	69,138	913,845	.....	589,683
South Dakota.....	4,419	65,667	6,178	52,404	Iowa.....	43,608	902,008	.....	553,751
					Illinois.....	47,833	821,002	.....	743,086
<b>Vitrified brick or block.....</b>	<b>489,242</b>	<b>11,615,144</b>	<b>631,324</b>	<b>12,500,866</b>	California.....	33,106	871,851	.....	959,193
For paving.....	392,526	9,371,763	631,324	12,500,866	Texas.....	27,796	594,774	.....	462,898
Ohio.....	104,972	2,423,685	293,381	3,682,230	Washington.....	13,823	430,198	.....	.....
Pennsylvania.....	62,899	1,490,303	151,200	2,052,676	New York.....	2,900	58,000	.....	(1)
Illinois.....	64,184	1,446,240	157,176	2,086,344	Delaware and District of Columbia.....	(1)	(1)	.....	.....
Kansas.....	26,431	714,164	50,707	594,229	Other states.....	111,056	1,850,005	.....	3,187,184
West Virginia.....	29,094	712,442	67,750	899,215					
Indiana.....	21,700	585,922	42,937	576,892	<b>Architectural terra cotta.....</b>	<b>3,988,182</b>	<b>.....</b>	.....	<b>6,087,652</b>
New York.....	9,365	252,948	31,240	515,672	New Jersey.....	.....	1,104,715	.....	1,620,791
Oklahoma.....	9,069	209,338	9,912	127,792	New York.....	.....	629,213	.....	889,468
Colorado.....	3,405	59,455	(1)	(1)	Missouri.....	.....	391,032	.....	478,006
California.....	524	12,871	1,800	39,705	California.....	.....	356,474	.....	535,735
Other states.....	60,883	1,463,805	125,221	1,926,111	Pennsylvania.....	.....	255,915	.....	362,348
Other purposes.....	96,716	2,243,381	(2)	(2)	Washington.....	.....	118,274	.....	220,788
Ohio.....	20,519	712,631	(2)	(2)	Colorado.....	.....	80,648	.....	(1)
Illinois.....	24,060	417,995	(2)	(2)	Indiana.....	.....	41,320	.....	(1)
Pennsylvania.....	3,305	185,159	(2)	(2)	Other states.....	.....	1,010,591	.....	1,980,516
New York.....	8,072	167,217	(2)	(2)					
Oklahoma.....	5,148	98,995	(2)	(2)	<b>Hollow building tile or block.....</b>	<b>2,329,217</b>	<b>17,964,573</b>	.....	<b>8,385,337</b>
Indiana.....	5,285	97,304	(2)	(2)	Ohio.....	664,744	4,755,610	.....	2,200,544
Kansas.....	6,530	94,670	(2)	(2)	Iowa.....	204,335	2,475,291	.....	1,033,397
Other states.....	29,799	469,320	(2)	(2)	Illinois.....	287,608	1,820,325	.....	567,266
					New Jersey.....	173,933	1,623,628	.....	1,599,295
<b>Face brick.....</b>	<b>791,068</b>	<b>16,033,059</b>	<b>810,395</b>	<b>9,289,623</b>	Indiana.....	199,922	1,555,859	.....	823,462
Pennsylvania.....	190,309	4,012,728	219,923	2,402,361	Pennsylvania.....	175,780	1,247,311	.....	494,175
Ohio.....	148,747	2,937,282	188,074	1,944,486	Minnesota.....	70,300	527,241	.....	123,911
Illinois.....	104,090	1,892,407	46,905	506,984	Kansas.....	60,873	501,068	.....	88,427
Indiana.....	67,817	1,234,000	80,349	799,520	California.....	54,166	444,290	.....	223,071
Missouri.....	32,278	762,470	27,692	411,193	Texas.....	45,680	438,601	.....	145,830
Texas.....	25,767	659,935	18,450	249,611	Missouri.....	44,889	361,555	.....	168,053
New Jersey.....	24,611	605,764	23,640	377,779	Alabama.....	31,708	293,111	.....	(1)
Kansas.....	30,429	531,298	31,079	271,104	Nebraska.....	33,025	275,706	.....	67,580
Iowa.....	20,603	449,491	11,183	148,394	New York.....	20,856	182,425	.....	161,725
Colorado.....	16,011	288,669	10,642	133,068	Washington.....	15,114	136,609	.....	127,371
Tennessee.....	11,533	244,374	18,594	190,893	Montana.....	18,437	113,063	.....	(1)
Georgia.....	11,517	208,095	7,475	77,721	Oregon.....	11,645	107,750	.....	38,353
California.....	7,088	191,162	10,759	226,268	Colorado.....	22,586	100,641	.....	(1)
Utah.....	7,790	166,451	14,742	189,131	West Virginia.....	5,485	38,135	.....	(1)
Oklahoma.....	8,114	145,545	2,729	25,641	Tennessee.....	2,841	27,795	.....	(1)
Wisconsin.....	6,447	104,444	8,388	78,766	Other states.....	110,486	900,480	.....	472,871
Washington.....	3,528	91,947	5,319	109,197					
West Virginia.....	4,297	80,586	2,354	37,114	<b>Tile (not drain).....</b>	<b>Squares.</b>	<b>8,137,452</b>	.....	<b>5,705,583</b>
Idaho and Nevada.....	2,650	67,068	.....	.....	Roofing.....	94,148	1,283,901	.....	.....
New York.....	2,709	48,457	5,810	59,639	Kansas.....	20,636	315,593	.....	.....
Other states.....	64,133	1,334,877	76,198	1,051,353	California.....	7,061	154,035	.....	.....
					Other states.....	66,451	814,273	.....	.....
<b>Fancy or ornamental brick— Colorado, Ohio, Connecti- cut, Virginia, and Kansas..</b>	<b>2,198</b>	<b>77,879</b>	.....	<b>1,199,485</b>					
<b>Enameled brick.....</b>	<b>14,166</b>	<b>846,676</b>	.....	<b>(1)</b>					
California.....	1,254	89,052	.....	.....					
Other states.....	12,912	757,624	.....	.....					

¹ Included in "Other states."

² Not reported separately; included above.

## MANUFACTURES.

TABLE 12.—PRODUCTS: 1919 AND 1914—Continued.

[Reported by the Geological Survey.]

	1919		1914			1919		1914	
	Quantity.	Value.	Quantity.	Value.		Quantity.	Value.	Quantity.	Value.
Tile (not drain)—Con.	<i>Sq. ft.</i>		<i>Sq. ft.</i>		Fire brick—Con.	<i>Thousands.</i>		<i>Thousands.</i>	
Floor.....	7,790,967	\$1,535,287			Washington.....	3,889	\$153,170	1,054	\$29,869
Ohio.....	2,298,344	570,627			Massachusetts.....	1,585	95,898	2,084	74,736
New Jersey.....	1,469,765	310,370			Georgia.....	4,030	91,411	(1)	(1)
Indiana.....	982,655	215,582			Michigan.....	1,242	89,147		
California.....	187,605	53,215			Tennessee.....	2,348	64,029	1,087	19,717
Other states.....	2,852,598	385,493			Montana.....	938	46,412	1,226	50,517
Ceramic mosaic.....	7,471,767	1,824,372			New Mexico.....	1,056	34,931		
Ohio.....	2,258,018	565,220			Other states.....	8,788	461,190	145,986	3,220,742
New Jersey.....	2,224,840	542,638			Silica brick.....	211,420	10,914,898	(2)	(2)
Indiana.....	968,350	242,087			Pennsylvania.....	160,058	7,842,316	(2)	(2)
California.....	389,918	95,649			Washington.....	443	30,172	(2)	(2)
Other states.....	1,630,641	378,878			Other states.....	50,919	3,042,410	(2)	(2)
Falence.....	1,550,121	881,241			All other brick and tile products.....		8,840,492		3,165,810
Ohio.....	729,717	461,048			Pennsylvania.....		2,390,609		786,675
New Jersey.....	321,102	174,838			Ohio.....		2,299,054		552,816
California.....	76,717	48,849			Indiana.....		821,339		426,220
Indiana.....	62,000	32,240			Oklahoma.....		503,460		258,107
Other states.....	360,585	164,766			Illinois.....		493,721		274,359
Wall.....	7,495,618	2,612,651			Missouri.....		274,075		86,845
Ohio.....	2,450,396	833,013			California.....		289,179		90,482
New Jersey.....	1,988,206	652,205			New Jersey.....		245,171		244,601
Indiana.....	1,327,476	500,815			Texas.....		241,922		45,008
California.....	266,630	139,480			West Virginia.....		214,679		24,848
Other states.....	1,462,850	487,138			Kansas.....		210,021		122,954
Stove lining.....		683,844		\$520,585	Arkansas.....		152,577		
Massachusetts.....		208,979		159,924	Colorado.....		141,946		113,252
Pennsylvania.....		165,530		129,419	Minnesota.....		92,053		
Maryland.....		35,925		21,393	New York.....		86,688		
Missouri.....		13,774		(1)	Michigan.....		75,150		35,000
Washington.....		3,472			Maine.....		47,481		924
Other states.....		250,104		209,849	Tennessee.....		43,056		
Fire brick.....	<i>Thousands.</i>		<i>Thousands.</i>		Kentucky.....		4,260		11,615
	963,439	38,015,792	816,784	16,427,547	Washington.....		36,055		27,872
Pennsylvania.....	394,154	16,236,155	298,183	5,774,677	Iowa.....		31,975		40,146
Missouri.....	126,574	5,121,077	76,177	1,554,431	Maryland.....		20,165		
Ohio.....	154,922	4,958,219	102,735	1,833,740	Georgia.....		27,319		
Kentucky.....	100,165	3,841,458	58,780	1,075,158	Louisiana.....		27,257		17,596
New Jersey.....	28,710	2,018,624	34,545	897,442	Massachusetts.....		20,259		
New York.....	10,595	782,009	7,797	321,048	Other states.....		34,521		36,490
California.....	19,654	743,117	13,560	358,526					
Illinois.....	19,269	732,114	15,416	274,106					
Maryland.....	15,256	671,532	12,448	243,043					
West Virginia.....	31,801	624,080	17,796	146,668					
Colorado.....	14,908	483,517	10,606	209,368					
Alabama.....	10,162	373,836	8,721	107,021					
Texas.....	7,009	199,820	4,860	82,838					
Indiana.....	6,318	194,046	3,723	93,900					

<sup>1</sup> Included in "Other states."<sup>2</sup> Not reported separately.

## GENERAL TABLES.

Table 13 gives the comparative statistics for the principal items, number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products, for the census years 1919 and 1914. Table 14 is a detailed statement, by states, for the census of 1919.

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

STATE.	Cen- sus year.	Num- ber of estab- lish- ments	Wage earners (aver- age num- ber).	Primary horse- power.	Expressed in thousands.			STATE.	Cen- sus year.	Num- ber of estab- lish- ments	Wage earners (aver- age num- ber).	Primary horse- power.	Expressed in thousands.		
					Wages.	Cost of mate- rials.	Value of prod- ucts.						Wages.	Cost of mate- rials.	Value of prod- ucts.
United States.....	1919 1914	2,414 3,239	76,915 100,182	405,746 442,813	\$78,256 \$4,907	\$67,488 42,723	\$208,423 135,921	Montana.....	1919 1914	14 17	145 191	2,139 1,488	\$194 183	\$200 150	\$505 474
Alabama.....	1919 1914	42 51	1,359 1,599	6,010 6,373	974 579	1,034 560	3,038 1,622	Nebraska.....	1919 1914	29 44	402 459	2,631 3,577	479 303	240 169	1,035 644
Arizona.....	1919 1914	13 12	99 96	178 300	102 71	56 39	188 176	New Hampshire.....	1919 1914	9 21	169 345	456 641	208 192	105 114	465 417
Arkansas.....	1919 1914	21 26	354 395	2,052 2,323	369 101	308 126	1,074 461	New Jersey.....	1919 1914	67 90	3,544 7,786	17,523 19,103	3,859 3,984	2,778 2,423	10,127 8,820
California.....	1919 1914	60 72	1,747 2,387	11,557 12,463	1,884 1,704	1,824 1,355	5,211 4,319	New York.....	1919 1914	118 171	3,246 5,776	20,228 26,467	3,503 3,009	2,240 1,774	8,813 6,207
Colorado.....	1919 1914	43 41	812 561	4,595 3,559	864 376	774 396	2,505 1,127	North Carolina.....	1919 1914	95 127	1,333 1,601	6,503 7,959	1,045 502	1,000 493	3,212 1,507
Delaware.....	1919 1914	11 13	85 159	661 707	98 74	73 47	223 173	North Dakota.....	1919 1914	5 9	140 171	901 1,728	157 101	81 59	309 270
Florida.....	1919 1914	11 14	153 222	805 1,320	71 84	54 94	181 288	Ohio.....	1919 1914	341 450	12,060 16,238	63,763 67,161	12,931 9,793	9,991 7,203	32,173 23,376
Georgia.....	1919 1914	47 53	1,617 1,875	6,573 9,741	1,194 739	1,277 823	3,734 2,394	Oklahoma.....	1919 1914	22 23	623 402	4,452 3,231	581 217	643 129	1,679 496
Idaho.....	1919 1914	12 10	109 73	764 763	132 44	72 22	303 95	Oregon.....	1919 1914	23 42	152 352	1,166 2,894	165 201	92 165	389 521
Illinois.....	1919 1914	144 219	5,627 7,151	40,098 42,397	6,502 5,219	4,830 3,001	17,564 12,434	Pennsylvania.....	1919 1914	303 356	15,597 17,412	69,211 99,310	16,155 8,869	16,512 8,032	43,842 22,731
Indiana.....	1919 1914	151 213	3,648 4,659	20,883 28,643	3,519 2,647	3,437 2,316	9,881 7,218	South Carolina.....	1919 1914	23 31	566 696	2,107 2,950	387 200	457 238	1,150 579
Iowa.....	1919 1914	113 158	2,452 3,163	18,335 20,081	2,994 2,169	2,639 2,021	8,127 6,400	South Dakota.....	1919 1914	3 3	23 26	244 285	23 15	21 16	64 38
Kansas.....	1919 1914	29 29	1,136 1,216	8,472 7,239	1,222 723	1,199 635	3,407 1,953	Tennessee.....	1919 1914	46 72	1,265 1,640	4,377 4,892	983 704	832 505	2,783 1,633
Kentucky.....	1919 1914	47 69	2,349 2,234	7,807 7,297	2,002 860	2,004 730	5,686 2,203	Texas.....	1919 1914	58 70	1,663 1,765	9,093 8,738	1,336 778	1,331 916	4,167 2,316
Louisiana.....	1919 1914	18 31	434 583	1,881 2,339	337 171	207 114	741 396	Utah.....	1919 1914	21 27	440 438	1,467 2,646	416 280	244 123	1,144 625
Maine.....	1919 1914	19 37	254 467	1,188 1,277	278 308	259 316	704 741	Virginia.....	1919 1914	45 64	1,331 1,663	3,967 5,852	1,085 614	850 513	2,738 1,493
Maryland.....	1919 1914	30 41	1,207 1,721	6,147 6,268	1,099 720	1,113 498	3,207 1,645	Washington.....	1919 1914	35 40	664 962	5,291 6,404	789 626	555 520	1,783 2,027
Massachusetts.....	1919 1914	35 46	739 1,124	3,026 3,378	816 680	524 417	1,818 1,450	West Virginia.....	1919 1914	36 40	1,032 1,451	8,649 7,245	1,053 1,088	785 563	2,316 1,977
Michigan.....	1919 1914	48 84	852 1,719	6,047 9,794	1,181 960	818 836	3,339 2,474	Wisconsin.....	1919 1914	50 72	414 828	3,807 3,821	397 417	390 301	1,241 1,114
Minnesota.....	1919 1914	34 61	799 1,215	5,224 7,664	834 704	809 749	2,293 2,152	Wyoming.....	1919 1914	10 7	46 47	644 187	74 28	42 12	195 55
Mississippi.....	1919 1914	28 38	472 551	1,702 2,435	365 198	202 188	925 513	All other states.....	1919 1914	40 50	974 1,485	4,986 6,056	1,113 778	549 408	2,605 1,778
Missouri.....	1919 1914	65 90	4,469 5,188	15,132 14,747	4,486 2,771	3,913 1,995	11,456 6,509								

## MANUFACTURES.

TABLE 14.—DETAILED STATEMENT,

STATE.		Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.  <i>Dollars.</i>
			Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.				
						Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.	Female.			
									Maximum month.	Minimum month.								
1	United States.....	2,414	86,503	1,649	4,350	2,446	1,143	76,915	Au 90,929	Fe 55,866	88,099	86,280	1,290	505	15	355,848,355		
2	Alabama.....	42	1,493	29	67	23	15	1,359	Oc 1,427	Ap 1,296	1,489	1,474	6	9	.....	4,180,012		
3	Arizona.....	13	113	12	2	.....	.....	99	Jy 149	Ja 35	128	128	.....	.....	.....	249,261		
4	Arkansas.....	21	413	15	29	5	10	354	Au 476	Ja 167	444	441	.....	3	.....	1,027,054		
5	California.....	60	1,994	25	112	72	38	1,747	De 2,124	Ja 1,218	2,287	2,232	41	14	.....	9,542,010		
6	Colorado.....	43	929	29	55	21	12	812	Au 1,000	Ja 465	931	924	6	.....	1	2,019,940		
7	Connecticut.....	30	945	19	61	22	8	835	Jy 1,149	Ja 393	825	820	2	3	.....	3,172,974		
8	Delaware.....	11	101	9	6	1	.....	85	Je 123	Ja 40	124	124	.....	.....	.....	395,700		
9	Florida.....	11	182	17	9	.....	.....	156	Oc 169	Ja 139	155	154	.....	1	.....	242,601		
10	Georgia.....	47	1,803	22	103	42	19	1,617	Oc 1,872	Ja 1,217	1,855	1,839	9	7	.....	5,143,631		
11	Idaho.....	12	130	7	9	3	2	109	Je 184	Fe 43	110	110	.....	.....	.....	341,444		
12	Illinois.....	144	6,471	110	399	237	98	5,627	Oc 7,443	Ja 3,239	6,932	6,917	8	7	.....	33,419,279		
13	Indiana.....	151	4,132	111	211	112	50	3,648	Se 4,495	Ja 2,448	4,286	4,096	179	11	.....	15,992,617		
14	Iowa.....	113	2,854	97	167	106	32	2,452	Au 3,199	Ja 1,104	2,768	2,768	3	7	.....	13,959,909		
15	Kansas.....	29	1,267	8	60	43	20	1,136	Au 1,400	Ja 630	1,324	1,322	2	.....	.....	4,242,497		
16	Kentucky.....	47	2,596	29	128	58	32	2,349	Se 2,747	Fe 1,981	2,389	2,321	48	20	.....	7,596,108		
17	Louisiana.....	18	506	10	23	22	12	434	So 549	Fe 209	555	543	.....	12	.....	1,031,143		
18	Maine.....	19	300	12	20	9	5	254	Au 409	Ja 108	290	290	.....	.....	.....	1,188,867		
19	Maryland.....	30	1,341	12	75	29	18	1,207	Au 1,400	Ja 943	1,308	1,285	.....	23	.....	7,518,743		
20	Massachusetts.....	35	830	18	45	19	9	739	Au 1,116	Mh 326	899	890	.....	9	.....	2,467,083		
21	Michigan.....	48	972	43	48	14	15	852	Je 1,082	Ja 498	973	963	1	9	.....	4,359,383		
22	Minnesota.....	34	929	27	54	32	17	799	Au 1,150	Ja 348	1,041	1,018	.....	23	.....	4,800,734		
23	Mississippi.....	28	547	37	33	1	4	472	Au 612	Ja 335	606	588	.....	18	.....	1,230,183		
24	Missouri.....	65	5,017	29	180	248	85	4,409	Oc 5,292	Ja 3,452	4,947	4,934	9	4	.....	19,777,479		
25	Montana.....	14	180	9	16	9	1	145	Jy 261	Fe 68	155	154	1	.....	.....	989,367		
26	Nebraska.....	29	487	39	34	9	3	402	Au 627	Ja 100	543	536	1	6	.....	1,576,553		
27	New Hampshire.....	9	197	6	13	6	3	169	My 335	Ja 42	163	160	1	2	.....	361,688		
28	New Jersey.....	67	3,963	25	198	130	66	3,544	Oc 4,429	Fe 2,190	4,358	4,075	266	9	8	18,720,986		
29	New York.....	118	3,620	80	187	68	39	3,246	Jy 4,606	Fe 1,264	4,045	4,031	14	.....	.....	16,775,766		
30	North Carolina.....	95	1,540	102	84	13	3	1,338	Au 1,799	Ja 752	1,718	1,670	.....	48	.....	2,431,556		
31	North Dakota.....	5	152	3	6	1	2	140	Jy 208	Ja 114	114	102	1	11	.....	217,551		
32	Ohio.....	341	13,548	239	615	404	280	12,060	Se 13,817	Ja 9,433	13,230	12,072	497	61	.....	64,371,925		
33	Oklahoma.....	22	705	7	38	23	9	628	Au 758	Ja 346	716	715	1	.....	.....	1,906,508		
34	Oregon.....	23	187	22	11	1	1	152	Au 275	Ja 27	285	281	1	3	.....	1,034,650		
35	Pennsylvania.....	303	17,438	144	738	467	192	15,897	Se 17,046	Mh 14,637	17,034	16,769	126	133	6	74,250,630		
36	South Carolina.....	23	625	21	32	4	2	566	Se 733	Fe 402	589	581	1	7	.....	1,655,526		
37	South Dakota.....	3	29	.....	4	2	.....	23	Je 39	Ja 3	27	27	.....	.....	.....	127,000		
38	Tennessee.....	46	1,424	39	64	41	15	1,265	Au 1,679	Fe 811	1,526	1,508	.....	18	.....	3,245,685		
39	Texas.....	58	1,905	24	125	71	22	1,668	Au 2,059	Ja 1,079	1,900	1,891	7	2	.....	6,682,576		
40	Utah.....	21	505	26	20	5	5	440	Au 594	Ja 261	474	466	1	7	.....	2,134,865		
41	Virginia.....	45	1,471	38	72	19	11	1,331	Se 1,663	Ja 899	1,592	1,592	.....	.....	.....	2,580,290		
42	Washington.....	35	771	20	59	19	9	664	Jy 837	Fe 386	821	815	1	5	.....	4,649,919		
43	West Virginia.....	36	1,151	6	67	26	20	1,032	Jy 1,198	Ja 788	1,164	1,107	56	1	.....	4,266,908		
44	Wisconsin.....	50	512	54	32	6	6	414	Je 738	Ja 94	661	651	1	9	.....	1,804,890		
45	Wyoming.....	10	60	8	4	2	.....	46	Je 77	Fe 5	105	103	.....	2	.....	227,090		
46	All other states.....	10	168	10	15	1	3	139	.....	.....	207	206	.....	1	.....	1,036,809		

<sup>1</sup> Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

<sup>2</sup> Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

## BRICK AND TILE, TERRA-COTTA, AND FIRE-CLAY PRODUCTS.

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BY STATES: 1919.

EXPENSES.									POWER.								
Salaries and wages.				For contract work.	Rent and taxes.		For materials.		Value of products.	Value added by manufacture.	Primary horsepower.					Electric horsepower generated in establishments reporting.	
Officials.	Clerks, etc.	Wage earners.	Rent of factory.		Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Total.			Owned.						
											Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. <sup>1</sup>	Rent- <sup>2</sup>		
Dollars. 10,989,977	Dollars. 4,850,930	Dollars. 78,250,085	Dollars. 528,613	Dollars. 425,073	Dollars. 4,808,971	Dollars. 33,084,160	Dollars. 34,403,953	Dollars. 208,422,920	Dollars. 140,934,807	405,746	277,574	4,241	17,456	40	103,435	27,508	1
153,910	49,431	973,824	8,500	4,022	37,181	450,078	583,769	3,088,485	2,054,038	6,016	4,318	60	17		1,621	222	2
1,200		101,530	130	450	1,093	9,795	45,848	188,034	132,391	178					178		3
78,185	10,164	309,039		300	18,025	124,541	183,894	1,073,989	765,534	2,052	1,927		85		40	76	4
316,701	160,714	1,884,457	10,045	8,206	105,862	895,402	929,049	5,211,390	3,389,939	11,557	3,550	150	92		7,765	10	5
112,668	34,635	803,878	47,790	5,992	55,243	388,856	384,937	2,504,658	1,730,895	4,595	3,180		10		1,405	111	6
160,158	31,538	989,102	5,164	8,029	43,618	178,514	284,979	2,294,001	1,830,508	3,814			82		2,162		7
9,480	260	97,870		1,520	1,524	34,848	33,004	222,740	149,888	661	1,570				125		8
9,677		71,304		1,270	1,048	11,971	42,046	181,430	127,413	805	617	120	68				9
289,609	84,924	1,193,593	1,200	1,479	90,508	480,563	790,506	3,733,823	2,456,754	9,573	5,202		51		4,320	30	10
23,555	4,846	132,221	8,976	1,471	1,708	23,064	47,866	302,987	231,457	764	60				704		11
1,057,112	459,003	6,502,174	17,604	20,755	337,817	1,905,904	2,923,932	17,564,017	12,734,181	40,098	28,913	363	332		10,490	4,745	12
417,252	235,505	3,510,367	48,448	8,569	244,286	1,805,657	1,631,511	9,880,579	6,443,611	20,883	16,225		207		4,451	994	13
365,455	184,193	2,994,261	25,489	21,768	97,465	945,135	1,094,077	8,127,157	5,487,945	18,335	10,823	280	451		6,781	586	14
163,882	81,810	1,222,475	8,144	2,480	70,237	410,879	787,948	3,407,010	2,208,192	8,472	4,147	150	2,481		1,694	150	15
333,909	144,295	2,002,074	200	600	169,776	1,165,238	848,809	5,686,473	3,682,426	7,807	6,991	200	72		484	2,513	16
61,485	16,287	336,825		9,830	20,539	30,245	167,475	740,610	533,890	1,881	1,411	100	83		287	20	17
42,205	15,189	277,655	1,200	642	16,497	134,501	124,235	704,484	445,058	1,186	675		38		473	688	18
171,034	45,789	1,099,219	329	2,011	55,272	680,971	425,566	3,207,465	2,094,928	6,147	4,547				1,600	10	19
105,330	40,079	815,617	54,550	21,741	35,972	234,461	290,027	1,817,512	1,293,024	3,026	1,492		60		1,465	15	20
159,029	36,256	1,100,074	9,010	3,619	87,031	189,406	628,508	3,330,381	2,521,407	6,047	5,884		90		73	7	21
124,810	55,333	834,062	73	8,000	51,682	306,206	503,112	2,293,396	1,484,078	5,224	3,270	370	67		1,517	545	22
55,745	14,418	364,947		160	10,055	116,570	175,222	925,222	633,430	1,702	1,680		22				23
579,731	440,051	4,485,883	1,125	12,470	209,320	2,211,031	1,707,005	11,455,779	7,537,743	15,132	12,027		210		2,895	2,288	24
36,064	15,339	194,459	393	1,135	13,212	115,608	84,814	505,053	305,131	2,139	360				1,779	25	25
90,603	16,795	470,068	6,022	4,425	22,698	78,579	161,892	1,065,264	824,793	2,031	2,031	80	135		385	65	26
34,290	13,481	207,631		4,609	4,300	19,850	85,554	465,204	359,890	456	315		41		100		27
533,370	282,958	3,859,313		49,013	209,447	1,631,337	1,146,904	10,127,176	7,348,935	17,523	12,897	80	458		4,088	2,179	28
452,441	121,060	3,503,190	44,721	64,491	173,411	1,194,799	1,044,604	8,813,281	6,573,818	20,228	15,695		910		3,623	1,125	29
185,596	11,884	1,044,585	4,000	5,614	91,894	287,129	718,495	3,211,892	2,208,268	6,503	4,871	125	150		1,357		30
12,650	5,617	156,596	2,133	10,675	6,448	21,513	59,707	308,550	227,330	901	600	300	1				31
1,583,812	804,322	12,931,241	97,032	38,430	863,983	4,577,945	5,382,726	32,172,579	22,211,005	63,763	49,023	390	4,003		10,347	5,818	32
109,260	87,936	580,875		365	29,189	235,176	403,264	1,679,129	1,035,686	4,452	3,400				489	1,005	33
23,689	2,969	105,424	1,983	180	9,242	26,581	65,139	385,581	293,861	1,166	556		10		600	20	34
2,052,499	1,019,954	16,155,084	99,960	70,986	1,040,786	10,164,224	6,347,407	43,842,120	27,330,489	69,211	37,576	1,395	5,673		24,567	2,705	35
77,453	5,600	386,726	100	3,200	16,382	174,415	282,717	1,155,681	698,549	2,107	1,660		21		420		36
5,740	720	22,627			444	1,500	19,427		63,571	244	215		4		25		37
125,643	67,089	983,038	12,164	1,215	88,991	365,867	516,085	2,782,669	1,900,717	4,377	3,700	13	29		635	143	38
255,397	121,330	1,335,884	18,190	3,139	173,866	428,738	905,816	4,160,571	2,832,517	9,093	8,001	5	206		881	250	39
75,254	10,949	416,586	422	2,673	17,614	110,743	133,501	1,144,021	892,777	1,467	45				1,422	215	40
166,940	35,691	1,085,271	2,650	1,985	47,230	268,381	582,106	2,738,298	1,887,811	3,067	3,551		60		356	40	41
133,480	34,805	789,328	1,250	7,450	39,066	185,384	369,834	1,782,566	1,227,348	5,291	3,384		10		1,897	390	42
144,123	67,040	1,052,811		667	31,573	307,777	477,600	2,316,288	1,530,911	8,649	6,984		632		1,033	460	43
58,325	17,708	396,972	19,026	7,203	17,428	125,213	264,436	1,240,805	850,952	3,807	2,510		79	40	1,178	85	44
8,600	3,865	74,468		1,236	2,119	3,133	30,278	104,851	152,440	644	160		2		482		45
33,060	4,020	123,818		700	8,651	20,737	64,459	311,361	226,165	1,172	935		2		235		46

<sup>1</sup> Same number reported for one or more other months.<sup>2</sup> All other states embrace: District of Columbia, 2 establishments; Nevada, 1; New Mexico, 6; and Vermont, 1.

# POTTERY.

## GENERAL STATISTICS.

**General character of the industry.**—This branch of the clay products industries embraces the establishments engaged primarily in the manufacture of pottery, comprising stoneware, earthenware, porcelain ware, china of various kinds, sanitary earthenware, and allied products. The general statistics for the industry in 1919 and 1914 have been given in Table 2 in comparison with those for the brick and tile branch of the clay products industries.

**Principal states, ranked by value of products.**—Table 15 shows the number of wage earners, value of products, and value added by manufacture, by states, ranked according to the value of products in 1919.

**Persons engaged in the industry.**—The age classification of the average number of wage earners in Table 16 is an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 26. Figures for 1909 are not given in Table 16 on account of a change in the basis of segregation of the pottery and of the brick and tile establishments, though given in Table 4 for the brick and tile industry.

**Wage earners, by months.**—The statistics for wage earners, Table 17, are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions existing during the year. The wage earners include a considerable proportion of females, namely, 25.4 per cent in 1919 for the industry as a whole. In the leading states, those employing more than 500 wage earners, the percentage of female wage earners employed ranged from 13.1 per cent in Indiana to 41.2 per cent in Michigan.

**Prevailing hours of labor.**—The figures given in Table 18 show that the movement toward shorter hours of labor per week is not as marked as in the other branch of the clay products industries. In 1919 the number of wage earners employed in establishments where the prevailing hours of labor

per week were 60 and over constitute 11.2 per cent of the total number, compared with 10 per cent in 1914; and 25.3 per cent of the total number in 1919 were employed in establishments where the prevailing hours of labor were 48 per week or less as compared with 23.2 per cent in 1914.

**Size of establishments, by average number of wage earners.**—The pottery industry, Table 19, is one of larger units than the brick and tile branch, the average number of wage earners per establishment being 82 in 1919 and 76 in 1914. In 1919 the establishments employing over 250 wage earners reported 33 per cent of the total number, and in 1914, 42 per cent.

**Size of establishments, by value of products.**—The classification by value of products, as shown in Table 20, necessarily reflects the general increase in value. The average value of products per establishment increased from \$106,000 in 1914 to \$220,000 in 1919, but this increase is essentially due to high prices, and hence the changes from lower to higher groups.

**Character of ownership.**—Table 21 presents the statistics for establishments classified according to form of ownership. The "Corporations" group employed 93.7 per cent of the wage earners in 1919 and 94.4 per cent in 1914, and reported 94.8 per cent of the products for both 1919 and 1914.

**Number and horsepower of types of prime movers.**—Table 22 presents the power statistics for the industry. Electric power is employed quite extensively, either purchased or generated at the plants. Of the total primary power, 48.6 per cent was utilized as electric power in 1919, this including electric motor equipment operated with purchased current, specified as rented, and secondary or that generated by the establishment. In 1914 the total ratio of electric power to primary power, was 28.4 per cent, and in 1909, 9.7 per cent.

**Fuel consumed.**—Table 23 presents the statistics for fuel, by kinds and by states. The figures for gas include both natural and manufactured gas.

TABLE 15.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.				STATE.	Number of establishments.	WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
		Average number.	Per cent distribution.	Rank.		Amount (expressed in thousands).	Per cent distribution.	Rank.		Amount (expressed in thousands).	Per cent distribution.	Rank.				Average number.	Per cent distribution.	Rank.		Amount (expressed in thousands).	Per cent distribution.	Rank.		Amount (expressed in thousands).	Per cent distribution.	Rank.	
United States..	340	27,934	100.0	....		\$74,910	100.0	....		\$54,125	100.0	...		Massachusetts.....	8	149	0.5	13		\$368	0.5	12		\$255	0.5	13	
Ohio.....	95	11,339	40.6	1		28,675	38.3	1		19,663	36.3	1		Kentucky.....	5	105	0.4	15		208	0.3	15		140	0.3	16	
New Jersey.....	53	5,717	20.5	2		16,226	21.7	2		12,045	23.4	2		Colorado.....	5	95	0.3	16		200	0.3	16		160	0.3	17	
West Virginia.....	18	3,445	12.3	3		10,112	13.6	3		7,074	13.1	3		Texas.....	10	40	0.2	17		99	0.1	17		72	0.1	17	
New York.....	14	1,858	6.7	5		4,726	6.3	4		3,644	6.7	4		Alabama.....	10	8	( <sup>1</sup> )	26		33	0.1	21		26	0.1	21	
Pennsylvania.....	22	1,868	6.7	4		4,565	6.1	5		3,212	5.9	5		Washington.....	3	10	( <sup>1</sup> )	24		28	( <sup>1</sup> )	23		18	( <sup>1</sup> )	23	
Indiana.....	8	747	2.7	6		2,624	3.5	6		1,846	3.4	6		Mississippi.....	4	11	( <sup>1</sup> )	23		25	( <sup>1</sup> )	24		15	( <sup>1</sup> )	26	
Michigan.....	8	708	2.5	7		2,113	2.8	7		1,571	2.9	7		Georgia.....	15	8	( <sup>1</sup> )	27		22	( <sup>1</sup> )	25		17	( <sup>1</sup> )	24	
Illinois.....	14	652	2.4	8		1,852	2.5	8		1,463	2.7	8		North Carolina.....	10	7	( <sup>1</sup> )	29		15	( <sup>1</sup> )	29		12	( <sup>1</sup> )	29	
California.....	10	296	1.1	9		849	1.1	9		591	1.1	10		South Carolina.....	3	5	( <sup>1</sup> )	31		13	( <sup>1</sup> )	31		8	( <sup>1</sup> )	32	
Maryland.....	4	246	0.9	10		497	0.7	11		350	0.7	11		All other states.....	23	620	2.2	....		1,069	2.2	....		1,337	2.5	...	

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

TABLE 16.—PERSONS ENGAGED IN THE INDUSTRY: 1919 AND 1914.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.		CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.	
					Male.	Female.						Male.	Female.
All classes.....	1919	30,692	22,925	7,767	74.7	25.3	Clerks and other subordinates salaried employees.....	1919	1,369	748	621	54.0	45.4
	1914	28,758	22,238	6,520	77.3	22.7		1914	1,049	695	354	66.3	33.7
Proprietors and officials.....	1919	1,389	1,340	49	96.5	3.5	Wage earners (average number).....	1919	27,934	20,837	7,097	74.0	25.4
	1914	1,004	966	38	96.2	3.8		1914	26,705	20,577	6,128	77.1	22.9
Proprietors and firm members.....	1919	183	172	11	94.0	6.0	16 years of age and over.....	1919	27,584	20,608	6,976	74.7	25.3
	1914	212	205	7	96.7	3.3		1914	26,424	20,411	6,013	77.2	22.8
Salaried officers of corporations.....	1919	400	387	13	96.8	3.2	Under 16 years of age.....	1919	350	229	121	65.4	34.6
	1914	294	281	13	95.6	4.4		1914	281	160	115	59.1	40.9
Superintendents and managers.....	1919	806	781	25	96.9	3.1							
	1914	498	480	18	96.4	3.6							

TABLE 17.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

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

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	27,934	26,431	<b>26,106</b>	26,267	26,638	26,909	27,294	28,023	28,689	28,830	29,038	30,041	30,342	86.0
Males.....	20,837	19,680	<b>19,441</b>	19,567	19,837	19,970	20,326	21,009	21,455	21,553	22,094	22,437	22,685	85.7
Females.....	7,097	6,771	<b>6,665</b>	6,710	6,801	6,939	6,968	7,014	7,234	7,277	7,544	7,594	7,657	93.6
1914.....	26,705	26,034	26,732	27,240	27,301	27,099	26,668	<b>26,666</b>	26,754	26,963	27,188	26,737	26,179	93.6
Alabama.....	8	<b>5</b>	<i>6</i>	8	8	8	10	9	9	9	9	9	7	50.0
California.....	290	306	307	297	284	267	<b>291</b>	286	296	303	309	313	323	80.8
Colorado.....	95	97	91	90	85	<b>84</b>	86	87	95	96	112	119	94	68.0
Georgia.....	8	<b>2</b>	<i>5</i>	5	5	4	4	4	8	9	16	20	14	10.0
Illinois.....	652	755	750	756	774	700	651	693	<b>459</b>	462	542	605	677	59.3
Indiana.....	747	<b>695</b>	706	714	727	726	747	755	795	796	796	699	810	87.3
Kentucky.....	105	100	<b>97</b>	109	105	104	108	104	112	111	104	102	104	86.6
Maryland.....	246	255	231	<b>228</b>	239	241	257	245	246	246	252	254	259	88.4
Massachusetts.....	149	139	142	140	<b>138</b>	139	150	150	155	155	161	162	157	85.2
Michigan.....	708	865	721	674	713	743	<b>648</b>	700	658	679	693	673	724	74.9
Mississippi.....	11	11	11	11	11	11	11	11	11	11	11	11	11	.....
New Jersey.....	5,717	5,196	<b>4,973</b>	4,953	4,988	5,190	5,431	5,722	6,124	6,214	6,446	6,598	6,784	73.3
New York.....	1,858	<b>1,671</b>	1,686	1,707	1,831	1,831	1,859	1,894	1,931	1,948	1,966	2,016	1,997	82.9
North Carolina.....	7	<b>5</b>	<i>6</i>	6	6	7	7	5	10	10	10	7	6	50.0
Ohio.....	11,339	<b>10,698</b>	10,728	10,926	11,074	11,163	11,171	11,301	11,697	11,596	11,894	11,991	11,929	89.2
Pennsylvania.....	1,868	1,700	<b>1,758</b>	1,758	1,819	1,784	1,836	1,897	1,950	1,933	1,998	1,975	1,964	87.7
South Carolina.....	5	<b>1</b>	<i>1</i>	4	6	6	7	7	7	7	7	6	1	14.3
Texas.....	40	<b>23</b>	27	32	34	37	53	62	54	46	28	38	47	35.5
Washington.....	10	<b>2</b>	<i>2</i>	2	1	1	14	15	17	17	15	18	16	5.6
West Virginia.....	3,445	<b>3,271</b>	3,285	3,316	3,313	3,313	3,395	3,421	3,448	3,511	3,604	3,714	3,748	87.3
States showing large proportion of females.														Per ct. av. is of state.
Illinois.....	108	105	101	99	100	94	101	112	97	97	127	127	136	16.6
Indiana.....	98	97	<b>97</b>	97	98	98	99	98	99	98	98	98	98	13.1
Michigan.....	292	400	308	301	312	353	273	250	<b>240</b>	312	250	319	319	41.2
New Jersey.....	1,155	1,065	1,006	1,011	<b>994</b>	1,063	1,108	1,142	1,223	1,221	1,302	1,351	1,374	20.2
New York.....	520	<b>493</b>	498	506	527	536	529	517	525	532	510	538	536	28.0
Ohio.....	3,309	<b>3,078</b>	3,112	3,176	3,211	3,269	3,277	3,261	3,382	3,418	3,498	3,528	3,498	29.2
Pennsylvania.....	469	428	425	430	464	455	463	482	535	500	496	489	491	25.1
West Virginia.....	956	<b>913</b>	937	944	932	931	980	936	935	966	1,001	1,009	1,008	27.8

## MANUFACTURES.

TABLE 18.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
		44 and under.	Between 44 and 48.	48. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	60.			44 and under.	Between 44 and 48.	48. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	60.
United States:																	
1919.....	27,934	2,320	752	3,096	10,840	6,320	2,385	1,321	Mississippi.....	11			10				1
1914.....	26,705	(?)	(?)	6,207	6,846	8,860	2,142	2,582	New Jersey.....	5,717	1,144	218	144	2,559	922	622	108
Alabama.....	8				1	1		6	New York.....	1,858	787		321	455		46	249
California.....	296	61		172		63			North Carolina.....	7						6	
Colorado.....	95			9		26			Ohio.....	11,339	310		2,895	4,352	2,733	1,045	4
Georgia.....	8			1	2		4	1	Pennsylvania.....	1,868				733	919	214	2
Illinois.....	652			20	78	487	25	42	South Carolina.....	5			4				1
Indiana.....	747			214	348	100	85		Texas.....	40			2		5		33
Kentucky.....	105						46	59	Washington.....	10			10				
Maryland.....	246			90	1	10		145	West Virginia.....	3,445		532		1,734	768	61	350
Massachusetts.....	140	16		12	87	32		2									
Michigan.....	708			3	477	228											

<sup>1</sup> Includes 48 and under in 1914.

\* Corresponding figures not available.

TABLE 19.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Establishments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States:																			
1919.....	340	27,934	32	65	112	50	615	44	1,486	54	3,921	74	12,590	16	5,513	4	2,685	1	1,012
1914.....	350	26,705	27	99	232	58	753	40	1,454	30	2,768	62	10,377	19	6,093	5	3,800	1	1,228
Alabama.....	10	8	5	5	8														
California.....	10	296		1	1	5	64	2	74	2	157								
Colorado.....	5	95	1	1	1	1	9	1	25	1	60								
Georgia.....	15	8	8	7	8														
Illinois.....	14	652		2	5	3	52	6	225			3	370						
Indiana.....	8	747	2			1	16			3	283	2	448						
Kentucky.....	5	105		3	4			1	45	1	56								
Maryland.....	4	246		1	1	1	10			1	90	1	145						
Massachusetts.....	8	149		3	9	2	21	2	57	1	62								
Michigan.....	6	708		1	3	1	8	1	35	1	71	1	150	1	441				
Mississippi.....	4	11	2	1	1		10												
New Jersey.....	53	5,717		3	4	9	106	4	116	17	1,177	16	2,670	3	1,093	1	551		
New York.....	14	1,858	2	1	2	4	58	1	81	1	69	3	610	1	303	1	785		
North Carolina.....	10	7	4	6	7														
Ohio.....	95	11,339	1	7	10	7	84	19	637	22	1,572	29	5,082	8	2,605	2	1,349		
Pennsylvania.....	22	1,868	3	3	4	2	31	4	136	3	263	6	1,063	1	371				
South Carolina.....	3	5		3	5														
Texas.....	10	40		6	10	3	30												
Washington.....	3	10	1	1	2		8												
West Virginia.....	18	3,445				2	28	2	56	1	61	10	1,588	2	700			1	1,012

TABLE 20.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919 AND 1914.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
	1919	1914	1919	1914	1919	1914	1919	1914
All classes.....	340	350	27,934	26,705	\$74,919,186	\$36,942,606	\$54,125,110	\$24,911,050
Less than \$5,000.....	75	106	61	167	160,589	223,918	121,223	176,782
\$5,000 to \$20,000.....	39	61	233	573	407,757	734,247	265,268	556,094
\$20,000 to \$100,000.....	71	74	1,954	2,909	4,021,309	3,485,938	2,825,302	2,452,867
\$100,000 to \$500,000.....	110	91	12,003	20,089	30,473,572	17,999,418	21,797,430	18,653,265
\$500,000 to \$1,000,000.....	35	15	8,522		24,530,231	10,277,906	18,003,075	
\$1,000,000 and over.....	10	3	5,161	2,967	15,325,728	4,221,179	11,112,812	3,072,052
PER CENT DISTRIBUTION.								
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	22.1	30.3	0.2	0.6	0.2	0.6	0.2	0.7
\$5,000 to \$20,000.....	11.5	17.4	0.8	2.1	0.5	2.0	0.5	2.2
\$20,000 to \$100,000.....	20.9	21.1	7.0	10.9	5.4	9.4	5.2	9.8
\$100,000 to \$500,000.....	32.4	28.0	43.0	75.2	40.7	48.7	40.3	74.9
\$500,000 to \$1,000,000.....	10.3	4.3	30.5		32.7	27.8	33.3	
\$1,000,000 and over.....	2.9	0.9	18.5	11.1	20.5	11.4	20.5	12.3



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TABLE 21.—CHARACTER OF OWNERSHIP, BY STATES: 1919.

STATE.	NUMBER OF ES- TABLISHMENTS 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.									
	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Indi- vid- uals.	Cor- pora- tions.	All oth- ers.	Indi- vid- uals.	Cor- pora- tions.	All oth- ers.		Indi- vid- uals.	Corpora- tions.	All others.	Indi- vid- uals.	Corpora- tions.	All oth- ers.							
United States:																								
1919.....	88	211	41	27,934	1,044	26,175	715	3.7	93.7	2.6	\$74,919,186	\$2,342,252	\$71,011,800	\$1,565,134	3.1	94.8	2.1							
1914.....	96	203	51	26,705	811	25,213	681	3.0	94.4	2.6	36,942,606	1,048,272	35,005,206	889,128	2.8	94.8	2.4							
Georgia.....	9	.....	6	8	3	.....	5	37.5	.....	62.5	22,361	12,296	.....	10,065	55.0	.....	45.0							
Illinois.....	4	10	.....	652	44	608	.....	6.7	93.3	.....	1,851,898	127,652	1,724,246	.....	6.9	93.1	.....							
Massachusetts.....	5	8	.....	149	43	106	.....	28.9	71.1	.....	367,590	107,387	260,203	.....	29.2	70.8	.....							
New Jersey.....	7	42	4	5,717	204	5,207	306	3.6	91.1	5.4	16,225,650	472,222	15,127,922	625,506	2.9	93.2	3.9							
New York.....	4	10	.....	1,858	20	1,838	.....	1.1	98.9	.....	4,726,063	47,007	4,679,056	.....	1.0	99.0	.....							
North Carolina.....	6	.....	4	7	2	.....	5	28.0	.....	71.4	15,400	7,198	.....	8,202	46.7	.....	53.3							
Ohio.....	8	79	8	11,339	460	10,656	223	4.1	94.0	2.0	28,675,361	1,000,963	27,188,445	485,953	3.5	94.8	1.7							
Pennsylvania.....	6	14	2	1,868	176	1,792	.....	4.1	95.9	.....	4,564,656	181,784	4,382,872	.....	4.0	96.0	.....							
South Carolina.....	3	.....	.....	5	5	.....	.....	100.0	.....	.....	13,275	.....	.....	.....	100.0	.....	.....							
West Virginia.....	1	17	.....	3,445	.....	3,445	.....	.....	100.0	.....	10,111,742	.....	10,111,742	.....	100.0	.....	.....							

<sup>1</sup> Includes the group "All others."

<sup>2</sup> Includes the group "Individuals."

TABLE 22.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919 AND 1914.

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.				POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.			
			Amount.		Per cent distribution.					Amount.		Per cent distribution.	
	1919	1914	1919	1914	1919	1914		1919	1914	1919	1914	1919	1914
Primary power, total.....	1,555	770	29,090	22,339	100.0	100.0	Primary power—Continued.						
Owned.....	293	336	19,728	18,733	67.8	83.9	Rented.....	1,263	434	9,362	3,606	32.2	16.1
Steam.....	242	257	18,509	17,089	63.6	76.5	Electric.....	1,263	434	9,312	3,604	32.0	16.1
Engines.....	289	257	18,124	17,089	62.3	76.5	Other.....			50	2	0.2	(1)
Turbines.....	3		385		1.3		Electric.....	2,087	697	14,147	6,335	100.0	100.0
Internal-combustion engines.....	49	75	1,113	1,509	3.8	6.8	Rented.....	1,263	434	9,312	3,604	65.8	56.9
Water wheels, turbines, and motors.....	2	4	106	135	0.4	0.6	Generated by establishments re- porting.....	824	263	4,835	2,731	34.2	43.1

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

TABLE 23.—FUEL CONSUMED, BY STATES: 1919.

STATE.	COAL.		Coke (ton, 2,000 pounds).	Fuel oils (bar-rels).	Gas-oline and other volatile oils (bar-rels).	Gas (1,000 cubic feet).	STATE.	COAL.		Coke (ton, 2,000 pounds).	Fuel oils (bar-rels).	Gas-oline and other volatile oils (bar-rels).	Gas (1,000 cubic feet).
	Anthra-cite (ton, 2,240 pounds).	Bitumi-nous (ton, 2,000 pounds).						Anthra-cite (ton, 2,240 pounds).	Bitumi-nous (ton, 2,000 pounds).				
United States:							Michigan.....		16,008		6,785		49,189
1919.....	34,953	610,562	1,017	40,590	1,263	6,045,388	Mississippi.....		800				479
1914.....	44,461	577,774	785	70,903	( <sup>1</sup> )	8,348,257	New Jersey.....	28,078	145,984	100	5,139	177	648
Alabama.....		100		3	5		New York.....	4,675	36,258	141	118	205	147
California.....		2,050		19,513	22	84,080	North Carolina.....		12	40		37	3,882,784
Colorado.....		2,534			200		Ohio.....	810	225,764		24	221	315,280
Georgia.....		40		2	15		Pennsylvania.....	863	44,881		3,081		28
Illinois.....		28,179		1,791		1,033	South Carolina.....		35			44	17,406
Indiana.....		36,100	734		3		Texas.....		10		4,088	1	
Kentucky.....		6,900					Washington.....		260				2,263,364
Maryland.....	468	8,811					West Virginia.....		27,377		16	15	50,328
Massachusetts.....	30	2,112				600	All other states.....	28	26,869	2	30	290	

<sup>1</sup> Included in figures for fuel oils.

## SPECIAL STATISTICS.

**Products.**—Table 24 presents comparative statistics for products, by kind and states, for 1919 and 1914. The total value of products here given, from the reports of the Geological Survey, is not strictly comparable with the value of products for the industry as reported

by the census in other tables. The latter includes all products of the establishments irrespective of their character and the former includes production by establishments engaged primarily in other lines of manufacture.

TABLE 24.—PRODUCTS: 1919 AND 1914.

[Reported by the Geological Survey.]

	1919	1914		1919	1914
Total value.....	\$77,857,762	\$35,393,161	Stoneware (not chemical)—Continued.		
Alabama.....	33,253	16,542	Indiana.....	\$17,268	\$39,000
California.....	923,377	345,303	Georgia.....	14,088	4,474
Colorado.....	192,978	61,257	Mississippi.....	13,606	14,510
Georgia.....	23,523	20,961	Other states.....	913,314	812,534
Illinois.....	2,104,109	780,575	Chemical stoneware.....	805,321	( <sup>2</sup> )
Indiana.....	2,066,792	1,152,078	Ohio.....	270,138	
Kentucky.....	210,187	80,423	Other states.....	535,183	
Maryland.....	487,049	208,483	White ware including C. C. white granite, semiporcelain and semivitreous porcelain ware.....	20,847,261	14,068,079
Massachusetts.....	313,325	219,104	Ohio.....	18,664,031	10,227,806
Michigan.....	2,096,874	265,194	West Virginia.....	8,328,877	2,577,766
Mississippi.....	16,334	15,080	New Jersey.....	1,642,947	727,637
Missouri.....	20,817	2,944	Pennsylvania.....	1,831,094	( <sup>2</sup> )
New Jersey.....	16,817,529	8,181,356	Other states.....	1,980,312	1,484,870
New Mexico.....	900		China, bone china, delft and belleek ware.....	7,703,832	2,384,686
New York.....	5,633,355	2,155,792	New York.....	2,787,364	784,604
North Carolina.....	17,240	12,796	New Jersey.....	1,870,542	1,076,043
Ohio.....	30,284,017	15,351,376	Pennsylvania.....	1,817,127	( <sup>2</sup> )
Pennsylvania.....	4,669,127	1,746,501	Other states.....	1,733,799	524,039
South Carolina.....	13,275	10,668	Sanitary ware, including bathtubs, washtubs, etc.....	14,872,364	7,874,269
Tennessee.....	564,646	97,195	New Jersey.....	7,031,371	5,058,204
Texas.....	95,324	58,747	West Virginia.....	1,678,760	872,987
Virginia.....	49,994	( <sup>2</sup> )	Ohio.....	1,301,024	619,931
Washington.....	28,074	( <sup>2</sup> )	Indiana.....	1,190,622	739,132
West Virginia.....	10,386,500	3,930,464	Pennsylvania.....	622,635	( <sup>2</sup> )
Other states.....	1,309,153	728,339	California.....	561,666	247,770
Red earthenware.....	1,298,311	1,059,904	Other states.....	1,586,286	336,245
Ohio.....	293,249	300,453	Porcelain electrical supplies (not including value of metal or other fittings).....	12,614,794	4,130,270
Pennsylvania.....	232,880	194,581	Ohio.....	3,717,207	1,472,359
California.....	74,222	36,931	New Jersey.....	3,447,830	905,878
New Jersey.....	34,235	35,193	New York.....	2,189,352	940,029
Kentucky.....	19,889	35,731	West Virginia.....	1,034,863	( <sup>2</sup> )
Missouri.....	19,817	2,243	Other states.....	2,225,542	812,004
Washington.....	18,110	( <sup>2</sup> )	Other pottery products.....	15,383,880	1,631,652
Texas.....	7,563	12,724	Ohio.....	2,537,465	1,138,725
Georgia.....	5,780	16,487	New Jersey.....	1,131,852	256,108
Alabama.....	5,122	4,800	New York.....	396,040	54,851
Mississippi.....	2,728	( <sup>2</sup> )	Illinois.....	214,203	8,745
North Carolina.....	2,552	1,477	Pennsylvania.....	129,240	15,737
Other states.....	582,124	419,279	California.....	68,466	15,952
Red and brown, white lined cooking ware—Ohio, West Virginia, and New Jersey, in order named.....	723,981	( <sup>2</sup> )	Massachusetts.....	37,742	11,345
Stoneware (not chemical) and yellow and Rockingham ware.....	4,603,018	3,349,301	Georgia.....	3,660	
Ohio.....	2,050,884	1,592,120	Alabama.....	3,000	
Illinois.....	803,188	483,407	Other states.....	863,212	130,189
Pennsylvania.....	318,394	282,511			
Kentucky.....	188,230	53,695			
California.....	152,308	( <sup>2</sup> )			
Texas.....	80,979	44,230			
Alabama.....	20,131	11,742			
North Carolina.....	14,648	11,078			

<sup>1</sup> Includes saggers, made and used, to the amount of \$2,115,637.<sup>2</sup> Included in "Other states."<sup>3</sup> Not classified separately in 1914.

## GENERAL TABLES.

Table 25 gives comparative statistics for the principal items, number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the census years 1919 and 1914. Table 26 is a detailed statement, by states, for the census of 1919.

TABLE 25.—COMPARATIVE SUMMARY, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		
United States.....	1919 1914	340 350	27,934 26,705	29,090 22,339	\$29,820 16,666	\$20,794 12,032	\$74,919 36,943	New Jersey.....	1919 1914	53 50	5,717 5,225	6,116 3,724	\$6,732 3,582	\$3,551 2,151	\$16,225 7,868
Alabama.....	1919 1914	10 12	8 26	67 79	6 9	7 4	33 21	New York.....	1919 1914	14 16	1,858 1,691	1,671 1,009	1,981 965	1,082 1,301	4,726 1,954
California.....	1919 1914	10 11	296 177	547 548	339 191	258 112	849 421	North Carolina.....	1919 1914	10 12	7 11	11 2	3 3	3 1	15 13
Colorado.....	1919 1914	5 5	95 53	104 125	82 29	35 16	200 67	Ohio.....	1919 1914	95 99	11,339 11,096	10,131 9,271	11,558 6,689	9,012 4,968	28,675 15,292
Georgia.....	1919 1914	15 14	8 32	31 95	5 8	5 5	22 27	Pennsylvania.....	1919 1914	22 21	1,868 1,564	2,198 1,639	1,761 865	1,353 695	4,565 1,736
Illinois.....	1919 1914	14 16	652 1,459	1,207 1,376	592 915	389 358	1,852 1,788	South Carolina.....	1919 1914	3 5	5 10	31 53	3 4	5 2	13 11
Indiana.....	1919 1914	8 9	747 770	711 638	881 585	778 314	2,624 1,812	Texas.....	1919 1914	10 11	40 46	212 128	35 22	27 18	99 62
Massachusetts.....	1919 1914	8 8	149 138	407 249	159 85	112 37	368 170	West Virginia.....	1919 1914	18 15	3,445 3,339	3,007 1,680	3,993 2,147	3,038 1,059	10,112 4,821
Michigan.....	1919 1914	6 6	708 339	879 319	851 199	542 126	2,113 435	All other states.....	1919 1914	39 40	992 729	1,700 1,404	839 366	567 265	2,427 945

## MANUFACTURES.

TABLE 26.—DETAILED STATEMENT,

STATE.		Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.
			Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
						Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.	Female.	
									Maximum month.	Minimum month.						
1	United States.....	340	30,692	183	1,206	748	621	27,934	Do 30,342	Fe 26,106	30,702	22,747	7,579	247	129	\$66,757,970
2	Alabama.....	10	20	12	.....	.....	.....	8	Je 10	Ja <sup>3</sup> 5	10	10	.....	.....	.....	21,889
3	California.....	10	339	9	18	8	8	296	De 323	Je 261	321	307	13	1	.....	746,460
4	Colorado.....	5	111	2	7	3	4	95	No 119	My 82	78	45	33	.....	.....	181,459
5	Georgia.....	15	32	23	1	.....	.....	8	No 20	Ja 2	21	21	.....	.....	.....	13,785
6	Illinois.....	14	746	4	42	32	16	652	Ap 774	Au 459	770	624	140	5	1	2,760,691
7	Indiana.....	8	843	4	35	35	22	747	De 810	Ja 695	814	702	98	12	2	2,556,661
8	Kentucky.....	5	120	5	7	1	2	105	Au 112	Fe 97	105	93	12	.....	.....	172,012
9	Maryland.....	4	272	3	16	4	3	246	De 258	Mh 228	265	189	53	19	4	398,185
10	Massachusetts.....	8	178	5	0	7	8	149	No 162	Ap 138	157	131	23	3	.....	446,619
11	Michigan.....	6	835	3	71	16	37	708	Ja 865	Je 648	819	487	329	3	.....	1,860,703
12	Mississippi.....	4	15	3	1	.....	.....	11	( <sup>4</sup> ) 11	( <sup>4</sup> ) 11	11	11	.....	.....	.....	27,250
13	New Jersey.....	63	6,400	16	293	228	146	5,717	De 6,764	Mh 4,958	6,797	5,326	1,327	91	53	16,491,585
14	New York.....	14	2,033	4	58	49	64	1,858	No 2,016	Ja 1,671	2,019	1,459	510	26	24	4,015,013
15	North Carolina.....	10	22	15	.....	.....	.....	7	Au <sup>3</sup> 10	Ja <sup>3</sup> 5	10	10	.....	.....	.....	10,070
16	Ohio.....	95	12,246	25	410	245	227	11,339	No 11,991	Ja 10,698	12,050	8,506	3,501	22	21	21,576,324
17	Pennsylvania.....	22	2,015	12	71	32	32	1,863	Oc 1,998	Fe 1,752	1,914	1,400	476	31	7	3,875,464
18	South Carolina.....	3	9	3	.....	1	.....	5	Je <sup>3</sup> 7	Ja <sup>3</sup> 1	3	3	.....	.....	.....	16,167
19	Texas.....	10	58	13	2	1	2	40	Jy 62	Ja <sup>3</sup> 22	46	44	2	.....	.....	162,039
20	Washington.....	3	14	2	1	.....	1	10	No 18	Ap 1	17	17	.....	.....	.....	25,392
21	West Virginia.....	18	3,689	1	132	69	42	3,445	De 3,748	Ja 3,272	3,745	2,708	990	31	16	9,341,202
22	All other states <sup>6</sup> .....	23	695	19	32	17	7	620	.....	.....	730	651	72	3	1	2,058,990

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

# POTTERY.

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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.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.				Rent- <sup>2</sup>	
											Steam engines (not turbines).	Steam turbines.	Internal combustion engines.	Water power. <sup>1</sup>		
\$3,929,097	\$2,074,335	\$29,820,278	\$117,384	\$162,132	\$2,677,855	\$15,400,705	\$5,393,371	\$74,919,186	\$54,125,110	29,090	18,124	385	1,113	106	9,362	4,835
49,159	27,723	338,996	225	478	133	3,827	3,218	32,772	25,727	67	40	.....	14	.....	13	.....
11,970	11,421	82,064	.....	1,050	5,939	180,613	77,663	849,243	590,967	547	40	.....	.....	.....	507	.....
540	.....	5,180	.....	1,365	4,807	18,070	16,524	200,086	165,492	164	62	.....	.....	.....	102	.....
114,713	59,794	592,226	.....	355	103	2,968	2,271	22,361	17,122	31	.....	.....	31	.....	.....	.....
105,291	71,048	881,217	250	3,126	97,998	259,526	129,164	1,851,898	1,463,208	1,207	745	.....	20	.....	442	12
22,779	3,140	80,694	300	6,314	177,116	621,508	156,462	2,624,121	1,846,151	711	505	.....	5	.....	201	158
35,869	5,692	162,782	.....	500	2,209	39,551	27,899	207,540	140,180	300	300	.....	.....	.....	.....	.....
15,125	10,688	159,195	50	11,410	112,834	34,312	297,306	407,306	350,160	251	240	.....	.....	.....	11	.....
216,363	67,013	851,180	.....	2,301	3,251	91,141	21,236	367,590	255,213	407	330	.....	.....	.....	77	.....
1,200	.....	8,350	.....	.....	53,977	394,878	147,083	2,113,252	1,571,291	879	520	.....	.....	.....	359	859
992,434	496,235	6,732,001	2,868	.....	341	7,908	1,780	25,089	15,401	40	40	.....	.....	.....	.....	.....
219,562	146,295	1,980,984	6,778	13,700	457,355	2,583,948	996,831	16,225,650	12,644,871	6,116	3,960	.....	60	.....	2,096	1,583
.....	.....	.....	.....	56,470	154,953	842,157	239,483	4,726,063	3,644,423	1,671	1,225	.....	2	.....	444	831
.....	.....	3,186	.....	.....	43	1,248	2,067	15,400	12,085	11	.....	.....	11	.....	.....	.....
1,222,746	820,230	11,558,318	78,193	25,640	886,527	6,731,173	2,281,268	28,675,361	19,662,920	10,131	6,695	135	614	.....	2,687	717
233,393	94,723	1,701,415	15,353	3,364	269,299	1,025,061	327,612	4,564,656	3,211,983	2,198	995	.....	22	106	1,075	41
.....	100	3,160	.....	.....	112	1,970	2,897	13,275	8,408	31	.....	.....	6	.....	25	.....
3,116	3,043	34,485	240	8,400	1,237	15,330	11,785	98,621	71,506	212	111	.....	46	.....	55	.....
874	420	12,929	.....	550	35	5,286	4,389	28,074	18,399	47	.....	.....	2	.....	45	.....
604,569	224,081	3,992,995	6,000	32,989	460,998	2,285,360	752,700	10,111,742	7,073,682	3,007	1,547	250	267	.....	943	607
80,304	31,789	572,503	7,127	5,080	90,012	176,348	156,817	1,669,086	1,335,921	1,062	769	.....	13	.....	280	27

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

<sup>2</sup> All other states embrace: Arkansas, 1 establishment; Connecticut, 2; District of Columbia, 2; Florida, 1; Iowa, 1; Louisiana, 1; Minnesota, 1; Missouri, 2; Nebraska, 2; New Hampshire, 1; Oregon, 2; Tennessee, 3; Utah, 1; Virginia, 2; and Wisconsin, 1.

# SAND-LIME BRICK.

## GENERAL STATISTICS.

**General character of the industry.**—This industry embraces the establishments engaged primarily in the manufacture of sand-lime brick, a building material first segregated as the subject of an industry at the census of 1914.

**Comparative summary.**—Table 27 presents the general statistics for the census years 1919 and 1914.

**Principal states, ranked by value of products.**—Table 28 shows the number of establishments, average number of wage earners, value of products, and value added by manufacture for the leading states, ranked according to value of products.

**Persons engaged in the industry.**—The age classification of the average number of wage earners in Table 29 is an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 38.

**Wage earners, by months.**—The statistics for wage earners, Table 30, are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions existing during the year. The industry is closely allied to the building trades, and there is a wide range shown for the maximum and minimum months.

**Prevailing hours of labor.**—The figures in Table 31 show a change toward shorter hours of labor. In 1914, 63.7 per cent of the wage earners, and in 1919,

53.2 per cent were employed in establishments where the prevailing hours of labor per week were 60 or over.

**Size of establishments, by average number of wage earners.**—Table 32 shows that the average number of wage earners for all plants in 1919 was 16, as compared with 12.4 in 1914.

**Size of establishments, by value of products.**—Measured by value of products, there is an apparent increase in the size of establishments, though this is essentially due to the high level of values in 1919 as compared with 1914, resulting in a change from the lower to the higher groups, shown in Table 33. The average value of products per establishment in 1914 was \$22,093 and in 1919, \$51,970.

**Character of ownership.**—The establishments are almost all corporations, there being only one individual establishment and one firm in 1919 and two individual establishments and two firms in 1914. The corporations reported 97.4 per cent of the wage earners and 98.6 per cent of the value of all products.

**Number and horsepower of types of prime movers.**—Table 34 presents the statistics concerning power. Of the total primary power, 12.8 per cent was utilized in the form of electric power in 1919 and 6 per cent in 1914.

**Fuel consumed.**—Table 35 presents the statistics for fuel, by kind and by states.

TABLE 27.—COMPARATIVE SUMMARY: 1919 AND 1914.

	1919	1914	Per cent of increase, <sup>1</sup> 1914-1919.		1919	1914	Per cent of increase, <sup>1</sup> 1914-1919.
Number of establishments.....	32	45	.....	Paid for contract work.....		\$5,715	.....
Persons engaged.....	600	658	8.8	Rent and taxes.....	\$64,978	21,120	208.0
Proprietors and firm members.....	3	6	.....	Cost of materials.....	575,402	350,484	64.2
Salaried employees.....	93	95	.....	Value of products.....	1,663,052	994,199	67.3
Wage earners (average number).....	504	557	-9.5	Value added by manufacture <sup>2</sup> .....	1,087,650	643,715	69.0
Primary horsepower.....	4,353	5,606	-22.3				
Capital.....	\$2,229,769	\$2,184,896	2.1				
Salaries and wages.....	637,627	420,930	51.5				
Salaries.....	135,773	95,974	37.2				
Wages.....	501,854	324,956	55.9				

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

<sup>2</sup>Value of products less cost of materials.

## SAND-LIME BRICK.

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

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States.....	32	504	100.0	.....	\$1,663	100.0	.....	\$1,088	100.0	.....
Michigan.....	7	106	21.0	1	531	31.9	1	313	28.8	1
Minnesota.....	3	69	13.7	2	185	11.1	2	143	13.1	2
New York.....	4	49	9.7	3	165	9.9	3	119	10.9	3
Indiana.....	3	37	7.3	4	142	8.5	4	88	8.1	4
All other states.....	15	243	48.3	.....	640	38.6	.....	425	39.1	.....

TABLE 29.—PERSONS ENGAGED IN THE INDUSTRY: 1919 AND 1914.

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.		CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.	
					Male.	Female.						Male.	Female.
All classes.....	1919 1914	600 658	586 645	14 13	97.5 98.0	2.5 2.0	Clerks and other subordinate salaried employees.	1919 1914	32 30	20 18	12 12	62.5 60.0	37.5 40.0
Proprietors and officials.....	1919 1914	64 71	63 71	1 .....	98.4 100.0	1.6 .....	Wage earners (average number).....	1919 1914	504 557	503 556	1 1	99.6 99.8	0.4 0.2
Proprietors and firm members....	1919 1914	3 6	3 6	..... .....	100.0 100.0	..... .....	16 years of age and over.....	1919 1914	504 555	503 555	1 .....	99.6 .....	0.4 .....
Salaried officers of corporations...	1919 1914	25 24	25 24	..... .....	100.0 100.0	..... .....	Under 10 years of age.....	1919 1914	..... 2	..... 1	..... 1	..... 50.0	..... 50.0
Superintendents and managers...	1919 1914	36 41	35 41	1 .....	97.2 100.0	2.8 .....							

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

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

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	504	<b>314</b>	321	343	408	529	550	606	569	582	572	<b>633</b>	621	49.6
Males.....	503	<b>314</b>	321	343	408	529	550	604	567	580	570	<b>631</b>	619	49.8
Females.....	1	.....	.....	.....	.....	.....	.....	2	2	2	2	2	2	.....
1914.....	557	404	<b>396</b>	493	544	714	720	680	702	604	515	476	430	55.0
Michigan.....	106	62	48	<b>46</b>	95	120	125	128	<b>136</b>	131	127	128	126	33.8
Minnesota.....	69	66	32	<b>24</b>	32	40	86	83	87	88	101	101	88	23.8
New York.....	49	36	<b>28</b>	<b>28</b>	47	44	68	60	64	50	52	56	55	41.2
Indiana.....	37	<b>19</b>	17	30	53	52	45	49	42	34	35	36	35	30.2

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

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—					
		48.	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.			48.	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
United States:								Michigan.....	106			13	18	75	.....
1919.....	504	37	48	85	66	268	.....	Minnesota.....	69	30	.....	.....	.....	39	.....
1914.....	557	81	.....	111	10	326	29	New York.....	49	25	.....	13	.....	11	.....
Indiana.....	37	12	.....	.....	13	12	.....								

## MANUFACTURES.

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

STATE.		TOTAL.		ESTABLISHMENTS EMPLOYING—					
		Establishments.	Wage earners (average number).	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.	
				Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States.....	1919.....	32	504	5	18	18	235	9	251
	1914.....	45	557	14	53	23	298	8	206
Indiana.....		3	37			3	37		
Michigan.....		7	106			7	106		
Minnesota.....		3	69			1	8	2	61
New York.....		4	49	1	4	2	20	1	25

TABLE 33.—SIZE OF ESTABLISHMENTS, BY VALUE OF PRODUCTS: 1919 AND 1914.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
	1919	1914	1919	1914	1919	1914	1919	1914
All classes.....	32	45	504	557	\$1,663,052	\$994,199	\$1,087,650	\$643,716
Less than \$5,000.....		5		11		10,066		5,914
\$5,000 to \$20,000.....	17	19	136	135	180,396	235,893	150,032	150,204
\$20,000 and over.....	25	21	468	411	1,582,656	748,240	1,037,618	487,597
PER CENT DISTRIBUTION.								
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....		11.1		2.0		1.0		0.9
\$5,000 to \$20,000.....	21.9	42.2	7.1	24.2	4.8	23.7	4.6	23.3
\$20,000 and over.....	78.1	46.7	92.9	73.8	95.2	75.2	95.4	75.8

1 Includes the group "Less than \$5,000."

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

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.			
			Amount.		Per cent distribution.	
	1919	1914	1919	1914	1919	1914
Primary power, total.....	63	66	4,358	5,606	100.0	100.0
Owned.....	40	51	3,818	5,267	87.6	94.0
Steam engines (not turbines)...	32	48	3,770	5,252	86.5	93.7
Internal-combustion engines...	8	3	48	15	1.1	0.3
Rented, electric.....	23	15	540	339	12.4	6.0
Electric.....	26	15	560	339	100.0	100.0
Rented.....	23	15	540	339	96.4	100.0
Generated by establishments reporting.....	3		20		3.6	

TABLE 35.—FUEL CONSUMED, BY STATES: 1919.

STATE.	COAL.		Coke (ton, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).
	Anthracite (ton, 2,240 pounds).	Bituminous (ton, 2,000 pounds).			
United States:					
1919.....	1,200	21,673	28	1,203	67
1914.....	787	25,289	712	770	(1)
Indiana.....		3,576			
Michigan.....		6,535			12
Minnesota.....		3,160	28	3	20
New York.....		1,692			7
All other states.....	1,200	6,710		1,200	28

1 Included in figures for fuel oils.

## SPECIAL STATISTICS.

**Products.**—Table 36 presents the statistics for products for 1919 in comparison with 1914. The detailed figures are for marketed sand-lime brick as reported

by the United States Geological Survey and slightly exceed in value the value of products reported by the manufacturers to the Bureau of the Census.

TABLE 36.—PRODUCTS: 1919 AND 1914.

KIND AND STATE.	1919	1914	KIND AND STATE.	1919	1914
Sand-lime brick marketed in the United States:			Common brick:		
Quantity.....			Quantity.....		
Indiana.....	146,947	172,629	thousands.....	145,277	164,999
Michigan.....	11,738	16,288	Value.....	\$1,682,966	\$989,249
Minnesota.....	42,063	42,465	Face brick:		
New York.....	23,391	19,958	Quantity.....		
All other states.....	10,958	18,347	thousands.....	1,670	7,630
	58,797	75,571	Value.....	\$22,197	\$69,263
Value.....	\$1,705,163	\$1,058,512			
Average value per thousand.....	\$11.60	\$6.13			



## GENERAL TABLES.

Comparative statistics are presented in Table 37 for operations of individual establishments. Table 38 is such states as can be shown without disclosing the a detailed statement, by states, for the census of 1919.

TABLE 37.—COMPARATIVE SUMMARY, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		
United States.....	1919	32	504	4,358	\$502	\$575	\$1,063	Michigan.....	1919	7	106	815	\$147	\$218	\$531
	1914	45	557	5,606	322	350	994		1914	12	136	1,392	87	95	265
Indiana.....	1919	3	37	517	46	53	142	All other states.....	1919	22	361	3,026	309	304	990
	1914	4	53	490	30	30	75		1914	29	368	3,724	205	225	654

TABLE 38.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				EXPENSES.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.				Total.	16 and over.		Under 16.		Capital.	Salaries and wages	
					Male.	Female.	Average number.	Number, 15th day of—		Male.		Female.	Male.	Female.	Officials.		Clerks, etc.	
								Maximum month.	Minimum month.									
United States.....	32	600	3	61	20	12	504	No	633	Ja	314	691	689	2	.....	\$2,220,769	\$110,905	\$24,778
Indiana.....	3	45	.....	6	1	1	37	Ap	53	Ja	16	35	35	.....	.....	190,883	12,222	1,826
Michigan.....	7	123	.....	14	.....	3	106	Au	136	Mh	46	137	137	.....	.....	428,081	30,895	2,348
Minnesota.....	3	86	.....	8	5	4	69	Oct	101	Mh	24	106	104	2	.....	242,626	12,405	8,720
New York.....	4	56	.....	6	1	.....	49	Je	68	Fe	28	70	70	.....	.....	99,938	7,448	500
All other states <sup>2</sup> .....	15	290	3	27	13	4	243	.....	.....	.....	.....	343	343	.....	.....	1,262,241	48,055	11,584

STATE.	EXPENSES—continued.						Value of products.	Value added by manufacture.	POWER.					Electric horse-power generated in establishments reporting.
	Salaries and wages—Con.	For contract work.	Rent and taxes.		For materials.				Primary horsepower.					
			Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.			Rented (electric).	
										Steam engines (not turbines).	Steam turbines.	Internal combustion engines.		
United States.....	\$501,854	.....	\$34,979	\$29,999	\$440,763	\$134,639	\$1,663,052	\$1,087,650	4,358	3,770	.....	48	540	20
Indiana.....	46,407	.....	.....	1,126	41,754	11,505	141,759	88,500	517	517	.....	.....	.....	.....
Michigan.....	146,855	.....	.....	18,076	184,736	32,995	530,669	312,938	815	750	.....	5	60	10
Minnesota.....	67,249	.....	.....	2,388	29,133	13,021	185,130	142,976	599	545	.....	29	25	.....
New York.....	46,182	.....	34,516	229	35,244	11,724	165,471	118,503	500	475	.....	.....	25	.....
All other states <sup>2</sup> .....	195,161	.....	463	8,180	140,896	65,394	640,023	424,733	1,027	1,483	.....	14	430	10

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

<sup>2</sup> All other states embrace: District of Columbia, 1 establishment; Florida, 2; Georgia, 1; Idaho, 1; Louisiana, 1; Massachusetts, 2; Ohio, 1; Pennsylvania, 1; South Dakota, 2; Tennessee, 1; Texas, 1; and Wisconsin, 1.

# CEMENT.

## GENERAL STATISTICS.

**General character of the industry.**—This industry embraces the establishments engaged in the manufacture of the hydraulic cements comprising Portland, natural, and puzzolan cements.

**Comparative summary.**—Table 39 presents the general statistics for the census years 1919, 1914, and 1909, with percentages of increase for the census periods.

**Principal states, ranked by value of products.**—Table 40 shows the number of establishments, average number of wage earners, value of products, and value added by manufacture, by states, ranked according to value of products in 1919.

**Persons engaged in the industry.**—The age classification of the average number of wage earners in Table 41 is an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 50.

**Wage earners, by months.**—The statistics for wage earners, Table 42, are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions existing during the year. Females constituted but 1.3 per cent of the wage earners.

**Prevailing hours of labor.**—The comparative statistics for 1919, 1914, and 1909 in Table 43 show a very strong movement toward fewer hours of labor per week. The industry shows a comparatively large number of hours of labor per week considered in connection with other industries, for 41.2 per cent of the wage earners were employed in establishments where the prevailing hours of labor per week were over 60. In 1914, 66.2 per cent of all of the wage earners were in establishments of this class, and in 1909, 71.1 per cent. Very few of the wage earners were employed in establishments where the prevailing hours of labor per week were 54 or less. Although the percentage of such wage earners in 1919 was but 7, it was a material gain over 1914 and 1909.

**Size of establishments, by average number of wage earners.**—The industry is one of relatively large units,

as shown in Table 44. The average number of wage earners per establishment was 208 in 1919 and 210 in 1914, no material change, but the 6 establishments employing over 500 wage earners embrace 25.1 per cent of the total number in 1919 as compared with 8 establishments and 22.6 per cent in 1914.

**Size of establishments, by value of products.**—The classification by value of products for 1919, presented in Table 45 considered in comparison with the prior censuses, necessarily reflects the great increase in values. The average value of products per establishment increased from \$468,000 in 1909 to \$765,000 in 1914, and to \$1,425,000 in 1919, but the increase in 1919 is entirely due to high prices, for on a quantity basis the production was 8.7 per cent less than in 1914, and the number of wage earners employed was 8.6 per cent less in 1919 than the number reported in 1914.

**Character of ownership.**—The 123 establishments comprising the industry in 1919 include 118 corporations, 1 individual, and 4 establishments under other forms of ownership. The "Corporations" group comprises 99.2 per cent of the wage earners and 99.4 per cent of the value of products, and the conditions with respect to character of ownership were similar in 1914 and 1909.

**Number and horsepower of types of prime movers.**—Table 46 presents the statistics concerning power. The establishments in this industry use a large amount of electric power purchased from hydroelectric power companies or from other sources of supply, and likewise generate considerable electric power. Of the total primary power, 70.7 per cent was utilized in the form of electric power in 1919, this including purchased electric power, specified as rented, and secondary electric or that generated by the establishments. In 1914 the ratio of total electric power to primary power was 68.7 per cent and in 1909, 42.7 per cent.

**Fuel consumed.**—Table 47 presents the statistics for fuel, by kind and by states.

## CEMENT.

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TABLE 39.—COMPARATIVE SUMMARY: 1919, 1914, AND 1909.

	1919	1914	1909	PER CENT OF INCREASE. <sup>1</sup>			1919	1914	1909	PER CENT OF INCREASE. <sup>1</sup>	
				1914-1919	1909-1914					1914-1919	1909-1914
Number of establishments.....	123	133	135	-7.5	-1.5	Salaries and wages.....	\$42,090,721	\$24,257,623	\$18,972,729	76.0	27.9
Persons engaged in the industry.	30,247	31,968	29,511	-5.4	8.3	Salaries.....	9,495,801	6,065,341	3,653,037	56.6	66.0
Proprietors and firm members.....	9	10	17	.....	.....	Wages.....	33,194,920	18,192,282	15,319,692	82.5	18.8
Salaried employees.....	4,714	4,032	2,710	16.9	48.3	Paid for contract work.....	266,204	340,381	88,133	-30.1	263.0
Wage earners (average number).....	25,524	27,916	26,775	-8.6	4.3	Rent and taxes.....	6,190,367	2,493,303	729,088	148.0	242.0
Primary horsepower.....	488,808	490,402	371,799	-0.3	31.9	Cost of materials.....	79,509,800	51,986,798	29,343,701	52.9	77.2
Capital.....	\$271,209,259	\$243,485,040	\$187,397,608	11.4	29.9	Value of products.....	175,264,910	101,750,444	63,205,455	72.2	61.0
						Value added by manufacture <sup>2</sup> ..	95,755,110	49,769,646	33,861,664	92.4	47.2

<sup>1</sup> A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.<sup>2</sup> Value of products less cost of materials.

TABLE 40.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCT: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States..	123	25,524	100.0	....	\$175,265	100.0	....	\$95,755	100.0	....	Illinois.....	5	1,123	4.4	7	\$3,283	4.7	7	\$4,308	4.5	7
Pennsylvania.....	22	7,443	29.2	1	54,540	31.1	1	28,166	30.5	1	Iowa.....	4	1,017	4.0	9	8,121	4.6	8	2,941	3.1	10
Indiana.....	5	1,953	7.6	2	13,363	7.6	2	7,499	7.8	2	Kansas.....	3	1,084	4.2	8	6,700	3.8	9	3,388	3.6	8
Missouri.....	5	1,788	7.0	3	11,738	6.7	3	6,108	6.4	4	Texas.....	5	641	2.5	12	4,743	2.7	11	3,100	3.2	9
California.....	8	1,816	5.2	6	11,258	6.4	4	7,144	7.5	3	Ohio.....	6	655	2.6	11	3,339	1.9	14	1,824	1.9	14
Michigan.....	11	1,887	5.4	5	9,643	5.5	5	5,681	5.9	5	Washington.....	4	436	1.7	16	3,241	1.9	15	1,521	1.6	18
New York.....	11	1,574	6.2	4	9,243	5.3	6	5,484	5.7	6	Utah.....	3	280	1.1	20	1,657	1.0	20	1,062	1.1	20
											All other states.....	26	4,827	18.9	....	29,396	16.8	....	16,469	17.2	...

TABLE 41.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.		CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.	
					Male.	Fe- male.						Male.	Fe- male.
All classes.....	1919 1914 1909	30,247 31,958 20,511	28,859 31,458 (1)	1,388 500 (1)	95.3 98.4 .....	4.7 1.6 .....	Clerks and other subordinate salaried employees.	1919 1914 1909	3,864 3,410 2,238	2,811 2,038 1,960	1,053 472 278	72.7 86.2 87.6	27.3 13.8 12.4
Proprietors and officials.....	1919 1914 1909	859 632 498	853 629 (1)	6 3 (1)	99.3 99.5 .....	0.7 0.5 .....	Wage earners (average number).....	1919 1914 1909	25,524 27,916 26,775	25,195 27,891 26,748	329 25 27	98.6 99.9 99.9	1.4 0.1 0.1
Proprietors and firm members....	1919 1914 1909	9 10 17	9 (1) (1)	..... (1) (1)	100.0 ..... .....	..... ..... .....	16 years of age and over.....	1919 1914 1909	25,496 27,871 26,709	25,169 27,846 26,683	327 25 26	98.6 99.9 99.9	1.4 0.1 0.1
Salaried officers of corporations...	1919 1914 1909	275 236 195	271 (1) (1)	4 (1) (1)	98.5 ..... .....	1.5 ..... .....	Under 16 years of age.....	1919 1914 1909	28 45 66	26 45 65	2 ..... 1	92.9 ..... 98.5	7.1 ..... 1.5
Superintendents and managers...	1919 1914 1909	575 386 286	573 (1) (1)	2 (1) (1)	99.7 ..... .....	0.3 ..... .....							

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

## MANUFACTURES.

TABLE 42.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

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

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		Janu-ary.	Febru-ary.	March.	April.	May.	June.	July.	August.	Septem-ber.	Octo-ber.	Novem-ber.	Decem-ber.	
United States:														
1919.....	25,524	<i>20,254</i>	20,563	21,964	23,864	25,083	26,028	27,690	28,445	29,062	28,811	28,133	29,411	69.6
Males.....	25,195	<i>19,045</i>	20,301	21,729	23,580	24,701	25,715	27,349	28,097	28,670	28,387	27,726	29,050	68.6
Females.....	329	259	262	235	284	292	313	341	348	392	424	407	361	55.4
1914.....	27,916	27,127	25,131	26,240	28,498	29,330	30,105	29,864	29,932	29,948	29,199	26,581	27,081	79.8
1909.....	26,775	<i>21,107</i>	22,119	24,058	25,983	27,337	27,786	28,474	28,052	29,782	29,970	29,044	27,528	70.6
California.....	1,316	<i>1,159</i>	1,201	1,160	1,168	1,283	1,304	1,363	1,333	1,335	1,385	1,494	1,607	72.1
Illinois.....	1,123	<i>886</i>	972	967	1,065	1,038	1,102	1,187	1,269	1,381	1,388	1,284	957	63.8
Indiana.....	1,953	<i>1,462</i>	1,558	1,713	1,917	1,972	2,042	2,001	2,176	2,475	1,839	2,102	2,189	58.7
Iowa.....	1,017	<i>636</i>	686	704	976	1,083	1,182	1,191	1,275	1,310	1,283	1,169	959	40.9
Kansas.....	1,084	<i>766</i>	855	997	1,045	1,145	1,048	1,123	1,101	1,097	1,377	1,335	1,119	55.6
Michigan.....	1,387	<i>958</i>	1,018	1,143	1,291	1,436	1,486	1,558	1,622	1,647	1,557	1,522	1,406	58.1
Missouri.....	1,788	<i>1,744</i>	1,709	1,650	1,763	1,783	1,791	1,855	1,892	1,837	1,918	1,886	1,638	85.4
New York.....	1,574	<i>997</i>	855	1,182	1,420	1,670	1,663	1,917	1,800	1,876	1,801	1,814	1,743	44.6
Ohio.....	655	<i>534</i>	602	563	647	599	707	737	766	736	743	691	645	66.4
Pennsylvania.....	7,443	<i>6,422</i>	6,310	6,383	6,766	7,012	7,508	8,027	8,106	8,355	8,368	8,089	7,970	75.4
Texas.....	641	<i>607</i>	562	619	676	616	600	638	649	676	677	688	684	81.7
Utah.....	280	<i>172</i>	182	233	253	260	299	304	341	352	334	305	295	48.9
Washington.....	436	<i>242</i>	278	306	432	456	476	509	549	524	520	462	418	44.1

TABLE 43.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919.

STATE.	Average number employed during year.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							STATE.	Average number employed during year.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
		44 and under.	Be- tween 44 and 48.	48. <sup>1</sup>	Be- tween 48 and 54.	54.	Be- tween 54 and 60.	60.			Over 60.	44 and under.	Be- tween 44 and 48.	48. <sup>1</sup>	Be- tween 48 and 54.	54.	Be- tween 54 and 60.	60.
United States:									Kansas.....	1,084					42	240	135	661
1919.....	25,524	13		799		962	7,148	6,097	Michigan.....	1,387					417			970
1914.....	27,916	(2)	(2)	24	3	73	1,530	7,790	Missouri.....	1,788						1,141		647
1909.....	26,775	(2)	(2)	20	1	42	1,944	6,742	New York.....	1,574	13				1	12		767
California.....	1,316					297	520	86	Ohio.....	655			104			143		408
Illinois.....	1,123					15	928	180	Pennsylvania.....	7,443			8	2	3,897	1,139		2,396
Indiana.....	1,953			362			449	1,054	Texas.....	641				374	97	130		137
Iowa.....	1,017					230			Utah.....	280			88		97			95
									Washington.....	436			181		255			

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

TABLE 44.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—																	
	Establishments.	Wage earners (average number).	No wage earners.		1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States:																				
1919.....	123	25,524		4	6	6	74	7	302	25	2,091	56	9,694	19	6,951		4	3,160	2	3,246
1914.....	133	27,916	1	7	21	7	88	7	257	18	1,392	57	10,128	28	9,714		7	4,675	1	1,641
California.....	8	1,316						1	35	1	86	5	894	1	301					
Illinois.....	5	1,123				1	14					2	421	2	688					
Indiana.....	5	1,953								2	170			2	811	1	972			
Iowa.....	4	1,017									53	1	230	2	734					
Kansas.....	8	1,084						1	42	1	91	6	951							
Michigan.....	11	1,387							1	45	5	426	4	499	1	417				
Missouri.....	5	1,788											553	1	310		925			
New York.....	11	1,574		1	1	2	25	1	50			3	1,016	1	482					
Ohio.....	6	655					9			2	193	3	453							
Pennsylvania.....	22	7,443		1	3	1	8				228	10	1,728	4	1,041	1	589	2	3,246	
Texas.....	5	641									136	3	505							
Utah.....	3	280									280									
Washington.....	4	436						1	45	1	99	2	292							

## CEMENT.

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TABLE 45.—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.....	123	133	135	25,524	27,916	26,775	\$175,264,910	\$101,756,444	\$63,205,455	\$95,755,110	\$49,769,640	\$33,861,664
Less than \$5,000.....	2	4	6	5	9	11	11,817	10,960	13,475	5,933	4,947	6,545
\$5,000 to \$20,000.....	1	8	10	1	66	127	99,584	99,584	115,349	56,068	56,068	64,397
\$20,000 to \$100,000.....	8	9	21	118	281	823	427,066	408,017	1,116,288	256,229	227,868	615,366
\$100,000 to \$500,000.....	22	41	84	1,785	13,373	15,815	7,882,005	12,926,958	33,520,319	4,024,713	20,733,571	10,175,372
\$500,000 to \$1,000,000.....	31	40	84	3,976	14,187	9,999	21,841,828	29,102,173	59,148,762	12,464,048	23,746,202	13,999,984
\$1,000,000 and over.....	50	31	14	19,640	14,187	9,999	145,122,194	59,148,762	28,440,024	79,014,187	23,746,202	13,999,984
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.....	1.6	3.0	4.4	(1)	(1)	(1)	(1)	0.1	0.2	(1)	0.1	0.2
\$5,000 to \$20,000.....	0.8	6.0	7.4	0.5	0.2	0.5	0.2	0.5	1.8	0.3	0.5	1.8
\$20,000 to \$100,000.....	6.5	6.8	15.6	7.0	1.0	3.1	12.7	12.7	4.2	41.7	56.8	56.8
\$100,000 to \$500,000.....	17.9	30.8	82.2	15.6	47.9	59.1	12.6	28.0	53.0	13.0	57.7	41.4
\$500,000 to \$1,000,000.....	25.2	30.1	10.4	76.9	50.8	37.3	82.8	53.1	45.0	82.5	57.7	41.4
\$1,000,000 and over.....	48.0	23.3	10.4	76.9	50.8	37.3	82.8	53.1	45.0	82.5	57.7	41.4

1 Less than one-tenth of 1 per cent.

TABLE 46.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	4,086	3,698	1,850	483,808	490,402	371,799	100.0	100.0	100.0
Owned.....	548	754	791	303,322	326,033	317,633	62.7	66.5	85.4
Steam.....	477	687	717	278,000	291,821	295,138	56.9	59.4	79.4
Engines.....	410	.....	.....	198,353	291,321	295,138	40.6	59.4	79.4
Turbines.....	61	.....	.....	79,656	.....	.....	16.3	.....	.....
Internal-combustion engines.....	63	75	53	24,703	28,360	19,005	5.1	5.8	5.1
Water wheels and turbines.....	8	12	21	3,550	6,346	3,430	0.7	1.3	0.9
Rented—Electric.....	4,138	2,944	1,038	182,486	164,369	54,166	37.3	33.5	14.6
Electric.....	8,500	6,091	3,827	345,535	336,516	158,749	100.0	100.0	100.0
Rented.....	4,138	2,944	1,038	182,486	164,369	54,166	52.8	48.8	34.1
Generated by establishments reporting.....	4,362	4,047	2,789	163,049	172,147	104,583	47.2	51.2	65.8

1 Includes 100 horsepower classified as "Other."

TABLE 47.—FUEL CONSUMED, BY STATES: 1919.

STATE.	COAL.		Coke (ton, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).	STATE.	COAL.		Coke (ton, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
	Anthracite (ton, 2,240 pounds).	Bituminous (ton, 2,000 pounds).						Anthracite (ton, 2,240 pounds).	Bituminous (ton, 2,000 pounds).				
United States:													
1919.....	272,266	0,031,428	50,840	1,859,564	1,778	4,370,699	Michigan.....	444,442	34,300	9,666	581	.....	.....
1914.....	226,474	6,731,438	20,072	2,502,065	(1)	5,525,894	Missouri.....	448,863	120	.....	10	.....	.....
1909.....	269,220	4,815,758	4,103	1,515,697	(1)	14,721,568	New York.....	342,356	1,486	51,352	678	.....	500
California.....	.....	.....	.....	1,035,561	.....	.....	Ohio.....	196,305	.....	.....	.....	.....	.....
Illinois.....	389,612	.....	.....	.....	.....	.....	Pennsylvania.....	1,623,085	.....	.....	.....	.....	.....
Indiana.....	523,653	.....	275	.....	.....	.....	Texas.....	50,112	11,390	549,815	.....	.....	273,977
Iowa.....	454,502	.....	.....	.....	100	.....	Utah.....	68,187	.....	.....	.....	.....	.....
Kansas.....	195,432	.....	2,500	144,160	49	1,796,222	Washington.....	77,634	763	26,500	365	.....	.....
							All other states.....	1,217,245	.....	.....	.....	.....	.....

1 Included in figures for fuel oils.

## MANUFACTURES.

## SPECIAL STATISTICS.

Products.—Table 48 presents detailed statistics of products for 1919 and 1914. The industry was greatly affected in 1919 by the depression in building and construction work, and the states all show a

decrease in the Portland cement output with the exception of Missouri, Michigan, and Texas, and in these states the increase was only nominal.

TABLE 48.—PRODUCTS—1919 AND 1914.

KIND AND STATE.	1919	1914	KIND AND STATE.	1919	1914
Total value of products.....	\$175,264,910	\$101,850,490	Cement—Continued.		
The cement industry.....	175,264,910	101,756,444	Portland cement—Continued.		
Subsidiary cement products from other industries.....		94,036	Barrels—Continued.		
Cement:			Texas.....	2,249,735	2,100,341
Barrels.....	81,306,524	89,049,766	Ohio.....	1,637,418	1,962,047
Value.....	\$138,713,823	\$82,204,096	Oregon and Washington.....	1,561,951	(1)
Portland cement—			Oklahoma.....	1,362,687	(1)
Barrels.....	80,777,935	88,230,170	Utah.....	819,861	981,100
Pennsylvania.....	25,325,173	26,570,151	Other states.....	10,933,341	13,983,665
Indiana.....	7,262,454	9,595,923	Value.....	\$138,130,269	\$81,789,368
Missouri.....	5,216,847	4,723,906	Average unit value (barrel).....	\$1.71	\$0.93
Michigan.....	4,676,244	4,285,345	Natural and puzzolan cement—		
California.....	4,642,679	5,076,114	Barrels.....	528,539	* 819,596
New York.....	4,383,679	5,886,124	Value.....	\$583,554	\$414,728
Illinois.....	4,206,918	5,401,605			
Iowa.....	3,573,278	4,233,707	All other products.....	\$36,551,087	\$19,046,394
Kansas.....	2,927,270	3,431,142			

\* Included with "Other states."

\* Includes 751,285 barrels of natural and 68,311 barrels of puzzolan cement.

## GENERAL TABLES.

Table 49 gives comparative statistics for the principal items, number of establishments, average number of wage earners, primary horsepower, wages, cost of ma-

terials, and value of products for the census years 1919, 1914, and 1909. Table 50 is a detailed statement, by states, for the census of 1919.

TABLE 49.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
Expressed in thousands.								Expressed in thousands.							
United States.....	1919	123	25,524	488,808	\$33,195	\$79,510	\$175,265	New York.....	1919	11	1,574	37,236	\$2,087	\$3,750	\$9,243
	1914	133	27,916	490,402	18,192	51,987	101,756		1914	12	2,283	33,363	1,610	8,507	6,840
	1909	135	26,775	371,799	15,320	29,344	63,205		1909	15	1,443	24,385	810	800	2,409
California.....	1919	8	1,316	40,544	1,884	4,114	11,258	Ohio.....	1919	6	655	13,514	975	1,514	3,339
	1914	7	2,420	46,550	1,759	3,381	7,699		1914	7	849	6,975	521	890	2,112
	1909	8	2,407	28,892	1,650	2,182	6,504		1909	9	837	12,685	544	638	1,465
Illinois.....	1919	5	1,123	24,700	1,463	3,975	8,283	Pennsylvania.....	1919	22	7,443	98,058	9,594	25,374	54,540
	1914	6	1,467	23,986	1,184	2,859	6,488		1914	26	7,910	132,894	4,428	15,827	20,081
	1909	6	1,395	15,270	855	1,619	4,088		1909	27	8,080	102,904	3,375	10,108	18,855
Indiana.....	1919	5	1,053	44,315	2,682	5,863	13,363	Texas.....	1919	5	641	16,390	598	1,643	4,743
	1914	7	2,354	43,048	1,355	4,903	10,107		1914	4	583	18,150	371	1,264	2,331
	1909	11	2,318	28,191	1,280	4,159	7,022	Utah.....	1919	3	280	7,778	359	595	1,657
Kansas.....	1919	8	1,084	21,247	1,327	3,382	6,700		1914	3	264	7,241	277	471	1,233
	1914	9	1,002	22,037	673	1,399	3,152	Washington.....	1919	4	436	19,536	716	1,720	3,241
	1909	12	2,143	61,754	1,359	1,550	4,682		1914	5	620	18,237	495	1,512	2,639
Michigan.....	1919	11	1,387	35,470	1,739	3,963	9,643	All other states.....	1919	35	7,632	130,020	9,801	23,028	49,255
	1914	17	1,340	24,158	975	2,406	4,529		1914	30	6,824	113,763	4,544	13,476	25,555
	1909	13	1,306	21,773	826	1,403	2,915		1909	34	6,796	75,945	4,121	8,879	15,255

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TABLE 50.—DETAILED STATEMENT, BY STATES: 1919.

STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.				
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.				16 and over.		Under 16.		Capital.	Salaries and wages.						
					Male.	Female.	Average number.	Number, 15th day of—		Male.	Female.	Male.	Female.	Officials.		Clerks, etc.						
								Maximum month.	Minimum month.													
United States....	123	30,247	0	850	2,811	1,053	25,524	Se	20,062	Ja	20,234	26,895	26,503	362	28	2	Dollars.	271,269,260	Dollars.	4,031,334	Dollars.	5,464,467
California.....	8	1,538	.....	71	120	31	1,316	De	1,607	Ja	1,159	1,525	1,499	26	.....	.....	31,097,607	312,976	278,042			
Illinois.....	5	1,304	.....	24	118	39	1,123	Oc	1,388	Ja	886	1,173	1,168	5	.....	.....	13,065,675	216,052	250,338			
Indiana.....	5	2,420	.....	103	250	100	1,953	Se	2,475	Ja	1,452	2,183	2,089	94	.....	.....	11,814,207	305,175	571,724			
Iowa.....	4	1,170	.....	20	90	25	1,017	Se	1,310	Ja	536	1,041	1,025	16	.....	.....	11,747,401	94,261	194,482			
Kansas.....	8	1,241	2	34	92	20	1,084	Oc	1,377	Ja	706	1,303	1,294	9	.....	.....	8,690,142	110,608	235,520			
Michigan.....	11	1,566	1	78	81	19	1,387	Se	1,647	Ja	958	1,294	1,277	17	.....	.....	10,540,992	203,492	155,121			
Missouri.....	5	2,270	.....	59	243	180	1,788	Oc	1,918	De	1,038	1,638	1,585	50	1	2	12,779,048	211,720	418,377			
New York.....	11	2,034	2	92	241	125	1,574	Jy	1,917	Fe	865	1,761	1,741	18	2	.....	20,547,761	265,114	324,984			
Ohio.....	6	723	2	19	35	12	655	Au	750	Fe	602	646	644	2	.....	.....	4,316,385	73,056	66,931			
Pennsylvania.....	22	8,069	.....	95	1,072	359	7,443	Oc	8,308	Fe	6,310	7,993	7,909	50	25	.....	62,354,245	1,391,345	2,054,980			
Texas.....	5	741	.....	33	54	13	641	No	688	Fe	562	677	677	.....	.....	.....	9,448,086	128,500	135,479			
Utah.....	3	308	.....	15	10	3	280	Se	352	Ja	172	288	281	7	.....	.....	3,488,064	41,153	19,019			
Washington.....	4	484	.....	22	18	8	436	Au	549	Ja	242	468	463	5	.....	.....	6,200,923	64,138	40,745			
All other states.....	26	5,479	2	171	369	110	4,827					4,905	4,851	54	.....	.....	65,148,123	615,741	708,825			

STATE.	EXPENSES—continued.										POWER.									
	Salaries and wages—Con.	For contract work.	Rent and taxes.		For materials.		Value of products.	Value added by manufacture.	Primary horsepower.						Electric horsepower generated in establishments reporting.					
			Wage earners.	Taxes, Federal, State, County, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.				Rented (electric).						
										Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power.							
United States.....	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.		
California.....	1,884,477	.....	223,982	1,983,891	2,130,126	11,258,473	7,144,456	40,544	105	.....	25	.....	40,414	.....	10,948	.....	19,398			
Illinois.....	1,462,737	.....	10,500	115,319	2,537,451	1,437,662	4,307,870	24,700	12,050	6,200	.....	.....	6,460	.....	10,948	.....	19,398			
Indiana.....	2,082,173	.....	1,047,942	306,907	3,871,335	1,962,030	7,499,443	44,315	9,240	14,141	.....	.....	20,934	.....	17,953	.....	10,803			
Iowa.....	1,515,337	85,233	.....	245,010	3,467,156	1,712,930	8,121,014	17,331	13,725	3,600	.....	.....	.....	.....	10,803	.....	10,803			
Kansas.....	1,326,970	20,447	2,202	117,764	2,049,878	1,311,800	6,699,799	21,247	13,832	400	7,015	.....	.....	.....	.....	.....	.....			
Michigan.....	1,738,993	814	33,537	204,450	2,094,766	1,867,821	9,643,454	35,470	15,105	15,600	305	2,000	2,460	.....	19,398	.....	19,398			
Missouri.....	2,310,336	.....	.....	182,261	3,481,732	2,088,420	6,168,009	35,170	2,590	1,215	.....	.....	31,365	.....	1,255	.....	1,255			
New York.....	2,986,003	3,374	1,710	294,867	1,850,628	1,907,951	9,242,547	37,236	14,433	8,650	6,050	.....	8,103	.....	14,888	.....	14,888			
Ohio.....	1,076,029	21,510	.....	43,810	615,907	898,344	3,338,594	13,614	5,225	1,000	80	.....	7,209	.....	3,498	.....	3,498			
Pennsylvania.....	9,594,037	53,440	692,872	1,168,043	16,289,288	9,084,447	54,539,872	98,058	70,671	12,759	22	.....	5,608	.....	25,997	.....	25,997			
Texas.....	567,650	.....	.....	217,540	515,199	1,127,932	4,743,343	16,390	.....	4,500	6,400	.....	5,365	.....	7,968	.....	7,968			
Utah.....	359,293	2,072	40	52,563	271,303	323,754	1,656,939	7,778	1,081,882	.....	.....	.....	7,778	.....	1,500	.....	1,500			
Washington.....	716,093	.....	.....	57,180	988,175	781,971	3,241,114	19,536	1,620,968	.....	.....	.....	17,936	.....	1,500	.....	1,500			
All other states.....	5,975,216	73,305	2,656	563,783	8,422,495	4,456,408	29,395,803	77,519	16,517,900	.....	.....	.....	28,866	.....	29,233	.....	29,233			

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

<sup>1</sup> Same number reported for one or more other months.  
<sup>2</sup> All other states embrace: Alabama, 2 establishments; Colorado, 2; Georgia, 1; Kentucky, 1; Maine, 2; Maryland, 2; Minnesota, 3; Montana, 2; Nebraska, 1; New Jersey, 2; Oklahoma, 3; Oregon, 1; Tennessee, 2; Virginia, 1; and West Virginia, 1.

# LIME.

## GENERAL STATISTICS.

**General character of the industry.**—The present report embraces establishments engaged primarily in the burning of lime.

**Comparative summary.**—Table 51 presents the comparative statistics for the industry for the census years 1919, 1914, 1909, and 1904, with percentages of increase for the census periods. Prior to 1904 the industry was combined with cement and wall plaster.

**Principal states, ranked by value of products.**—Table 52 shows the number of establishments, wage earners, value of products, and value added by manufacture, by states, ranked according to the value of products in 1919. Although the majority of the states are represented in the industry, yet the six leading states—Pennsylvania, Ohio, West Virginia, Massachusetts, Missouri, and Virginia—reported nearly 60 per cent of the products.

**Persons engaged in the industry.**—The age classification of the average number of wage earners in Table 53 is an estimate obtained by the method described in the "Explanation of terms." Figures for states will be found in Table 63.

**Wage earners, by months.**—The statistics for wage earners, Table 54, are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions existing during the year. The few females incidentally reported as wage earners are negligible.

**Prevailing hours of labor.**—The statistics presented in Table 55 show a material reduction in the hours of labor per week. In 1909, 82.9 per cent of the wage earners were employed in plants where the prevailing hours of labor were 60 or over per week. This proportion decreased to 73.1 per cent in 1914, and still further to 64.3 per cent in 1919. On the other hand, but a fraction of 1 per cent was reported for establishments in 1909 where the prevailing hours of labor

were 48 per week or less, and 1.7 per cent in 1914. In 1919 this proportion increased to 11 per cent.

**Size of establishments, by average number of wage earners.**—The average number of wage earners per establishment was 20 in 1914 and 24 in 1919. The majority of the establishments are owned by individuals or firms and a relatively large number employ not exceeding 5 wage earners. In 1919 the establishments employing over 100 wage earners, 23 in number, shown in Table 56, reported 32.8 per cent of all wage earners, and in 1914 there were 25 establishments of this character with 35 per cent of the wage earners.

**Size of establishments, by value of products.**—Comparative figures for groups by value of products, presented in Table 57 for 1919 and 1914, are necessarily affected by the general increase in values. The average value of products per establishment increased from \$21,000 in 1909 to \$29,000 in 1914 and to \$71,000 in 1919. On a quantity production basis the industry shows a slight decrease.

**Character of ownership.**—Table 58 presents the statistics for establishments classified according to form of ownership. The decrease in number of establishments in 1919 as compared with prior censuses is essentially in the "Individuals" and "All others" groups, the latter comprising chiefly firms, and the proportion of the business done by "Corporations" has progressively increased whether measured by number of wage earners or by value of products.

**Number and horsepower of types of prime movers.**—Table 59 presents the power statistics for the industry for 1919, 1914, and 1909. Electric power is a growing factor, and of the total primary power, 55.3 per cent was purchased electric power in 1919, as compared with 28.8 per cent in 1914 and 5.4 per cent in 1909.

**Fuel consumed.**—Table 60 presents the statistics for fuel, by kind and by states. The figures for gas include both natural and manufactured gas.



TABLE 51.—COMPARATIVE SUMMARY: 1919, 1914, 1909, AND 1904.

	1919	1914	1909	1904	PER CENT OF INCREASE. <sup>1</sup>		
					1914-1919	1909-1914	1904-1909
Number of establishments.....	476	627	853	526	-25.1	-24.5	62.2
Persons engaged.....	12,855	13,975	15,859	12,383	-8.0	-10.7	26.5
Proprietors and firm members.....	349	500	704	500	-30.5	-37.0	58.8
Salaried employees.....	1,101	1,046	908	731	5.3	8.1	32.4
Wage earners (average number).....	11,405	12,429	13,897	11,152	-8.2	-10.6	24.6
Primary horsepower.....	51,735	39,134	27,071	18,198	32.2	41.4	52.1
Capital.....	\$45,844,532	\$34,123,948	\$32,520,200	\$22,596,000	34.3	4.9	43.9
Salaries and wages.....	12,865,076	7,329,873	7,059,831	5,300,000	75.5	3.8	33.2
Salaries.....	1,995,880	1,290,265	1,079,657	703,000	54.7	19.5	53.6
Wages.....	10,869,196	6,039,608	5,980,174	4,597,000	80.0	1.0	30.1
Paid for contract work.....	70,430	110,545	50,053	33,813	-36.3	97.2	65.8
Rent and taxes.....	985,500	225,847	184,644	215,972	336.4	22.3	.....
Cost of materials.....	14,295,925	7,557,870	8,730,906	5,437,000	89.2	12.3	23.8
Value of products.....	33,970,463	18,390,805	17,951,987	14,751,000	84.7	2.4	21.7
Value added by manufacture <sup>2</sup> .....	19,673,538	10,833,135	11,221,081	9,314,000	81.6	-3.6	20.6

<sup>1</sup> A minus sign (-) denotes decrease.<sup>2</sup> Exclusive of internal revenue.<sup>3</sup> Value of products less cost of materials.

TABLE 52.—PRINCIPAL STATES, RANKED BY VALUE OF PRODUCTS: 1919.

STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			STATE.	Number of establishments.	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thou- sands).	Per cent distribution.	Rank.	Amount (expressed in thou- sands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thou- sands).	Per cent distribution.	Rank.	Amount (expressed in thou- sands).	Per cent distribution.	Rank.
United States..	476	11,405	100.0	....	\$33,970	100.0	....	\$19,673	100.0	....	Texas.....	7	226	2.0	15	\$798	2.3	15	\$475	2.4	14
Ohio.....	30	1,191	10.4	2	4,021	11.8	2	2,320	11.8	2	Connecticut.....	5	191	1.7	17	770	2.3	16	351	1.8	16
Pennsylvania.....	158	2,539	22.3	1	7,556	22.2	1	4,554	23.2	1	Michigan.....	6	222	1.9	16	626	1.8	17	335	1.7	17
West Virginia.....	9	727	6.4	5	2,395	7.0	3	1,488	7.6	3	California.....	8	159	1.4	20	564	1.7	18	283	1.4	19
Massachusetts.....	12	501	4.4	7	2,114	6.2	4	1,145	5.8	5	Vermont.....	8	160	1.4	19	459	1.4	19	199	1.0	20
Missouri.....	16	736	6.5	4	2,080	6.2	5	1,298	6.6	4	Minnesota.....	5	167	1.5	18	427	1.3	20	307	1.6	18
Virginia.....	37	750	6.6	3	1,875	5.5	6	1,145	5.8	6	Washington.....	5	150	1.3	21	341	1.0	21	195	1.0	21
Alabama.....	10	291	2.5	14	1,149	3.4	8	508	2.6	12	Arkansas.....	4	76	0.7	22	188	0.6	22	106	0.5	23
Wisconsin.....	20	392	3.4	10	1,130	3.3	9	713	3.6	8	Utah.....	12	45	0.4	27	140	0.4	24	97	0.5	24
Tennessee.....	16	527	4.6	6	1,100	3.2	10	649	3.3	9	South Dakota.....	3	14	0.1	32	59	0.2	30	35	0.2	30
Illinois.....	11	378	3.3	11	1,065	3.1	11	734	3.7	7	New Mexico.....	4	13	0.1	33	27	0.1	34	23	0.1	33
Maryland.....	36	468	4.1	8	1,049	3.1	12	498	2.5	13	New Jersey.....	5	12	0.1	34	26	0.1	35	17	0.1	36
Indiana.....	5	419	3.7	9	939	2.8	13	551	2.8	11	All other states.....	28	716	6.3	....	2,230	6.6	....	1,206	6.1	....
New York.....	16	335	2.9	13	832	2.4	14	441	2.3	15											

TABLE 53.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Cen-sus year.	Total.	Male.	Fe-male.	PER CENT OF TOTAL.		CLASS.	Cen-sus year.	Total.	Male.	Fe-male.	PER CENT OF TOTAL.	
					Male.	Fe-male.						Male.	Fe-male.
All classes.....	1919	12,855	12,640	215	98.3	1.7	Clerks and other subordinate salaried employees.....	1919	494	325	169	65.8	34.2
	1914	13,975	13,803	172	98.7	1.3		1914	538	407	131	75.7	24.3
	1909	15,859	(1)	(1)	(1)	(1)		1909	427	335	92	78.5	21.5
Proprietors and officials.....	1919	953	922	31	96.4	3.6	Wage earners (average number).....	1919	11,405	11,393	12	99.9	0.1
	1914	1,008	980	28	97.2	2.8		1914	12,429	12,416	13	99.9	0.1
	1909	1,335	(1)	(1)	(1)	(1)		1909	13,897	13,889	8	99.9	0.1
Proprietors and firm members.....	1919	349	332	17	95.1	4.9	16 years of age and over.....	1919	11,382	11,370	12	99.9	0.1
	1914	500	477	23	95.4	4.6		1914	12,402	12,389	13	99.9	0.1
	1909	794	(1)	(1)	(1)	(1)		1909	13,856	13,848	8	99.9	0.1
Salaried officers of corporations.....	1919	252	240	12	95.2	4.8	Under 16 years of age.....	1919	23	23	.....	100.0	.....
	1914	189	184	5	97.4	2.6		1914	27	27	.....	100.0	.....
	1909	191	(1)	(1)	(1)	(1)		1909	41	41	.....	100.0	.....
Superintendents and managers.....	1919	355	350	5	98.6	1.4							
	1914	319	319	.....	100.0	.....							
	1909	350	(1)	(1)	(1)	(1)							

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

## MANUFACTURES.

TABLE 54.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

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

STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
United States:														
1919.....	11,405	10,442	10,370	10,844	11,515	11,572	11,306	11,445	12,034	12,143	11,869	11,809	11,511	85.4
Males.....	11,393	10,432	10,359	10,833	11,506	11,562	11,295	11,435	12,024	12,130	11,856	11,796	11,489	85.4
Females.....	12	10	11	11	9	10	11	10	10	13	13	14	22	40.9
1914.....	12,429	11,076	10,811	11,061	13,164	13,407	13,154	13,842	13,745	13,670	12,876	11,708	10,174	74.0
Alabama.....	291	300	290	285	286	283	283	289	283	291	297	292	314	90.0
Arkansas.....	76	70	81	88	83	65	66	73	77	77	70	83	76	75.6
California.....	159	166	170	169	178	174	161	152	159	147	141	143	148	79.2
Connecticut.....	191	183	180	173	182	198	195	199	185	191	194	198	199	89.4
Illinois.....	378	304	308	322	381	416	412	417	397	401	408	398	372	72.9
Indiana.....	419	432	449	422	435	426	418	393	430	431	450	396	346	76.9
Maryland.....	468	482	426	482	507	511	478	441	499	530	493	447	412	76.0
Massachusetts.....	501	459	454	445	475	507	508	503	519	539	532	542	529	82.1
Michigan.....	222	181	172	169	199	243	248	237	263	260	243	229	227	61.6
Minnesota.....	167	118	89	121	174	211	192	194	183	173	174	188	177	51.0
Missouri.....	736	610	634	659	700	698	688	728	850	846	853	811	755	71.5
New Jersey.....	12	9	7	14	16	14	12	13	13	12	10	10	14	43.8
New Mexico.....	13	8	8	8	6	8	7	16	19	12	17	26	23	23.1
New York.....	335	359	324	335	315	293	301	304	322	338	354	375	400	73.5
Ohio.....	1,191	968	958	1,089	1,203	1,274	1,257	1,308	1,315	1,299	1,290	1,195	1,136	72.9
Pennsylvania.....	2,539	2,440	2,498	2,569	2,616	2,538	2,509	2,505	2,505	2,611	2,540	2,507	2,481	93.3
South Dakota.....	14	14	14	15	14	13	14	14	16	16	14	13	13	81.2
Tennessee.....	527	527	512	537	536	525	494	525	538	548	539	525	523	81.0
Texas.....	220	171	171	180	199	206	203	211	251	224	265	319	312	53.6
Utah.....	45	27	46	40	41	52	58	34	46	58	41	54	43	46.6
Vermont.....	160	154	150	158	169	151	150	150	157	179	174	177	171	77.1
Virginia.....	750	704	684	700	854	809	796	712	708	792	712	728	771	80.1
Washington.....	150	144	130	139	158	145	131	136	147	151	177	185	108	67.6
West Virginia.....	727	740	765	744	718	706	736	726	755	748	697	700	699	92.3
Wisconsin.....	392	292	306	350	420	430	437	429	427	421	427	407	358	69.8

TABLE 55.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919.

STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							STATE.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
		44 and under.	Between 44 and 48.	48.1	Between 48 and 54.	54.	Between 54 and 60.	60.			44 and under.	Between 44 and 48.	48.1	Between 48 and 54.	54.	Between 54 and 60.	60.
United States:																	
1919.....	11,405	27	4	1,224	211	1,456	1,149	6,357	077	Missouri.....	736	.....	.....	.....	58	.....	547
1914.....	12,429	(2)	(2)	220	237	1,142	1,750	7,257	1,823	New York.....	335	.....	10	5	115	44	161
1909.....	13,897	(2)	(2)	114	150	818	1,295	8,573	2,941	Ohio.....	1,191	.....	9	.....	172	61	949
Alabama.....	291	.....	.....	47	19	35	.....	80	110	Pennsylvania.....	2,539	9	4	25	13	107	636
California.....	159	14	.....	40	.....	6	64	.....	35	Tennessee.....	527	.....	.....	90	13	15	17
Connecticut.....	191	.....	.....	.....	.....	146	.....	45	.....	Texas.....	226	.....	1	16	15	60	125
Illinois.....	378	.....	71	62	35	36	172	2	.....	Vermont.....	160	.....	.....	.....	151	.....	9
Indiana.....	419	.....	131	.....	.....	.....	142	146	.....	Virginia.....	750	.....	95	53	38	34	530
Maryland.....	468	3	.....	150	.....	12	134	169	.....	Washington.....	150	.....	13	.....	67	27	.....
Massachusetts.....	501	.....	.....	85	.....	353	.....	.....	63	West Virginia.....	727	.....	.....	.....	.....	623	104
Michigan.....	222	.....	.....	.....	.....	.....	222	.....	.....	Wisconsin.....	392	.....	26	.....	27	14	325
Minnesota.....	167	.....	.....	.....	.....	5	162	.....	.....								

\* Includes 48 and under for 1914 and 1909.

\* Corresponding figures not available.

TABLE 56.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—															
	Establishments.	Wage earners (average number).	No wage earners.		1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		Over 500 wage earners.	
			Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States.....	1919..	476	11,405	28	187	342	105	1,262	87	2,904	46	3,066	19	2,601	4	1,140	.....	.....
	1914..	627	12,429	54	293	552	110	1,440	104	3,371	32	2,165	19	2,640	5	1,651	1	601
Illinois.....		11	378	1	2	5	1	12	3	100	4	261	.....	.....	.....	.....	.....	.....
Indiana.....		5	410	.....	.....	.....	1	10	.....	.....	2	123	2	277	.....	.....	.....	.....
Maryland.....		30	468	2	25	56	6	71	1	35	1	60	2	247	.....	.....	.....	.....
Massachusetts.....		12	501	.....	.....	.....	8	43	6	185	2	167	1	106	.....	.....	.....	.....
Missouri.....		16	736	1	1	5	5	40	5	195	2	181	2	306	.....	.....	.....	.....
New York.....		16	335	.....	8	20	2	26	4	157	2	132	.....	.....	.....	.....	.....	.....
Ohio.....		30	1,191	.....	8	18	4	46	8	299	8	534	2	294	.....	.....	.....	.....
Pennsylvania.....		158	2,539	11	99	151	22	256	12	422	8	526	4	576	2	608	.....	.....
Tennessee.....		16	527	.....	3	6	5	66	5	181	2	149	1	125	.....	.....	.....	.....
Virginia.....		87	750	4	8	17	11	119	9	254	4	253	1	107	.....	.....	.....	.....
West Virginia.....		9	727	1	3	7	.....	.....	1	30	.....	.....	3	438	1	252	.....	.....
Wisconsin.....		20	392	.....	3	8	9	124	7	207	1	53	.....	.....	.....	.....	.....	.....

TABLE 57.—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.....	476	627	863	11,405	12,429	13,897	\$33,970,463	\$18,390,805	\$17,951,987	\$19,673,538	\$10,833,135	\$11,221,081
Less than \$5,000.....	149	314	460	141	432	684	292,907	568,191	787,432	194,501	364,917	529,224
\$5,000 to \$20,000.....	97	109	161	490	973	1,547	1,050,190	1,198,125	1,725,237	637,148	737,529	1,139,472
\$20,000 to \$100,000.....	129	161	199	2,794	5,259	6,982	7,029,586	7,345,974	8,701,922	4,310,348	4,316,431	5,507,983
\$100,000 to \$500,000.....	89	38	33	5,886	5,765	4,084	19,826,727	6,164,103	6,677,396	9,769,880	5,414,258	4,044,402
\$500,000 and over.....	12	5	.....	2,088	.....	.....	8,674,083	3,114,412	.....	4,761,705	.....	.....
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.....	31.3	50.1	53.9	1.2	3.5	4.9	0.9	3.1	4.4	1.0	3.4	4.7
\$5,000 to \$20,000.....	20.4	17.4	18.9	4.4	7.8	11.1	3.1	6.5	9.6	3.2	6.8	10.2
\$20,000 to \$100,000.....	27.1	25.7	23.3	24.5	42.3	50.3	20.7	39.9	48.8	21.9	39.8	49.1
\$100,000 to \$500,000.....	18.7	6.0	3.9	51.6	46.4	33.7	49.8	33.6	37.2	49.7	5.0	36.0
\$500,000 and over.....	2.5	0.8	.....	18.3	.....	.....	25.5	16.9	.....	24.2	.....	.....

TABLE 58.—CHARACTER OF OWNERSHIP, BY STATES: 1919.

STATE.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE EARNERS.						VALUE OF PRODUCTS.								
	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	Total.	In establishments owned by—			Per cent of total.			Total.	In establishments owned by—			Per cent of total.			
					Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.		Individ-u-als.	Corpora-tions.	All others.	Indi-vid-u-als.	Cor-pora-tions.	All oth-ers.	
United States:																		
1919.....	194	224	58	11,405	1,034	9,623	748	9.1	84.4	6.5	\$33,970,463	\$2,702,603	\$29,231,305	\$2,036,555	8.0	86.0	6.0	
1914.....	333	222	72	12,429	1,802	9,840	781	14.5	79.2	6.3	18,390,805	2,419,142	14,892,684	1,078,979	13.1	81.0	5.9	
1909.....	484	248	121	13,897	2,615	9,960	1,322	18.8	71.7	9.5	17,951,987	2,793,490	13,485,150	1,675,338	15.6	75.0	9.4	
Illinois.....	3	7	1	378	.....	337	141	.....	89.2	10.8	1,064,548	.....	971,498	193,050	.....	91.3	8.7	
Indiana.....	.....	4	1	419	.....	419	.....	.....	100.0	.....	938,723	.....	938,723	.....	.....	100.0	.....	
Maryland.....	19	12	5	468	29	351	88	6.2	75.0	18.8	1,049,265	97,106	704,353	247,806	9.3	67.1	23.6	
Massachusetts.....	1	10	1	501	.....	501	.....	.....	100.0	.....	2,113,741	.....	2,113,741	.....	.....	100.0	.....	
Missouri.....	.....	13	3	736	.....	725	11	.....	98.5	1.5	2,090,126	.....	2,067,345	22,781	.....	98.9	1.1	
New York.....	9	7	.....	335	77	258	.....	23.0	77.0	.....	832,141	210,362	621,779	.....	25.3	74.7	.....	
Ohio.....	5	21	4	1,191	61	1,031	99	5.1	86.6	8.3	4,021,106	132,985	3,654,029	234,092	3.3	90.9	45.8	
Pennsylvania.....	103	36	19	2,539	387	2,036	116	15.2	80.2	4.6	7,556,372	1,107,068	6,202,864	246,440	14.7	82.1	3.3	
Tennessee.....	6	7	3	527	118	332	77	22.4	63.0	14.6	1,099,620	144,384	773,266	181,970	13.1	70.3	16.5	
Virginia.....	9	25	3	750	36	699	15	4.8	93.2	2.0	1,875,173	78,220	1,761,651	35,302	4.2	93.9	1.9	
West Virginia.....	3	5	11	727	.....	720	7	.....	98.0	1.0	2,394,667	.....	2,374,569	20,098	.....	99.2	0.8	
Wisconsin.....	2	17	1	392	.....	374	18	.....	95.4	4.6	1,130,092	.....	1,077,983	52,109	.....	95.4	4.6	

1 Includes the group "Individuals."

2 Includes the group "All others."

3 Includes the groups "Individuals" and "All others."

## MANUFACTURES.

TABLE 59.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	1,633	1,103	607	61,735	39,134	27,671	100.0	100.0	100.0
Owned.....	472	678	.....	23,140	27,826	26,174	44.7	71.1	94.6
Steam.....	329	543	523	19,946	25,388	24,271	38.0	64.0	87.7
Engines.....	320	543	523	18,732	25,388	24,271	36.2	64.0	87.7
Turbines.....	9	.....	.....	1,214	.....	.....	2.3	.....	.....
Internal-combustion engines.....	139	123	87	2,944	2,122	1,462	5.7	5.4	5.3
Water wheels, turbines, and motors.....	4	10	12	250	816	441	0.5	0.8	1.6
Rented.....	1,161	427	79	28,595	11,308	1,497	55.3	28.9	5.4
Electric.....	1,161	427	79	28,595	11,253	1,497	55.3	28.8	5.4
Other.....	.....	.....	.....	.....	55	.....	.....	0.1	.....
Electric.....	1,333	519	113	32,155	12,861	1,560	100.0	100.0	100.0
Rented.....	1,161	427	79	28,595	11,253	1,497	88.9	87.6	38.9
Generated by establishments reporting.....	172	92	34	3,560	1,608	1,063	11.1	12.4	63.1

<sup>1</sup> Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.

TABLE 60.—FUEL CONSUMED, BY STATES: 1919.

STATE.	COAL.		Coke (ton, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).	STATE.	COAL.		Coke (ton, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
	Anthracite <sup>1</sup> (ton, 2,240 pounds).	Bituminous (ton, 2,000 pounds).						Anthracite <sup>1</sup> (ton, 2,240 pounds).	Bituminous (ton, 2,000 pounds).				
United States:							New Jersey.....	705	200	218	.....	.....	.....
1919.....	57,112	872,910	102,788	21,301	5,519	53,835	New Mexico.....	.....	608	.....	.....	.....	.....
1914.....	76,141	677,071	60,169	82,447	( <sup>2</sup> )	673,853	New York.....	2,546	32,175	.....	73	.....	.....
Alabama.....	.....	27,046	.....	.....	4	500	Ohio.....	.....	161,673	.....	20	534	52,316
Arkansas.....	.....	600	.....	2,500	24	.....	Pennsylvania.....	43,738	195,080	49,070	133	204	390
California.....	.....	68,374	.....	.....	.....	.....	South Dakota.....	.....	2,126	.....	.....	6	.....
Connecticut.....	23	13,825	.....	.....	42	.....	Tennessee.....	.....	43,393	.....	6	5	.....
Illinois.....	25	18,047	.....	.....	.....	.....	Texas.....	.....	24,745	1,300	6,551	25	.....
Indiana.....	.....	41,455	.....	.....	.....	.....	Utah.....	.....	2,219	1,341	60	30	.....
Maryland.....	3,359	5,442	15,918	32	247	.....	Vermont.....	.....	14,669	.....	.....	.....	.....
Massachusetts.....	15	30,044	2,802	.....	236	.....	Virginia.....	2,696	41,627	6,292	3	15	.....
Michigan.....	886	4,161	7,002	7,135	2,895	.....	Washington.....	3,119	.....	.....	.....	69	.....
Minnesota.....	.....	5,084	.....	31	20	.....	West Virginia.....	.....	54,388	18,688	.....	.....	820
Missouri.....	46,191	.....	.....	.....	59	.....	Wisconsin.....	.....	3,163	.....	200	901	.....
							All other states.....	.....	35,977	67	4,627	137	.....

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

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

## SPECIAL STATISTICS.

**Products.**—Table 61 presents comparative statistics for products, by states, for 1919, 1914, and 1909. The quantities and values are as reported by the Geological Survey. The census reports carry the value of all products. The containers, an important item in the value of products, not included in the figures as re-

ported by the Geological Survey, are included in this table under the item "All other products." Further, the Geological Survey reports are based upon lime burned and sold during the respective years, while the products as reported to the census represent production, whether sold or carried in stock.

TABLE 61.—PRODUCTS: 1919, 1914, AND 1909.

PRODUCT.	1919	1914	1909	LIME PRODUCTION, BY STATE. <sup>1</sup>	1919	1914	1909
Total value.....	\$33,970,463	\$18,390,805	\$17,951,087	United States.....	3,071,423	3,380,928	3,481,974
Lime:				Pennsylvania.....	779,608	849,963	881,439
Tons (2,000 pounds).....	3,071,423	3,380,928	3,484,974	Ohio.....	512,614	480,010	343,754
Value.....	\$27,643,000	\$13,268,938	\$13,846,072	Virginia.....	223,768	243,990	164,095
Average value per ton.....	\$9.00	\$3.92	\$3.98	Missouri.....	180,749	185,080	182,460
Quicklime—				West Virginia.....	174,167	192,195	80,569
Tons.....	2,301,488	2,865,807	3,277,363	Michigan.....	145,783	66,507	83,103
Value.....	\$20,482,600	\$11,029,022	\$12,932,922	Alabama.....	135,095	46,965	75,268
Hydrated lime—				Massachusetts.....	131,762	124,199	130,546
Tons.....	769,935	515,121	207,611	New York.....	126,404	94,009	134,732
Value.....	\$7,160,400	\$2,239,916	\$913,150	Wisconsin.....	123,020	227,469	208,250
All other products.....	\$2,327,463	\$5,121,867	\$4,105,915	Tennessee.....	116,346	85,939	79,003
				Indiana.....	107,460	99,185	90,325
				Maryland.....	103,563	155,845	125,436
				Maine.....	96,582	122,218	178,564
				Illinois.....	65,000	87,603	104,260
				All other states.....	48,902	349,150	537,665

<sup>1</sup> Reported in tons of 2,000 pounds.

## GENERAL TABLES.

Table 62 gives the comparative statistics for the principal items, number of establishments, average number of wage earners, primary horsepower, cost

of materials, and value of products for the census years 1919, 1914 and 1909. Table 63 is a detailed statement, by states, for the census of 1919.

TABLE 62.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
United States.....	1919	476	11,405	51,735	\$10,869	\$14,297	\$33,970	New York.....	1919	16	335	2,386	\$317	\$391	\$832
	1914	627	12,420	30,134	6,040	7,558	18,391		1914	23	310	720	149	189	503
	1909	853	13,897	27,671	5,980	6,781	17,952		1909	33	465	781	236	176	580
Alabama.....	1919	10	291	899	305	641	1,149	Ohio.....	1919	30	1,191	9,175	1,262	1,701	4,021
	1914	14	390	871	147	196	398		1914	38	1,416	7,374	777	706	2,334
	1909	15	411	723	136	182	426		1909	30	1,273	3,872	553	598	1,620
Arkansas.....	1919	4	76	240	55	82	188	Pennsylvania.....	1919	158	2,539	12,551	2,552	3,002	7,556
	1914	7	189	457	54	82	188		1914	265	3,128	8,725	1,404	1,393	3,948
	1909	9	157	137	51	78	161		1909	348	3,258	8,682	1,259	1,038	3,342
California.....	1919	8	159	345	170	281	561	Tennessee.....	1919	16	527	1,117	372	451	1,100
	1914	7	213	220	130	116	316		1914	9	432	670	137	108	357
	1909	15	410	558	234	212	600		1909	20	415	668	130	93	323
Connecticut.....	1919	5	191	85	196	419	770	Texas.....	1919	7	225	596	227	323	798
	1914	10	284	476	158	265	489		1914	8	262	439	105	115	317
	1909	10	325	170	160	275	553		1909	11	348	534	123	143	390
Illinois.....	1919	11	378	1,668	409	331	1,065	Utah.....	1919	12	45	166	63	43	140
	1914	14	448	2,077	265	276	747		1914	10	49	10	37	19	71
	1909	16	511	794	283	174	688		1909	12	74	20	53	29	115
Indiana.....	1919	5	419	1,553	341	338	939	Vermont.....	1919	8	160	1,141	158	260	459
	1914	6	202	582	84	151	284		1914	8	132	149	64	98	189
	1909	10	440	800	175	182	447		1909	11	185	248	72	119	250
Maryland.....	1919	36	468	2,111	263	551	1,049	Virginia.....	1919	37	750	3,149	587	730	1,875
	1914	25	266	605	99	152	390		1914	34	694	1,729	273	471	995
	1909	43	397	942	128	132	420		1909	35	716	921	232	300	856
Massachusetts.....	1919	12	501	2,028	523	969	2,114	Washington.....	1919	5	150	447	141	146	341
	1914	11	474	997	231	370	817		1914	6	154	384	112	80	250
	1909	9	557	589	304	337	864		1909	12	188	245	126	109	370
Michigan.....	1919	6	222	1,195	183	291	626	West Virginia.....	1919	9	727	3,700	788	967	2,395
	1914	8	150	653	88	132	318		1914	10	773	4,026	378	434	980
	1909	11	157	265	85	134	327		1909	13	514	1,000	188	224	644
Minnesota.....	1919	5	167	260	109	120	427	Wisconsin.....	1919	20	392	2,731	359	417	1,130
	1914	5	223	328	127	139	342		1914	30	828	4,032	450	827	1,570
	1909	8	203	319	101	143	311		1909	43	776	1,981	412	507	1,272
Missouri.....	1919	16	736	1,936	650	792	2,030	All other states.....	1919	35	743	2,278	765	1,052	2,316
	1914	19	531	1,593	277	409	890		1914	48	835	1,823	474	805	1,606
	1909	31	692	1,314	317	461	1,031		1909	80	1,214	1,670	535	1,012	2,246
New Jersey.....	1919	5	12	65	11	9	26								
	1914	12	46	89	20	25	62								
	1909	19	211	312	78	73	201								

## MANUFACTURES.

TABLE 63.—DETAILED STATEMENT,

STATE.		Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.
			Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
						Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.	Female.	
									Maximum month.	Minimum month.						
1	United States.....	476	12,855	349	607	325	169	11,405	Se 12,143	Fe 10,370	12,052	11,996	26	30	.....	\$45,844,532
2	Alabama.....	10	331	8	16	12	4	291	De 314	My 282	325	325	.....	.....	.....	1,423,701
3	Arkansas.....	4	90	1	9	4	.....	76	Mh 86	My 65	88	88	.....	.....	.....	236,939
4	California.....	8	190	6	13	9	3	159	Ap 178	Oc 141	157	155	2	.....	.....	879,186
5	Connecticut.....	5	205	.....	9	4	1	191	Jy <sup>2</sup> 199	Mh 178	199	199	.....	.....	.....	946,037
6	Illinois.....	11	443	11	24	23	7	378	Jy 417	Ja 304	387	386	1	.....	.....	1,542,543
7	Indiana.....	5	462	8	13	13	9	419	Oc 450	De 346	391	301	.....	.....	.....	967,549
8	Maryland.....	36	546	31	26	14	7	468	Se 530	Oc 403	489	485	.....	4	.....	813,019
9	Massachusetts.....	12	543	8	21	10	3	501	No 542	Mh 445	533	531	.....	2	.....	1,254,637
10	Michigan.....	6	241	2	7	6	4	222	Au 263	Mh 162	227	227	.....	.....	.....	601,900
11	Minnesota.....	5	198	5	12	8	6	167	Jy 194	Fe 99	184	184	.....	.....	.....	558,447
12	Missouri.....	16	809	6	35	20	12	736	Oc 853	Ja 610	760	759	1	.....	.....	3,073,677
13	New Jersey.....	5	21	8	.....	1	.....	12	Ap 16	Fe 7	16	16	.....	.....	.....	41,965
14	New Mexico.....	4	17	1	2	1	.....	13	No 26	Mh <sup>3</sup> 6	24	24	.....	.....	.....	44,392
15	New York.....	16	367	9	15	4	4	335	De 400	My 293	391	389	2	.....	.....	1,398,373
16	Ohio.....	30	1,365	13	68	59	34	1,191	Au 1,315	Fe 958	1,197	1,196	1	.....	.....	6,040,374
17	Pennsylvania.....	158	2,866	144	118	36	29	2,539	Ap 2,616	Ja 2,440	2,653	2,643	10	.....	.....	8,712,597
18	South Dakota.....	3	18	1	1	.....	2	14	Au <sup>2</sup> 16	Mh <sup>2</sup> 13	14	14	.....	.....	.....	55,050
19	Tennessee.....	16	564	15	15	3	4	527	Se 543	Je 494	554	549	.....	5	.....	1,008,500
20	Texas.....	7	264	7	18	11	2	226	No 319	Ja <sup>2</sup> 171	318	318	.....	.....	.....	808,866
21	Utah.....	12	63	10	6	2	.....	45	Je <sup>2</sup> 58	Ja 27	48	46	2	.....	.....	479,515
22	Vermont.....	8	183	6	12	2	3	160	Se 179	Mh 138	166	166	.....	.....	.....	663,341
23	Virginia.....	37	851	15	57	17	12	750	Ap 854	Fe 684	812	793	.....	19	.....	2,307,420
24	Washington.....	5	166	.....	10	6	.....	150	No 185	Jy 125	174	172	2	.....	.....	1,170,482
25	West Virginia.....	9	782	6	18	27	4	727	Fe <sup>2</sup> 755	Oc 697	716	715	1	.....	.....	3,090,561
26	Wisconsin.....	20	449	5	32	13	7	392	Je 437	Ja 292	373	372	1	.....	.....	2,417,188
27	All other states <sup>2</sup> .....	28	821	23	50	20	12	716	.....	.....	856	853	3	.....	.....	5,301,013

<sup>1</sup> Includes water wheels and turbines (irrespective of ownership of water supply).<sup>2</sup> Same number reported for one or more other months.

BY STATES: 1919.

EXPENSES.										POWER.							
Salaries and wages.				For contract work.	Rent and taxes.		For materials.		Value of products.	Value, added by manufacture.	Primary horsepower.						Electric-horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.	Rent of factory.		Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.	Total.			Owned.				Rented (electric).		
											Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. <sup>1</sup>			
\$1,366,422	\$629,458	\$10,869,196	\$70,430	\$88,937	\$896,563	\$8,260,479	\$6,027,446	\$33,970,403	\$19,673,538	51,735	18,732	1,214	2,944	250	28,595	3,500	1
44,202	23,749	304,741	2,271	3,753	19,470	440,329	199,886	1,148,096	508,481	809	250	140	19	.....	400	.....	2
11,870	3,655	54,585	.....	220	1,790	54,724	27,095	187,687	105,848	240	132	.....	108	.....	.....	.....	3
22,835	15,811	169,897	.....	.....	12,681	146,344	134,855	564,152	282,053	345	235	.....	.....	.....	110	.....	4
19,723	6,277	196,289	.....	685	17,270	297,602	121,594	770,206	351,010	85	.....	.....	.....	.....	85	.....	5
56,722	34,087	409,141	.....	393	34,970	233,157	97,495	1,064,548	733,896	1,608	370	.....	.....	.....	1,298	.....	6
34,211	26,913	340,817	417	.....	28,921	233,374	154,821	938,723	550,628	1,553	960	.....	14	.....	579	505	7
37,150	16,985	263,424	450	3,372	17,580	372,942	178,394	1,049,265	497,929	2,111	844	.....	168	.....	1,099	.....	8
52,974	23,900	522,624	.....	2,777	69,613	599,854	368,475	2,113,741	1,145,412	2,028	531	.....	135	.....	1,362	60	9
23,150	10,289	183,272	.....	200	11,044	148,596	142,424	625,750	334,730	1,195	1,000	.....	118	.....	77	360	10
32,100	13,620	169,381	.....	250	16,748	77,846	42,073	427,439	307,620	260	200	.....	18	.....	42	30	11
63,309	62,231	649,765	13,441	1,225	51,656	405,472	387,144	2,090,126	1,297,510	1,938	1,515	.....	105	.....	310	235	12
.....	1,020	11,097	.....	100	694	1,747	7,912	26,682	17,023	65	40	.....	.....	.....	25	.....	13
1,246	22	11,155	2,105	30	167	605	3,637	26,822	22,580	.....	.....	.....	.....	.....	.....	.....	14
32,460	8,262	317,489	8,320	.....	30,038	189,522	201,587	832,141	441,032	2,386	1,045	.....	59	.....	1,282	.....	15
182,774	125,265	1,261,937	4,008	178	146,550	954,878	746,122	4,021,106	2,320,106	9,175	2,015	807	775	.....	5,578	1,199	16
298,217	70,109	2,551,699	14,966	47,437	125,326	1,094,470	1,308,014	7,556,372	4,553,832	12,554	4,541	.....	247	30	7,736	908	17
1,891	2,011	17,150	.....	.....	1,179	8,965	15,364	59,475	35,156	55	.....	.....	30	.....	25	.....	18
31,669	7,511	371,802	.....	636	24,548	298,099	152,410	1,099,620	649,111	1,117	993	100	24	.....	.....	.....	19
37,536	17,120	227,206	1,888	300	8,412	189,479	133,581	797,892	474,822	596	535	.....	6	.....	55	10	20
8,100	1,684	62,941	3,502	2,097	2,066	24,691	18,300	139,042	90,651	106	.....	2	124	.....	40	.....	21
19,722	2,335	158,809	1,316	2,381	8,049	98,702	161,257	459,489	199,530	1,141	290	.....	.....	145	700	130	22
121,636	24,025	586,844	2,979	879	64,811	460,197	264,001	1,875,173	1,144,975	3,149	1,399	.....	9	.....	1,741	.....	23
20,585	10,983	144,254	.....	.....	8,408	95,206	51,295	341,361	194,860	447	87	.....	60	.....	300	.....	24
59,865	50,116	788,410	.....	6,940	129,241	502,501	404,419	2,394,607	1,487,747	3,700	30	.....	.....	.....	3,670	.....	25
54,382	19,396	358,643	3,600	2,115	20,155	151,834	264,840	1,130,092	718,418	2,731	1,135	15	846	75	660	8	26
98,034	46,686	736,324	11,107	12,969	45,176	582,347	440,451	2,229,626	1,206,828	2,223	685	150	79	.....	1,409	.....	27

<sup>1</sup> All other states embrace; Arizona, 2 establishments; Colorado, 1; Florida, 2; Idaho, 2; Iowa, 2; Kentucky, 3; Maine, 4; Montana, 2; Nevada, 1; North Carolina, 2; Oklahoma, 2; Oregon, 2; Rhode Island, 1; and Wyoming, 2.

# GLASS.

## GENERAL STATISTICS.

**General character of the industry.**—This industry embraces all establishments engaged in the manufacture of glass from raw materials, but does not include those engaged primarily in glass beveling, bending sheet glass, engraving glass, making glass labels, staining and ornamenting glass, or making glassware from purchased "blanks." It does, however, cover the reworking of glass when done by the establishment in which the glass is manufactured.

The establishments in this industry are engaged in the manufacture of (1) building glass, which includes window glass, plate glass, and all varieties of cast and rolled glass; (2) pressed and blown glass, such as tableware, jelly glasses, tumblers, goblets, bar goods, lamps, chimneys, lantern globes, electric bulbs, shades, globes, and other gas and electric goods, opal ware, cut ware, decorated glassware and tubing; (3) bottles, jars, druggists' wares, demijohns, etc.

**Comparative summary.**—Table 1 presents the statistics for each census since 1879, with percentages of increase for each census 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 the general rise of prices and wages following the World War, and do not, therefore, fairly measure the growth of the industry for that period. The addition of the Federal income tax since 1919 accounts for the large increase in "Rent and taxes."

**Principal states, ranked by value of products.**—Table 2 summarizes the more important statistics of the industry by states, the states being arranged according to the value of products reported for 1919.

The major portion of the glass manufactured in the United States is made in the factories in the four adjoining states of Pennsylvania, West Virginia, Ohio, and Indiana. These states reported for 1919, 69.5 per cent of the establishments, 69.1 per cent of the wage earners, and 72 per cent of the value of products.

Pennsylvania was the most important state in the industry, producing 30.7 per cent of all the glass manufactured in the United States. West Virginia ranked second; Ohio, third; and Indiana, fourth.

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

**Wage earners, by months.**—As shown by Table 4, the number of wage earners employed in the industry ranged from a maximum of 85,416 in November to a minimum of 65,055 in July, the minimum number being equivalent to 76.2 per cent of the maximum. Figures for the principal states are given separately for 1919, while for the United States a segregation of sex is given for 1919 and males and females combined for 1919, 1914, and 1909.

**Prevailing hours of labor.**—Table 5 shows a marked shortening of the working day for the industry since 1914. In that year, 53.9 per cent of the wage earners were reported as employed fewer than 54 hours per week as against 80.2 per cent in 1919. In 1914 the "60" and "Over 60" groups constituted 20.8 per cent of the total number of wage earners, as compared with 6.9 per cent in 1919.

**Size of establishments, by average number of wage earners.**—Table 6 shows that 275 establishments, or 74.1 per cent of the total number for the industry, were in the several classes having fewer than 251 wage earners, while such establishments employed but 36.1 per cent of the total number of wage earners. On the other hand, the establishments employing an average of more than 250 wage earners represented only 25.9 per cent of the total number of establishments, but reported 63.9 per cent of the total number of wage earners.

**Size of establishments, by value of products.**—At the censuses of 1909 and 1914 establishments with products valued at "\$100,000 to \$1,000,000" constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. Table 7, therefore, gives combined figures for these two groups in the case of all items for 1909, and in the case of average number of wage earners and value added by manufacture for 1914. The statistics in this table show the degree of concentration of production in large establishments. In 1919 the groups "\$500,000 to \$1,000,000" and "\$1,000,000 and over" included 139 establishments, or 37.5 per cent of the total number for the industry, employed 56,533 wage earners, or 72.9 per cent of the total average number, and reported products to the value of \$208,553,025, or 79.6 per cent of the total value of products.

**Character of ownership.**—Table 8 emphasizes the predominance of the corporate form of ownership. Corporations owned 92.2 per cent of the total number of establishments in the industry in 1919, employed



97.4 per cent of the total average number of wage earners, and reported 98 per cent of the total value of products. During the five-year period 1914 to 1919 the average number of wage earners in corporations increased 4,332, or 6.1 per cent, and the value of products \$137,662,585, or 115.7 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 44,291 horsepower, or 27.1 per cent. This increase,

however, is chiefly due to the gain of 38,527 horsepower, or 267 per cent, in rented power. The owned power increased only 5,764 horsepower, or 3.9 per cent.

**Fuel consumed.**—Table 10 shows, by states, the principal kinds of fuel used in the industry in 1919 and 1914. Of the totals for the principal kinds of fuel used in the industry in 1919, Pennsylvania reported 25.2 per cent of the bituminous coal, 14.1 per cent of the fuel oils, and 41.4 per cent of the gas.

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

	1919	1914	1909	1904	1899	1889	1879	PER CENT OF INCREASE. <sup>1</sup>					
								1914-1919	1909-1914	1904-1909	1899-1904	1889-1899	1879-1889
Number of establishments.....	371	348	363	399	355	294	169	6.6	-4.1	-9.0	12.4	20.7	74.0
Persons engaged.....	83,656	78,804	72,573	67,105	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	6.2	8.6	8.1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Proprietors and firm members.....	60	93	87	96	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	44.4	17.7	17.0	34.0	( <sup>2</sup> )	( <sup>2</sup> )
Salaried employees.....	6,070	4,209	3,676	3,040	2,268	( <sup>2</sup> )	( <sup>2</sup> )	4.1	8.1	7.7	21.1	17.7	( <sup>2</sup> )
Wage earners (average number).....	77,520	74,502	68,911	63,969	52,818	44,892	24,177	27.1	32.5	34.6	72.8	87.5	397.9
Primary horsepower.....	207,430	163,139	123,132	91,476	52,943	28,241	5,672	40.1	19.1	44.6	45.5	49.9	117.9
Capital.....	\$215,680,436	\$153,025,876	\$120,288,384	\$89,389,151	\$61,423,603	\$40,966,850	\$18,804,509	82.8	24.0	7.4	38.0	35.1	141.9
Salaries and wages.....	100,891,194	55,204,723	44,293,215	41,228,441	29,877,086	22,118,522	9,144,100	101.1	31.1	26.7	41.1	41.1	41.1
Salaries.....	13,364,569	6,548,904	4,933,591	3,940,293	2,792,376	( <sup>2</sup> )	( <sup>2</sup> )	70.9	23.8	5.4	37.7	( <sup>2</sup> )	( <sup>2</sup> )
Wages.....	87,526,625	48,655,819	39,299,624	37,288,148	27,084,710	( <sup>2</sup> )	( <sup>2</sup> )	60.3	74.0	51.0	-3.6	( <sup>2</sup> )	( <sup>2</sup> )
Paid for contract work.....	240,750	150,185	85,864	56,848	58,959	( <sup>2</sup> )	( <sup>2</sup> )	1,033.8	74.2	41.8	34.5	( <sup>2</sup> )	( <sup>2</sup> )
Rent and taxes.....	10,003,005	882,222	506,533	437,121	426,583	( <sup>2</sup> )	( <sup>2</sup> )	97.3	43.3	22.8	56.3	37.8	51.2
Cost of materials.....	90,780,124	46,016,504	32,119,490	26,145,522	16,781,009	12,140,985	8,028,621	112.8	33.6	15.7	40.8	37.7	04.1
Value of products.....	261,884,080	123,085,019	92,695,203	79,607,988	56,539,712	41,051,004	21,154,571	122.0	28.5	12.2	34.3	37.7	120.3
Value added by manufacture.....	171,103,956	77,068,515	59,976,704	53,462,476	39,808,703	28,910,019	13,126,950						

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

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

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

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

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

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

STATE.	Number of establishments	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			STATE.	Number of establishments	WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
		Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.			Average number.	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.	Amount (expressed in thousands).	Per cent distribution.	Rank.
United States	371	77,520	100.0	....	\$261,884	100.0	....	\$171,104	100.0	...	New York.....	19	3,929	5.1	7	\$12,996	5.0	7	\$8,951	5.2	7
Pennsylvania.....	102	21,602	27.9	1	80,480	30.7	1	52,822	30.9	1	Missouri.....	4	2,084	2.6	8	6,927	2.6	8	4,367	2.6	8
West Virginia.....	77	11,068	15.0	2	42,730	16.3	2	28,929	16.9	2	Oklahoma.....	10	1,662	2.2	10	4,761	1.8	9	2,839	1.7	10
Ohio.....	44	10,935	14.1	3	35,241	13.5	3	22,588	13.2	3	Maryland.....	8	1,755	2.3	9	4,032	1.5	10	2,032	1.7	9
Indiana.....	35	9,350	12.1	4	30,107	11.5	4	16,952	9.9	4	California.....	7	1,393	1.7	11	3,761	1.4	11	2,435	1.4	11
Illinois.....	14	4,065	5.1	6	18,245	7.0	5	12,685	7.4	5	Kansas.....	5	584	0.8	13	2,193	0.8	12	1,527	0.9	12
New Jersey.....	21	5,942	7.7	5	13,095	5.2	6	9,249	5.4	6	Virginia.....	4	641	0.8	12	881	0.3	15	500	0.3	15
											All other states.....	15	1,990	2.6	....	5,956	2.3	....	4,267	2.5	....

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

CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.		CLASS.	Census year.	Total.	Male.	Female.	PER CENT OF TOTAL.	
					Male.	Female.						Male.	Female.
All classes.....	1919	83,656	72,647	11,009	86.8	13.2	Clerks and other subordinate salaried employees.....	1919	3,638	2,042	1,596	56.1	43.9
	1914	78,804	73,243	5,561	92.9	7.1		1914	2,824	2,026	798	71.7	28.3
	1909	72,573	67,811	4,762	93.4	6.6		1909	2,286	1,616	670	70.7	29.3
Proprietors and officials.....	1919	2,498	2,465	33	98.7	1.3	Wage earners (average number).....	1919	77,520	68,140	9,380	87.9	12.1
	1914	1,478	1,460	18	98.8	1.2		1914	74,502	69,757	4,745	93.6	6.4
	1909	1,376	1,366	10	99.3	0.7		1909	68,911	64,829	4,082	94.1	5.9
Proprietors and firm members.....	1919	60	58	2	96.7	3.3	16 years of age and over.....	1919	76,107	66,973	9,134	88.0	12.0
	1914	93	91	2	97.8	2.2		1914	72,510	68,085	4,425	93.9	6.1
	1909	87	82	5	94.3	5.7		1909	65,350	61,639	3,711	94.3	5.7
Salaried officers of corporations.....	1919	706	689	17	97.6	2.4	Under 16 years of age.....	1919	1,413	1,167	246	82.6	17.4
	1914	517	505	12	97.7	2.3		1914	1,992	1,672	320	83.9	16.1
	1909	479	475	4	99.2	0.8		1909	3,561	3,190	371	89.6	10.4
Superintendents and managers.....	1919	1,732	1,720	12	99.3	0.7							
	1914	868	864	4	99.5	0.5							
	1909	810	809	1	99.9	0.1							

## MANUFACTURES.

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.....	77,520	74,571	78,413	79,693	79,450	78,191	74,719	<i>65,065</i>	68,993	78,072	83,190	85,416	84,477	76.2
Males.....	68,140	65,438	69,132	70,234	70,003	68,704	65,236	<i>57,164</i>	60,731	68,575	73,194	75,037	74,232	76.2
Females.....	9,380	9,133	9,281	9,459	9,447	9,487	9,483	<i>7,891</i>	8,262	9,497	9,996	10,379	10,245	76.0
1914.....	74,502	83,002	85,875	86,461	85,644	82,973	74,347	55,433	<i>49,861</i>	62,683	72,075	77,383	78,287	57.7
1909.....	68,911	72,931	75,720	78,921	77,692	76,550	73,038	<i>40,222</i>	43,839	55,127	71,740	78,454	81,665	49.3
California.....	1,333	1,512	1,466	1,468	1,450	1,401	1,212	951	<i>691</i>	1,082	1,368	1,781	1,654	33.2
Illinois.....	4,065	4,260	4,291	4,196	4,249	4,024	4,086	4,014	3,957	4,027	3,946	3,905	3,825	89.1
Indiana.....	9,360	9,908	10,020	9,803	9,454	9,366	9,188	7,884	<i>7,860</i>	9,002	10,004	10,492	9,219	74.9
Kansas.....	584	396	656	669	717	669	194	199	370	812	821	789	680	23.6
Maryland.....	1,755	1,609	1,656	1,713	1,866	1,784	1,875	1,749	<i>1,252</i>	1,833	1,878	1,943	1,902	64.4
Missouri.....	2,034	2,025	2,029	2,299	2,243	2,162	2,148	1,692	<i>1,663</i>	1,850	1,972	2,191	2,134	72.3
New Jersey.....	5,942	6,574	5,909	6,076	6,274	6,171	6,120	5,045	<i>4,488</i>	5,089	6,182	6,565	6,811	85.9
New York.....	3,929	4,190	4,214	4,245	4,139	3,973	3,991	<i>2,695</i>	3,322	3,675	4,002	4,210	4,432	60.8
Ohio.....	10,935	9,851	10,991	11,094	11,517	11,177	10,943	<i>8,077</i>	10,239	10,813	11,516	11,942	12,085	75.1
Oklahoma.....	1,692	1,303	2,142	2,235	2,297	1,971	1,400	987	1,033	1,502	1,713	1,653	2,068	43.0
Pennsylvania.....	21,602	20,149	20,607	20,490	20,477	20,349	20,496	<i>18,809</i>	20,558	23,389	24,283	24,944	24,673	75.4
Virginia.....	641	524	525	638	660	692	692	700	593	644	670	670	684	74.9
West Virginia.....	11,608	10,448	11,681	12,178	11,572	11,734	10,387	<i>9,554</i>	11,807	12,450	12,854	12,599	12,743	74.3

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. <sup>1</sup>	Between 48 and 54.	54.	Between 54 and 60.	60.
United States.....	1919	77,520	14,098	7,174	20,098	14,815	5,818	4,143	4,603
	1914	74,502	( <sup>2</sup> )	( <sup>2</sup> )	12,205	27,975	11,394	7,458	10,743
	1909	68,911	( <sup>2</sup> )	( <sup>2</sup> )	11,358	16,603	8,707	13,923	10,764
California.....	1919	1,333	500	( <sup>2</sup> )	833	( <sup>2</sup> )	25	( <sup>2</sup> )	( <sup>2</sup> )
	1914	1,084	( <sup>2</sup> )	( <sup>2</sup> )	203	856	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Illinois.....	1919	4,065	1,823	277	1,513	7	440	( <sup>2</sup> )	( <sup>2</sup> )
	1914	3,704	( <sup>2</sup> )	( <sup>2</sup> )	180	1,203	663	1,398	320
Indiana.....	1919	9,360	1,725	386	2,985	1,804	629	( <sup>2</sup> )	1,821
	1914	9,390	( <sup>2</sup> )	( <sup>2</sup> )	590	3,361	2,290	1,241	1,908
Maryland.....	1919	1,755	91	91	983	216	424	( <sup>2</sup> )	( <sup>2</sup> )
	1914	1,184	( <sup>2</sup> )	( <sup>2</sup> )	140	937	107	( <sup>2</sup> )	( <sup>2</sup> )
Missouri.....	1919	2,034	( <sup>2</sup> )	( <sup>2</sup> )	325	1,625	184	( <sup>2</sup> )	( <sup>2</sup> )
	1914	2,248	( <sup>2</sup> )	( <sup>2</sup> )	11	448	35	( <sup>2</sup> )	1,754
New Jersey.....	1919	5,942	1,136	744	942	2,044	822	83	171
	1914	5,784	( <sup>2</sup> )	( <sup>2</sup> )	864	3,602	918	( <sup>2</sup> )	151
New York.....	1919	3,929	204	14	767	425	217	2,302	( <sup>2</sup> )
	1914	3,089	( <sup>2</sup> )	( <sup>2</sup> )	344	882	700	1,107	56
Ohio.....	1919	10,935	1,197	2,723	3,780	1,471	916	783	65
	1914	10,997	( <sup>2</sup> )	( <sup>2</sup> )	784	4,515	2,916	198	2,276
Oklahoma.....	1919	1,692	258	126	1,241	67	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
	1914	1,270	( <sup>2</sup> )	( <sup>2</sup> )	856	156	258	( <sup>2</sup> )	( <sup>2</sup> )
Pennsylvania.....	1919	21,602	4,002	1,172	7,905	5,104	1,146	503	1,361
	1914	23,606	( <sup>2</sup> )	( <sup>2</sup> )	4,494	7,235	2,734	2,114	2,859
Virginia.....	1919	641	( <sup>2</sup> )	222	303	( <sup>2</sup> )	116	( <sup>2</sup> )	( <sup>2</sup> )
	1914	606	( <sup>2</sup> )	( <sup>2</sup> )	163	343	100	( <sup>2</sup> )	( <sup>2</sup> )
West Virginia.....	1919	11,668	2,662	1,321	4,437	1,167	641	402	676
	1914	8,889	( <sup>2</sup> )	( <sup>2</sup> )	2,315	3,931	532	983	1,128

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

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

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—															
	Establishments.	Wage earners (average number).	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
United States.....1919.....	371	77,520	8	27	21	303	39	1,436	86	6,362	121	19,891	65	22,137	23	14,424	8	12,940
.....1914.....	348	74,502	5	16	17	251	31	1,096	72	5,542	126	20,060	63	23,706	23	16,179	6	7,652
California.....	7	1,333	1	3	2	22	2	57	1	66	3	500	3	1,102	1	773	1	1,700
Illinois.....	14	4,065	2	5	2	22	1	31	1	66	3	480	3	1,102	1	599	1	1,467
Indiana.....	35	9,350	3	39	3	39	3	198	3	198	16	2,981	9	2,791	3	2,070	1	1,700
Maryland.....	8	1,755	1	14	1	14	1	43	2	183	2	864	2	625	1	569	1	1,271
Missouri.....	4	2,034	1	4	1	17	1	43	1	77	2	432	1	402	1	1,107	1	1,525
New Jersey.....	21	5,942	2	25	2	25	3	116	2	142	4	602	7	2,493	2	1,107	1	1,467
New York.....	19	3,929	2	30	2	30	4	125	5	388	6	831	1	274	1	2,281	1	2,281
Ohio.....	44	10,935	1	17	1	17	1	43	11	796	14	2,154	11	4,015	6	3,910	1	1,457
Oklahoma.....	16	1,692	1	4	1	4	1	29	6	424	8	1,235	21	7,248	4	2,397	3	4,646
Pennsylvania.....	102	21,602	2	8	6	99	12	479	24	1,796	30	4,929	21	7,248	4	2,397	3	4,646
Virginia.....	4	641	2	7	3	45	13	470	20	1,441	25	3,826	9	2,880	5	2,999	1	1,457
West Virginia.....	77	11,068	2	7	3	45	13	470	20	1,441	25	3,826	9	2,880	5	2,999	1	1,457

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.....	371	348	363	77,520	74,502	68,911	\$261,884,080	\$123,085,019	\$92,065,203	\$171,103,956	\$77,038,515	\$59,075,704
Less than \$20,000.....	13	17	24	114	243	209	159,539	169,911	171,970	71,677	95,552	111,629
\$20,000 to \$100,000.....	33	52	91	874	2,424	4,647	1,950,021	3,306,884	5,691,840	1,133,066	2,157,023	3,751,838
\$100,000 to \$500,000.....	186	210	238	19,999	52,620	53,931	51,221,495	48,813,320	69,534,919	34,381,173	51,295,824	45,877,554
\$500,000 to \$1,000,000.....	70	46	10	16,723	19,215	10,124	49,235,395	30,110,455	16,606,465	32,097,290	23,520,116	10,734,688
\$1,000,000 and over.....	69	23	10	39,810	19,215	10,124	159,317,630	40,684,449	16,606,465	103,420,750	23,520,116	10,734,688
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 \$20,000.....	3.5	4.9	6.6	0.1	0.3	0.3	0.1	0.1	0.2	(1)	0.1	0.2
\$20,000 to \$100,000.....	8.9	14.9	25.1	1.1	3.3	6.7	0.7	2.7	6.2	0.7	2.8	6.3
\$100,000 to \$500,000.....	50.1	60.3	65.6	25.3	70.6	78.3	19.6	39.6	75.5	20.1	66.6	75.7
\$500,000 to \$1,000,000.....	18.9	13.3	21.0	21.0	25.8	14.7	18.8	24.5	18.1	18.8	30.5	17.9
\$1,000,000 and over.....	18.6	6.6	2.8	51.4	25.8	14.7	60.8	33.1	18.1	60.4	30.5	17.9

(1) Less than one-tenth of 1 per cent.

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

CHARACTER OF OWNERSHIP.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (average num- ber).	Value of products.	Value added by manufac- ture.	CHARACTER OF OWNERSHIP.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (average num- ber).	Value of products.	Value added by manufac- ture.
United States.....	1919	371	77,520	\$261,884,080	\$171,103,956	Per cent distribution: Individual.....	1919	3.2	0.8	0.7	0.7
	1914	348	74,502	123,085,019	77,068,515		1914	3.4	1.0	0.7	0.8
	1909	363	68,911	92,065,203	59,975,704						
Individual.....	1919	12	618	1,795,048	1,182,286	Corporation.....	1919	82.2	97.4	98.0	97.8
	1914	12	770	892,991	596,735		1914	89.9	95.5	96.7	96.2
Corporation.....	1919	342	75,468	256,643,158	167,380,720	All other.....	1919	4.6	1.8	1.3	1.5
	1914	313	71,136	118,980,573	74,165,662		1914	6.6	3.5	2.6	3.0
All other.....	1919	17	1,434	3,445,874	2,540,950						
	1914	23	2,596	3,211,455	2,306,118						

## MANUFACTURES.

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

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	4,431	2,290	1,428	207,430	168,139	123,132	100.0	100.0	100.0
Owned.....	1,034	1,051	1,122	154,474	148,710	119,707	74.5	91.2	97.2
Steam <sup>1</sup> .....	425	601	765	99,140	105,061	98,971	47.8	64.4	80.4
Engines.....	411	( <sup>2</sup> )	( <sup>2</sup> )	80,715	( <sup>2</sup> )	( <sup>2</sup> )	38.9	( <sup>2</sup> )	( <sup>2</sup> )
Turbines.....	24	( <sup>2</sup> )	( <sup>2</sup> )	18,425	( <sup>2</sup> )	( <sup>2</sup> )	8.9	( <sup>2</sup> )	( <sup>2</sup> )
Internal-combustion engines.....	371	385	356	52,877	43,448	20,731	25.5	28.6	16.8
Water.....	228	5	1	2,457	201	5	1.2	0.1	( <sup>3</sup> )
Water wheels and turbines.....	227	4	.....	2,452	200	.....	1.2	0.1	.....
Water motors.....	1	1	1	5	1	5	( <sup>3</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Rented.....	3,397	1,239	306	52,956	14,429	3,425	25.5	8.8	2.8
Electric.....	3,397	1,239	306	52,864	14,224	3,425	25.5	8.7	2.8
Other.....	.....	.....	.....	92	5	.....	( <sup>3</sup> )	( <sup>3</sup> )	.....
Electric.....	9,720	6,018	2,510	143,125	92,896	43,589	100.0	100.0	100.0
Rented.....	3,397	1,239	306	52,864	14,224	3,425	37.0	15.3	7.9
Generated by establishments reporting.....	6,323	4,779	2,204	90,261	78,672	40,164	63.0	84.7	92.1

<sup>1</sup> Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power. <sup>2</sup> Not reported separately. <sup>3</sup> Less than one-tenth of 1 per cent.

TABLE 10.—FUEL CONSUMED, BY STATES: 1919 AND 1914.

STATE.	Cen- sus year.	COAL.		Coke (tons, 2,000 lbs.).	Fuel oils (barrels).	Gasoline and other vola- tile oils (bar- rels).	Gas (1,000 cubic feet).	STATE.	Cen- sus year.	COAL.		Coke (tons, 2,000 lbs.).	Fuel oils (barrels).	Gasoline and other vola- tile oils (bar- rels).	Gas (1,000 cubic feet).
		An- thra- cite (tons, 2,240 lbs.).	Bitumi- nous (tons, 2,000 lbs.).							An- thra- cite (tons, 2,240 lbs.).	Bitumi- nous (tons, 2,000 lbs.).				
United States.....	1919	15,268	2,643,654	131,998	895,984	14,135	38,500,857	New Jersey.....	1919	2,556	168,002	2,296	134,043	289	45,245
Per cent of in- crease <sup>1</sup> .....	1914	41,372	2,252,268	16,770	867,836	( <sup>1</sup> )	43,336,322	1914	3,793	139,856	2,350	112,265	( <sup>1</sup> )	3,029	
		-63.1	17.4	687.1	4.9	.....	-11.2								
California.....	1919				152,810		290,315	New York.....	1919	4,711	136,650	984	105,149	1,721	91,690
	1914				94,886	( <sup>1</sup> )		1914	11,870	95,081	1,439	29,445	( <sup>1</sup> )	97,740	
Illinois.....	1919	3	418,860	120,000	52,657	30	200	Ohio.....	1919	905	339,738	85	16,994	325	5,800,995
	1914		397,550		280,976	( <sup>1</sup> )		1914		271,397	675	6,480	( <sup>1</sup> )	7,251,445	
Indiana.....	1919	698	523,728	2,486	217,323	40	457,551	Oklahoma.....	1919		10		3,042	167	2,332,616
	1914		470,646	2,020	121,744	( <sup>1</sup> )	453,770	1914		300			6	( <sup>1</sup> )	2,426,681
Kansas.....	1919		75				699,315	Pennsylvania.....	1919	6,363	667,250	3,300	126,269	11,339	15,945,505
	1914						758,611	1914	9,155	521,399	1,501	118,074	( <sup>1</sup> )	20,939,700	
Maryland.....	1919	32	35,407	1,440	49,045	102	20,550	Virginia.....	1919		13,250		3,215		
	1914	2,327	13,628	42	26,103	( <sup>1</sup> )	58,505	1914			16,350		1,237	( <sup>1</sup> )	
Missouri.....	1919		206,190	1,229	22,029			West Virginia.....	1919		71,206	79	4,187	7	11,832,115
	1914		221,666	2,922	40,326	( <sup>1</sup> )	800	1914			28,583	160			10,600,469
								All other states.....	1919		63,191		8,321	106	984,769
								1914		14,227	75,912	5,655	29,034	( <sup>1</sup> )	730,672

<sup>1</sup> Included in figures for fuel oils.

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

## SPECIAL STATISTICS.

Certain additional detailed information concerning the quantity and value of products and the equipment for the industry is collected by means of supplemental schedules, data for which are presented in Tables 11, 12, and 13.

Table 11 shows in detail the quantity and value of the principal products for the glass industry for 1919, 1914, 1909, and 1904.

TABLE 11.—DETAILED STATISTICS OF QUANTITY AND VALUE: 1919, 1914, 1909, AND 1904.

	1919	1914	1909	1904
Products, total value <sup>1</sup> .....	\$261,884,080	\$123,085,019	\$92,095,203	\$79,007,998
Building glass, value.....	\$83,713,115	\$36,824,069	\$26,308,438	\$21,697,861
Window glass—				
Square feet.....	368,912,209	400,698,893	346,080,550	242,615,750
Value.....	\$41,100,724	\$17,495,950	\$11,742,959	\$11,610,851
Obscured glass, including				
cathedral and skylight—				
Square feet.....	33,822,302	43,040,079	22,815,946	21,870,634
Value.....	\$4,300,308	\$2,417,253	\$1,358,574	\$972,014
Plate glass, total cast, square				
feet.....	72,849,340	75,770,261	60,105,694	34,804,986
Polished—				
Square feet.....	56,823,749	60,383,516	47,370,254	27,293,138
Value.....	\$33,348,279	\$14,773,787	\$12,204,875	\$7,978,253
Rough, made for sale—				
Square feet.....	788,742	131,492	205,690	17,784
Value.....	\$171,118	\$25,859	\$37,431	\$3,529
Wire glass—				
Polished—				
Square feet.....	1,229,077	1,707,848	( <sup>2</sup> )	( <sup>2</sup> )
Value.....	\$635,543	\$534,322	( <sup>2</sup> )	( <sup>2</sup> )
Rough, made for sale as				
such—				
Square feet.....	14,462,400	13,980,996	( <sup>2</sup> )	( <sup>2</sup> )
Value.....	\$2,271,099	\$1,056,012	( <sup>2</sup> )	( <sup>2</sup> )
All other building glass,				
value.....	\$1,886,044	\$520,280	\$904,599	\$1,133,214
Pressed and blown glass, value..	\$70,748,861	\$30,279,290	\$27,398,445	\$21,956,158
Tableware, 100 pieces.....	2,457,938	1,554,056	1,286,056	1,283,974
Jellies, tumblers, and goblets,				
dozens.....	25,182,133	18,030,243	11,037,030	7,346,214
Lamps, dozens.....	917,250	580,196	322,482	487,017
Chimneys, dozens.....	6,615,109	6,989,624	6,652,967	7,039,756
Lantern globes, dozens.....	1,985,741	1,363,562	952,620	1,705,247
Shades, globes, and other gas				
goods, dozens.....	12,313,307	2,016,800	1,541,449	878,244
Blown tumblers, stem ware,				
and bar goods, dozens.....	9,668,638	11,377,310	9,182,060	6,282,606
Opal ware, dozens.....	2,155,972	4,636,051	3,095,666	1,091,208
Cut ware, dozens.....	549,170	207,957	206,336	83,736
Decorated glassware, dozens..	1,052,861	1,158,077	( <sup>2</sup> )	( <sup>2</sup> )
Lenses, dozens.....	725,075	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Electric bulbs, dozens.....	18,303,003	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Tubing, pounds.....	18,147,470	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Bottles and jars, value.....	\$94,670,389	\$51,958,728	\$36,018,333	\$33,631,063
Prescriptions, vials, and drug-				
gists' wares, gross.....	6,684,548	4,803,416	3,624,022	3,202,586
Beer, soda, and mineral, gross.	4,178,368	4,573,610	2,345,204	2,351,852
Liquors and flasks, gross.....	993,030	2,689,022	1,887,344	2,157,801
Milk jars, gross.....	877,268	1,188,891	440,302	253,651
Fruit jars, gross.....	1,800,262	1,108,952	1,124,486	1,061,829
Battery jars and other elec-				
trical goods, gross.....	13,805	79,211	9,981	19,974
Patent and proprietary, gross..	3,364,679	1,384,689	1,637,798	1,657,372
Packers' and preservers, gross.	4,297,076	3,271,174	1,237,175	1,237,065
Demi-johns and carboys, dozens	271,119	160,796	122,570	64,450
All other products, value.....	\$12,751,715	\$4,022,932	\$2,369,987	\$2,322,916

<sup>1</sup> In addition, considerable quantities of electrical shades, globes, etc., which can not be shown without disclosing the operations of individual establishments, were made in 1919 and 1914 by establishments engaged primarily in the manufacture of electrical goods. In 1909, 42,639 gross of bottles and jars, valued at \$90,490, and in 1904 glassware, valued at \$9,663, were made as subsidiary products by establishments engaged primarily in other lines of manufacture.

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

Of the 371 establishments reported for 1919, 128 manufactured building glass; 130, pressed and blown

glass; and 145, bottles and jars. Of the 348 establishments reported for 1914, 102 manufactured building glass; 107, pressed and blown glass; and 150, bottles and jars.

In 1919, 32 per cent of the total value of products represented building glass; 27 per cent, pressed and blown glass; 36.1 per cent, bottles and jars; and 4.9 per cent, other products. The corresponding proportions in 1914 were 29.9, 24.6, 42.2, and 3.3 per cent, respectively.

There was an increase of 127.3 per cent in the total value of building glass reported for the period 1914–1919. The most important product in 1919 in this class was window glass, the value reported being 49.1 per cent of the total for building glass. Window glass also occupied first place at the censuses of 1914 and 1904, but plate glass led in 1909.

Pennsylvania produced 151,932,372 square feet of window glass in 1919; West Virginia was second, with 119,804,785 square feet; and Ohio third, with 27,865,050 square feet. Pennsylvania also ranked first in the output of obscured glass, plate glass, and rough wire glass, producing over one-half of the total for each class. Missouri ranked second in the production of these products.

The total value of pressed and blown glass shows an increase of 158.2 per cent for the decade 1909–1919, and of 133.7 per cent for the five-year period 1914–1919. During both the ten-year and five-year periods the increases in the production of jelly glasses, tumblers, and goblets, and in shades, globes, and other gas goods were pronounced. There was a noticeable decline in the production of blown tumblers, stem ware and bar goods in 1919, as compared with the two preceding censuses.

Of the three main classes of products, bottles and jars represented the greatest value at each of the four censuses covered by the table. During the decade 1909–1919 there was an increase of 162.8 per cent in the value of this class of products and for the five-year period 1914–1919 an increase of 82.2 per cent.

Considerable increases were reported in the output of most of the products shown in the table for the period 1914–1919, those showing decreases being largely in the building glass industry, and for liquors and flasks and milk jars in the bottle and jar factories.

Few of the glass factories make finished cut glass, the item "cut ware" representing principally the glass blanks which have not been cut and polished and are sold to establishments making a specialty of producing the finished cut ware. These latter establishments are classified in census reports under the head of "Glass, cutting, staining, and ornamenting."

"All other products" include a number of unclassified articles, such as glass stoppers, marbles, table tops, etc.

Table 12 shows the value of each of the three classes of glass products, in the leading states, for 1919, 1914, 1909, and 1904.

TABLE 12.—PRODUCTS, BY PRINCIPAL STATES: 1919, 1914, 1909, AND 1904.

PRODUCT AND STATE.	1919	1914	1909	1904
Products, total value.....	\$261,834,080	\$123,085,019	\$92,095,203	\$79,607,998
Illinois.....	18,244,717	7,680,843	5,047,333	5,019,740
Indiana.....	30,106,652	14,881,372	11,593,094	14,706,929
Kansas.....	2,133,470	728,681	2,030,573	958,720
Maryland.....	4,031,841	1,500,982	1,038,368	589,580
Missouri.....	6,927,042	3,882,420	1,992,883	1,781,026
New Jersey.....	13,694,677	7,597,754	6,961,088	6,450,195
New York.....	12,995,741	6,150,714	4,508,790	4,279,706
Ohio.....	35,240,877	19,191,342	14,358,274	9,026,208
Oklahoma.....	4,760,844	2,005,736	(1)	(1)
Pennsylvania.....	80,479,762	39,797,822	32,817,936	27,671,693
Virginia.....	831,455	690,420	681,900	549,031
West Virginia.....	42,730,338	14,631,171	7,779,483	4,598,563
All other states.....	9,716,674	5,340,262	3,279,481	3,370,538
Building glass, value.....	83,713,115	36,824,069	26,303,438	21,697,861
Illinois.....	(1)	(1)	648,718	281,559
Indiana.....	5,485,400	2,356,946	1,610,092	3,790,618
Kansas.....	1,833,470	(1)	1,131,808	381,084
Missouri.....	(1)	3,122,793	1,778,364	1,036,493
New York.....	(1)	(1)	173,387	456,310
Ohio.....	7,204,826	3,805,669	2,744,513	1,625,120
Oklahoma.....	(1)	1,181,657	(1)	(1)
Pennsylvania.....	39,613,933	18,968,873	14,858,649	12,169,013
West Virginia.....	15,217,616	4,410,710	2,751,133	1,323,896
All other states.....	14,357,780	2,977,421	505,774	633,822
Pressed and blown glass, value.....	70,748,861	30,270,280	27,398,445	21,950,158
Indiana.....	6,656,007	2,926,296	2,774,128	2,859,087
Maryland.....	(1)	(1)	508,492	46,191
New Jersey.....	3,108,505	(1)	1,019,836	181,559
New York.....	7,135,823	2,237,960	1,926,852	1,932,524
Ohio.....	16,740,016	6,490,498	6,100,707	3,954,060
Oklahoma.....	890,001	220,620	(1)	(1)
Pennsylvania.....	20,923,783	11,241,495	9,847,228	9,406,183
West Virginia.....	12,943,428	6,263,554	4,306,528	2,620,065
All other states.....	2,351,290	898,967	854,674	955,289
Bottles and jars, value.....	94,670,389	51,958,728	36,018,333	33,631,063
California.....	(1)	(1)	873,434	855,440
Illinois.....	14,419,392	6,680,700	4,364,795	4,949,166
Indiana.....	17,126,062	9,155,103	6,982,378	7,213,456
Maryland.....	3,427,675	1,244,700	528,707	536,478
Missouri.....	(1)	759,627	(1)	607,383
New Jersey.....	10,457,863	7,176,787	5,834,605	6,960,714
New York.....	4,473,507	2,343,683	1,884,394	1,896,245
Ohio.....	8,979,061	7,422,402	4,717,058	2,961,727
Oklahoma.....	2,332,532	608,559	(1)	(1)
Pennsylvania.....	15,120,155	8,830,255	7,778,787	5,951,144
Virginia.....	828,755	690,420	681,900	549,031
West Virginia.....	13,059,303	3,777,445	640,521	602,002
All other states.....	4,758,589	3,173,927	1,735,094	1,472,281
All other products.....	12,751,715	4,022,932	2,369,987	2,322,016

<sup>1</sup> Included in "All other states," to avoid disclosing the operations of individual establishments.

For 1919 Pennsylvania reported 47.3 per cent of the total value of building glass, 29.6 per cent of the total value of pressed and blown glass, and 16 per cent of the total value of bottles and jars, ranking first in the value of building glass and in pressed and blown glass and second in the value of bottles and jars. West Virginia ranked second in value of building glass produced and Ohio third, while in pressed and blown glass Ohio was second and West Virginia third. Indiana ranked first in value of bottles and jars manufactured, followed by Pennsylvania, Illinois, West Virginia, New Jersey, and Ohio.

Of the 128 plants that manufactured building glass in 1919, 79 made window glass, 27 of which were located in West Virginia, 21 in Pennsylvania, 12 in Ohio, 5 in Kansas, 3 each in Indiana and Oklahoma, 2 each in Arkansas, California, and Texas, and 1 each in Illinois and Louisiana; 19 made obscured glass, including cathedral and skylight, 6 of which were in Pennsylvania, 4 in West Virginia, 3 in Indiana, 2 each in Illinois and Ohio, and 1 each in Missouri and New York; 17 made plate glass, 9 of which were in Pennsylvania, 2 each in Ohio and West Virginia, and 1 each in Illinois, Indiana, Michigan, and Missouri; 7 made wire glass, 4 of which were in Pennsylvania, and 1 each in Illinois, Missouri, and West Virginia. Pennsylvania, with 34 establishments, Ohio with 20, and West Virginia with 31, in the order named, were the leading states in value of pressed and blown glass produced in 1919. Named in the order of their importance, the leading states producing tableware were Indiana, Ohio, West Virginia, and Pennsylvania; jelly glasses, tumblers, and goblets—West Virginia, Ohio; Pennsylvania, and Indiana; lamps—New York, Ohio, and Pennsylvania; lamp chimneys—Indiana, Ohio, West Virginia, and Pennsylvania; blown tumblers, stem ware, and bar goods—West Virginia, Ohio, and Pennsylvania; cut ware and decorated ware—West Virginia, Ohio, and Pennsylvania; electric bulbs—Ohio, New York, and Pennsylvania; tubing—New Jersey, Ohio, New York, and Pennsylvania.

Of the 145 establishments that produced bottles and jars in 1919, 35 were in Pennsylvania, 18 in Indiana, 15 each in New Jersey and West Virginia, 11 in Ohio, 10 each in New York and Oklahoma, 9 in Illinois, 6 in Maryland, 5 in California, 4 in Virginia, 2 in Missouri, and 1 each in Louisiana, South Carolina, Tennessee, Washington, and Wisconsin.

Named in the order of their importance, the leading states producing prescription bottles, vials, and druggists' wares were: Illinois, Indiana, Maryland, New Jersey, Pennsylvania, and West Virginia; beer, soda, and mineral water bottles—Ohio, Illinois, Indiana, Pennsylvania, and New York; liquors and flasks—West Virginia, Ohio, Indiana, and Pennsylvania; fruit jars—Indiana, Oklahoma, Ohio, and Pennsylvania; packers and preservers—West Virginia, Pennsylvania, and Indiana; patent and proprietary bottles—New Jersey, West Virginia, and Pennsylvania.

The measure of production for a glass factory is the melting capacity of its furnaces and tanks.

Table 13 presents the statistics of such equipment for the census years 1919, 1914, 1909, and 1904. The idle furnaces and tanks shown in this table represent the idle equipment of active establishments and not the equipment of establishments which were idle throughout the year.

Of the 289 pot furnaces, with a capacity of 4,247 pots, operated in 1919, 19 furnaces, with 360 pots, were used in making window glass; 13 furnaces, with 171 pots, in producing obscured glass; and 80 furnaces, with 1,544 pots, in making plate glass. There were 79 continuous tanks, with a capacity of 1,463 rings,

operated in producing building glass. Of this number, 58 tanks, with 1,169 rings, were used in producing window glass; 10 tanks, with 140 rings, in making obscured glass; 8 tanks, with 56 rings, in producing wire glass; and 3 tanks, with 98 rings, in making plate glass.

TABLE 13.—EQUIPMENT: 1919, 1914, 1909, AND 1904.

STATE.	Cen- sus year.	POT FURNACES.				TANKS. <sup>1</sup>							
		Operated.		Idle.		Continuous.				Intermittent.			
						Operated.		Idle.		Operated.		Idle.	
		Number.	Number of pots.	Number.	Number of pots.	Number.	Number of rings.	Number.	Number of rings.	Number.	Capacity (tons).	Number.	Capacity (tons).
United States.....	1919	289	4,247	41	567	437	3,073	47	300	116	380	9	25
	1914	328	4,522	53	766	348	3,641	48	421	59	407	10	94
	1909	370	4,945	59	697	369	3,759	48	436	73	433	13	56
	1904	349	4,192	49	617	340	3,076	26	191	94	408	13	69
Illinois.....	1919	7	120	...	...	26	98	3	16	...	...	...	...
	1914	6	100	2	30	18	101	2	23	...	...	1	2
	1909	9	107	1	20	24	201	4	53	1	5	...	...
	1904	8	104	4	47	24	234	...	4	20	1	10	...
Indiana.....	1919	16	220	1	10	55	312	2	14	3	13	...	...
	1914	18	244	2	22	57	499	5	21	3	19	...	...
	1909	18	307	2	40	61	533	6	34	2	14	...	...
	1904	63	670	7	79	87	749	4	25	3	20	1	8
Maryland.....	1919	8	100	1	12	6	19	...	4	17	...	...	...
	1914	0	84	1	16	4	23	...	1	12	...	...	...
	1909	11	109	1	12	3	21	...	1	8	...	...	...
	1904	6	74	2	17	1	5	...	1	8	...	...	...
New Jersey.....	1919	14	116	6	49	34	207	5	40	12	3	9	...
	1914	15	115	2	19	27	257	15	117	5	27	3	18
	1909	16	130	6	42	36	329	12	90	9	106	1	11
	1904	19	147	4	36	36	310	11	71	11	69	...	...
New York.....	1919	26	311	5	38	21	141	1	...	3	8	3	9
	1914	23	281	6	45	15	117	4	23	...	4	1	2
	1909	35	798	9	66	19	167	1	7	3	7	1	1
	1904	28	257	3	27	22	179	2	15	3	10	1	6
Ohio.....	1919	50	819	10	190	54	333	7	85	5	20	1	3
	1914	58	759	7	101	36	519	5	96	7	26	...	...
	1909	56	593	12	143	49	434	8	98	11	27	2	3
	1904	39	551	4	66	34	283	2	20	12	33	2	9
Pennsylvania.....	1919	102	1,660	12	180	95	693	14	72	51	116	...	...
	1914	138	2,121	28	333	90	1,011	10	100	28	282	5	57
	1909	144	2,086	23	301	99	1,178	12	93	20	145	0	27
	1904	120	1,715	17	222	87	804	6	54	30	137	3	12
West Virginia.....	1919	40	494	3	36	93	721	6	40	35	160	2	4
	1914	32	341	2	20	54	615	4	26	12	95	4	9
	1909	37	339	2	24	33	422	2	45	12	96	2	11
	1904	43	393	6	88	18	155	1	6	19	90	5	24
All other states.....	1919	26	398	3	52	53	579	9	33	3	15	...	...
	1914	32	477	8	130	47	499	3	15	1	2	2	6
	1909	44	471	3	49	45	474	3	16	8	25	1	3
	1904	23	281	2	32	32	247	...	5	28	...	...	...

<sup>1</sup> In addition, 71 establishments reported for 1919, 161 tanks equipped with 640 automatic machines; in 1914, 26 establishments reported 106 tanks equipped with 331 automatic machines.

## GENERAL TABLES.

Table 14 shows, for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of

materials, and value of products for the glass industry. Table 15 presents, for 1919, by states, more detailed statistics of the industry.

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

STATE.	Cen- sus year.	Num- ber of estab- lish- ments	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	STATE.	Cen- sus year.	Num- ber of estab- lish- ments	Wage earners (aver- age num- ber).	Primary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		
United States.....	1919	371	77,520	207,430	\$87,527	\$90,780	\$261,884	New York.....	1919	19	3,929	4,893	\$5,004	\$4,045	\$12,906
	1914	318	74,502	163,139	48,656	46,017	123,085		1914	22	3,089	2,415	2,158	1,685	5,167
	1909	363	68,911	123,132	39,300	32,119	92,095		1909	24	3,114	1,774	1,806	1,159	4,509
Illinois.....	1919	14	4,065	10,594	3,741	5,559	18,245	Ohio.....	1919	44	10,935	37,831	12,112	12,652	35,241
	1914	10	3,764	9,685	2,692	2,803	7,680		1914	39	10,907	34,871	7,053	7,046	19,191
	1909	11	3,507	6,638	2,182	1,541	5,047		1909	45	10,159	10,198	5,977	4,688	14,358
Indiana.....	1919	35	9,350	18,977	9,013	13,155	30,107	Pennsylvania.....	1919	102	21,602	70,280	26,472	27,658	80,480
	1914	41	9,390	16,048	5,735	6,905	14,881		1914	103	23,606	61,899	15,214	15,542	39,798
	1909	44	9,544	21,081	4,942	4,728	11,593		1909	112	23,710	55,182	13,436	12,634	32,818
Kansas.....	1919	5	584	313	1,196	607	2,133	Virginia.....	1919	4	641	611	394	332	831
	1914	6	364	195	867	202	729		1914	4	606	286	328	258	690
	1909	23	1,435	1,031	986	672	2,037		1909	5	524	245	306	261	682
Maryland.....	1919	8	1,755	1,848	1,643	1,039	4,032	West Virginia.....	1919	77	11,068	29,494	13,057	13,801	42,730
	1914	6	1,184	1,030	783	400	1,501		1914	63	8,889	14,120	5,673	4,638	14,631
	1909	7	1,052	427	505	237	1,038		1909	61	6,190	5,233	3,628	2,296	7,779
Missouri.....	1919	4	2,034	14,188	2,412	2,560	6,927	All other states.....	1919	38	5,015	13,717	5,876	4,927	14,467
	1914	7	2,248	12,445	1,588	1,575	3,882		1914	28	4,581	7,748	3,295	2,427	7,347
	1909	4	1,755	8,820	768	947	1,993		1909	14	2,270	3,472	1,434	967	3,280
New Jersey.....	1919	21	5,942	4,684	6,007	4,445	13,695								
	1914	19	5,784	2,897	3,770	2,531	7,598								
	1909	23	5,651	3,081	3,340	1,999	6,961								

## MANUFACTURES.

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

STATE.	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.				Total.	16 and over.		Under 16.		Capital.	Salaries and wages.			
					Male.	Female.	Average number.	Number, 15th day of—		Male.		Female.	Male.	Female.	Officials.		Clerks, etc.			
								Maximum month.	Minimum month.											
United States..	371	83,656	60	2,438	2,042	1,596	77,520	No 85,416	Jy 65,055	93,320	81,214	10,410	1,415	281	\$215,680,436	\$8,547,791	\$4,810,778			
California.....	7	1,431	3	25	53	17	1,333	No 1,781	Aug 591	1,410	1,358	52	.....	.....	2,082,731	120,577	90,261			
Illinois.....	14	4,370	4	160	70	65	4,065	Feb 4,291	Dec 3,825	4,187	3,670	481	31	5	13,008,050	410,860	131,426			
Indiana.....	35	9,011	.....	232	198	139	9,350	No 10,492	Aug 7,860	10,404	8,599	1,398	423	74	19,900,836	952,675	391,750			
Kansas.....	5	636	.....	22	10	10	584	Oct 821	June 194	875	874	1	.....	.....	976,904	65,977	25,625			
Maryland.....	8	1,879	6	41	56	21	1,755	No 1,948	Aug 1,252	1,901	1,577	270	37	17	2,360,036	170,716	131,008			
Missouri.....	4	2,136	.....	50	24	28	2,034	Mch 2,299	Aug 1,663	2,574	2,306	268	.....	.....	7,884,372	222,105	58,785			
New Jersey.....	21	6,493	5	136	264	146	5,942	Dec 6,811	Aug 4,488	6,966	5,997	882	75	12	12,508,430	558,824	630,941			
New York.....	19	4,400	6	142	171	152	3,920	Dec 4,432	Jy 2,695	4,554	4,089	352	111	2	11,166,015	435,064	365,263			
Ohio.....	44	11,761	.....	297	305	224	10,935	Dec 12,085	Jy 9,077	13,346	11,376	1,916	44	10	27,660,039	1,092,226	763,236			
Oklahoma.....	16	1,811	6	79	19	15	1,692	Apr 2,297	Jy 987	2,103	1,855	232	12	4	4,248,214	224,012	60,300			
Pennsylvania.....	102	23,490	18	718	572	580	21,602	No 24,944	Jy 18,809	26,764	23,502	2,675	467	130	71,852,560	2,438,507	1,323,630			
Virginia.....	4	668	.....	18	7	2	641	Jy 700	Jan 524	685	563	118	4	.....	947,837	41,505	11,940			
West Virginia.....	77	12,555	12	429	274	172	11,668	Oct 12,854	Jy 9,554	14,772	12,982	1,573	195	22	36,457,591	1,517,517	729,231			
All other states <sup>1</sup> .....	15	2,125	.....	85	25	25	1,990	.....	.....	2,689	2,466	192	26	5	4,596,791	291,223	60,379			

STATE.	EXPENSES—continued.						Value of products.	Value added by manufacture.	POWER.							
	Salaries and wages—Con.	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.						
										Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. <sup>2</sup>			
United States..	\$87,526,625	\$240,750	\$148,826	\$9,854,179	\$96,422,262	\$24,357,862	\$261,884,080	\$171,103,956	207,430	80,715	18,425	52,877	2,457	52,956	90,261	
California.....	1,654,369	.....	8,944	59,836	903,703	421,775	3,760,787	2,435,309	2,764	45	.....	.....	.....	2,719	.....	
Illinois.....	3,740,590	.....	3,851	1,485,406	3,451,127	2,108,152	18,244,717	12,685,438	10,594	4,457	2,500	1,000	.....	2,637	2,822	
Indiana.....	9,012,581	104,008	6,501	925,142	10,513,348	2,641,258	30,106,652	16,952,046	18,977	5,680	1,500	6,039	.....	5,758	8,386	
Kansas.....	1,195,872	.....	.....	31,816	461,597	145,098	2,133,470	1,526,775	313	.....	25	216	2	70	.....	
Maryland.....	1,643,239	.....	660	172,219	656,500	382,249	4,031,841	2,093,092	1,848	275	.....	.....	.....	1,573	20	
Missouri.....	2,411,517	.....	163	463,420	1,650,295	910,113	6,927,042	4,366,634	14,188	7,025	1,350	4,508	.....	405	11,420	
New Jersey.....	6,006,747	1,345	725	587,975	3,141,992	1,303,226	13,694,677	9,249,459	4,684	1,744	.....	1,230	.....	1,710	2,039	
New York.....	5,003,901	2,100	9,450	596,430	2,824,041	1,220,920	12,995,741	8,950,780	4,893	1,150	750	125	.....	2,808	112	
Ohio.....	12,111,911	31,279	95,968	1,147,955	8,984,050	3,668,347	35,240,877	22,588,480	37,831	19,165	6,750	3,325	5	8,586	23,797	
Oklahoma.....	1,753,686	.....	85	63,291	1,607,933	304,362	4,750,844	2,838,549	2,795	350	.....	1,950	.....	495	977	
Pennsylvania.....	26,471,740	67,335	11,454	2,562,170	19,896,838	7,761,299	80,479,752	52,821,615	70,280	30,279	5,550	17,087	.....	17,364	27,441	
Virginia.....	393,636	.....	.....	9,973	236,796	94,723	831,455	499,936	611	220	.....	.....	.....	391	.....	
West Virginia.....	13,656,859	34,683	10,905	1,569,140	11,010,447	2,790,987	42,730,338	28,928,904	29,494	2,875	.....	17,397	2,450	6,772	12,372	
All other states <sup>1</sup> .....	2,499,977	.....	120	179,406	1,083,595	605,353	5,955,887	4,266,939	8,158	6,550	.....	.....	.....	1,608	875	

<sup>1</sup> All other states embrace: Arkansas, 3 establishments; Louisiana, 2; Massachusetts, 1; Michigan, 1; Rhode Island, 1; South Carolina, 1; Tennessee, 1; Texas, 2; Washington, 1; Wisconsin, 2.

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

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