

# POCKETBOOKS, PURSES, AND CARDCASES

Description of the industry.—The establishments covered by this industry designation are those engaged primarily in the manufacture of leather pocketbooks, purses, women's purse-handbags, cardcases, wallets, coin purses, bill folds, etc.

**TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929**

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	290	10,430	\$15,229,422	\$35,351,605	\$68,627,515	\$33,275,910	1,828
1927	257	8,570	13,169,509	29,618,524	57,344,655	27,726,131	1,725
1925	190	6,826	9,021,720	22,442,200	43,105,212	20,603,013	1,356
1923	207	5,518	7,291,112	16,235,882	32,731,725	16,495,843	1,094
1921	115	2,715	3,224,244	6,221,200	13,084,000	6,863,769	( <sup>3</sup> )
1919	139	2,905	3,061,903	7,557,155	14,549,659	6,992,504	431
1914	64	1,466	702,314	1,783,840	3,350,552	1,566,712	242
1909	79	1,472	688,615	1,929,327	3,623,161	1,698,834	181
1904	46	2,281	796,985	1,926,723	3,767,446	1,840,723	274
1899	68	1,653	588,595	1,278,226	2,495,188	1,216,962	176
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929	12.8	21.7	15.6	19.4	19.7	20.0	6.0
1925-1927	35.3	25.5	46.0	32.0	33.0	34.2	27.2
1923-1925	-8.2	23.7	23.7	38.2	31.7	25.3	23.9
1921-1923	80.0	103.2	126.1	161.0	150.1	140.3	-----
1919-1921	-17.3	-6.5	5.3	-17.7	-10.1	-1.8	-----
1919-1929	108.6	259.0	397.4	367.8	371.7	375.9	324.1
1909-1919	( <sup>4</sup> )	97.4	344.6	291.7	301.0	311.0	138.1
1899-1909	( <sup>4</sup> )	-10.9	17.0	50.9	45.4	39.6	3.4

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>3</sup> Not called for on schedule.  
<sup>4</sup> Per cent not computed where base is less than 100.

**TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919**

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>1</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	290	1,441	10,430	1,828	106	1,662	\$4,651,506	\$15,229,422	\$35,351,605	\$35,180,922	\$170,683	\$68,627,515	\$33,275,910
	1927	257	1,228	8,570	1,725	280	1,445	3,170,059	13,169,509	29,618,524	29,480,478	138,046	57,344,655	27,726,131
	1919	139	424	2,905	431	-----	431	1,125,264	3,061,903	7,557,155	7,524,883	82,272	14,549,659	6,992,504
Individual States:														
California	1929	11	14	107	14	-----	14	47,117	118,040	248,241	247,276	965	491,327	243,086
	1927	10	20	84	13	-----	13	26,812	106,350	159,349	168,520	829	396,133	236,784
	1919	3	-----	3	1	-----	1	-----	4,296	4,059	3,928	131	10,709	6,650
Illinois	1929	10	61	264	29	-----	29	129,073	367,298	751,928	748,994	2,934	1,552,203	809,275
	1927	14	21	128	62	-----	62	33,555	341,069	889,044	889,044	386,043	477,699	477,699
	1919	10	30	83	22	-----	22	90,291	82,130	162,026	161,170	847	376,511	214,485
Massachusetts	1929	17	110	696	119	6	113	290,088	709,779	1,641,654	1,627,394	14,260	3,540,411	1,898,757
	1927	11	64	397	67	-----	67	175,825	341,069	723,626	717,579	6,047	1,542,556	818,930
	1919	10	49	381	80	-----	80	199,835	259,623	617,148	612,010	5,138	1,324,791	707,643
Missouri	1929	5	26	168	38	-----	38	51,833	140,090	293,916	290,581	3,335	742,482	448,566
New Jersey	1929	9	108	646	97	-----	97	370,675	829,923	1,459,119	1,445,061	14,058	4,090,527	2,631,408
	1927	8	97	800	208	120	148	291,158	829,923	1,752,463	1,739,793	12,670	3,656,960	1,904,509
New York	1929	192	835	6,101	994	-----	994	2,986,461	10,952,801	25,706,722	25,606,698	100,024	47,031,431	21,834,709
	1927	178	839	5,341	783	-----	783	2,166,413	9,909,952	22,802,521	22,717,923	85,498	42,802,339	19,989,818
	1919	93	247	1,842	229	-----	229	634,513	2,337,223	5,931,711	5,913,503	18,208	11,109,315	5,174,604
Ohio	1929	7	45	314	68	-----	68	169,071	268,274	591,610	586,086	5,524	1,503,842	912,232
	1927	7	29	309	197	-----	197	87,645	253,596	563,024	554,351	8,673	1,277,874	714,850
Pennsylvania	1929	17	119	1,040	283	160	123	302,987	957,711	2,351,666	2,340,421	11,245	4,306,827	1,955,161
	1927	12	60	782	214	160	54	174,570	799,549	1,854,214	1,847,607	6,007	3,420,078	1,565,864
	1919	7	19	161	28	-----	28	37,073	102,850	198,581	197,050	1,531	453,297	254,716

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919—Continued  
[See note at head of this table]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
(Groups of States: Ga., 1 est.; Tex., 2; Va., 1; Wis., 5; Other States (Kans., 1 est.; Me., 3; Md., 6; Mich., 1; Oreg., 1; R. I., 1)-----)	1929	9	101	833	152	-----	152	\$272, 228	\$665, 152	\$1, 584, 280	\$1, 569, 349	\$14, 931	\$3, 032, 217	\$2, 047, 937
	1929	13	22	261	34	-----	34	32, 033	220, 354	632, 469	629, 062	3, 407	1, 136, 248	503, 779
States not shown separately-----	<sup>4</sup> 1927	17	98	720	121	-----	121	214, 081	583, 305	1, 374, 283	1, 361, 282	13, 001	3, 382, 066	2, 007, 783
	<sup>4</sup> 1919	16	79	435	71	-----	71	163, 552	275, 781	643, 630	637, 213	6, 417	1, 275, 036	634, 406

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 181; 1927, 205; 1919, 168. The total numbers of persons engaged— proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 12,052; 1927, 10,003; 1919, 3,497.  
<sup>2</sup> For 1929, sales (shipments or deliveries) by manufacturers; for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>4</sup> Colorado, 1 establishment; Georgia, 1; Kansas, 1; Maine, 2; Maryland, 2; Missouri, 3; Texas, 2; Virginia, 1; Wisconsin, 4.  
<sup>5</sup> Colorado, 1 establishment; Maine, 1; Missouri, 1; New Jersey, 4; Ohio, 2; Texas, 1; Wisconsin, 6.

TABLE 3.—PRODUCTS, BY KIND AND VALUE, BY STATES: 1929

[The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Statistics are given for each State which can be shown separately without disclosing data for individual establishments. In some cases, however, certain of the "Other States" reported larger quantities and values than some of the States shown separately]

KIND	Value	KIND	Value
1. Pocketbooks, purses, and cardcases industry, all products, total.	\$68, 627, 515	Pocketbooks, purses, and cardcases—Continued.	
2. Pocketbooks, purses, and cardcases-----	64, 692, 179	Women's purse-handbags—Continued.	
3. Other products (not normally belonging to the industry).....	3, 301, 469	Pennsylvania-----	\$1, 162, 905
4. Receipts for contract work-----	522, 342	Other States-----	2, 456, 829
5. Receipts for custom work and repairing-----	111, 525	Pocketbooks, total value-----	16, 965, 613
6. Pocketbooks, purses, and cardcases made as secondary products in other industries-----	507, 686	New York-----	11, 716, 105
Pocketbooks, purses, and cardcases, all industries, aggregate (sum of 2 and 6)-----	65, 199, 865	Pennsylvania-----	2, 097, 663
Women's purse-handbags, total value-----	40, 521, 323	Other States-----	3, 151, 845
Illinois-----	538, 236	Bill folds, total value-----	5, 116, 629
Massachusetts-----	1, 724, 691	Massachusetts-----	1, 123, 160
New Jersey-----	1, 515, 878	New York-----	1, 189, 933
New York-----	32, 259, 117	Other States-----	2, 803, 836
Ohio-----	823, 667	Coin purses-----	1, 365, 976
		Cardcases-----	1, 230, 024

TABLE 4.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925: QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate-----	2, 058	Horse-power 1, 828	1, 272	Horse-power 1, 725	729	Horse-power 1, 356	370	Horse-power 431	142	Horse-power 242	100.0	100.0
Prime movers, total-----	3	160	4	280	6	340	-----	-----	2	84	9.1	-----
Steam engines-----	2	160	4	280	6	340	-----	-----	1	80	8.8	-----
Internal-combustion engines-----	1	6	-----	-----	-----	-----	-----	-----	1	4	0.3	-----
Electric motors driven by purchased energy-----	2, 055	1, 662	1, 268	1, 445	723	1, 016	370	431	140	158	90.9	100.0
Electric motors, total-----	2, 088	1, 778	1, 330	1, 628	765	1, 134	370	431	220	240	100.0	100.0
Driven by purchased energy-----	2, 055	1, 662	1, 268	1, 445	723	1, 016	370	431	140	158	93.5	100.0
Driven by energy generated in establishments reporting-----	33	116	62	183	42	118	-----	-----	80	82	6.5	-----
Electric generators-----	2	Kilowatts 100 Kilowatt-hours	4	Kilowatts 175	4	Kilowatts 175	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	-----	-----
Electric energy purchased <sup>2</sup> -----	-----	2, 711, 660	-----	( <sup>2</sup> )	-----	( <sup>2</sup> )	-----	( <sup>1</sup> )	-----	( <sup>1</sup> )	-----	-----

<sup>1</sup> Not called for on schedule.

<sup>2</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

<sup>3</sup> Data incomplete.

## CENSUS OF MANUFACTURES: 1929

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:														
1929	10,430	9,934	10,097	10,299	10,256	9,153	<i>8,312</i>	9,321	10,552	11,593	12,285	12,161	11,194	67.7
1925	6,826	6,611	6,726	6,843	6,534	<i>6,174</i>	6,182	6,240	6,810	7,356	7,697	7,005	7,141	80.2
1919	2,905	<i>2,605</i>	2,718	2,778	2,760	2,754	2,791	2,892	3,013	3,000	3,126	3,194	3,169	81.6
1914	1,460	1,300	1,399	1,545	1,566	1,432	1,398	1,438	1,517	1,627	1,695	1,492	<i>1,243</i>	73.3
1909	1,472	1,380	1,467	1,431	1,358	<i>1,324</i>	1,403	1,347	1,400	1,539	1,653	1,695	1,614	78.1
California	107	<i>94</i>	100	101	106	103	110	99	108	109	122	120	113	77.0
Illinois	264	244	270	258	243	<i>229</i>	<i>229</i>	233	274	295	330	297	266	69.4
Massachusetts	696	550	608	640	621	610	<i>596</i>	636	707	817	963	914	753	55.7
Missouri	168	126	125	145	148	127	<i>112</i>	146	177	206	255	263	192	42.6
New Jersey	646	671	624	609	603	629	<i>553</i>	598	663	689	706	717	686	77.1
New York	6,101	6,143	6,148	6,212	6,184	5,198	<i>4,510</i>	5,331	6,280	6,843	7,078	6,943	6,334	63.7
Ohio	314	<i>269</i>	290	328	312	298	288	279	305	332	357	361	348	74.5
Pennsylvania	1,040	1,025	1,054	1,057	1,042	<i>973</i>	981	974	992	1,068	1,106	1,093	1,110	87.7

# SADDLERY AND HARNESS

Description of the industry.—This industry designates the manufacture of harness and parts, halters, horse boots, turf goods, saddles and parts, feed bags, etc.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	260	3,339	\$3,713,728	\$13,834,124	\$23,338,555	\$9,504,431	4,698
1927	264	4,023	4,541,398	16,526,180	27,350,244	10,830,064	4,908
1925	258	4,570	5,050,562	18,775,991	30,083,555	11,307,504	5,021
1923	472	6,617	6,915,581	24,460,405	42,113,300	17,652,895	7,761
1921	503	4,489	4,996,664	17,664,981	30,163,601	12,498,620	(3) 8,205
1919	1,823	10,411	10,849,066	52,442,907	83,713,010	31,270,103	10,362
1914	2,551	12,969	7,995,612	33,056,442	53,558,612	20,472,170	17,234
1909	1,347	14,632	8,071,484	33,177,937	54,224,602	21,046,665	6,900
1904	1,076	15,032	7,634,311	23,774,230	42,054,842	18,280,603	5,434
1899	873	14,364	6,254,462	19,770,574	33,792,563	13,931,989	
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	-1.5	-17.0	-18.2	-16.3	-14.7	-12.2	-4.3
1925-1927	2.3	-12.0	-10.2	-12.0	-9.1	-4.2	-2.3
1923-1925	-45.3	-30.9	-26.8	-23.2	-28.6	-35.9	-35.3
1921-1923	-20.4	47.4	38.4	38.5	39.6	41.2	
1919-1921	-67.5	-56.9	-53.9	-66.3	-64.0	-60.0	
1919-1929	-85.7	-67.9	-65.8	-73.6	-72.1	-69.6	-42.7
1909-1919	35.3	-28.8	34.4	58.1	54.4	48.0	-62.4
1899-1909	54.3	1.9	29.1	67.8	60.9	51.1	217.2

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>3</sup> Not called for on schedule.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employes <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	260	688	3,339	4,698	817	3,881	\$1,473,907	\$3,713,728	\$13,834,124	\$138,466	\$138,466	\$23,338,555	\$9,504,431
	1927	264	877	4,023	4,908	993	3,915	1,659,780	4,541,398	16,526,180	163,699	163,699	27,350,244	10,830,064
	1919	1,823	2,506	10,411	13,205	1,539	6,606	4,839,685	10,849,066	52,442,907	373,676	373,676	83,713,010	31,270,103
Individual States:														
California	1929	7	23	79	77		77	51,398	115,225	240,453	246,916	2,567	464,357	214,874
	1927	7	9	97	160		160	22,761	151,049	290,429	288,376	2,053	558,781	268,352
	1919	37	68	130	178		178	45,391	164,455	734,571	729,938	4,633	1,181,680	447,109
Colorado	1929	8	20	95	117		117	36,920	112,890	267,205	264,171	3,034	484,736	217,531
	1927	9	10	92	101		101	29,049	135,027	255,974	253,258	2,716	540,007	284,033
	1919	27	38	206	234		234	98,526	272,422	950,750	944,586	6,164	1,556,723	605,973
Connecticut	1929	5	9	29	40		40	15,608	32,577	96,129	94,838	1,291	183,257	87,128
Illinois	1929	19	46	303	396	125	271	113,267	434,437	1,495,153	1,483,022	12,131	2,447,768	952,015
	1927	19	74	365	310	125	185	124,896	441,064	1,567,969	1,544,757	13,212	2,430,307	872,338
	1919	183	148	887	606	133	473	290,757	1,058,949	4,530,369	4,501,909	28,460	7,032,469	2,502,100
Indiana	1929	7	32	130	195		195	46,114	100,881	396,010	390,878	5,132	653,662	257,652
	1927	11	35	204	214	25	189	102,439	172,934	580,262	571,643	8,619	987,649	407,387
	1919	114	106	453	605	95	510	186,420	440,219	1,432,951	1,409,986	22,965	2,520,166	1,037,215
Iowa	1929	13	65	181	231	60	171	167,057	232,891	1,112,880	1,101,691	11,189	1,796,058	686,178
	1927	14	72	255	203	60	143	133,691	330,159	1,628,592	1,618,961	9,631	2,420,274	800,682
	1919	110	97	395	409	109	300	175,364	493,640	2,689,453	2,568,298	21,155	4,167,588	1,578,135

See footnotes at end of table.

## CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919—Continued

[See note at head of this table]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
Individual States—Con.														
Kansas	1929	7	5	43	62	-----	62	\$21,520	\$61,507	\$182,330	\$181,058	\$1,272	\$336,972	\$154,642
	1927	12	18	98	126	-----	126	36,957	116,890	483,089	478,413	4,676	741,136	258,047
	1919	83	34	181	156	4	152	75,869	217,958	965,650	956,871	8,770	1,490,428	524,778
Kentucky	1929	11	27	151	217	-----	217	42,380	151,231	941,288	935,205	6,063	1,401,605	460,317
	1927	10	35	175	243	-----	243	73,376	195,616	1,080,163	1,080,164	8,980	1,615,070	525,917
	1919	52	120	479	352	2	350	273,659	460,109	2,858,777	2,842,395	16,382	4,443,902	1,685,185
Massachusetts	1929	6	12	46	52	25	27	23,452	55,486	131,842	128,559	3,283	210,092	87,250
	1927	6	15	45	40	25	24	29,987	53,505	165,580	161,081	3,609	284,253	118,063
	1919	15	16	140	106	25	81	28,432	158,568	465,505	457,309	8,196	778,809	313,304
Michigan	1929	5	4	26	58	-----	58	12,880	32,510	96,362	94,053	2,309	177,800	81,488
	1927	5	14	51	68	-----	68	23,740	74,641	196,917	195,926	4,407	354,809	157,181
	1919	51	23	253	188	-----	188	47,606	267,090	1,098,979	1,088,026	10,953	2,101,341	1,002,362
Minnesota	1929	11	55	152	187	-----	187	95,888	168,434	609,434	601,883	7,551	1,059,037	449,603
	1927	10	26	198	178	-----	178	52,085	140,088	707,787	703,320	4,407	1,274,627	566,840
	1919	51	153	436	329	60	269	239,030	489,246	2,829,313	2,812,360	16,947	4,150,286	1,329,973
Missouri	1929	10	55	167	273	100	173	119,471	186,922	477,903	469,060	7,923	867,507	389,604
	1927	14	93	289	440	180	260	197,747	328,048	624,512	607,893	16,610	1,781,023	856,511
	1919	88	363	1,215	1,082	309	773	590,505	1,250,103	6,338,114	6,260,481	77,633	8,449,700	3,111,592
Nebraska	1929	6	35	85	170	-----	170	69,273	144,081	910,568	903,846	6,752	1,715,830	804,241
	1927	6	31	145	423	80	343	80,003	173,018	1,019,179	1,012,513	6,606	1,638,264	514,085
	1919	53	41	127	134	0	128	74,797	169,362	900,729	893,564	7,165	1,434,118	533,389
New York	1929	16	13	110	48	-----	48	29,044	145,902	343,004	330,424	4,450	662,890	318,095
	1927	14	19	58	112	50	62	32,384	78,641	190,639	186,882	3,757	368,726	178,087
	1919	91	44	223	126	-----	126	52,610	249,899	816,232	808,239	7,993	1,435,448	619,216
Ohio	1929	12	21	96	327	170	157	36,033	110,577	311,630	304,492	7,138	591,241	279,611
	1927	13	45	161	380	170	210	69,997	174,300	689,034	678,012	11,022	1,045,601	356,567
	1919	106	141	799	567	134	433	257,796	605,807	3,036,277	3,019,710	16,558	5,142,703	2,100,426
Oregon	1929	10	21	116	262	-----	262	57,328	171,526	409,255	398,269	4,986	741,917	338,602
	1927	9	12	138	198	-----	198	28,485	204,124	411,946	406,099	5,937	777,897	365,951
	1919	33	45	182	233	-----	233	76,432	245,094	937,984	931,547	6,437	1,931,187	993,203
Pennsylvania	1929	13	11	79	100	74	35	24,971	88,308	240,013	242,752	3,261	486,079	240,066
	1927	12	16	82	105	60	45	26,944	104,232	183,586	179,237	4,840	395,490	211,904
	1919	117	53	225	179	85	94	67,532	204,787	897,926	889,013	8,913	1,515,099	617,173
Tennessee	1929	11	39	223	334	50	284	73,598	210,195	901,780	894,575	7,205	1,449,836	648,056
	1927	10	30	213	126	-----	126	52,327	209,309	958,304	952,102	6,202	1,429,315	471,011
	1919	43	144	614	292	-----	292	287,174	520,500	3,024,250	3,009,033	15,217	4,789,806	1,765,556
Texas	1929	20	78	326	331	-----	331	153,736	850,871	1,490,872	1,489,572	10,300	2,383,887	884,015
	1927	14	70	273	226	-----	226	100,267	278,707	1,186,667	1,179,402	7,265	2,038,248	851,881
	1919	68	266	919	359	10	349	355,483	989,859	5,229,770	5,212,040	17,730	7,817,760	2,587,980
Utah	1929	5	3	25	11	-----	11	4,260	39,136	44,151	42,426	1,725	99,349	55,198
	1927	( <sup>4</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	-----	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
	1919	18	23	67	40	-----	40	20,560	85,970	441,294	438,596	2,698	662,018	220,724
Wisconsin	1929	10	50	95	347	-----	347	113,584	126,065	547,947	542,682	5,265	1,012,126	464,179
	1927	12	87	204	382	-----	382	143,468	281,768	1,062,213	993,151	9,062	2,079,018	1,076,805
	1919	43	114	441	247	7	240	274,508	500,739	3,291,741	3,278,379	13,362	5,143,289	1,851,468
Groups of States: Idaho, 1 est.; Nev., 1; N. Dak., 2; Okla., 2; S. Dak., 2; Wash., 4; Wyo., 1	1929	13	13	55	97	1	96	22,000	92,637	348,977	344,626	4,351	520,987	172,010
Other States (Ala., 2 est.; Ariz., 2; Ark., 2; Del., 2; Ga., 8; La., 1; Me., 1; Md., 2; Mont., 3; N. J., 2; N. Mex., 1; N. C., 3; R. I., 1; Va., 2; W. Va., 3)	1929	35	45	727	767	212	545	144,605	549,430	2,219,978	2,200,741	19,237	3,579,544	1,350,566
States not shown separately	1927	57	166	878	864	218	646	299,176	791,468	3,004,338	2,970,481	33,857	4,692,460	1,688,122
	1919	440	460	2,030	1,790	620	1,170	865,165	2,014,200	9,072,272	9,011,936	60,336	14,950,484	5,887,212

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 216; 1927, 211; 1919, 1,946. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 4,243; 1927, 5,111; 1919, 14,863.

<sup>2</sup> For 1929, sales (shipments or deliveries) by manufacturers; for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1910 but not in the United States totals.

<sup>5</sup> Withheld from publication in order to avoid disclosing data for individual establishments.

<sup>6</sup> Alabama, 2 establishments; Arizona, 4; Arkansas, 3; Connecticut, 2; Delaware, 2; Georgia, 6; Idaho, 1; Louisiana, 1; Montana, 3; Nevada, 1; New Jersey, 2; New Mexico, 1; North Carolina, 5; North Dakota, 1; Oklahoma, 2; Rhode Island, 1; South Dakota, 2; Utah, 3; Virginia, 2; West Virginia, 2; Washington, 3; Wyoming, 2.

<sup>7</sup> Alabama, 8 establishments; Arizona, 4; Arkansas, 20; Connecticut, 4; Delaware, 3; Georgia, 20; Idaho, 16; Louisiana, 8; Maine, 9; Maryland, 26; Mississippi, 5; Montana, 11; Nevada, 2; New Hampshire, 2; New Jersey, 46; New Mexico, 4; North Carolina, 30; North Dakota, 14; Oklahoma, 36; Rhode Island, 3; South Carolina, 5; South Dakota, 10; Vermont, 10; Virginia, 33; Washington, 42; West Virginia, 51; Wyoming, 18.

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**TABLE 3.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1920, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929**

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
		Horse-power		Horse-power		Horse-power		Horse-power		Horse-power		
Prime movers and electric motors driven by purchased energy, aggregate.....	951	4,698	1,049	4,908	937	5,021	1,072	8,205	1,796	10,362	100.0	100.0
Prime movers, total.....	20	817	10	903	21	1,171	82	1,599	221	4,125	17.4	10.5
Steam, total.....	13	585	13	800	13	875	25	1,279	66	3,344	12.5	15.6
Engines.....	12	573	13	800	13	875	25	1,279	(1)	(1)	12.2	15.6
Turbines.....	1	12							(1)	(1)	0.3	
Internal-combustion engines.....	6	192	6	193	7	261	55	282	148	662	4.1	3.4
Water wheels and water turbines.....	1	40			1	35	2	38	7	119	0.8	0.5
Electric motors driven by purchased energy.....	931	3,881	1,030	3,915	916	3,850	1,890	6,606	1,575	6,237	82.6	80.5
Electric motors, total.....	1,001	4,265	1,092	4,293	1,011	4,383	1,925	6,851	1,679	6,584	100.0	100.0
Driven by purchased energy.....	931	3,881	1,030	3,915	916	3,850	1,890	6,606	1,575	6,237	91.0	96.4
Driven by energy generated in establishments reporting.....	70	384	62	378	95	533	35	245	104	647	8.0	3.6
Electric generators.....	8	Kilowatts 348 Kilowatt-hours 2,270,420	8	Kilowatts 388	9	Kilowatts 654	(?)	(?)	(?)	(?)		
Electric energy purchased <sup>1</sup> .....				(4)		(4)		(?)		(?)		

<sup>1</sup> Not called for separately on schedule.  
<sup>2</sup> Not called for on schedule.  
<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>4</sup> Data incomplete.

**TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929**

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum is of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
<b>United States:</b>															
1929.....	3,339	3,628	3,660	3,589	3,479	3,273	3,122	<i>3,080</i>	3,052	3,204	3,293	3,339	3,395	3,395	82.8
1925.....	4,570	4,841	5,009	4,989	4,704	4,321	4,209	<i>4,014</i>	4,170	4,382	4,608	4,758	4,832	4,832	80.1
1919.....	10,411	10,627	10,431	10,416	10,060	9,956	9,558	10,063	10,396	10,445	10,789	10,551	10,655	10,655	90.7
1914.....	12,969	13,765	13,854	13,653	13,399	13,135	12,834	12,436	12,105	11,576	12,401	12,679	13,401	13,401	85.7
1909.....	14,632	14,550	14,827	14,880	14,742	14,635	14,546	14,366	<i>14,301</i>	14,419	14,432	14,728	16,170	16,170	94.3
California.....	79	81	79	78	79	82	82	90	82	74	72	74	68	68	73.9
Colorado.....	95	97	95	94	89	95	95	97	97	94	94	95	93	93	91.8
Connecticut.....	29	29	30	32	30	30	31	30	27	29	26	27	25	25	78.1
Illinois.....	303	418	377	367	347	284	243	<i>215</i>	231	260	276	302	318	318	51.4
Indiana.....	130	142	157	149	136	127	116	<i>112</i>	125	121	126	121	131	131	71.3
Iowa.....	181	189	209	216	201	166	126	<i>124</i>	145	166	190	214	229	229	54.1
Kansas.....	43	94	84	78	39	28	26	25	25	23	25	30	31	31	24.5
Kentucky.....	151	159	163	160	139	130	114	<i>107</i>	124	154	174	193	200	200	53.5
Massachusetts.....	46	43	<i>42</i>	44	45	46	44	44	45	49	50	51	45	45	82.4
Michigan.....	26	<i>25</i>	<i>25</i>	<i>25</i>	26	37	27	27	27	27	27	26	26	26	92.6
Minnesota.....	152	144	163	165	188	150	137	149	145	147	151	159	145	145	81.5
Missouri.....	167	161	174	180	184	196	180	151	<i>146</i>	148	155	164	161	161	74.5
Nebraska.....	85	128	121	106	102	76	73	<i>65</i>	67	72	70	69	76	76	60.8
New York.....	110	110	109	110	112	112	113	110	109	109	110	111	102	102	90.3
Ohio.....	96	98	108	111	105	100	91	93	87	91	91	91	91	91	78.4
Oregon.....	116	<i>108</i>	109	115	116	116	115	115	112	120	118	121	121	121	89.3
Pennsylvania.....	79	81	74	84	82	89	80	<i>69</i>	79	76	79	77	79	79	77.5
Tennessee.....	223	244	245	231	224	199	177	190	203	227	243	243	255	255	69.4
Texas.....	326	349	346	313	316	320	332	332	329	341	336	363	398	398	85.4
Utah.....	25	28	28	28	25	23	23	23	24	25	24	25	25	25	88.5
Wisconsin.....	95	114	114	121	129	107	105	89	<i>60</i>	65	78	70	86	86	46.5

## TRUNKS, SUITCASES, AND BAGS

**Description of the industry.**—The establishments in this industry are engaged primarily in the manufacture of trunks, valises, suitcases, traveling bags, satchels, Boston bags, carrying cases, brief cases, hatboxes, luncheon kits, etc. These commodities are made principally from leather, but certain other materials, such as imitation leather, canvas, and fiber board, are also used.

**TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929**

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	467	11,359	\$13,756,761	\$31,093,935	\$63,968,029	\$32,274,094	10,220
1927	495	10,345	13,084,687	29,128,235	59,958,081	30,830,440	9,001
1925	475	10,348	13,225,966	31,381,851	61,223,867	29,842,010	7,893
1923	605	11,441	13,520,094	32,836,895	63,023,072	30,186,177	7,269
1921	504	8,712	10,260,364	23,882,610	46,548,977	22,066,367	(3)
1919	597	11,470	12,463,767	33,222,432	63,032,266	30,709,834	7,096
1914	561	9,911	5,540,167	13,625,467	26,471,527	12,846,070	7,510
1909	524	11,122	5,537,329	14,629,065	28,027,964	13,398,899	6,885
1904	373	9,091	4,139,034	9,107,785	18,643,580	9,535,795	4,849
1899	312	6,964	2,777,016	5,954,718	12,428,646	6,473,928	3,314
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	-5.7	9.8	5.1	8.8	6.7	4.7	13.5
1925-1927	4.2	(4)	-1.1	-7.2	-2.1	3.3	14.0
1923-1925	-5.9	-9.6	-2.2	-4.4	-2.9	-1.1	8.6
1921-1923	0.2	31.3	31.8	37.5	35.4	33.2	-----
1919-1921	-15.6	-24.0	-17.7	-28.1	-27.2	-20.2	-----
1919-1929	-21.8	-1.0	10.4	-4.6	0.1	5.1	32.8
1909-1919	13.9	3.1	125.1	127.1	128.1	129.2	11.8
1899-1909	67.9	59.7	99.4	145.7	125.5	107.0	107.8

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>3</sup> Not called for on schedule.  
<sup>4</sup> Less than one-tenth of 1 per cent.

**TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919**

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	467	1,710	11,359	10,220	3,285	6,935	\$4,925,638	\$13,756,761	\$31,093,935	\$31,309,997	\$33,038	\$63,968,029	\$32,274,094
	1927	495	1,752	10,345	9,001	3,390	5,611	4,500,702	13,084,687	29,128,235	28,762,720	305,515	59,958,081	30,830,440
	1919	597	2,145	11,470	7,696	4,614	8,082	5,271,777	12,463,767	33,222,432	32,959,431	263,001	63,032,266	30,709,834
Individual States:														
California	1929	42	86	436	300	-----	300	224,921	550,887	1,227,732	1,217,048	10,684	2,678,598	1,350,806
	1927	40	61	322	218	-----	218	129,650	407,952	1,071,976	1,065,215	6,761	2,089,200	1,017,230
	1919	45	50	336	195	80	115	69,357	360,635	839,169	835,158	4,011	1,562,608	718,339
Illinois	1929	47	188	1,132	719	159	669	557,637	1,574,521	3,701,145	3,665,965	35,180	6,861,687	3,100,542
	1927	59	190	1,167	793	185	678	541,367	1,602,076	3,305,839	3,269,712	36,127	6,547,949	3,242,110
	1919	61	256	1,181	706	255	451	607,693	1,482,445	3,853,440	3,824,742	28,698	7,292,902	3,439,462
Indiana	1929	8	18	195	267	-----	267	37,425	155,107	404,259	391,278	12,981	775,105	370,846
	1927	6	29	107	209	-----	209	55,277	123,042	243,918	229,368	14,060	530,431	286,513
	1919	8	31	427	310	106	205	63,701	416,632	733,396	715,643	17,763	1,343,231	614,835
Maryland	1929	4	6	55	27	-----	27	6,589	53,774	111,331	110,053	1,278	237,237	125,906
	1927	4	8	60	21	-----	21	8,914	63,500	138,721	137,036	1,085	270,819	132,098
	1919	7	-----	35	8	-----	8	-----	23,913	61,087	60,424	693	112,316	61,229
Massachusetts	1929	20	88	485	355	90	265	268,544	530,544	1,209,178	1,193,937	15,241	2,487,933	1,278,755
	1927	24	113	418	171	95	76	281,312	477,895	1,100,402	1,093,927	6,475	2,332,776	1,232,374
	1919	26	111	614	88	-----	88	243,243	541,687	1,850,151	1,842,242	7,909	3,206,478	1,356,322

See footnotes at end of table.

# TRUNKS, SUITCASES, AND BAGS

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TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919—Continued

[See note at head of this table]

STATE	Census year	Number of establishments	Salaried officers and employ-ees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufac-ture <sup>3</sup>
					Total	Prime movers	Motors run by pur-chased energy			Total	Materials	Fuel and pur-chased energy		
<b>Individual States—Con.</b>														
Michigan	1929	11	70	505	620	125	495	\$178,118	\$654,720	\$1,321,040	\$1,237,940	\$33,100	\$2,629,132	\$1,308,092
	1927	11	74	341	663	125	538	205,342	444,900	972,250	941,641	30,618	2,075,992	1,103,733
	1919	10	27	199	143	120	23	62,500	202,167	380,230	377,003	3,277	820,912	440,682
Minnesota	1929	8	13	67	35	-----	35	27,670	72,331	167,847	164,952	2,895	334,480	166,642
	1927	9	10	60	44	-----	44	26,133	74,463	160,129	157,737	2,392	324,973	164,844
	1919	14	22	70	75	-----	75	30,048	95,975	258,401	254,763	3,638	480,834	232,433
Missouri	1929	18	86	825	479	-----	479	294,552	981,740	1,796,161	1,774,099	22,062	3,627,743	1,831,582
	1927	18	69	821	349	-----	349	148,630	968,734	1,725,571	1,701,640	23,931	3,098,242	1,972,671
	1919	20	134	877	530	290	240	270,991	855,187	2,396,622	2,369,500	27,122	4,278,561	1,881,939
New Jersey	1929	20	78	734	1,050	650	400	310,226	1,064,051	1,991,078	1,966,356	24,722	4,164,841	2,173,763
	1927	25	97	844	1,322	725	597	289,917	1,210,461	2,305,479	2,272,368	33,111	4,839,401	2,533,922
	1919	21	117	717	437	279	168	440,561	939,054	2,766,773	2,751,503	15,270	4,898,976	2,132,203
New York	1929	141	397	1,882	1,199	150	1,049	1,096,826	2,707,427	6,040,404	5,980,094	60,310	12,609,871	6,569,467
	1927	153	378	1,905	903	150	813	930,879	2,995,650	7,011,545	6,929,713	81,832	13,925,864	6,914,819
	1919	158	433	1,950	826	393	433	1,097,486	2,750,245	7,667,406	7,624,774	42,632	13,977,087	6,309,681
Ohio	1929	27	92	401	760	120	640	265,376	533,169	1,132,997	1,109,103	23,894	2,306,295	1,173,298
	1927	23	68	330	331	140	191	178,884	440,561	884,645	867,310	17,335	2,006,428	1,121,783
	1919	22	67	306	223	125	98	180,262	357,035	803,599	796,074	7,525	1,636,384	832,785
Pennsylvania	1929	43	115	1,252	471	130	341	351,635	1,476,944	4,366,535	4,334,068	32,467	7,689,271	3,322,736
	1927	51	138	1,054	519	132	387	375,423	1,374,662	3,342,909	3,313,511	29,398	6,585,486	3,242,577
	1919	86	232	1,115	539	252	287	540,472	1,167,643	3,060,864	3,034,248	26,609	6,620,836	3,559,982
Texas	1929	7	27	111	171	-----	171	65,728	93,581	199,646	195,145	3,501	456,535	256,889
	1927	9	20	105	110	-----	110	84,520	90,635	158,046	155,070	2,370	448,573	290,527
	1919	12	38	125	97	-----	97	75,730	90,965	234,446	232,606	1,540	502,500	268,144
Virginia	1929	7	103	1,167	1,487	1,196	297	270,284	977,037	3,036,692	3,017,098	19,594	5,782,717	2,740,025
	1927	9	144	1,184	1,396	990	406	375,307	1,126,415	2,432,517	2,409,917	22,600	5,254,960	2,822,473
	1919	15	197	1,703	1,557	1,430	127	488,667	1,683,736	4,136,971	4,119,725	17,246	8,618,472	4,481,501
Washington	1929	7	15	90	42	-----	42	41,017	124,129	168,766	166,079	2,687	458,272	289,506
	1927	5	12	101	51	-----	51	31,928	120,784	218,278	216,400	1,878	408,770	190,492
	1919	13	20	73	23	-----	23	32,601	85,712	170,852	170,080	772	367,163	196,311
Wisconsin	1929	18	186	1,059	1,199	690	519	687,592	1,118,505	2,586,978	2,550,538	36,440	6,024,633	3,437,655
	1927	19	228	865	1,292	775	517	629,013	932,963	2,474,405	2,436,793	37,612	5,375,582	2,901,177
	1919	18	197	933	1,269	995	274	546,689	738,385	2,387,709	2,351,415	36,294	4,724,196	2,386,487
<b>Groups of States:</b>														
Conn., 3 est., Me., 2, R. I., 3	1929	8	31	289	92	-----	92	63,922	261,062	440,743	433,300	7,443	963,394	522,651
D. C., 1 est.; Ga., 1; Ky., 3; La., 2; Tenn., 2	1929	9	21	126	110	-----	110	42,318	116,903	238,471	233,187	5,284	477,162	238,681
Other States (Colo., 5 est.; Idaho, 1; Iowa, 3; Kans., 1; Nebr., 2; N. Dak., 1; Ore., 2; Utah, 1)	1929	16	81	558	837	-----	837	225,268	720,329	1,552,932	1,518,757	34,176	3,504,024	1,951,092
States not shown separately	1927	30	113	653	679	73	506	244,216	630,464	1,681,596	1,563,656	17,940	3,243,199	1,601,603
	1919	61	213	800	677	290	387	376,676	672,501	1,621,326	1,599,631	21,795	3,493,825	1,872,499

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 314; 1927, 415; 1919, 601. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 13,383; 1927, 12,512; 1919, 14,216.

<sup>2</sup> For 1929, sales (shipments or deliveries) by manufacturers; for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>5</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.

<sup>6</sup> Colorado, 5 establishments; Connecticut, 2; District of Columbia, 1; Florida, 2; Georgia, 2; Iowa, 2; Kansas, 1; Kentucky, 3; Louisiana, 1; Maine, 2; Nebraska, 1; North Dakota, 1; Oregon, 1; Rhode Island, 2; Tennessee, 3; Utah, 1.

<sup>7</sup> Alabama, 1 establishment; Arizona, 1; Arkansas, 1; Colorado, 7; Connecticut, 3; District of Columbia, 1; Georgia, 2; Iowa, 10; Kansas, 3; Kentucky, 2; Louisiana, 2; Maine, 2; Nebraska, 4; North Dakota, 1; Oregon, 5; Rhode Island, 1; South Dakota, 1; Tennessee, 7; Utah, 6; Wyoming, 1.



## CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	2,658	Horse-power 10,220	2,057	Horse-power 9,001	1,687	Horse-power 7,893	857	Horse-power 7,696	679	Horse-power 7,510	100.0	100.0
Prime movers, total.....	30	3,285	33	3,390	35	3,303	53	4,614	74	5,391	32.1	60.0
Steam, total.....	25	3,165	25	3,233	27	3,130	43	4,455	53	4,608	30.9	57.9
Engines.....	24	3,133	25	3,233	27	3,130	41	4,335	(1)	(1)	30.6	56.3
Turbines.....	1	30					2	120	(1)	(1)	0.3	1.6
Internal-combustion engines.....	4	70	7	107	7	123	10	159	15	232	0.7	2.1
Water wheels and water turbines.....	1	50	1	50	1	50			6	551	0.5	
Electric motors driven by purchased energy.....	2,638	6,935	2,024	5,611	1,652	4,590	804	3,082	605	2,119	67.9	40.0
Electric motors, total.....	3,167	8,816	2,357	7,240	2,022	6,458	1,141	5,123	808	4,393	100.0	100.0
Driven by purchased energy.....	2,638	6,935	2,024	5,611	1,652	4,590	804	3,082	605	2,119	78.7	60.2
Driven by energy generated in establishments reporting.....	529	1,881	333	1,629	370	1,868	337	2,041	203	2,274	21.3	39.8
Electric generators.....	19	Kilowatts 1,697 Kilowatt-hours	16	Kilowatts 1,160	13	Kilowatts 1,245	(2)	(2)	(2)	(2)		
Electric energy purchased <sup>1</sup> .....		5,450,605		(4)		(4)		(2)		(2)		

<sup>1</sup> Not called for separately on schedule.

<sup>2</sup> Not called for on schedule.

<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

<sup>4</sup> Data incomplete.

TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:															
1929.....	11,359	<i>9,978</i>	10,662	11,168	11,466	11,550	11,780	11,705	11,797	11,978	11,911	11,499	10,820	83.3	
1925.....	10,348	<i>9,346</i>	9,824	10,112	10,216	10,275	10,387	10,515	10,624	10,736	10,868	10,813	10,367	85.2	
1919.....	11,470	<i>10,101</i>	10,471	10,711	10,785	11,065	11,358	11,678	11,942	12,178	12,467	12,463	12,421	81.0	
1914.....	9,911	<i>9,816</i>	10,324	10,427	10,633	10,318	10,174	10,124	9,935	9,845	9,643	9,066	8,597	80.9	
1909.....	11,122	<i>10,283</i>	10,682	11,098	10,815	11,143	11,070	10,957	11,420	11,700	11,638	11,587	11,169	87.9	
California.....	436	<i>396</i>	411	428	430	432	440	457	456	457	452	439	423	86.7	
Illinois.....	1,132	<i>1,019</i>	1,033	1,061	1,067	1,082	1,077	1,125	1,163	1,225	1,321	1,237	1,175	77.1	
Indiana.....	195	<i>166</i>	186	215	202	195	228	189	202	201	183	216	158	69.3	
Maryland.....	55	<i>57</i>	57	57	57	57	62	62	62	62	48	43	37	59.7	
Massachusetts.....	485	<i>367</i>	418	458	584	560	559	497	486	507	478	475	445	65.1	
Michigan.....	505	<i>465</i>	516	539	575	615	615	520	501	461	462	422	373	60.7	
Minnesota.....	57	<i>51</i>	53	65	78	71	68	67	58	48	45	45	41	53.9	
Missouri.....	825	<i>713</i>	766	838	848	853	860	859	879	904	838	798	738	78.9	
New Jersey.....	734	<i>650</i>	691	725	727	719	741	732	773	782	796	789	687	81.7	
New York.....	1,882	<i>1,545</i>	1,737	1,924	2,015	1,983	2,006	1,958	1,960	1,956	1,905	1,816	1,716	76.6	
Ohio.....	401	<i>363</i>	374	385	412	404	415	424	404	412	414	405	396	88.8	
Pennsylvania.....	1,282	<i>1,093</i>	1,121	1,209	1,216	1,182	1,232	1,258	1,251	1,324	1,388	1,431	1,318	76.4	
Texas.....	111	<i>97</i>	97	101	100	123	123	124	128	120	105	110	110	75.8	
Virginia.....	1,167	<i>1,159</i>	1,164	1,159	1,173	1,165	1,173	1,169	1,162	1,170	1,171	1,169	1,166	93.8	
Washington.....	90	<i>59</i>	63	66	65	68	63	106	104	115	112	128	119	46.8	
Wisconsin.....	1,039	<i>932</i>	1,008	1,031	1,025	1,033	1,070	1,087	1,104	1,122	1,120	1,104	1,049	84.8	

## LEATHER GOODS, NOT ELSEWHERE CLASSIFIED

Description of the industry.—This industry embraces a group of establishments manufacturing miscellaneous leather products not treated as belonging to any one of the other leather industries. Among these products are belts (for wear on the person); desk sets; handles, corners, straps, etc., for luggage; embossed leather; check-book covers; dog furnishings; key cases; vanity cases; washers; burnt leather; cigar and cigarette cases; and other miscellaneous leather products.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	392	6,035	\$6,759,742	\$18,013,489	\$35,951,013	\$17,937,524	3,190
1927	413	7,188	8,379,080	21,539,590	43,291,552	21,751,962	3,051
1925	364	6,685	7,395,537	20,473,515	40,511,952	20,038,437	3,223
1923	461	7,882	8,944,278	19,596,861	40,134,415	20,537,554	4,902
1921	482	8,557	10,329,353	23,698,049	47,715,082	24,017,033	( <sup>3</sup> )
1919	503	8,945	9,415,403	30,035,537	52,952,772	22,917,235	3,840
1914	378	7,071	3,603,565	10,632,124	19,333,934	8,701,810	3,233
1909	425	7,681	7,681,200	10,290,430	18,838,281	8,547,842	3,851
1904	423	7,785	3,137,125	9,626,614	17,655,345	8,028,731	3,321
1899	315	6,293	2,271,755	6,191,058	11,787,611	5,596,553	1,644
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	-5.1	-16.0	-19.3	-16.4	-17.0	-17.5	-12.5
1925-1927	13.5	7.5	13.3	5.2	6.9	8.6	13.3
1923-1925	-21.0	-15.2	-17.3	4.5	0.9	-2.4	-34.3
1921-1923	-4.4	-7.9	-13.4	-17.3	-15.9	-14.5	—
1919-1921	-4.2	-4.3	9.7	-21.1	-9.9	4.8	—
1919-1929	-22.1	-32.5	-28.2	-40.0	-32.1	-21.7	-18.8
1909-1919	18.4	16.5	159.9	191.9	181.1	163.1	-0.3
1899-1909	34.9	22.1	59.5	66.2	59.8	52.7	134.2

<sup>1</sup> For 1929, manufacturers' sales (shipment or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>3</sup> Not called for on schedule.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	392	892	6,035	3,196	309	2,887	\$2,582,733	\$6,759,742	\$18,013,489	\$17,820,838	\$186,651	\$35,951,013	\$17,937,524
	1927	413	1,238	7,188	3,651	216	3,435	2,937,367	8,379,080	21,539,590	21,275,463	264,127	43,291,552	21,751,962
	1919	503	1,708	8,945	4,340	939	4,291	4,022,442	9,415,403	30,035,537	29,856,600	178,937	52,952,772	22,917,235
Individual States:														
California	1929	26	36	152	108	1	107	70,306	165,677	432,160	428,422	3,738	817,099	384,689
	1927	24	31	153	94	6	88	62,136	203,508	398,066	394,675	3,391	885,549	487,483
	1919	17	40	158	58	—	58	49,634	137,102	332,866	330,950	1,916	679,927	347,061
Connecticut	1929	6	14	80	35	—	35	22,642	55,054	130,385	128,532	1,833	255,266	124,881
	1927	10	22	186	80	—	80	63,137	169,042	382,019	376,096	5,923	908,989	526,970
	1919	4	1	31	5	—	5	2,000	25,015	54,917	54,406	511	105,993	51,076
Illinois	1929	37	92	539	323	—	323	256,905	619,629	1,782,102	1,764,497	17,605	3,579,585	1,797,483
	1927	47	101	656	682	—	682	314,951	836,223	2,412,339	2,385,517	26,822	4,594,259	2,181,920
	1919	41	122	687	523	175	348	287,367	652,853	2,278,208	2,252,890	25,318	3,921,630	1,643,422
Indiana	1929	4	10	40	33	—	33	20,422	29,593	56,496	53,371	3,125	157,029	100,538
	1927	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	—	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
	1919	6	53	129	134	—	134	187,707	124,012	834,215	828,822	5,393	1,300,832	466,617
Maryland	1929	6	15	61	47	25	22	34,133	46,906	108,780	106,815	1,965	244,928	136,148
	1927	9	16	103	44	25	10	14,855	100,389	298,198	295,711	2,487	284,359	284,161
	1919	4	16	92	28	20	8	29,392	63,848	154,609	153,228	1,351	339,837	185,228

See footnotes at end of table.

## CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919—Continued

[See note at head of this table]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
Individual States—Con. Massachusetts.....	1929	29	49	459	478	50	428	\$134,134	\$423,372	\$913,996	\$886,364	\$27,632	\$2,187,719	\$1,273,723
	1927	38	103	658	530	—	530	206,297	688,256	1,795,293	1,736,179	59,114	3,499,660	1,704,357
	1919	51	95	545	396	108	288	184,210	417,345	1,130,091	1,113,942	16,149	2,062,710	932,619
Michigan.....	1929	8	20	145	50	—	56	80,304	195,116	463,745	459,197	4,548	938,894	475,140
	1927	7	28	140	75	—	75	72,287	153,702	630,782	627,340	3,442	987,541	356,759
	1919	14	41	173	132	42	90	112,323	133,079	829,667	824,188	5,479	1,258,893	429,236
Missouri.....	1929	7	41	345	100	—	100	120,857	290,371	480,273	473,446	6,827	1,971,597	1,491,324
	1927	12	125	573	150	—	150	184,009	498,297	1,334,236	1,325,960	8,276	3,080,206	1,754,970
	1919	8	29	93	419	—	419	53,805	81,934	342,891	337,603	5,288	574,996	232,105
New Jersey.....	1929	18	71	606	355	15	340	232,480	726,347	1,893,332	1,871,556	21,776	3,311,001	1,417,669
	1927	20	57	672	337	15	322	184,009	498,297	1,124,932	1,105,818	10,114	2,508,437	1,383,505
	1919	28	100	930	416	315	101	304,577	913,172	1,668,412	1,641,648	16,764	3,572,545	1,914,133
New York.....	1929	188	372	2,632	928	3	925	1,139,693	3,279,616	9,611,927	9,549,224	62,703	17,680,377	8,068,450
	1927	175	557	2,938	1,014	90	924	1,475,234	4,041,781	10,315,139	10,212,550	102,589	20,907,891	10,592,752
	1919	244	837	4,410	1,025	44	981	2,098,429	5,424,854	17,234,165	17,173,346	60,819	30,322,284	13,088,119
Ohio.....	1929	11	46	229	79	—	79	78,387	224,237	589,412	585,623	3,789	1,246,678	657,266
	1927	16	38	220	111	8	103	60,766	211,261	522,702	518,530	4,172	1,128,184	605,482
	1919	13	40	136	156	8	148	58,824	104,387	611,418	607,059	4,369	992,124	330,706
Oregon.....	1929	4	3	14	27	—	27	6,680	15,900	39,283	38,674	609	72,408	33,125
	1927	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	—	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
	1919	6	4	14	12	—	12	4,875	15,120	37,920	36,327	1,602	68,977	31,048
Pennsylvania.....	1929	21	50	202	224	75	149	106,701	219,016	528,089	516,232	9,857	1,092,357	566,268
	1927	25	75	403	178	30	148	154,439	348,315	1,060,627	1,047,912	12,715	1,940,471	879,844
	1919	33	151	753	359	207	152	300,103	631,137	1,701,949	1,684,446	17,508	3,257,715	1,555,766
Groups of States: Colo., 3 est.; Kans., 1; Minn., 3; Wash., 2; Wis., 6.....	1929	15	53	390	263	100	163	186,133	325,481	621,820	608,001	13,819	1,712,573	1,080,753
	Other States (Ga., 3 est.; Ky., 1; Me., 1; N. C., 2; R. I., 1; Tenn., 1; Tex., 2; Va., 1).....	1929	12	20	141	140	40	100	63,046	143,429	363,689	356,884	6,805	683,502
States not shown separately.....	1927	30	85	456	356	42	314	170,380	454,257	1,265,257	1,249,175	16,082	2,259,016	993,759
	1919	34	179	794	239	20	219	399,206	690,945	2,834,200	2,817,745	16,455	4,494,309	1,600,109

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 283; 1927, 328; 1919, 488. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 7,210; 1927, 8,754; 1919, 11,141.

<sup>2</sup> For 1929, sales (shipments or deliveries) by manufacturers; for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.

<sup>5</sup> Withheld from publication in order to avoid disclosing data for individual establishments.

<sup>6</sup> Colorado, 2 establishments; Georgia, 1; Indiana, 3; Kansas, 1; Kentucky, 1; Louisiana, 1; Maine, 1; Minnesota, 4; New Hampshire, 1; North Carolina, 1; Oklahoma, 1; Oregon, 3; Rhode Island, 2; Texas, 1; Virginia, 1; Washington, 2; West Virginia, 1; Wisconsin, 3.

<sup>7</sup> Colorado, 2 establishments; Georgia, 4; Louisiana, 1; Minnesota, 11; New Hampshire, 2; Rhode Island, 4; Texas, 1; Washington, 3; Wisconsin, 6.

TABLE 3.—PRODUCTS, BY KIND AND VALUE, BY STATES: 1929

[The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Statistics are given for each State which can be shown separately without disclosing data for individual establishments]

KIND AND STATE	Value	KIND AND STATE	Value
1. Miscellaneous-leather-products industry, all products, total value.....	\$35,951,013	Miscellaneous leather products, all industries—Continued. Desk sets, total.....	\$1,200,863
2. Miscellaneous leather products.....	32,520,062	New York.....	569,170
3. Receipts for contract work.....	670,251	Other States.....	601,763
4. Receipts for custom work and repairing.....	193,573	Handles, corners, straps, etc., for luggage.....	4,030,555
5. Other products (not normally belonging to the industry).....	2,567,127	Embossed leather.....	1,673,580
6. Miscellaneous leather products made as secondary products in other industries.....	10,493,151	Check-book covers.....	1,388,127
Miscellaneous leather products, all industries, aggregate value (sum of 2 and 6).....	43,013,213	Dog furnishings.....	955,497
Belts (for wear on the person), total.....	14,582,261	Key cases.....	914,739
Illinois.....	1,298,515	Vanity cases.....	723,699
New York.....	10,338,526	Washers.....	557,794
Other States.....	2,945,220	Burnt leather.....	357,218
		Cigar and cigarette cases.....	315,722
		Other leather products <sup>1</sup> .....	16,347,078

<sup>1</sup> Leather trimmings, razor straps, police goods, textile leathers, wrist bands, souvenirs, picture frames, novelties, etc.

LEATHER GOODS, NOT ELSEWHERE CLASSIFIED

TABLE 4.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate	1,621	Horse-power 3,196	1,681	Horse-power 3,651	1,235	Horse-power 3,223	1,184	Horse-power 3,840	626	Horse-power 3,233	100.0	100.0
Prime movers, total	17	309	13	216	15	265	39	939	44	1,850	9.7	24.5
Steam engines	15	294	5	165	7	210	17	696	21	1,603	9.2	18.1
Internal-combustion engines	2	15	7	49	8	55	17	217	22	244	0.5	5.7
Water wheels and water turbines			1	2			5	26	1	3		0.7
Electric motors driven by purchased energy	1,604	2,887	1,668	3,435	1,220	2,958	1,145	2,901	582	1,383	90.3	75.5
Electric motors, total	1,604	2,887	1,705	3,529	1,253	3,004	1,191	3,081	657	1,722	100.0	100.0
Driven by purchased energy	1,604	2,887	1,668	3,435	1,220	2,958	1,145	2,901	582	1,383	100.0	94.2
Driven by energy generated in establishments reporting			37	94	33	46	46	180	75	339		5.8
Electric generators	1	Kilowatts 86 Kilowatt-hours	12	Kilowatts 125	2	Kilowatts 75	(1)	(1)	(1)	(1)		
Electric energy purchased <sup>1</sup>		2,712,236		(2)		(2)		(1)		(1)		

<sup>1</sup> Not called for on schedule.  
<sup>2</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>3</sup> Data incomplete.

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimums of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
United States:														
1929	6,035	<i>5,496</i>	5,748	6,014	6,110	6,054	5,935	6,046	6,044	6,234	6,444	6,363	5,928	85.3
1925	6,685	<i>6,167</i>	6,469	6,392	6,309	6,266	6,469	6,573	6,743	7,117	7,469	7,481	6,781	82.8
1919	8,945	<i>8,019</i>	8,082	8,097	8,314	8,458	8,575	9,012	9,240	9,328	9,973	10,153	10,089	79.0
1914	7,071	<i>6,077</i>	6,820	6,881	6,860	6,807	6,939	6,988	7,115	7,553	7,854	7,417	6,941	85.0
1909	7,681	<i>7,129</i>	7,242	7,293	7,259	7,248	7,252	7,418	7,789	8,139	8,489	8,623	8,264	82.7
California	152	<i>135</i>	139	147	146	159	168	160	151	152	160	161	148	80.4
Connecticut	80	<i>81</i>	79	78	80	82	88	78	77	81	81	77	80	92.8
Illinois	539	<i>499</i>	507	509	519	516	529	552	548	555	598	589	545	83.4
Indiana	40	<i>42</i>	42	43	45	41	38	38	40	34	36	39	39	75.6
Maryland	61	<i>49</i>	49	51	53	64	68	67	68	69	69	65	60	71.0
Massachusetts	450	<i>430</i>	442	462	460	468	460	468	450	445	479	474	465	89.8
Michigan	145	<i>145</i>	156	158	181	155	181	158	159	144	123	115	113	70.2
Missouri	345	<i>312</i>	329	329	331	327	314	299	322	348	404	427	395	70.0
New Jersey	606	<i>582</i>	598	591	609	596	606	618	633	615	615	606	600	91.9
New York	2,632	<i>2,381</i>	2,514	2,731	2,762	2,658	2,490	2,576	2,547	2,787	2,862	2,787	2,491	83.2
Ohio	229	<i>211</i>	205	212	214	221	229	227	252	253	256	240	219	80.5
Oregon	14	<i>15</i>	14	14	15	14	13	14	14	14	15	15	14	80.7
Pennsylvania	202	<i>192</i>	199	202	199	203	204	196	195	200	207	214	213	89.7

## Group 10.—STONE, CLAY, AND GLASS PRODUCTS

### THE GROUP AS A WHOLE

The industries in Group 10 derive their principal materials from the earth in the form of stone, clay, and sand, and the group is constituted on the basis of this similarity in regard to source of materials rather than upon any similarity in the character or uses of the finished products.

Certain of the industries in this group as formerly constituted—namely, "Grindstones, pulpstones, and millstones," "Hones, whetstones, and similar products," and "Minerals and earths, ground or otherwise treated"—were closely related to quarrying, and many of the establishments assigned to them were engaged primarily in quarrying and only incidentally in manufacturing. At the census for 1929, however, such establishments were excluded from the manufactures-census classification and assigned to the appropriate quarrying industries, which were canvassed at the Decennial Census of Mines and Quarries. As a result the production of grindstones, pulpstones, and millstones has been abandoned as a manufacturing industry and the present manufactures-census classifications for the other two industries in question have been restricted to those establishments which purchase their quarried materials. The figures for these industries for 1927 and prior census years are not, therefore, comparable with those for 1929.

In several of the other industries in this group—namely, "Cement," "Clay products," "Lime," "Marble, granite, slate, and other stone products," and "Pottery"—both mining or quarrying operations and manufacturing are in some cases carried on by the same establishment. As such establishments usually keep only single sets of books, and as the same employees are sometimes engaged in both lines of work, it is impossible to separate the data for mining or quarrying from those for manufacturing.

This group has been divided into three subgroups, namely, (1) industries in which stone is the principal material; (2) those in which clay is the principal material; and (3) the glass industry and those industries which use glass as their principal material. The classification of a few industries is necessarily rather arbitrary. For example: Cement is one of the materials used in the manufacture of concrete products; and plaster as well as stone and clay are used in the manufacture of statuary and art goods.

The following table presents summary statistics for the group as a whole, by subgroups and industries; and detailed reports for the individual industries follow in order. All these reports have been published separately in pamphlet form.

#### SUMMARY FOR GROUP 10.—STONE, CLAY, AND GLASS PRODUCTS: 1914 TO 1929

Data for establishments with products under \$5,000 in value included for 1919 and 1914 but not for subsequent year. See General Explanations—Establishments Covered—Size

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products	Value added by manufacture <sup>1</sup>	Horsepower
Aggregate for the group.....	1929	8,514	328,417	\$432,817,393	\$526,339,979	\$1,561,414,590	\$1,035,074,611	2,854,402
	1927	8,673	350,017	464,272,991	594,774,814	1,612,548,765	1,017,774,461	2,709,131
	1925	8,478	353,036	467,012,428	603,426,910	1,640,651,985	1,037,225,075	2,348,157
	1923	8,317	351,692	453,567,361	573,472,896	1,563,120,627	989,648,241	1,936,054
	1921	8,347	252,990	307,064,599	428,258,661	1,033,091,070	604,832,409	( <sup>2</sup> )
	1919	12,599	302,810	332,725,753	422,611,208	1,111,746,070	689,134,862	1,584,917
	1914	14,790	335,824	206,084,765	240,818,101	618,699,787	377,881,686	1,499,976
Industries using stone as a material, total.....	1929	5,146	116,411	171,789,939	268,245,775	751,210,410	482,964,635	1,856,823
	1927	5,156	126,569	187,878,839	303,631,823	787,843,224	484,211,401	1,672,639
	1925	4,852	123,099	178,644,360	300,793,054	779,030,905	478,237,851	1,395,930
	1923	4,621	118,560	167,466,066	273,368,200	697,460,550	424,092,350	1,071,210
	1921	4,752	84,565	109,833,103	212,557,002	464,614,448	252,057,440	( <sup>3</sup> )
	1919	7,969	93,851	108,521,394	195,406,952	457,758,991	292,352,039	706,159
	1914	9,530	115,642	74,636,913	119,163,342	277,561,345	168,398,003	808,040
Asbestos products, other than steam packing or pipe and boiler covering.....	1929	67	8,092	10,776,712	25,408,002	56,164,036	30,750,034	40,458
	1927	62	6,337	8,375,502	21,517,740	44,156,388	22,698,648	20,625
	1925	49	6,129	7,691,801	19,225,002	36,273,797	17,045,795	22,918
	1923	56	6,078	6,640,022	20,025,265	36,820,444	16,794,179	26,855
	1921	40	2,020	1,947,608	6,078,000	13,030,440	6,094,440	( <sup>4</sup> )
	1919	46	3,654	3,731,974	12,947,702	23,977,557	11,020,855	9,657
	1914	32	962	483,736	1,360,185	2,813,378	1,453,393	2,861

See footnotes at end of summary.



## CENSUS OF MANUFACTURERS: 1929

## SUMMARY FOR GROUP 10.—STONE, CLAY, AND GLASS PRODUCTS: 1914 TO 1929—Continued

[See note at head of this table]

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products	Value added by manufacture <sup>1</sup>	Horsepower
<b>Industries using clay as a material—Continued</b>								
Graphite, ground and refined .....	1929	11	494	\$627,235	\$1,437,860	\$3,759,969	\$2,302,100	3,166
	1927	13	289	340,510	1,319,161	2,931,584	1,612,423	3,011
	1925	11	228	278,224	1,328,188	2,569,487	1,241,299	2,927
	1923	8	244	304,437	1,082,018	2,184,609	1,102,601	2,700
	1921	11	152	185,468	703,441	1,456,804	763,423	(?)
	1919	24	497	434,317	1,092,684	2,299,587	1,149,903	7,445
	1914	11	250	181,125	723,190	1,724,330	1,001,140	2,602
Minerals and earths, ground or otherwise treated <sup>2</sup> .....	1929	88	1,679	2,187,923	8,937,883	17,409,056	8,471,173	39,117
Pottery, including porcelain ware .....	1929	313	35,409	43,655,980	27,007,364	110,622,453	83,615,989	61,868
	1927	310	36,007	45,149,818	33,580,795	110,597,338	77,010,543	64,879
	1925	309	36,530	46,768,867	38,925,756	111,078,028	77,152,272	50,141
	1923	304	36,824	46,766,308	35,590,835	114,392,033	80,792,148	44,532
	1921	271	28,458	35,355,509	25,227,227	84,217,427	58,900,200	(?)
	1919	340	27,934	29,820,278	20,794,076	74,919,188	54,125,110	29,040
	1914	350	26,705	16,660,340	12,031,556	36,942,606	24,911,050	22,387
Statuary and art goods, factory product .....	1929	171	2,112	4,235,907	2,044,955	10,045,169	8,000,204	1,539
	1927	136	2,028	4,403,742	2,414,919	10,187,247	7,772,328	1,137
	1925	137	2,033	4,188,087	2,078,478	9,329,892	7,251,414	1,340
	1923	150	1,807	3,243,690	1,897,528	7,550,015	5,652,487	887
	1921	138	1,634	2,741,429	1,715,217	6,666,904	4,951,747	(?)
	1919	195	1,466	1,716,067	1,378,540	5,019,521	3,640,981	682
	1914	190	1,988	1,582,745	842,289	3,909,569	3,067,280	781
<b>Glass and manufactures of glass, total .....</b>	1929	995	78,338	102,551,638	135,271,625	368,934,303	233,662,678	356,150
	1927	919	74,598	93,928,099	134,878,640	336,146,854	201,298,208	320,244
	1925	938	78,384	99,356,297	146,696,602	358,850,976	212,154,314	281,476
	1923	962	81,956	100,819,195	145,070,297	367,847,941	222,777,044	250,982
	1921	971	61,798	77,031,633	106,926,445	262,420,330	145,493,885	(?)
	1919	1,173	86,599	96,500,596	117,636,735	311,158,176	193,521,441	216,613
	1914	1,165	85,753	55,294,000	59,173,083	149,720,289	90,547,266	172,772
Glass .....	1929	263	67,527	87,795,111	103,293,943	303,818,560	200,524,617	341,979
	1927	269	65,825	81,352,734	109,911,464	282,394,330	172,462,866	318,298
	1925	310	69,371	86,735,571	113,652,436	295,959,424	182,306,988	271,639
	1923	333	73,335	89,897,948	113,170,262	309,353,411	196,133,149	240,528
	1921	329	54,748	68,224,243	86,036,406	213,471,309	127,434,903	(?)
	1919	371	77,520	87,524,625	90,786,124	261,884,080	171,103,956	207,338
	1914	348	74,502	48,655,819	46,016,504	123,085,019	77,068,515	162,934
Glass products (except mirrors) made from purchased glass .....	1929	431	6,029	7,814,551	16,318,683	33,273,003	16,954,370	5,757
	1927	400	4,465	6,214,552	8,778,563	22,327,681	13,549,013	3,316
	1925	410	4,860	6,516,711	13,330,933	27,943,048	14,612,115	3,531
	1923	434	5,157	6,042,204	11,808,836	25,026,657	13,217,721	4,732
	1921	492	4,682	5,374,401	10,807,878	22,209,476	11,401,598	(?)
	1919	616	6,450	6,154,831	14,357,878	28,443,321	14,085,443	5,042
	1914	635	8,007	4,670,370	7,142,009	16,445,839	9,303,230	5,358
Mirrors, framed and unframed .....	1929	304	4,782	6,941,976	15,659,049	31,842,740	16,183,691	8,414
	1927	250	4,308	6,360,813	16,188,614	31,424,043	15,236,320	7,630
	1925	218	4,153	6,104,015	19,713,293	34,948,504	15,235,211	6,306
	1923	195	3,464	4,879,043	20,091,199	33,467,073	13,376,774	5,722
	1921	180	2,365	3,232,084	10,082,161	16,739,545	6,657,384	(?)
	1919	186	2,599	2,819,140	12,498,733	20,830,775	8,332,042	4,233
	1914	182	3,184	1,067,811	6,013,670	10,189,431	4,175,461	4,480

<sup>1</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>2</sup> Not called for on schedule.

<sup>3</sup> Not strictly comparable with figures for other years because cost of containers (nonreturnable) sold with products was excluded for 1923 but is included for other years.

<sup>4</sup> Not treated as a manufacturing industry at the census for 1929. See second paragraph of text, p. 824.

<sup>5</sup> No comparable figures available for earlier years because of a change in classification.

<sup>6</sup> For 1925 and subsequent years this industry classification has covered the manufacture of graphite crucibles only. The figures for 1919 have been adjusted for comparison with those years. No comparable data are available for 1923, 1921, or 1914.

# ASBESTOS PRODUCTS; STEAM AND OTHER PACKING, PIPE AND BOILER COVERING, AND GASKETS

(THIS REPORT COVERS TWO INDUSTRIES IN DIFFERENT GROUPS; NAMELY, "ASBESTOS PRODUCTS OTHER THAN STEAM PACKING OR PIPE AND BOILER COVERING," GROUP 10, AND "STEAM AND OTHER PACKING, PIPE AND BOILER COVERING, AND GASKETS, NOT ELSEWHERE CLASSIFIED," GROUP 16)

Description of the industries.—This report covers two closely related and overlapping industries, namely (1) "Asbestos products, other than steam packing and pipe and boiler covering" and (2) "Steam and other packing, pipe and boiler covering, and gaskets, not elsewhere classified." The products of the first industry comprise asbestos textiles, asbestos building materials, and other commodities composed wholly or chiefly of asbestos, not including steam and other packing, pipe and boiler covering, and gaskets. Establishments classified in the second industry are engaged primarily in the manufacture of packing for steam, water, and other pipe joints, and for engines, air compressors, etc.; insulating materials for covering boilers and pipes; and gaskets made of fiber, paper, or any combination of materials. Manufacturers whose principal products are (a) cork gaskets, or (b) rubber gaskets, or (c) leather gaskets, are classified in (a) the "Cork products" industry, or (b) the "Rubber goods other than tires, inner tubes, and boots and shoes" industry, or (c) the "Leather goods, not elsewhere classified" industry,

as the case may be; but an establishment which makes two or more classes of gaskets is assigned to the "Steam and other packing, pipe and boiler covering, and gaskets, not elsewhere classified" industry. The total value of all gaskets manufactured, so far as separately reported to the Bureau of the Census, is, however, given in Tables 3 and 4.

Detailed statistics of products.—Because of the similarity of materials used in the two industries, the commodities which are the primary products of each are made to a considerable extent as secondary products in the other, and for this reason the detailed production statistics for both industries are presented in combination in Tables 3 and 4. At censuses prior to that for 1929 the steam-packing industry was canvassed by means of the "general schedule," which did not call specifically for data on the quantities and values of the several classes of products made in this industry, and for this reason it is impossible to give comparative figures for 1927 or for earlier years in Tables 3 and 4.

TABLE 1.—SUMMARY FOR THE INDUSTRIES, IN COMBINATION AND SEPARATELY, FOR THE UNITED STATES: 1899 TO 1929

(Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size)

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
<b>ASBESTOS PRODUCTS; STEAM AND OTHER PACKING, PIPE AND BOILER COVERING, AND GASKETS</b>							
1929	238	15,358	\$20,437,126	\$47,004,491	\$101,597,171	\$54,592,680	71,339
1927	221	12,283	16,280,105	41,311,945	87,200,889	45,888,944	56,335
1925	221	12,215	15,763,990	39,596,855	80,144,936	40,548,071	45,497
1923	198	11,142	13,071,768	35,875,462	69,811,681	33,936,219	44,526
1921	197	6,903	7,276,481	22,059,691	42,142,897	20,083,206	( <sup>3</sup> )
1919	215	9,801	10,535,249	35,672,263	64,502,336	28,830,073	26,412
1914	181	5,175	3,008,230	9,535,815	17,026,173	7,490,358	20,026
Percent of increase or decrease (—)							
1927-1929	7.7	25.0	25.5	13.8	16.5	19.0	26.6
1925-1927		0.6	3.3	4.3	8.8	13.2	16.2
1923-1925	11.6	9.6	20.6	10.4	14.8	19.5	8.9
1921-1923	0.5	61.4	79.6	62.6	65.7	69.0	
1919-1921	-8.4	-29.6	-32.8	-38.2	-34.7	-30.8	
1919-1929	10.7	56.7	88.6	31.8	57.5	89.4	95.9
<b>ASBESTOS PRODUCTS, OTHER THAN STEAM PACKING OR PIPE AND BOILER COVERING</b>							
1929	67	8,092	10,776,712	25,408,002	56,184,036	30,756,034	40,458
1927	62	6,337	8,375,502	21,517,740	44,156,388	22,638,648	26,525
1925	49	6,129	7,091,801	19,225,002	36,273,797	17,048,795	22,918
1923	56	6,078	6,640,022	20,026,265	36,820,444	16,794,179	26,855
1921	40	2,026	1,947,098	6,076,000	13,080,440	6,954,440	( <sup>3</sup> )
1919	46	3,654	3,731,974	12,947,702	23,977,557	11,029,855	9,657
1914	32	962	483,786	1,360,185	2,813,578	1,463,393	2,861
Percent of increase or decrease (—)							
1927-1929	( <sup>4</sup> )	27.7	28.7	18.1	27.2	35.9	52.6
1925-1927	( <sup>4</sup> )	3.4	8.9	11.9	21.7	32.8	15.7
1923-1925	( <sup>4</sup> )	0.8	15.8	-4.0	-1.5	1.5	-14.7
1921-1923	( <sup>4</sup> )	200.0	240.9	229.6	182.6	141.5	
1919-1921	( <sup>4</sup> )	-44.6	-47.8	-53.1	-45.7	-39.9	
1919-1929	( <sup>4</sup> )	121.5	188.8	96.2	134.2	178.8	318.9

See footnotes at end of table.



CENSUS OF MANUFACTURES: 1929

TABLE 1.—SUMMARY FOR THE INDUSTRIES, IN COMBINATION AND SEPARATELY, FOR THE UNITED STATES: 1899 TO 1929—Continued

[See note at head of this table]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
<b>STEAM AND OTHER PACKING, PIPE AND BOILER COVERING, AND GASKETS, NOT ELSEWHERE CLASSIFIED</b>							
1929	171	7,266	\$9,660,414	\$21,596,489	\$45,433,135	\$23,836,046	30,881
1927	159	6,946	7,904,603	19,794,205	43,044,501	23,250,296	29,810
1925	172	6,056	8,072,189	20,371,863	43,871,139	23,499,270	25,679
1923	142	5,064	6,431,746	15,849,197	32,991,237	17,142,040	17,671
1921	157	4,877	5,328,783	15,983,691	29,112,457	13,128,766	(3) 17,671
1919	169	6,147	7,103,275	22,724,561	40,524,779	17,860,218	29,765
1914	149	4,213	2,524,503	8,175,630	14,212,595	6,030,965	17,165
1909	153	3,648	1,811,421	6,650,293	12,159,989	5,509,696	10,877
1904	106	2,734	1,273,144	3,896,317	8,951,705	5,055,388	8,675
1899	97	1,147	525,332	1,540,398	3,493,710	1,947,312	4,282
Per cent of increase or decrease (—)							
1927-1929	7.5	22.2	22.2	9.1	5.5	2.5	3.6
1925-1927	-7.6	-2.3	-2.1	-2.8	-1.9	-1.1	16.5
1923-1925	21.1	20.2	25.5	28.5	33.0	37.1	44.8
1921-1923	-9.6	3.8	20.7	-0.8	13.3	30.6	-----
1919-1921	-7.1	-20.7	-25.0	-29.7	-28.2	-26.2	-----
1919-1929	1.2	18.2	36.0	-5.0	12.1	33.9	15.4
1909-1919	10.5	68.5	292.3	241.7	233.3	223.1	146.0
1899-1909	(4)	218.0	244.8	330.1	248.1	182.9	155.2

<sup>1</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Not called for on schedule.

<sup>4</sup> Per cent not computed where base is less than 100.

TABLE 2.—GENERAL STATISTICS FOR EACH INDUSTRY, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Cen-sus-year	Num-ber of estab-lish-ments	Sala-ried offi-cers and em-ploy-ees	Wage earners (aver-age for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>1</sup>	Value added by manufac-ture <sup>2</sup>
					Total	Prime movers	Motors run by pur-chased energy			Total	Materials and con-tainers	Fuel and purchased energy		
<b>ASBESTOS PRODUCTS, OTHER THAN STEAM PACKING OR PIPE AND BOILER COVERING</b>														
United States														
	1929	67	1,126	8,092	40,458	11,945	23,513	\$3,119,663	\$10,776,712	\$25,408,092	\$23,745,592	\$1,662,410	\$56,164,036	\$30,756,024
	1927	62	757	6,837	26,525	9,555	16,970	2,081,209	8,375,502	21,517,740	20,550,008	967,132	44,150,388	22,638,648
	1919	46	530	3,654	9,657	4,212	6,445	1,599,733	3,731,974	12,647,702	12,570,147	377,555	23,977,557	11,029,555
Individual States:														
Illinois														
	1929	7	89	980	1,450	300	1,150	269,958	1,365,806	4,250,823	3,819,019	431,804	8,025,390	3,774,667
	1927	7	87	415	2,098	-----	2,098	231,134	684,821	1,567,254	1,504,962	52,292	3,237,967	1,680,713
	1919	6	30	202	326	-----	326	46,398	232,036	512,517	495,959	16,558	612,141	399,624
New Jersey														
	1929	7	188	1,920	10,856	7,800	3,056	743,661	2,757,629	5,883,239	5,373,495	509,744	12,442,021	6,558,782
	1927	8	178	1,929	7,698	6,000	1,698	464,175	2,814,675	7,439,847	7,037,844	402,003	13,261,190	5,821,343
	1919	6	40	118	271	140	131	84,561	212,130	330,135	316,950	13,185	840,785	519,650
New York														
	1929	5	26	82	902	100	802	77,126	109,592	189,424	173,022	16,402	542,275	352,551
	1927	4	12	53	225	35	190	22,650	69,551	149,054	139,175	9,870	350,742	207,688
	1919	5	11	21	27	-----	27	19,613	20,203	71,098	70,508	500	156,929	85,831
Ohio														
	1929	7	31	230	1,234	10	1,224	107,010	316,231	637,317	616,619	20,668	1,819,871	1,182,564
	1927	0	34	238	1,330	-----	1,330	165,144	365,981	711,335	691,515	20,820	1,871,528	1,159,063
Pennsylvania														
	1929	9	164	1,136	7,139	1,010	6,129	395,543	1,550,866	2,855,675	2,707,134	148,541	7,000,128	4,240,453
	1927	8	126	1,184	3,738	1,010	2,728	348,814	1,588,207	3,008,142	2,830,448	127,694	8,025,685	5,017,543
	1919	9	123	1,150	2,771	1,490	1,281	435,467	1,343,567	4,592,032	4,499,627	92,405	7,819,548	3,227,516
Groups of States:														
Ind., 3 est.; Mo., 4														
	1929	7	95	431	3,333	475	2,863	229,364	519,048	1,349,655	1,291,470	58,215	3,763,673	2,413,968
Mass., 4 est.; N. H., 2														
	1929	6	131	917	4,313	1,035	3,278	379,111	1,172,431	2,127,699	1,974,837	152,862	5,130,902	3,003,263
N. C., 4 est.; S. C., 1														
	1929	5	63	784	3,986	600	3,386	107,355	610,764	2,492,743	2,421,937	70,806	4,511,657	2,018,914
Other States (Calif., 6 est.; Conn., 4; La., 2; Mich., 1; Wash., 1)														
	1929	14	349	1,642	7,240	615	6,625	810,535	2,373,845	5,621,397	5,308,059	253,338	12,832,059	7,210,662
States not shown separately														
	1927	29	320	2,513	11,436	2,510	8,926	849,292	2,932,267	8,051,008	8,296,664	354,944	17,403,270	8,751,668
	1919	20	321	2,163	6,262	2,582	3,680	1,013,094	1,924,098	7,441,920	7,187,013	254,907	14,239,154	6,797,234

See footnotes at end of table.

ASBESTOS PRODUCTS, STEAM PACKING, ETC.

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TABLE 2.—GENERAL STATISTICS FOR EACH INDUSTRY, BY STATES: 1929, 1927, AND 1919—Continued

[See note at head of this table]

STATE	Census-year	Number of establishments	Salaried officers and employees	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
STEAM AND OTHER PACKING, PIPE AND BOILER COVERING, AND GASKETS, NOT ELSEWHERE CLASSIFIED														
United States.....	1929	171	41,392	7,266	30,881	14,349	16,532	\$4,132,547	\$9,660,414	\$21,596,480	\$20,134,583	\$1,401,906	\$45,433,135	\$23,836,046
	1927	159	41,533	6,946	29,810	17,220	12,590	4,237,064	7,904,603	19,794,205	18,441,143	1,353,062	43,044,501	23,256,296
	1919	169	41,542	6,147	26,755	21,009	7,574	3,262,877	7,103,275	22,724,561	21,331,990	1,392,565	40,524,779	17,800,218
Individual States:														
California.....	1929	13	55	218	1,206	-----	1,206	130,034	307,914	609,683	551,855	57,828	1,443,845	889,105
	1927	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
	1919	8	67	171	1,385	600	695	100,529	197,606	461,264	384,969	74,295	916,662	454,398
Colorado.....	1929	3	3	9	26	-----	26	3,960	12,438	22,311	21,335	976	80,461	17,150
	1927	4	2	9	40	10	30	2,250	9,972	27,883	27,004	879	62,921	25,038
	1919	3	13	11	47	18	29	14,221	6,896	40,243	39,490	753	74,297	34,054
Illinois.....	1929	22	325	1,200	1,061	60	1,601	989,387	1,447,187	3,471,387	3,390,713	74,674	7,466,498	3,095,111
	1927	20	321	1,458	7,633	6,454	1,179	817,415	2,097,277	6,261,002	5,947,132	313,870	11,673,474	5,412,472
	1919	19	167	385	567	100	407	265,011	393,195	1,031,131	1,008,753	22,378	2,358,471	1,327,340
Massachusetts.....	1929	10	67	151	357	15	342	172,108	196,526	454,614	433,785	20,829	1,134,365	679,751
	1927	11	45	152	322	40	282	78,926	162,092	437,010	419,961	17,049	882,645	445,635
	1919	9	47	95	178	55	123	110,904	107,558	362,511	346,969	15,512	686,389	323,878
Michigan.....	1929	13	112	912	1,062	-----	1,062	493,426	1,054,198	3,786,205	3,735,930	50,335	7,781,245	3,994,980
	1927	10	84	469	848	-----	848	327,474	632,109	2,004,488	1,972,662	31,826	3,701,337	1,690,849
	1919	6	50	275	292	-----	292	95,106	283,930	664,223	657,135	7,088	1,115,495	451,272
New Jersey.....	1929	14	94	387	1,369	900	469	256,174	641,016	1,426,985	1,366,316	60,669	3,191,378	1,764,393
	1927	15	35	393	1,264	930	334	242,989	572,171	1,654,853	1,616,860	37,993	3,231,595	1,670,742
	1919	17	203	1,612	7,369	7,221	148	493,827	2,110,988	6,525,047	6,133,365	391,682	10,291,324	3,760,277
New York.....	1929	36	148	807	3,869	1,745	2,124	607,466	1,115,153	2,551,451	2,443,248	108,203	6,068,457	3,517,066
	1927	35	415	693	2,169	765	1,404	1,155,441	883,203	2,852,186	2,770,142	82,043	6,972,771	4,120,586
	1919	33	190	770	1,449	900	439	535,934	822,064	4,250,913	4,180,050	70,863	6,650,404	2,498,491
Ohio.....	1929	11	75	462	4,644	95	4,549	177,509	789,389	2,209,972	2,085,328	124,644	4,008,161	1,798,189
	1927	6	16	73	163	70	93	41,554	96,886	166,512	162,803	4,269	362,245	195,733
	1919	8	23	69	87	29	58	49,559	68,731	166,928	163,964	2,964	365,942	198,114
Pennsylvania.....	1929	26	301	1,624	13,245	10,384	2,861	848,600	2,247,042	4,547,689	3,966,005	581,684	8,616,823	4,069,134
	1927	21	238	1,493	11,881	8,146	3,735	755,860	1,914,407	3,777,162	3,178,428	598,734	9,063,244	5,216,082
	1919	33	468	1,775	11,496	10,559	937	1,081,298	1,955,064	5,556,691	4,958,893	597,798	11,358,344	6,801,653
Washington.....	1929	3	6	18	38	-----	38	14,840	26,531	51,276	48,519	2,757	116,709	65,433
	1927	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
	1919	4	24	37	35	2	33	37,834	92,555	166,438	154,934	1,504	504,435	247,997
Groups of States:														
Ala., 2 est.; Ga., 1.....	1929	3	9	11	30	-----	30	29,980	14,187	104,514	102,753	1,761	180,081	75,567
Ind., 3 est.; Ky., 1.....	1929	4	67	747	2,228	1,140	1,088	153,276	875,927	869,825	537,783	332,042	2,297,615	1,427,790
Minn., 1 est.; Wis., 3.....	1929	4	10	40	153	10	143	24,565	41,609	154,365	143,874	10,491	269,967	115,602
Other States (Conn., 1 est.; La., 1; Md., 1; Mo., 2; Nebr., 1; Oreg., 2; R. I., 1).....	1929	9	120	680	903	-----	903	230,122	591,237	1,336,152	1,301,139	35,013	2,813,527	1,477,375
States not shown separately.....	1927	37	327	1,206	5,490	805	4,685	815,155	1,535,886	2,613,110	2,346,651	266,459	7,074,260	4,461,159
	1919	29	240	957	3,858	1,315	2,543	478,144	1,064,628	3,509,172	3,301,444	207,728	6,195,916	2,686,744

<sup>1</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Not including proprietors and firm members, as follows: For 1929, 9; 1927, 9; 1919, 11. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 9,237; 1927, 7,103; 1919, 4,195.

<sup>4</sup> California, 4 establishments; Connecticut, 3; Indiana, 1; Louisiana, 2; Maryland, 1; Massachusetts, 5; Michigan, 2; Minnesota, 1; Missouri, 2; New Hampshire, 2; North Carolina, 3; Oregon, 1; South Carolina, 1; Tennessee, 1.

<sup>5</sup> California, 1 establishment; Connecticut, 2; Indiana, 2; Maryland, 1; Massachusetts, 3; Minnesota, 1; Missouri, 1; New Hampshire, 4; Ohio, 2; South Carolina, 2; Wyoming, 1.

<sup>6</sup> Not including proprietors and firm members, as follows: For 1929, 55; 1927, 89; 1919, 72. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 8,713; 1927, 7,568; 1919, 7,761.

<sup>7</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.

<sup>8</sup> Withheld from publication in order to avoid disclosing data for individual establishments.

<sup>9</sup> Alabama, 2 establishments; California, 12; Georgia, 1; Indiana, 5; Kentucky, 1; Louisiana, 1; Maryland, 1; Minnesota, 2; Missouri, 2; Montana, 1; Nebraska, 1; Oregon, 1; Texas, 1; Washington, 2; Wisconsin, 4.

<sup>10</sup> Alabama, 3 establishments; Connecticut, 2; Georgia, 1; Indiana, 3; Kentucky, 2; Louisiana, 1; Maine, 1; Minnesota, 5; Missouri, 1; Nebraska, 2; North Carolina, 1; Oregon, 1; Utah, 1; Wisconsin, 5.

CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1929

[The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products]

KIND	Unit	Quantity	Value	KIND	Unit	Quantity	Value
1. "Asbestos products, other than steam packing or pipe and boiler covering" and "Steam and other packing, pipe and boiler covering, and gaskets, not elsewhere classified" industries, all products, total value.....			\$101,507,171	Asbestos products, steam and other packing, etc.—Continued.			
2. Asbestos products, steam and other packing, pipe and boiler covering, and gaskets.....			96,920,700	Asbestos textiles—Continued.			
3. Other products (not normally belonging to the industries).....			4,676,471	Gaskets.....	Pounds...	3,012,335	\$1,726,504
4. Asbestos products, steam and other packing, pipe and boiler covering, and gaskets, made as secondary products in other industries, value.....			4,955,748	Other asbestos textiles.....			1,088,466
Asbestos products, steam and other packing, pipe and boiler covering, and gaskets, all industries:				Asbestos building materials—			
Aggregate value (sum of 2 and 4).....			101,876,448	Total value.....			10,423,618
Asbestos textiles—				Asbestos shingles.....	Squares...	894,164	5,277,308
Total value.....			36,161,993	Asbestos lumber (plain).....	Square feet	16,770,928	1,638,687
Brake linings (not molded).....	Feet.....	110,246,479	16,447,438	Asbestos lumber (corrugated).....	Square feet	18,624,266	1,455,739
Clutch facings.....	Pieces.....	38,096,113	3,910,727	Other asbestos building materials <sup>1</sup> .....			2,051,884
Yarn.....	Pounds.....	15,378,407	5,173,568	Asbestos products other than textiles or building materials—			
Cloth.....	Pounds.....	6,666,889	2,767,049	Total value.....			22,446,503
Tape, listings, and tubular lagging.....	Pounds.....	2,225,852	1,202,231	Pipe and boiler covering, air-cell asbestos.....	Lineal feet.	67,331,323	4,657,666
Packing, compressed sheet.....	Pounds.....	3,430,625	787,116	Pipe and boiler covering, asbestos other than air-cell.....	Lineal feet.	27,086,503	2,516,009
Packing, fabric, flat.....	Pounds.....	1,676,301	692,369	Pipe and boiler covering, 85 per cent magnesia.....	Lineal feet.	23,959,209	3,045,324
Packing, woven and molded to special sections (with or without other materials).....	Pounds.....	3,516,455	2,366,225	Molded asbestos brake lining.....	Feet.....	22,410,872	2,534,616
				Molded 85 per cent magnesia blocks.....	Board feet.	21,479,103	2,457,337
				Millboard.....	Pounds.....	7,280,221	345,375
				Asbestos insulating cements.....	Pounds.....	68,472,356	917,848
				85 per cent magnesia cement.....	Pounds.....	2,725,244	100,118
				Table mats and protectors.....	Pounds.....	1,615,631	786,222
				Other asbestos products <sup>2</sup> .....			5,103,980
				Gaskets other than asbestos textile <sup>3</sup> .....			15,741,964
				Steam and other packing, other than asbestos textile.....			14,725,046
				Mineral-wool products.....			2,377,324

<sup>1</sup> Asbestos flexible roofing, asbestos wall tile, and miscellaneous asbestos building materials.  
<sup>2</sup> Molded asbestos blocks, molded composition insulators, high-temperature cements, asbestos ebony, asbestos paper, and miscellaneous asbestos products.  
<sup>3</sup> See "Description of the industries," p. 827.  
<sup>4</sup> Includes \$3,725,710, value of leather packings made by establishments classified in the leather-belting industry.

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, BY STATES: 1929

[The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Statistics are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups]

KIND AND STATE	Number of establishments	Quantity	Value	KIND AND STATE	Number of establishments	Quantity	Value
<b>ASBESTOS TEXTILES</b>				<b>ASBESTOS TEXTILES—continued</b>			
Brake linings (not molded), total.....	33	<i>Feet</i> 110,246,479	\$16,447,438	Packing, woven and molded to special sections (with or without other materials), total.....	28	<i>Pounds</i> 3,516,455	\$2,366,225
Illinois.....	3	5,885,210	730,253	New York.....	8	1,129,250	930,858
New Jersey.....	6	18,301,905	2,642,417	Pennsylvania.....	4	856,091	481,188
Pennsylvania.....	7	23,840,423	3,818,720	Other States (Calif., 3 est.; Ga., 1; Ill., 2; Conn., 2 est.; Mass., 3; N. Y., 2.....			
Conn., 2 est.; Mass., 3; N. Y., 2.....	7	44,676,650	7,301,115	Ind., 1; Mass., 3; N. J., 3; N. C., 1; Ohio, 1; S. C., 1).....	16	1,632,114	954,209
N. C., 4 est.; S. C., 1.....	5	3,975,625	667,879	Gaskets, total.....	45	3,012,335	1,726,504
Other States (Calif., 1 est.; Ind., 3; Ohio, 1).....	5	13,476,666	1,787,048	California.....	5	151,016	75,964
Clutch facings, total.....	17	<i>Pieces</i> 38,096,113	3,910,727	New York.....	7	460,462	371,343
Conn., 3 est.; Mass., 2; N. J., 2; Pa., 5.....	12	37,717,711	3,775,790	Pennsylvania.....	8	352,032	231,006
Other States (Calif., 1 est.; Ill., 2; Ind., 2).....	5	378,402	134,937	Conn., 1 est.; Mass., 3; N. J., 2.....	6	791,036	282,119
Yarn, total.....	17	<i>Pounds</i> 15,378,407	5,173,568	Ill., 3 est.; Ind., 1; Mich., 1; Minn., 1; Mo., 2; Ohio, 1; Wis., 1.....	10	1,149,151	694,970
Pennsylvania.....	6	1,254,114	592,498	Oreg., 2 est.; Wash., 2.....	4	3,055	2,484
Conn., 2 est.; Mass., 1; N. J., 2.....	5	5,645,233	1,736,193	Other States (Ga., 1 est.; La., 1; S. C., 1; Tex., 2).....	5	106,584	68,918
Other States (Calif., 1 est.; Ill., 1; N. C., 3; S. C., 1).....	6	8,479,060	2,844,877	Other asbestos textiles (Calif., 2 est.; Ill., 1; Mass., 2; N. J., 1; N. Y., 2; Ohio, 3; Pa., 5; S. C., 1).....	17		1,088,466
Cloth, total.....	17	6,666,889	2,767,049	<b>ASBESTOS BUILDING MATERIALS</b>			
Pennsylvania.....	6	1,087,948	501,644	Asbestos shingles, total.....	10	<i>Squares</i> 894,164	5,277,308
Ill., 3 est.; Ind., 1; Ohio, 1.....	5	237,479	94,437	N. H., 1 est.; N. Y., 1; Pa., 1.....	3	263,108	1,635,417
Other States (Calif., 1 est.; Mass., 1; N. J., 2; N. C., 1; S. C., 1).....	6	5,341,162	2,050,968	Other States (Calif., 1 est.; Ill., 1; La., 1; Mo., 2; Ohio, 2).....	7	631,050	3,641,891
Tape, listings, and tubular laggings, total.....	16	2,225,852	1,202,231	Asbestos lumber, plain (Ill., 1 est.; La., 1; Mo., 2; N. H., 1; Ohio, 1; Pa., 1).....	7	<i>Square feet</i> 16,770,928	1,638,687
Illinois.....	3	164,938	71,634	Asbestos lumber, corrugated (Ill., 1 est.; Mich., 1; Mo., 2; N. H., 1; Ohio, 1; Pa., 1).....	7	18,624,266	1,455,739
Pennsylvania.....	5	315,617	287,100	Other asbestos building materials <sup>1</sup> (Calif., 1 est.; Ill., 2; N. H., 1; N. J., 2; N. Y., 1; Pa., 3).....	10		2,051,884
Other States (Calif., 2 est.; Ind., 1; Mass., 1; N. J., 2; N. C., 1; S. C., 1).....	8	1,747,297	843,497				
Packing, compressed sheet, total.....	10	3,430,625	787,116				
Conn., 1 est.; Mass., 2; N. J., 1; Pa., 2.....	6	2,842,784	675,573				
Other States (Ca., 1 est.; Ill., 2; Ohio, 1).....	4	687,741	111,543				
Packing, fabric, flat (Calif., 1 est.; Ga., 1; Ill., 2; Ind., 1; Mass., 1; N. J., 1; Pa., 2; S. C., 1).....	10	1,676,301	692,369				

See footnotes at end of table.

ASBESTOS PRODUCTS, STEAM PACKING, ETC.

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, BY STATES: 1929—Continued

[See note at head of this table]

KIND AND STATE	Number of establishments	Quantity	Value	KIND AND STATE	Number of establishments	Quantity	Value
<b>ASBESTOS PRODUCTS OTHER THAN TEXTILES OR BUILDING MATERIALS</b>				<b>ASBESTOS PRODUCTS OTHER THAN TEXTILES OR BUILDING MATERIALS—continued</b>			
Pipe and boiler covering, air-cell asbestos, total.	36	<i>Lineal feet</i> 67,331,323	\$4,657,666	Other asbestos products, total <sup>1</sup> .....	45		\$5,105,960
California.....	3	2,438,975	177,031	California.....	4		266,158
Illinois.....	9	13,637,702	760,777	Illinois.....	6		581,472
New Jersey.....	6	17,485,427	1,074,696	Pennsylvania.....	8		1,266,993
New York.....	3	1,188,200	94,464	Conn., 1 est.; Mass., 1; N. H., 1; N. J., 6; N. Y., 4.....	13		2,439,304
Other States (Colo., 1 est.; Mass., 1; Mich., 2; Minn., 1; Ohio, 2; Oreg., 2; Pa., 4; Wash., 1; Wis., 1).....	15	32,581,019	2,550,698	Ind., 2 est.; Mich., 2; Ohio, 3; Wis., 1.....	8		502,766
Pipe and boiler covering, asbestos other than air-cell, total.....	25	27,686,503	2,516,009	Colo., 1 est.; Oreg., 2; Wash., 3.....	6		69,267
Ill., 5 est.; Mich., 1; Minn., 1; Wis., 1.....	8	7,529,730	1,001,955	<b>OTHER PRODUCTS</b>			
Other States (Calif., 4 est.; Colo., 2; Mass., 1; N. J., 3; N. Y., 1; Ohio, 2; Oreg., 1; Pa., 3).....	17	20,156,773	1,514,054	Gaskets other than asbestos textile, total <sup>2</sup> .....	54		15,741,964
Pipe and boiler covering, 85 per cent magnesia (Calif., 2 est.; Colo., 1; Ill., 1; N. J., 2; Pa., 3; Wash., 2).....	11	23,959,209	3,045,324	California.....	4		133,077
Molded asbestos brake lining (Calif., 1 est.; Conn., 2; Ill., 2; Ind., 1; Mass., 3; Ohio, 1; Pa., 2).....	12	<i>Feet</i> 22,410,872	2,534,646	Massachusetts.....	6		538,310
Molded 85 per cent magnesia blocks (Calif., 2 est.; Ill., 1; N. J., 1; Pa., 3).....	7	<i>Board feet</i> 21,479,103	2,457,337	Michigan.....	6		6,622,913
Millboard (Conn., 1 est.; Colo., 1; Ill., 1; Ohio, 1; Pa., 1; Wash., 1).....	6	<i>Pounds</i> 7,280,221	345,375	New Jersey.....	5		460,324
Asbestos insulating cement, total.....	29	68,472,386	917,846	New York.....	12		623,561
Mass., 2 est.; N. J., 4; Pa., 5; Vt., 1.....	12	36,962,061	563,963	Ohio.....	4		300,933
Ind., 2 est.; Ill., 5; Minn., 1; Wis., 1.....	9	28,333,062	361,643	Pennsylvania.....	7		342,020
Calif., 3 est.; Colo., 2; Oreg., 1; Wash., 2.....	8	2,577,263	52,240	Other States (Conn., 1 est.; Ga., 1; Ill., 6; Md., 1; Wis., 1).....	10		6,690,826
85 per cent magnesia cement (Calif., 3 est.; Ill., 3; N. J., 1; Ohio, 1; Pa., 3; Wash., 1).....	12	2,725,244	109,118	Steam and other packing, other than asbestos textile, total.....	103		14,725,046
Table mats and protectors, total.....	17	1,615,631	766,222	California.....	10		234,334
California.....	4	68,514	50,903	Illinois.....	12		1,748,469
Illinois.....	4	1,138,903	485,173	Massachusetts.....	8		730,122
N. H., 1 est.; N. Y., 1; Pa., 2.....	4	70,301	68,622	Michigan.....	11		2,539,461
Other States (Mich., 1 est.; Mo., 2; Ohio, 2).....	5	337,910	171,524	New Jersey.....	17		4,014,397
				New York.....	17		2,068,718
				Pennsylvania.....	8		790,919
				N. H., 1 est.; N. J., 6; R. I., 1.....	8		379,020
				Ala., 2 est.; Ga., 1; Ky., 1; La., 1; Miss., 1; S. C., 1; Tex., 1.....	8		2,179,696
				Other States (Colo., 1 est.; Ind., 1; Md., 1; Nebr., 1; Ohio, 7; Wash., 1).....	12		2,377,324
				Mineral-wool products (Calif., 1 est.; Ill., 1; Ind., 2; Mich., 1; N. J., 1; Ohio, 1; Wis., 1).....	8		

<sup>1</sup> Asbestos flexible roofing, asbestos wall tile, and miscellaneous asbestos building materials.

<sup>2</sup> Molded asbestos blocks, molded composition insulators, asbestos ebony, asbestos paper, and miscellaneous asbestos products.

<sup>3</sup> See "Description of the industries," p. 827.

<sup>4</sup> Includes \$3,725,710, value of leather packings made by establishments classified in the leather-belted industry.

## CENSUS OF MANUFACTURES: 1929

TABLE 5.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929; FOR EACH INDUSTRY

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
ASBESTOS PRODUCTS, OTHER THAN STEAM PACKING OR PIPE AND BOILER COVERING												
Prime movers and electric motors driven by purchased energy, aggregate.....	2,923	Horse-power 40,458	1,622	Horse-power 26,525	1,166	Horse-power 22,918	371	Horse-power 9,657	117	Horse-power 2,861	100.0	100.0
Prime movers, total.....	29	11,945	19	9,555	18	9,691	34	4,212	17	1,455	29.5	43.0
Steam, total.....	22	11,485	17	9,270	17	9,651	31	4,105	15	1,375	28.4	42.5
Engines.....	10	1,645	10	1,670	10	1,770	27	2,255	(1)	(1)	4.1	23.3
Turbines.....	12	9,840	7	7,600	7	7,881	4	1,850	(1)	(1)	24.3	19.2
Internal-combustion engines.....	5	170					2	47			0.4	0.4
Water wheels and water turbines.....	2	200	2	285	1	40	1	60	2	80	0.7	0.8
Electric motors driven by purchased energy.....	2,894	28,513	1,603	16,970	1,148	13,227	337	5,445	100	1,406	70.5	56.4
Electric motors, total.....	4,378	52,978	2,236	29,951	1,816	21,529	461	7,411	117	1,584	100.0	100.0
Driven by purchased energy.....	2,894	28,513	1,603	16,970	1,148	13,227	337	5,445	100	1,406	53.8	73.5
Driven by energy generated in establishments reporting.....	1,484	24,465	633	12,981	668	8,302	124	1,966	17	158	46.2	26.5
Electric generators.....	22	Kilowatts 12,625 Kilowatt-hours	13	Kilowatts 6,400	13	Kilowatts 6,370	(2)	(2)	(2)	(2)		
Electric energy purchased <sup>1</sup> .....		44,918,551		(3)		(3)		(3)		(3)		
STEAM AND OTHER PACKING, PIPE AND BOILER COVERING, GASKETS, NOT ELSEWHERE CLASSIFIED												
Prime movers and electric motors driven by purchased energy, aggregate.....	2,246	Horse-power 30,881	1,616	Horse-power 29,810	1,224	Horse-power 25,579	745	Horse-power 28,755	453	Horse-power 17,165	100.0	100.0
Prime movers, total.....	62	14,349	84	17,220	78	15,051	120	21,009	131	13,818	46.5	78.5
Steam, total.....	47	13,764	74	17,073	64	14,633	100	20,637	100	13,031	44.6	77.1
Engines.....	38	7,714	72	15,109	68	7,103	94	13,822	(1)	(1)	25.0	51.6
Turbines.....	9	6,050	2	1,904	6	7,530	6	6,815	(1)	(1)	19.6	25.5
Internal-combustion engines.....	11	305	10	147	14	418	20	372	28	522	1.2	1.4
Water wheels and water turbines.....	4	220							3	265	0.7	
Electric motors driven by purchased energy.....	2,184	16,532	1,532	12,590	1,146	10,528	625	5,746	322	3,347	53.5	21.5
Electric motors, total.....	3,010	25,418	2,702	26,850	1,818	13,613	1,518	17,835	670	9,576	100.0	100.0
Driven by purchased energy.....	2,184	16,532	1,532	12,590	1,146	10,528	625	5,746	322	3,347	65.0	32.2
Driven by energy generated in establishments reporting.....	826	8,886	1,170	14,260	672	3,085	893	12,089	348	6,229	35.0	67.8
Electric generators.....	19	Kilowatts 6,034 Kilowatt-hours	83	Kilowatts 8,126	70	Kilowatts 7,841	(2)	(2)	(2)	(2)		
Electric energy purchased <sup>1</sup> .....		40,342,745		(3)		(3)		(3)		(3)		

<sup>1</sup> Not called for separately on schedule.<sup>2</sup> Not called for on schedule.<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.<sup>4</sup> Data incomplete.

# ASBESTOS PRODUCTS, STEAM PACKING, ETC.

**TABLE 6.—WAGE EARNERS, BY MONTHS, FOR EACH INDUSTRY, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929**

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
<b>ASBESTOS PRODUCTS, OTHER THAN STEAM PACKING OR PIPE AND BOILER COVERING</b>															
United States:															
1929	8,092	7,567	7,809	8,019	8,284	8,461	8,481	8,550	8,742	8,543	8,060	7,556	7,098	80.5	
1925	6,129	5,647	5,586	5,783	5,921	5,931	6,073	6,236	6,397	6,416	6,444	6,526	6,587	84.8	
1919	3,654	3,441	3,435	3,464	3,516	3,455	3,339	3,637	3,823	3,948	4,022	3,952	4,036	82.2	
1914 <sup>1</sup>	962	986	1,008	1,024	971	922	883	1,030	960	916	933	989	922	85.7	
Illinois	980	877	917	938	947	992	984	949	1,047	1,052	1,056	1,051	950	83.0	
New Jersey	1,920	1,921	1,922	1,962	2,011	2,077	2,054	2,094	2,053	2,012	1,772	1,644	1,524	72.8	
New York	82	84	93	103	94	79	75	87	87	86	80	58	54	52.4	
Ohio	230	218	230	227	238	248	249	233	240	228	223	220	212	85.1	
Pennsylvania	1,136	1,123	1,144	1,130	1,083	1,113	1,144	1,161	1,208	1,204	1,161	1,103	1,058	87.6	
<b>STEAM AND OTHER PACKING, PIPE AND BOILER COVERING, AND GASKETS, NOT ELSEWHERE CLASSIFIED</b>															
United States:															
1929	7,266	6,603	7,083	7,215	7,539	7,948	8,061	7,913	7,412	7,106	7,088	6,804	6,468	80.2	
1925	6,086	5,648	5,848	5,874	5,934	6,003	6,046	6,136	6,187	6,296	6,291	6,363	6,406	83.2	
1919	6,147	6,329	6,096	5,902	5,683	5,656	5,693	5,899	6,205	6,375	6,642	6,532	6,782	83.4	
1914	4,213	4,506	4,499	4,473	4,293	4,185	4,241	4,095	3,949	4,045	4,153	4,085	4,032	87.6	
1909	3,648	3,605	3,500	3,312	3,334	3,354	3,381	3,364	3,496	3,795	4,071	4,274	4,284	77.3	
California	218	235	187	188	186	194	187	205	230	235	238	262	269	68.0	
Colorado	9	10	9	9	9	9	9	8	11	12	9	8	6	50.0	
Illinois	1,200	955	1,161	1,326	1,408	1,548	1,527	1,363	1,154	1,038	1,024	970	925	59.8	
Massachusetts	151	146	146	156	157	164	170	163	167	151	139	133	130	76.5	
Michigan	912	825	932	883	1,026	1,029	1,069	962	863	917	853	777	813	72.7	
New Jersey	387	379	379	373	379	380	376	369	397	393	400	405	399	92.1	
New York	807	764	826	784	838	772	836	842	830	826	829	768	766	90.7	
Ohio	462	458	455	456	457	453	467	464	471	474	462	471	461	95.6	
Pennsylvania	1,621	1,579	1,620	1,626	1,609	1,621	1,610	1,537	1,620	1,635	1,674	1,670	1,634	94.3	
Washington	18	18	18	18	17	18	18	18	18	18	17	17	17	94.4	

<sup>1</sup>No comparable data for years prior to 1914.

# CEMENT

**Description of the industry.**—This industry consists in the manufacture of hydraulic cement from rock usually quarried by the manufacturing establishments. The principal product is Portland cement, but small quantities of natural and puzzolan cements are also manufactured. Portland cement is a calcined and ground mixture of limestone, chalk or marl, and clay or shale. Natural cement is an argillaceous limestone, calcined and ground. Puzzolan cement is made by grinding a mixture of furnace slag and slaked lime.

**Comparative statistics for prior years.**—Table 3 shows comparative figures for the United States for the census years 1923 to 1929, compiled from data collected at the biennial censuses of manufactures. The United States Bureau of Mines compiles annual statistics on the production of cement, and these are available for the years alternating with the biennial census years.

**State statistics.**—General statistics, by States, for 1929, 1927, and 1919, are given in Table 2 and production statistics, by States, for 1929, in Table 3. In each case, as explained in the headnote, statistics are presented for all States for which separate figures can be given without disclosing data for individual establishments. Statistics are given in Table 3 for three States which are not shown separately in Table 2. This condition arises because small quantities of natural and puzzolan cement are produced in these States, in each case by only one establishment; and if the total value of products, including that of natural and puzzolan cement, were shown for any one of these States in Table 2, it would be possible to calculate the value of these commodities by subtracting the value of Portland cement, as given in Table 3, from the total, as given in Table 2.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1904 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size. No comparable data available for years prior to 1904]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horse-power
1929.....	174	33,308	\$48,840,096	\$95,242,497	\$267,509,260	\$172,266,763	1,183,989
1927.....	161	36,322	53,110,745	120,012,025	293,565,293	173,553,268	1,069,390
1925.....	145	38,437	53,911,519	114,168,969	300,895,070	189,726,101	871,650
1923.....	133	35,091	49,707,992	<sup>3</sup> 100,766,747	264,098,497	163,331,750	642,840
1921.....	125	26,231	34,415,677	102,359,637	208,020,920	101,267,292	(4)
1919.....	123	25,524	33,194,920	79,509,800	175,264,010	95,755,110	488,808
1914.....	133	27,916	18,192,282	61,980,798	101,756,444	49,769,046	490,402
1909.....	135	26,775	15,319,602	29,345,791	63,205,455	33,861,664	371,799
1904.....	129	17,478	8,814,077	12,215,118	29,873,122	17,658,009	149,564
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	8.1	-8.1	-8.0	-20.6	-8.9	-0.7	10.7
1925-1927.....	11.0	-5.5	-1.5	5.1	-2.4	-7.1	22.7
1923-1925.....	9.0	9.5	8.5	13.3	13.9	14.3	35.6
1921-1923.....	6.4	33.8	44.4	-1.6	29.7	61.3	-----
1919-1921.....	1.6	2.8	3.7	28.7	16.2	5.8	-----
1919-1929.....	41.5	30.7	47.2	19.8	52.6	79.9	142.2
1909-1919.....	-8.9	-4.7	116.7	171.0	177.3	182.8	81.5

<sup>1</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Not strictly comparable with figures for other years for the reason that the cost of containers (nonreturnable) sold with products is excluded for 1923 and included for other years.

<sup>4</sup> Not called for on schedule.





## CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES, 1923 TO 1929, AND SALES (SHIPMENTS OR DELIVERIES) OF PORTLAND CEMENT, BY STATES, 1929

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments.]

	Number of establishments	Barrels	Value <sup>1</sup>		Number of establishments	Barrels	Value <sup>1</sup>
<b>Total, all products:</b>				<b>Portland cement, by States,<sup>4</sup> 1929:</b>			
1929	174		\$267, 509, 260	Total	164	169, 868, 322	\$260, 428, 797
1927	161		293, 565, 293	Alabama	6	5, 228, 947	6, 048, 090
1925	145		300, 895, 070	California	12	12, 964, 740	20, 646, 518
1923	133		264, 098, 497	Illinois	4	7, 738, 208	11, 374, 935
<b>Portland cement:</b>				Iowa	6	6, 686, 111	10, 009, 596
1929	164	169, 868, 322	260, 428, 797	Kansas	7	6, 855, 861	11, 042, 589
1927	153	173, 206, 513	287, 431, 268	Michigan	14	13, 325, 727	19, 984, 453
1925	138	161, 658, 901	293, 964, 730	Missouri	5	7, 984, 337	12, 762, 825
1923	( <sup>2</sup> )	137, 460, 238	260, 658, 575	New York	10	10, 742, 902	16, 605, 734
<b>Natural, puzzolan, and masonry cement:</b>				Ohio	10	9, 144, 086	14, 003, 218
1929	13	2, 184, 161	3, 262, 503	Pennsylvania	28	30, 309, 662	57, 805, 030
1927	11	2, 123, 868	3, 126, 211	Tennessee	6	4, 537, 601	5, 737, 929
1925	10	1, 729, 343	2, 709, 030	Texas	9	7, 083, 572	11, 750, 126
1923	10	1, 325, 465	2, 029, 685	Other States <sup>3</sup>	47	38, 366, 473	61, 877, 048
<b>Other products:</b>							
1929			3, 817, 960				
1927			3, 607, 814				
1925			4, 221, 810				
1923			1, 409, 937				

<sup>1</sup> Does not include the value of refractory cement which is made by establishments classified in the "Clay products (other than pottery) and nonclay refractories" industry, as follows: For 1929, 138,334 tons, valued at \$3,116,308; 1927, 105,937 tons, \$2,477,683; 1925, 78,477 tons, \$2,270,276; 1923, 95,812 tons, \$1,835,349.

<sup>2</sup> No data.

<sup>3</sup> Not strictly comparable with other years for the reason that the cost of containers (nonreturnable) sold with products is excluded for 1923 and included for other years.

<sup>4</sup> See "State statistics," p. 834.

<sup>5</sup> Arkansas, 1 establishment; Colorado, 2; Florida, 1; Georgia, 3; Idaho, 1; Indiana, 5; Kentucky, 1; Louisiana, 1; Maine, 1; Maryland, 2; Minnesota, 1; Montana, 2; Nebraska, 2; New Jersey, 2; Oklahoma, 2; Oregon, 3; South Dakota, 1; Utah, 3; Virginia, 2; Washington, 6; West Virginia, 3; Wisconsin, 1; Wyoming, 1.

TABLE 4.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate	13, 436	Horsepower 1, 183, 989	11, 982	Horsepower 1, 069, 390	9, 178	Horsepower 871, 650	4, 686	Horsepower 488, 808	3, 698	Horsepower 490, 402	100.0	100.0
Prime movers, total	454	608, 935	481	525, 042	403	445, 477	548	306, 322	754	326, 033	61.4	62.7
Steam, total	391	585, 334	421	503, 224	414	423, 037	477	278, 009	667	291, 321	49.4	50.9
Engines	205	169, 697	261	143, 720	273	145, 526	416	108, 353	( <sup>1</sup> )	( <sup>1</sup> )	0.2	40.6
Turbines	186	475, 637	160	359, 504	141	277, 511	61	79, 656	( <sup>1</sup> )	( <sup>1</sup> )	40.2	16.3
Internal-combustion engines	52	16, 901	49	15, 118	41	15, 540	63	24, 763	75	28, 360	1.4	5.1
Water wheels and water turbines	11	6, 700	11	6, 700	8	6, 900	8	3, 550	12	6, 346	0.6	0.7
Electric motors driven by purchased energy	12, 981	575, 054	11, 501	544, 348	8, 715	426, 173	4, 138	182, 486	2, 944	164, 369	48.6	37.3
Electric motors, total	25, 815	1, 149, 041	22, 640	1, 041, 396	16, 675	782, 785	8, 500	345, 535	6, 991	336, 516	100.0	100.0
Driven by purchased energy	12, 981	575, 054	11, 501	544, 348	8, 715	426, 173	4, 138	182, 486	2, 944	164, 369	60.0	52.8
Driven by energy generated in establishments reporting	12, 834	573, 987	11, 139	497, 048	7, 960	356, 612	4, 302	163, 049	4, 047	172, 147	60.0	47.2
Electric generators	263	Kilowatts 417, 220	290	Kilowatts 343, 525	269	Kilowatts 244, 525	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )		
Electric energy purchased <sup>3</sup>		Kilowatt-hours 1, 385, 192, 739		( <sup>4</sup> )		( <sup>4</sup> )		( <sup>4</sup> )		( <sup>4</sup> )		

<sup>1</sup> Not called for separately on schedule.

<sup>2</sup> Not called for on schedule.

<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

<sup>4</sup> Data incomplete.

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TABLE 5.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Percent minimum is of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
United States:															
1929	33,368	31,257	30,015	32,464	33,776	34,948	35,555	35,539	35,690	34,613	33,461	32,167	<i>80,000</i>	84.1	
1925	38,437	35,400	<i>34,978</i>	36,713	38,233	38,616	40,127	40,793	40,806	40,826	39,997	38,357	36,493	85.7	
1919	25,524	<i>20,234</i>	20,563	21,964	23,864	25,083	25,028	27,690	28,445	28,082	28,811	28,133	25,411	69.6	
1914	27,916	27,127	25,131	26,246	28,498	29,330	30,105	29,864	29,932	29,948	29,199	25,581	<i>24,051</i>	70.8	
1909	26,775	<i>21,167</i>	22,119	24,058	25,983	27,337	27,786	28,474	28,052	29,782	28,970	29,044	27,529	70.6	
California	2,295	2,220	2,293	2,420	2,413	2,299	2,351	2,361	2,280	2,209	2,218	2,298	<i>2,183</i>	90.2	
Iowa	1,215	1,173	<i>909</i>	945	1,221	1,277	1,303	1,302	1,295	1,309	1,330	1,291	1,226	68.3	
Kansas	1,176	<i>913</i>	1,089	1,128	1,114	1,253	1,287	1,220	1,239	1,247	1,236	1,185	1,172	70.9	
Michigan	2,502	<i>2,092</i>	2,224	2,448	2,528	2,555	2,702	2,704	2,792	2,667	2,577	2,461	2,274	74.9	
Missouri	1,784	1,611	1,593	1,690	1,822	1,887	1,827	1,949	2,011	1,879	1,820	1,672	<i>1,412</i>	70.2	
New York	2,110	1,951	<i>1,665</i>	2,013	2,121	2,218	2,291	2,346	2,434	2,201	2,097	2,046	1,941	88.4	
Pennsylvania	7,470	7,286	6,935	7,038	7,276	7,891	8,020	8,034	7,923	7,658	7,500	7,321	<i>6,752</i>	84.0	
Tennessee	669	643	656	643	632	695	710	716	743	728	668	655	<i>542</i>	72.9	
Texas	1,484	<i>1,380</i>	1,417	1,444	1,465	1,478	1,515	1,529	1,535	1,551	1,509	1,488	1,499	89.0	

# CHINA FIRING AND DECORATING, NOT DONE IN POTTERIES

Description of the industry.—This industry classification covers establishments engaged primarily in firing and decorating china for the trade. Small estab-

lishments engaged in such work for private customers or to individual order are not canvassed.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	27	317	\$420,303	\$610,361	\$1,554,003	\$913,642	53
1927	31	366	428,232	681,653	1,692,079	1,010,426	43
1925	31	353	385,912	672,277	1,589,832	917,555	38
1923	33	355	460,411	600,519	1,402,609	883,090	49
1921	34	325	397,835	504,270	1,241,964	737,694	( <sup>3</sup> )
1919	43	244	244,211	310,785	866,762	555,977	43
1914	51	295	159,471	330,190	726,960	396,770	22
1909	40	328	190,800	311,117	786,203	475,176	18
1904	28	225	107,647	107,647	326,679	219,032	6
1899	49	298	122,423	207,356	484,891	277,535	0
PER CENT OF INCREASE OF DECREASE (-)							
1927-1929	( <sup>4</sup> )	-13.4	-1.9	-0.1	-8.2	-0.6	( <sup>5</sup> )
1925-1927	( <sup>4</sup> )	9.9	11.0	1.4	0.4	10.1	( <sup>5</sup> )
1923-1925	( <sup>4</sup> )	-6.2	-16.2	10.3	0.5	3.9	( <sup>5</sup> )
1921-1923	( <sup>4</sup> )	9.2	15.7	20.9	20.2	19.7	( <sup>5</sup> )
1919-1921	( <sup>4</sup> )	33.2	62.9	62.3	43.3	32.7	( <sup>5</sup> )
1919-1929	( <sup>4</sup> )	29.9	72.1	106.0	79.3	64.3	( <sup>5</sup> )
1909-1919	( <sup>4</sup> )	-25.6	28.0	-0.1	10.2	17.0	( <sup>5</sup> )
1899-1909	( <sup>4</sup> )	10.1	55.9	50.0	62.2	71.2	( <sup>5</sup> )

<sup>1</sup> The figure for 1929 refers to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Includes, for 1929, \$14,316, value of decorated glassware, normally belonging to "Glass products, except mirrors, made from purchased glass" industry, made as secondary products by establishments engaged primarily in firing and decorating china. Does not include following values of decorated china reported as secondary products by establishments classified in other industries: 1929, \$123,984; 1927, \$68,846; 1923, \$199,673; 1921, \$46,351; 1919, \$58,398. No comparable data for 1925 or for years prior to 1919.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Not called for on schedule.

<sup>5</sup> Per cent not computed where base is less than 100.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	Horsepower (rated capacity) of power equipment—motors run by purchased energy	Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
								Total	Materials and containers	Fuel and purchased energy		
United States	1929	27	68	317	53	\$145,673	\$420,303	\$610,361	\$603,648	\$36,713	\$1,554,003	\$913,642
	1927	31	72	366	43	147,957	428,232	681,653	652,681	28,972	1,692,079	1,010,426
	1919	43	32	244	43	81,625	244,211	310,785	290,493	20,292	866,762	555,977
Illinois	1929	7	37	142	3	76,163	194,792	310,825	297,609	13,216	725,360	414,535
	1927	10	25	137	6	60,498	157,097	280,963	272,123	8,840	711,596	430,633
	1919	10	18	76	10	52,394	89,720	98,386	90,791	7,695	332,207	253,821
New Jersey	1929	4	8	34	5	19,919	37,939	85,160	81,146	4,014	166,419	81,259
	1927	6	17	53	8	36,186	64,053	122,156	114,086	8,070	262,035	129,879
	1919	8	10	85	15	27,449	67,684	83,619	77,296	6,323	213,753	130,134
New York	1929	9	19	99	40	41,351	148,900	201,532	185,696	15,836	581,878	330,246
	1927	6	22	116	18	35,011	145,611	183,691	175,514	8,177	513,807	330,110
	1919	9	—	44	18	—	55,220	80,218	77,184	3,064	173,967	93,749
Other States	1929	7	4	42	5	8,240	38,582	42,844	39,197	3,647	130,346	87,502
	1927	9	8	60	11	15,658	61,471	94,843	90,958	3,885	214,641	119,798
	1919	16	4	39	—	1,782	31,587	48,562	45,252	3,810	126,835	78,273

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 22; 1927, 26; 1919, 45. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 407; 1927, 464; 1919, 321.

<sup>2</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> See footnote 2, Table 1.

<sup>5</sup> California, 2 establishments; Colorado, 1; Connecticut, 1; Indiana, 1; Pennsylvania, 1; West Virginia, 1.

<sup>6</sup> California, 2 establishments; Connecticut, 1; Indiana, 1; Ohio, 1; Pennsylvania, 2; West Virginia, 1; Wisconsin, 1.

<sup>7</sup> California, 5 establishments; Colorado, 4; Connecticut, 1; Indiana, 1; Michigan, 1; Missouri, 2; Washington, 2.

# CHINA FIRING AND DECORATING

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**TABLE 3.—POWER EQUIPMENT, 1929, 1927, 1925, 1919, AND 1914, AND ELECTRIC ENERGY PURCHASED, 1929, FOR THE UNITED STATES**

	Number	Rated capacity		Number	Rated capacity
ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY		<i>Horsepower</i>	ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY—CON.		<i>Horsepower</i> <sup>16</sup>
1929.....	22	53	1914.....	11	<i>Kilowatt-hours</i>
1927.....	21	43			301, 731
1925.....	22	38			
1919.....	26	43			
			Electric energy purchased, <sup>2</sup> 1929.....		

<sup>1</sup> In addition, one internal-combustion engine of 6 horsepower was reported for 1914.  
<sup>2</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

**TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929**

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:															
1929.....	317	<b>334</b>	327	330	314	314	302	297	<i>293</i>	312	327	330	324	87.7	
1925.....	333	316	324	350	351	341	310	<i>274</i>	310	334	353	367	302	74.7	
1919.....	244	<i>204</i>	207	218	221	235	237	245	254	264	277	285	281	71.6	
1914.....	295	299	321	316	304	292	301	279	278	209	207	291	<i>263</i>	81.9	
1909.....	328	316	321	332	342	329	342	312	<i>298</i>	320	345	334	342	86.4	
Illinois.....	142	148	144	152	143	138	<i>133</i>	136	138	135	143	149	142	87.5	
New Jersey.....	34	39	38	39	34	35	33	32	28	34	33	34	34	71.8	
New York.....	99	106	104	99	97	100	95	86	<i>84</i>	100	108	105	100	77.8	

## THE CLAY-PRODUCTS INDUSTRIES

Because of the close relationship existing between the two clay-products industries—"Clay products (other than pottery) and nonclay refractories" and "Pottery, including porcelain ware"—the statistics are given both separately and in combination in the tables herewith.

**Description of the industries.**—The "Clay products (other than pottery) and nonclay refractories" industry embraces those establishments which are engaged primarily in the manufacture of brick, drain-tile and other tile, sewer pipe, stove lining, terracotta products, and other refractories, both clay and nonclay.

The establishments assigned to the "Pottery, including porcelain ware" industry are those whose leading products are stoneware, earthenware, porcelain ware, vitreous-china plumbing fixtures, and allied products.

**Scope of the canvass.**—The clay-products industries have been canvassed annually since 1921 by the Bureau of the Census, the reports for the odd-numbered years being included in the series presenting the reports of the biennial censuses of manufactures. The data collected for the even-numbered years relate only to production and stocks on hand, except for 1922, for

which year data were collected on production only. The biennial-census canvasses, in addition to covering the same statistical field for these industries as for manufacturing industries in general, call for data relating to stocks, in order that statistics for these may be given for consecutive years. Annual statistics on production were compiled by the Geological Survey, Department of the Interior, prior to 1921.

**Establishments reporting products valued at less than \$5,000.**—Although the canvass for the biennial census of manufactures is confined, for the most part, to establishments with a yearly output valued at \$5,000 or more, it has been found desirable in the case of the clay-products industries to collect data on production and stocks from all establishments without regard to the size of output. The detailed product statistics in this report, therefore, comprise such data.

**Establishments classified according to major products.**—Table 6, p. 852, gives, for 1929, a summary for establishments classified according to their major products. The purpose of this table is to show the extent to which the production of the specified items is concentrated in establishments which manufacture them as their principal products.

TABLE 1.—COMBINED SUMMARY FOR THE CLAY-PRODUCTS INDUSTRIES, AND SUMMARIES FOR THE SEPARATE INDUSTRIES, FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
<b>THE CLAY-PRODUCTS INDUSTRIES<sup>3</sup></b>							
1929	2,062	128,745	\$150,574,307	\$103,706,106	\$405,550,966	\$290,850,880	595,755
1927	2,162	137,639	167,117,325	133,450,464	430,505,181	297,054,717	584,460
1925	2,248	139,813	173,890,352	133,938,840	444,808,445	310,809,605	567,345
1923	2,287	139,547	170,479,309	136,617,435	447,808,364	310,809,929	526,105
1921	2,152	97,217	109,081,494	63,603,132	278,546,848	185,043,716	(4)
1919	2,754	104,849	108,076,363	88,282,180	283,342,106	195,059,917	434,197
1914	3,580	126,887	71,573,748	54,754,734	172,864,051	118,109,317	464,817
Per cent of increase or decrease (—):							
1927-1929	-4.6	-6.5	-9.9	-18.5	-5.8	(5)	1.9
1925-1927	-3.8	-1.2	-3.9	-0.4	-3.2	-4.4	3.0
1923-1925	-1.7	-0.2	2.0	-2.2	-0.7	(5)	8.0
1921-1923	6.3	43.5	56.3	46.4	60.8	68.0	-----
1919-1921	-21.9	-7.3	0.9	5.9	-1.7	-5.1	-----
1910-1920	-25.1	22.8	30.3	23.1	43.1	52.2	37.2
<b>CLAY PRODUCTS (OTHER THAN POTTERY) AND NONCLAY REFRACTORIES<sup>3</sup></b>							
1929	1,749	93,336	\$106,918,327	\$81,698,742	\$204,934,513	\$213,235,771	533,887
1927	1,846	100,972	121,967,507	90,869,669	319,907,843	220,038,174	529,681
1925	1,939	102,777	127,127,485	100,013,084	333,730,417	233,717,333	517,204
1923	1,883	102,723	123,773,001	103,817,650	333,416,331	230,098,781	480,576
1921	1,881	68,759	73,725,986	68,275,905	194,329,421	120,059,516	(4)
1919	2,414	76,915	78,250,985	67,488,115	205,422,920	140,984,807	405,157
1914	3,239	100,182	54,907,418	42,723,178	135,921,445	93,193,207	442,480
Per cent of increase or decrease (—):							
1927-1929	-5.3	-7.6	-12.3	-18.2	-7.8	-3.1	0.8
1925-1927	-4.8	-1.6	-4.1	-0.1	-4.1	-5.9	2.4
1923-1925	-2.2	0.1	2.7	-3.2	0.1	1.6	7.6
1921-1923	5.4	49.4	67.9	51.3	71.6	82.5	-----
1919-1921	-22.1	-10.6	-5.8	1.2	-6.8	-10.6	-----
1910-1920	-27.5	21.3	30.6	21.1	41.5	51.3	31.8

See footnotes at end of table.

CENSUS OF MANUFACTURES: 1929

TABLE 4.—CLAY PRODUCTS (INCLUDING POTTERY) AND NONCLAY REFRACTORIES—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, AND STOCKS ON HAND, FOR THE UNITED STATES: 1925 TO 1929—Con.

[For statistics of principal products, by States, see Table 5]

[Ton, 2,000 pounds; square, 100 square feet]

CLASS AND YEAR	Number of establishments	Quantity	Value	Stocks on hand Dec. 31	CLASS AND YEAR	Number of establishments	Quantity	Value	Stocks on hand Dec. 31
<b>CLAY PRODUCTS, OTHER THAN POTTERY—continued</b>					<b>POTTERY</b>				
<b>Fire-clay products—Continued.</b>					<b>Total value:—</b>				
<b>Special shapes—</b>					<b>Tons</b>				
1929	53	182,280	\$4,092,295	47,544	1929			\$112,019,217	
1928	41	86,671	2,518,198	30,037	1928			107,780,369	
1927	39	132,618	2,639,485	41,180	1927			111,612,931	
1926	40	61,909	1,714,914	17,010	1926			116,493,308	
1925	(1)	(1)	(1)	(1)	1925			112,018,500	
<b>Glass-house tank blocks, melting pots, stoppers, floaters, and rings:</b>					<b>Red earthenware:</b>				
1929	13	35,912	2,276,009	20,575	1929	103		2,798,161	
1928	13	35,513	1,993,609	21,823	1928	79		2,618,078	
1927	14	41,177	2,310,473	23,647	1927	70		2,850,428	
1926	(1)	(1)	(1)	(1)	1926	80		2,633,909	
1925	(1)	(1)	(1)	(1)	1925	73		2,631,867	
<b>Chimney pipe and tops:</b>					<b>Stoneware (except chemical):</b>				
1929	24	19,895	310,113	11,788	1929	63		3,810,138	
1928	26	5,044	216,869	1,419	1928	51		3,768,009	
1927	28	7,905	243,384	2,510	1927	40		4,603,079	
1926	(1)	(1)	(1)	(1)	1926	63		5,311,123	
1925	(1)	(1)	(1)	(1)	1925	50		4,349,317	
<b>Segment blocks:</b>					<b>Yellow and Rockingham ware:</b>				
1929	14	50,546	734,272	18,416	1929	5		324,018	
1928	14	48,845	518,826	38,451	1928	7		653,082	
1927	14	58,980	967,422	36,316	1927	(10)		(10)	
1926	(1)	(1)	(1)	(1)	1926	(10)		(10)	
1925	(1)	(1)	(1)	(1)	1925	(10)		(10)	
<b>Refractory cement (clay):</b>					<b>Chemical stoneware:</b>				
1929	48	57,532	1,692,535		1929	4		1,064,562	
1928	41	51,331	932,326		1928	7		984,854	
1927	40	45,909	1,241,257		1927	5		985,732	
1926	42	31,816	1,328,216		1926	7		848,303	
1925	(1)	(1)	(1)	(1)	1925	9		928,462	
<b>Clay sold, raw or prepared:</b>					<b>Chemical porcelain:</b>				
1929	229	464,215	2,199,952		1929	4		277,549	
1928	225	507,302	2,742,020		1928	4		266,248	
1927	240	487,301	2,597,779		1927	3		(11)	
1926	260	476,020	2,666,843		1926	4		208,731	
1925	240	656,918	3,482,236		1925	4		242,342	
<b>Other clay products:</b>					<b>White ware, including cream-color, white granite, semiporcelain, and semivitreous porcelain ware:</b>				
1929	71		3,502,764		1929	54		32,066,498	
1928	78		3,100,551		1928	47		31,434,506	
1927	67		3,268,472		1927	59		31,692,083	
1926	94		6,585,182		1926	60		33,563,570	
1925	118		8,561,014		1925	62		32,815,622	
<b>NONCLAY REFRACTORIES</b>					<b>Hotel china:</b>				
<b>Total value—</b>					1929				
1929			20,205,897		1929	22		10,476,285	
1928			23,418,850		1928	22		9,251,248	
1927			23,547,601		1927	20		10,019,828	
1926			24,505,519		1926	18		10,382,279	
1925			20,364,431		1925	19		9,866,975	
<b>Silica brick:</b>					<b>Vitreous china plumbing fixtures (exclusive of fittings), total value:—</b>				
1929	26	Thousands	15,165,260	Thousands	1929			24,992,047	
1928	26		12,187,539		1928			24,556,102	
1927	27		12,756,994		1927			23,627,594	
1926	31		13,614,033		1926			22,875,604	
1925	28		11,280,127		1925			25,035,715	
<b>Magnesite and chrome brick:</b>					<b>Bathroom and toilet fixtures—</b>				
<b>Magnesite brick—</b>					<b>Closest bowls—</b>				
1929	4				<b>Siphon jets—</b>				
1928	5				1929	34		317,072	2,095,647
1927	6				1928	36		255,405	2,197,530
1926	7				1927	33		225,465	2,076,743
1925	7	17,399	5,630,647	3,738	1926	40		284,377	2,167,562
		14,116	4,148,823	2,449	1925	40		284,103	2,045,158
		13,941	3,874,176	3,642	<b>Washdowns—</b>				
		16,130	4,762,645	2,945	1929	36	1,364,804	5,651,120	
		12,732	3,751,872		1928	39	1,548,556	6,210,013	
<b>Chrome brick—</b>					1927	40	1,539,863	5,866,347	
1929	3				1926	43	1,684,473	6,704,752	
1928	4				1925	44	1,866,240	8,547,549	
1927	4				<b>Reverse traps—</b>				
1926	4				1929	32	207,221	1,005,401	
1925	4				1928	33	182,543	1,140,055	
<b>Refractory cement (nonclay):</b>					1927	35	197,510	1,017,347	
1929	18	Tons	1,420,773	Tons	1926	37	178,583	990,402	
1928	24		1,644,564		1925	36	163,149	908,518	
1927	22		1,286,426		<b>Flush tanks—</b>				
1926	17		1,045,468		<b>Lowdown (large and small)—</b>				
1925	88	78,477	2,270,276		1929	35	1,202,396	6,476,911	
<b>Other nonclay refractories, including those of alumina and silicon carbide:</b>					1928	38	1,288,079	7,016,585	
1929	20		6,989,217		1927	40	1,312,739	6,802,887	
1928	21		5,442,924		1926	42	1,250,427	6,594,464	
1927	20		5,680,006		1925	45	1,393,340	8,140,657	
1926	18		5,083,373						
1925	16		3,062,166						

See footnotes at end of table.







## THE CLAY-PRODUCTS INDUSTRIES

Because of the close relationship existing between the two clay-products industries—"Clay products (other than pottery) and nonclay refractories" and "Pottery, including porcelain ware"—the statistics are given both separately and in combination in the tables herewith.

**Description of the industries.**—The "Clay products (other than pottery) and nonclay refractories" industry embraces those establishments which are engaged primarily in the manufacture of brick, drain-tile and other tile, sewer pipe, stove lining, terracotta products, and other refractories, both clay and nonclay.

The establishments assigned to the "Pottery, including porcelain ware" industry are those whose leading products are stoneware, earthenware, porcelain ware, vitreous-china plumbing fixtures, and allied products.

**Scope of the canvass.**—The clay-products industries have been canvassed annually since 1921 by the Bureau of the Census, the reports for the odd-numbered years being included in the series presenting the reports of the biennial censuses of manufactures. The data collected for the even-numbered years relate only to production and stocks on hand, except for 1922, for

which year data were collected on production only. The biennial-census canvasses, in addition to covering the same statistical field for these industries as for manufacturing industries in general, call for data relating to stocks, in order that statistics for these may be given for consecutive years. Annual statistics on production were compiled by the Geological Survey, Department of the Interior, prior to 1921.

**Establishments reporting products valued at less than \$5,000.**—Although the canvass for the biennial census of manufactures is confined, for the most part, to establishments with a yearly output valued at \$5,000 or more, it has been found desirable in the case of the clay-products industries to collect data on production and stocks from all establishments without regard to the size of output. The detailed product statistics in this report, therefore, comprise such data.

**Establishments classified according to major products.**—Table 6, p. 852, gives, for 1929, a summary for establishments classified according to their major products. The purpose of this table is to show the extent to which the production of the specified items is concentrated in establishments which manufacture them as their principal products.

TABLE 1.—COMBINED SUMMARY FOR THE CLAY-PRODUCTS INDUSTRIES, AND SUMMARIES FOR THE SEPARATE INDUSTRIES, FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
<b>THE CLAY-PRODUCTS INDUSTRIES<sup>3</sup></b>							
1929.....	2,062	128,745	\$150,574,307	\$108,706,106	\$405,556,966	\$296,850,800	695,755
1927.....	2,162	137,639	167,117,325	133,450,464	430,505,181	297,054,717	584,400
1925.....	2,245	139,313	173,896,352	133,935,840	444,808,445	310,869,605	567,345
1923.....	2,287	139,547	170,479,309	136,917,435	447,808,354	310,890,929	525,105
1921.....	2,152	97,217	109,081,494	63,503,132	278,546,848	185,043,716	( <sup>4</sup> )
1919.....	2,754	104,849	108,076,363	88,282,189	283,342,106	195,059,917	434,197
1914.....	3,589	126,887	71,573,748	54,754,734	172,864,051	118,109,317	464,817
Per cent of increase or decrease (—):							
1927-1929.....	-4.6	-6.5	-9.9	-18.5	-5.8	( <sup>5</sup> )	1.9
1925-1927.....	-3.8	-1.2	-3.9	-0.4	-3.2		3.0
1923-1925.....	-1.7	-0.2	2.0	-2.2	-0.7	( <sup>5</sup> )	8.0
1921-1923.....	6.3	43.5	56.3	46.4	60.8	68.0	-----
1919-1921.....	-21.9	-7.3	0.9	5.9	-1.7	-5.1	-----
1919-1929.....	-25.1	22.8	39.3	23.1	43.1	52.2	37.2
<b>CLAY PRODUCTS (OTHER THAN POTTERY) AND NONCLAY REFRACTORIES<sup>3</sup></b>							
1929.....	1,749	93,336	\$106,918,327	\$81,698,742	\$294,934,513	\$213,235,771	533,887
1927.....	1,846	100,972	121,967,507	99,869,669	319,907,843	220,038,174	529,581
1925.....	1,939	102,777	127,127,485	100,013,084	335,730,417	233,717,533	517,294
1923.....	1,983	102,723	123,773,001	103,317,550	336,416,331	230,095,731	480,578
1921.....	1,881	68,759	73,725,985	68,275,905	194,328,421	126,053,510	( <sup>4</sup> )
1919.....	2,414	76,915	78,256,085	67,488,113	205,422,920	140,934,807	405,157
1914.....	3,239	100,182	54,907,418	42,723,178	135,921,445	93,198,267	442,480
Per cent of increase or decrease (—):							
1927-1929.....	-5.3	-7.6	-12.3	-18.2	-7.8	-3.1	0.8
1925-1927.....	-4.8	-1.8	-4.1	-0.1	-4.1	-5.9	2.4
1923-1925.....	-2.2	0.1	2.7	-3.2	0.1	1.6	7.6
1921-1923.....	5.4	49.4	67.9	51.3	71.6	82.5	-----
1919-1921.....	-22.1	-10.6	-5.8	1.2	-6.8	-10.6	-----
1919-1929.....	-27.5	21.3	36.6	21.1	41.5	51.3	31.8

See footnotes at end of table.







TABLE 4.—CLAY PRODUCTS (INCLUDING POTTERY) AND NONCLAY REFRACTORIES—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, AND STOCKS ON HAND, FOR THE UNITED STATES: 1925 TO 1929—Con.

[For statistics of principal products, by States, see Table 5]

[Ton, 2,000 pounds; square, 100 square feet]

CLASS AND YEAR	Number of establishments	Quantity	Value	Stocks on hand Dec. 31	CLASS AND YEAR	Number of establishments	Quantity	Value	Stocks on hand Dec. 31
<b>CLAY PRODUCTS, OTHER THAN POTTERY—continued</b>					<b>POTTERY</b>				
<b>Fire-clay products—Continued.</b>					<b>Total value:—</b>				
<b>Special shapes—</b>					<b>Tons</b>				
1929	53	182,280	\$4,092,295	47,544	1929			\$112,019,217	
1928	41	86,671	2,518,198	30,037	1928			107,780,309	
1927	39	132,618	2,699,485	41,180	1927			111,612,931	
1926	40	61,909	1,714,914	17,010	1926			116,493,308	
1925	(1)	(1)	(1)	(1)	1925			112,018,600	
<b>Glass-house tank blocks, melting pots, stoppers, floaters, and rings:</b>					<b>Red earthenware:</b>				
1929	13	35,912	2,276,009	20,575	1929	103		2,798,161	
1928	13	35,513	1,993,609	21,828	1928	79		2,618,078	
1927	14	41,177	2,310,473	23,647	1927	79		2,850,428	
1926	(1)	(1)	(1)	(1)	1926	80		2,635,909	
1925	(1)	(1)	(1)	(1)	1925	73		2,691,897	
<b>Chimney pipe and tops:</b>					<b>Stoneware (except chemical):</b>				
1929	24	19,885	310,113	11,788	1929	63		3,819,138	
1928	26	5,044	216,869	1,419	1928	51		3,788,009	
1927	28	7,905	243,324	2,510	1927	40		4,503,079	
1926	(1)	(1)	(1)	(1)	1926	63		5,311,123	
1925	(1)	(1)	(1)	(1)	1925	50		4,349,317	
<b>Segment blocks:</b>					<b>Yellow and Rockingham ware:</b>				
1929	14	50,546	734,272	18,410	1929	5		324,918	
1928	14	48,845	516,826	33,451	1928	7		653,082	
1927	14	58,989	967,422	36,316	1927	(10)		(10)	
1926	(1)	(1)	(1)	(1)	1926	(10)		(10)	
1925	(1)	(1)	(1)	(1)	1925	(10)		(10)	
<b>Refractory cement (clay):</b>					<b>Chemical stoneware:</b>				
1929	48	57,532	1,692,535		1929	4		1,064,562	
1928	41	51,331	932,326		1928	7		984,554	
1927	40	45,609	1,241,267		1927	5		985,732	
1926	42	31,816	1,328,216		1926	7		848,303	
1925	(*)	(*)	(*)	(*)	1925	9		928,402	
<b>Clay sold, raw or prepared:</b>					<b>Chemical porcelain:</b>				
1929	229	464,215	2,199,962		1929	4		277,549	
1928	225	507,302	2,742,020		1928	4		260,248	
1927	240	487,301	2,597,779		1927	3		(11)	
1926	250	478,020	2,666,843		1926	4		208,731	
1925	240	656,918	3,482,236		1925	4		242,342	
<b>Other clay products:</b>					<b>White ware, including cream-color, white granite, semiporcelain, and semivitreous porcelain ware:</b>				
1929	71		3,502,764		1929	54		32,066,498	
1928	78		3,109,551		1928	47		31,434,606	
1927	67		3,268,472		1927	59		31,692,083	
1926	94		7,658,182		1926	60		33,663,670	
1925	118		7,851,014		1925	62		32,815,622	
<b>NONCLAY REFRACTORIES</b>					<b>Hotel china:</b>				
<b>Total value—</b>					1929				
1929			20,205,897		1929	22		10,476,285	
1928			23,418,850		1928	22		9,251,248	
1927			23,547,601		1927	20		10,019,528	
1926			24,505,619		1926	18		10,882,279	
1925			20,364,431		1925	19		9,866,976	
<b>Silica brick:</b>					<b>Vitreous china plumbing fixtures (exclusive of fittings), total value:—</b>				
1929	28	Thousands 294,402	15,165,260	Thousands 69,149	1929			24,092,047	
1928	26	241,523	12,187,539	48,846	1928			24,566,102	
1927	27	245,881	12,756,994	56,876	1927			23,627,594	
1926	31	266,409	13,614,033	51,114	1926			22,875,604	
1925	28	235,877	11,280,127		1925			25,035,715	
<b>Magnesite and chrome brick:</b>					<b>Bathroom and toilet fixtures—</b>				
<b>Magnesite brick—</b>					<b>Closet bowls—</b>				
1929	4				1929	34	Number of pieces 317,072	2,095,647	
1928	5				1928	36	255,405	2,197,530	
1927	6				1927	33	225,465	2,076,743	
1926	7	17,399	5,630,647	3,738	1926	40	264,377	2,157,662	
1925	7	14,116	4,143,823	2,449	1925	40	284,103	2,045,158	
<b>Chrome brick—</b>					<b>Washdowns—</b>				
1929	3	13,941	3,874,176	3,642	1929	36	1,364,804	5,651,120	
1928	4	16,130	4,762,645	2,945	1928	39	1,548,556	6,210,013	
1927	4	12,732	3,751,872		1927	40	1,539,863	5,866,347	
1926	4				1926	43	1,684,473	6,704,752	
1925	4				1925	44	1,866,240	8,547,549	
<b>Refractory cement (nonclay):</b>					<b>Reverse traps—</b>				
1929	18	Tons 80,802	1,420,773	Tons	1929	32	207,221	1,005,491	
1928	24	70,103	1,044,664		1928	33	182,543	1,140,055	
1927	22	60,328	1,236,426		1927	35	197,510	1,017,347	
1926	17	45,788	1,045,463		1926	37	178,583	999,402	
1925	38	78,477	2,270,276		1925	30	163,149	908,518	
<b>Other nonclay refractories, including those of alumina and silicon carbide:</b>					<b>Flush tanks—</b>				
1929	20		6,089,217		<b>Lowdown (large and small)—</b>				
1928	21		5,442,924		1929	35	1,202,396	6,476,911	
1927	20		5,680,005		1928	38	1,288,079	7,016,585	
1926	18		5,083,373		1927	40	1,312,739	6,802,887	
1925	16		3,062,156		1926	42	1,250,427	6,594,464	
					1925	45	1,393,340	8,140,567	

See footnotes at end of table.

# THE CLAY-PRODUCTS INDUSTRIES

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**TABLE 4.—CLAY PRODUCTS (INCLUDING POTTERY) AND NONCLAY REFRACTORIES—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, AND STOCKS ON HAND, FOR THE UNITED STATES: 1925 TO 1929—Con.**

[For statistics of principal products, by States, see Table 5]

[Ton 2,000 pounds; square, 100 square feet]

CLASS AND YEAR	Number of establishments	Quantity	Value	Stocks on hand Dec. 31	CLASS AND YEAR	Number of establishments	Quantity	Value	Stocks on hand Dec. 31
<b>POTTERY—continued</b>					<b>POTTERY—continued</b>				
Vitreous china plumbing fixtures—Continued.					Semivitreous or porcelain, etc.—Con.		<i>Number of pieces</i>		<i>Number of pieces</i>
Bathroom and toilet fixtures—Continued.					1928.....	22		\$4,674,672	
Flush tanks—Continued.		<i>Number of pieces</i>			1927.....	24		5,465,996	
Other—					1926.....	18		5,597,701	
1929.....	11	19,776	\$137,840		1925.....			(13)	
1928.....	10	17,027	99,888		Porcelain electrical supplies (exclusive of fittings):				
1927.....	10	49,890	468,192		1929.....	52		22,135,474	
1926.....	8	37,388	356,762		1928.....	51		20,812,337	
1925.....	11	26,668	174,921		1927.....	60		22,860,078	
Lavatories—					1926.....	52		24,867,088	
1929.....	24	347,809	4,779,710		1925.....	59		21,826,971	
1928.....	25	336,476	4,301,555		Garden pottery:				
1927.....	27	346,117	4,498,048		1929.....	18		368,634	
1926.....	26	324,083	3,700,500		1928.....	17		248,335	
1925.....	21	276,214	2,834,216		1927.....	17		326,210	
Other bathroom and toilet fixtures—					1926.....	(13)		(13)	
1929.....	21		3,393,279		1925.....	(13)		(13)	
1928.....	18		3,079,706		Art pottery:				
1927.....	16		2,237,124		1929.....	55		2,325,123	
1926.....	17		1,847,529		1928.....	40		2,265,725	
1925.....	11		1,532,299		1927.....	40		2,156,250	
Other fixtures, including laundry tubs and kitchen sinks—					1926.....	(13)		(13)	
1929.....	14		1,452,049		1925.....	(13)		(13)	
1928.....	10		520,770		Saggers:				
1927.....	12		660,906		1929.....	77		1,307,960	
1926.....	11		505,633		1928.....	102		1,739,242	
1925.....	12		802,497		1927.....	109		1,915,950	
Semivitreous or porcelain (all clay) plumbing fixtures (exclusive of fittings), total value: <sup>12</sup>					1926.....	108		2,325,738	
1929.....			3,965,429		1925.....	104		1,764,077	
1928.....			389,141		Other pottery products:				
1927.....	5		231,600		1929.....	54		6,097,439	
1926.....	5		529,032		1928.....	42		4,511,636	
1925.....	24		2,815,658		1927.....	49		5,200,433	
					1926.....	93		7,878,662	
					1925.....	99		12,557,152	

<sup>1</sup> Not reported separately; included in figure for "Other clay products."

<sup>2</sup> Data for years prior to 1929 included in figures for "Floor-arch, silo, and corner tile; radial chimney blocks; fire-proofing tile."

<sup>3</sup> Includes data for "Conduit."

<sup>4</sup> Included in figure for "Falcon tile."

<sup>5</sup> Includes data for "Enameled tile."

<sup>6</sup> Included in figure for "Refractory cement (nonclay)."

<sup>7</sup> See footnote 1.

<sup>8</sup> Includes data for "Refractory cement (clay)."

<sup>9</sup> Includes data for "Yellow and Rockingham ware."

<sup>10</sup> Included in figure for "Stoneware (except chemical)."

<sup>11</sup> Can not be shown separately without disclosing the production of individual establishments; included in figure for "Other pottery products."

<sup>12</sup> For statistics on total production of plumbing fixtures (made of clay, iron, cement, etc.), see report on Plumbers' Supplies.

<sup>13</sup> Not reported separately; included in figure for "Other pottery products."

<sup>14</sup> See footnote 11.

<sup>15</sup> See footnote 13.



THE CLAY-PRODUCTS INDUSTRIES

TABLE 5.—CLAY PRODUCTS (INCLUDING POTTERY) AND NONCLAY REFRACTORIES—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, AND STOCKS ON HAND, BY STATES: 1929—Continued

[See note at head of this table]

CLASS AND STATE	Number of establishments	Quantity	Value	Stocks on hand Dec. 31	CLASS AND STATE	Number of establishments	Quantity	Value	Stocks on hand Dec. 31
<b>CLAY PRODUCTS, OTHER THAN POTTERY—Continued</b>					<b>CLAY PRODUCTS, OTHER THAN POTTERY—Continued</b>				
Hollow building tile—Continued					Sewer pipe, total.....	107	Tons 1,675,453	\$21,330,107	Tons 523,024
Floor-arch, sile, and corner tile; radial chimney blocks; fire-proofing tile—Continued.					California.....	9	81,595	2,213,955	32,191
Ohio.....	9	78,306	\$461,779	27,973	Georgia.....	5	45,035	619,953	35,853
Pennsylvania.....	8	118,492	607,597	25,002	Illinois.....	7	47,163	734,045	31,135
Calif., 1 establishment; Colo., 2; N. Mex., 1; Wash., 1.....	5	1,460	18,511	1,264	Indiana.....	5	122,008	1,351,750	19,738
Ala., 1; Kans., 1; Mass., 1; Minn., 1; Mo., 1; Nebr., 1; N. J., 6; N. C., 1.....	13	45,924	335,523	14,548	Iowa.....	4	57,040	719,519	26,234
Roofing tile, total.....	54	Squares 370,771	3,943,847	Squares 114,365	Kentucky.....	3	28,630	440,693	10,009
California.....	29	161,425	1,671,472	41,670	Missouri.....	5	83,697	1,480,829	43,710
Colo., 2 establishments; Fla., 1; Ga., 1; Ind., 1; Kans., 2; Ky., 2; Mo., 1; N. Mex., 1; Ohio, 2; Oreg., 1; Pa., 2; Tenn., 2; Tex., 2; Wash., 4; W. Va., 1.....	25	209,346	2,272,375	72,695	Ohio.....	33	695,971	7,298,746	190,203
Floor tile (plain, vitreous, encaustic, quarry, etc.), total.....	65	Square feet 15,887,499	3,773,281	Square feet 5,151,720	Pennsylvania.....	8	263,347	2,364,977	42,269
California.....	24	1,998,578	707,230	544,729	Washington.....	5	18,173	256,867	7,470
Indiana.....	4	853,821	124,484	292,719	Ala., 1 establishment; D. C., 2; N. C., 3; S. C., 1; Tenn., 1; Va., 1; Kans., 1; Me., 1; Mich., 2; Minn., 1.....	9	94,791	1,200,822	23,542
New Jersey.....	5	2,208,296	514,041	718,329	Colo., 3; Oreg., 1; Tex., 2; Utah, 2; Wyo., 1.....	5	64,656	1,094,226	30,450
Ohio.....	9	4,250,130	1,065,832	1,740,769	Stove lining, total.....	16	16,895	468,248	4,152
Pennsylvania.....	6	303,850	62,935	621,537	Massachusetts.....	3	4,970	193,219	1,569
Colo., 2 establishments; Fla., 2; Ky., 2; Mass., 1; Minn., 1; N. Mex., 1; N. Y., 1; Tenn., 1; Wash., 1; W. Va., 4; Wis., 1.....	17	0,260,824	1,298,133	1,233,037	New York.....	3	1,075	62,930	894
Ceramic mosaic tile (vitreous and semi-vitreous, unglazed), total.....	31	18,051,525	3,738,393	6,560,663	Pennsylvania.....	3	2,164	80,570	914
New Jersey.....	8	4,256,486	835,692	1,434,107	Ind., 1 establishment; Md., 1; Mo., 1; Ohio, 4.....	7	8,656	122,529	895
Ohio.....	6	4,367,171	887,303	1,865,997	Flue lining, total.....	98	243,333	2,499,320	52,675
Calif., 7 establishments; Ga., 1; Ind., 2; Ky., 1; Mo., 1; N. Y., 1; Pa., 3; Wis., 1.....	17	9,427,868	2,015,308	3,200,559	California.....	7	7,451	259,459	4,556
Enameled tile (bright, dull, matt, and semimatt finishes) and glazed ceramic mosaic, total.....	31	15,977,773	7,446,171	4,505,131	Illinois.....	8	4,145	61,895	2,687
California.....	10	2,685,684	1,349,900	711,634	Iowa.....	4	4,622	49,535	1,085
Indiana.....	3	2,124,957	1,020,568	158,565	Missouri.....	5	11,032	185,218	3,138
New Jersey.....	5	2,018,527	1,098,043	841,542	North Carolina.....	3	3,860	42,774	625
Ohio.....	5	5,313,752	2,375,727	1,923,143	Ohio.....	28	144,020	1,120,467	19,861
Pennsylvania.....	4	3,431,915	1,422,223	853,310	Pennsylvania.....	8	28,892	261,020	5,732
Ky., 1 establishment; Mich., 1; Wash., 1; W. Va., 1.....	4	402,938	179,704	10,937	Washington.....	4	2,029	34,139	919
Faience tile (including hand-decorated tile), total.....	35	3,379,486	2,689,823	1,413,987	Ala., 1 establishment; Ky., 3; Tenn., 2.....	6	10,618	143,463	2,273
California.....	15	1,866,401	1,462,551	580,999	D. C., 2; Ga., 4; Me., 1; S. C., 1; Va., 1.....	9	12,468	161,439	4,050
New Jersey.....	6	285,813	244,604	320,644	Ind., 5; Kans., 1; Mich., 1; Minn., 1.....	8	9,470	112,979	5,807
Ohio.....	6	894,885	667,965	404,387	Colo., 2; Mont., 1; Oreg., 1; Tex., 2; Utah, 1; Wyo., 1.....	8	3,736	66,882	2,042
Fla., 1 establishment; Ky., 2; Pa., 2; Wash., 1; W. Va., 1; Wis., 1.....	8	332,327	314,643	107,957	Wall coping, total.....	60	41,698	507,080	10,782
Wall tile (white and bright-glazed), including trim, total.....	31	30,442,775	11,254,320	7,661,557	Illinois.....	6	1,083	17,102	763
California.....	8	1,524,725	760,221	262,551	Iowa.....	4	1,010	13,194	483
New Jersey.....	6	6,071,835	2,157,406	1,657,617	Missouri.....	4	2,392	45,889	832
Ohio.....	7	6,787,764	2,777,139	2,559,017	Ohio.....	17	17,378	174,934	3,861
Pennsylvania.....	3	6,049,662	1,780,281	1,434,505	Pennsylvania.....	6	8,779	81,538	1,702
Ga., 1 establishment; Ind., 2; Ky., 1; Mich., 1; W. Va., 2.....	7	10,008,789	3,779,273	1,747,387	Ala., 1 establishment; Ga., 4; Ky., 3; N. C., 3; S. C., 1; Tenn., 1.....	13	7,111	104,421	1,511
Drain tile, total.....	333	Tons 888,621	6,615,718	Tons 134,595	Calif., 1; Ind., 2; Kans., 1; Mich., 1; Minn., 1; Tex., 2; Utah, 1; Wash., 1.....	10	3,945	69,914	1,630
California.....	19	7,042	118,385	5,738	Fire-clay products (shaped):				
Colorado.....	6	1,541	17,580	2,012	Brick, block, or tile for locomotive and other fire-box lining, etc. (9-inch equivalent), total.....	198	Thousands 938,218	36,168,898	Thousands 292,966
Illinois.....	34	136,715	637,579	19,264	California.....	16	26,714	1,330,227	8,677
Indiana.....	40	116,119	879,786	29,821	Colorado.....	6	16,083	594,661	4,998
Iowa.....	3	200,224	1,525,082	37,662	Illinois.....	3	25,216	796,392	3,665
Kansas.....	3	3,456	27,889	1,153	Indiana.....	4	5,897	136,225	2,097
Kentucky.....	9	6,740	42,298	3,021	Kentucky.....	11	101,818	4,473,678	27,011
Michigan.....	12	42,913	389,474	8,045	Missouri.....	13	153,595	5,968,111	29,997
Minnesota.....	5	2,997	37,504	1,652	New Jersey.....	10	17,450	928,170	5,078
Missouri.....	11	11,753	106,357	3,733	Ohio.....	25	152,175	3,965,976	99,001
New Jersey.....	5	1,474	20,450	349	Pennsylvania.....	59	352,421	14,897,005	95,887
Ohio.....	81	271,796	1,856,523	51,135	Texas.....	7	6,799	223,444	968
Oregon.....	12	6,174	54,870	2,119	Washington.....	5	6,715	233,666	1,820
Tennessee.....	4	3,365	33,656	2,049	Conn., 1 establishment; Mass., 2; N. Y., 4.....	7	5,590	371,411	918
Washington.....	11	5,302	52,010	2,803	Iado, 2; Mich., 2; Minn., 1; Mont., 2; N. Mex., 1; N. Dak., 2; Oreg., 1; Utah, 1.....	12	5,639	299,242	1,603
Wisconsin.....	7	6,915	67,106	2,638	Ala., 2; Ark., 1; Ga., 3; Md., 5; S. C., 1; Tenn., 2; Va., 1; W. Va., 5.....	20	62,256	1,930,600	11,246
D. C., 2 establishments; Me., 1; N. Y., 3; Pa., 2.....	8	4,438	39,942	2,337	High-alumina brick (over 40% Al <sub>2</sub> O <sub>3</sub> ), total.....	17	23,911	2,114,925	9,530
Ala., 2; Ga., 4; Miss., 2; N. C., 3; S. C., 1; Va., 1; W. Va., 2.....	15	20,696	168,705	3,257	Missouri.....	6	5,716	542,200	1,980
Ark., 2; Mont., 1; Okla., 1; Tex., 3; Utah, 3; Wyo., 1.....	11	9,861	96,522	5,749	Ohio.....	4	8,175	468,984	3,255
					Calif., 2 establishments; Colo., 1; Ga., 1; Ill., 2; Pa., 1.....	7	9,020	1,103,741	4,294
					Special shapes, total.....	53	Tons 182,280	4,092,295	Tons 47,544
					California.....	7	6,961	195,886	5,866
					Missouri.....	4	79,418	1,531,694	17,333
					New Jersey.....	4	5,551	262,930	1,595
					Ohio.....	6	12,333	268,019	4,164



TABLE 5.—CLAY PRODUCTS (INCLUDING POTTERY) AND NONCLAY REFRACTORIES—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, AND STOCKS ON HAND, BY STATES: 1929—Continued

[See note at head of this table]

CLASS AND STATE	Number of establishments	Quantity	Value	Stocks on hand Dec. 31	CLASS AND STATE	Number of establishments	Quantity	Value	Stocks on hand Dec. 31
<b>CLAY PRODUCTS, OTHER THAN POTTERY—continued</b>					<b>NONCLAY REFRACTORIES—CON.</b>				
<b>Fire-clay products—Continued.</b>					<b>Other nonclay refractories (including alumina and silicon carbide):</b>				
<b>Special shapes—Continued.</b>					Calif., 1 establishment; Ill., 1; Ky., 1; Md., 1; Mass., 2; Mich., 1; Mo., 1; N. J., 2; N. Y., 1; Ohio, 1; Pa., 6; Wash., 1; W. Va., 1.				
Pennsylvania	15	Tons 50,416	\$1,085,065	Tons 10,376	<b>POTTERY</b>				
Ark., 1 establishment; Ga., 2; Ky., 2; Md., 1; Mass., 2; N. Y., 1	9	17,456	347,021	5,987	<b>Red earthenware, total</b>				
Colo., 2; Idaho, 1; Wash., 2	5	13,146	371,680	2,324	103	Tons	\$6,989,217	Tons	
Glass-house tank blocks, melting pots, stoppers, floaters, and rings, total	13	35,912	2,276,000	20,575	Alabama	8		16,560	
Pennsylvania	5	8,124	544,694	5,617	California	9		212,308	
Calif., 2 establishments; Ind., 2; Mo., 1; N. J., 1; Ohio, 2	8	27,788	1,731,415	14,958	Georgia	7		19,038	
Chimney pipe and tops, total	24	10,855	310,113	11,788	Illinois	5		212,773	
California	6	3,447	107,308	1,944	Michigan	4		103,244	
Ala., 1 establishment; Ga., 2; Ill., 3; Ky., 1; Ohio, 6; Tenn., 1; Tex., 2; Wash., 2	18	16,438	202,805	9,844	Mississippi	5		9,600	
Segment blocks, total	14	50,546	734,272	18,410	New Jersey	4		93,428	
Missouri	3	9,473	138,565	8,968	North Carolina	4		19,059	
Calif., 2 establishments; Ill., 3; Ind., 1; Iowa, 1; Mass., 2; Minn., 1; Ohio, 1	11	41,073	595,707	9,442	Ohio	13		435,548	
Refractory cement (clay), total	48	57,532	1,602,635		Pennsylvania	5		581,731	
California	6	5,306	88,141		Texas	5		68,771	
Ohio	4	2,292	83,603		Washington	4		36,911	
Ala., 1 establishment; Ill., 2; Ind., 1; Mass., 2; Mich., 1; Mo., 7; N. J., 4; N. Y., 6; Pa., 12; S. C., 1; Vt., 1	38	49,934	1,520,791		Mass., 2 establishments; N. Y., 2; D. C., 1; Md., 1; S. C., 3; Va., 1	4		486,321	
Clay sold, raw or prepared, total	229	464,215	2,199,952		Ky., 3; Tenn., 2	5		71,784	
Alabama	3	2,216	9,863		Ind., 2; Iowa, 1; Kans., 1; Minn., 1; Mo., 3; Nebr., 1; Wis., 1	10		216,442	
California	16	12,860	104,068		Colo., 2; Oreg., 1; Utah, 2	5		61,029	
Colorado	5	4,662	14,319		Stoneware, total	63		3,819,138	
Illinois	8	28,539	63,649		Alabama	6		14,678	
Indiana	6	12,661	47,697		California	7		330,608	
Iowa	5	2,289	23,984		Georgia	3		3,500	
Kentucky	9	33,714	113,173		Illinois	4		650,138	
Massachusetts	10	3,053	22,148		Ohio	13		1,741,477	
Missouri	11	77,073	541,671		Texas	7		124,077	
Nebraska	3	1,945	3,730		Ark., 1 establishment; Colo., 1; Ind., 2; Kans., 1; Ky., 4; Mass., 1; Minn., 1; Miss., 2; Mo., 1; N. C., 2; Oreg., 1; Pa., 3; S. C., 1; Tenn., 2	23		964,000	
New Jersey	13	27,749	216,648		Yellow and Rockingham ware:				
New York	6	2,277	10,698		Calif., 1 establishment; Ill., 1; Ohio, 3	5		324,918	
Ohio	33	114,762	372,888		Chemical stoneware:				
Pennsylvania	51	101,688	563,845		N. J., 1 establishment; Ohio, 2; Tex., 1	4		1,064,562	
Texas	7	2,455	12,777		Chemical porcelain:				
Conn., 2 establishments; Mo., 2; Md., 5; Va., 1; W. Va., 6	4	649	8,377		Colo., 1 establishment; Mich., 1; N. J., 1; Pa., 1	4		277,549	
Ga., 1; S. C., 1; Tenn., 2	12	11,895	56,270		Whiteware, total	54		32,066,498	
Mich., 1; Minn., 3; N. Dak., 2; Wis., 1	4	1,053	4,546		New Jersey	3		219,720	
Ark., 1; N. Mex., 2; Okla., 1	7	15,214	32,545		Ohio	31		15,108,142	
Idaho, 1; Mont., 3; Oreg., 2; Utah, 2; Wash., 3; Wyo., 1	4	1,947	3,781		Pennsylvania	3		1,563,600	
Other clay products, including fancy or ornamental brick, total	71		3,502,764		West Virginia	8		10,937,681	
California	13		38,197		Calif., 3 establishments; Colo., 1; Ill., 1; Ind., 1; Mich., 1; Minn., 1; Md., 1; Tenn., 1; Va., 1	4		821,988	
Illinois	8		949,629		Hotel china, total	22		10,476,285	
Missouri	3		30,825		New York	3		3,261,245	
Ohio	18		1,466,527		Ohio	6		1,217,102	
N. J., 3 establishments; N. Y., 1; Pa., 6	10		808,060		Pennsylvania	3		2,323,698	
Ala., 1; Ga., 1; Ky., 1; Okla., 1; Tenn., 1; Tex., 2; Va., 1	8		93,994		West Virginia	3		1,687,755	
Ind., 3; Mich., 1	4		69,378		Calif., 1 establishment; N. J., 5; Oreg., 1	7		2,006,485	
Iowa, 3; N. Dak., 1	4		16,276		Vitreous china plumbing fixtures (exclusive of fittings), total value		Number of pieces		Number of pieces
Colo., 1; Oreg., 1; Utah, 1	3		29,878		Bathroom and toilet fixtures:				
<b>NONCLAY REFRACTORIES</b>					<b>Closest bowls—</b>				
<b>Silica brick, total</b>					<b>Siphon jets, total</b>				
Pennsylvania	14	Thousands 213,060	10,452,622	Thousands 49,438	Illinois	3		7,128	44,689
Ala., 1 establishment; Calif., 1; Colo., 2; Ill., 2; Ind., 1; Mo., 1; Mont., 1; Ohio, 2; Utah, 1	12	81,342	4,712,638	19,711	New Jersey	14		202,832	1,151,658
Magnesite brick; Md., 1 establishment; Pa., 2	4				West Virginia	4		2,368	16,368
Chrome brick; Md., 1 establishment; Pa., 2	3				Calif., 3 establishments; Pa., 3	6		36,264	278,767
Refractory cement (nonclay):					Ind., 3; Ohio, 3; Wis., 1	7		69,080	604,206
Ala., 1 establishment; Colo., 1; Ill., 2; Ind., 1; Mass., 1; Mont., 1; N. J., 3; Ohio, 1; Pa., 7	18	Tons 80,802	1,420,773	Tons	Washdowns, total	36	1,364,804	5,651,120	
					California	3		153,436	620,636
					Illinois	4		182,629	937,712
					Indiana	3		131,665	534,947
					New Jersey	14		336,551	1,693,643
					Pennsylvania	4		157,696	528,734
					West Virginia	4		124,449	420,713
					Ohio, 3 establishments; Wis., 1	4		223,348	864,735

THE CLAY-PRODUCTS INDUSTRIES

TABLE 5.—CLAY PRODUCTS (INCLUDING POTTERY) AND NONCLAY REFRACTORIES—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, AND STOCKS ON HAND, BY STATES: 1929—Continued

[See note at head of this table]

CLASS AND STATE	Number of establishments	Quantity	Value	Stocks on hand Dec 31	CLASS AND STATE	Number of establishments	Quantity	Value	Stocks on hand Dec 31
<b>POTTERY—continued</b>					<b>POTTERY—continued</b>				
Vitreous china plumbing fixtures—Continued.					Porcelain electrical supplies (exclusive of fittings), total value		Number of pieces	\$22,135,474	Number of pieces
Bathroom and toilet fixtures—Continued.					Insulators, total	22		13,899,795	
Closet bowls—Continued.		Number of pieces		Number of pieces	New York	3		2,684,347	
Reverse traps, total	32	207,221	\$1,005,491		Ohio	6		5,107,105	
New Jersey	13	58,905	386,165		Calif., 2 establishments; Conn., 1; Ill., 1; Md., 1; N. J., 2; Pa., 1; Tenn., 1; W. Va., 3; Wis., 1	13		6,108,352	
Ill., 3 establishments; Ind., 3; Ohio, 3; Wis., 1	10	70,192	391,183		Knobs, tubes, and cleats, total	15		1,575,285	
Calif., 3; Pa., 3; W. Va., 3	9	78,124	278,143		Ohio	7		397,253	
Flush tanks—					Calif., 1 establishment; Ill., 1; Pa., 1; Tenn., 1; W. Va., 4	8		1,178,032	
Lowdown (large and small), total	35	1,202,396	6,476,911		Other electrical supplies, total	29		6,660,394	
California	3	152,106	932,663		New Jersey	13		3,144,243	
Illinois	4	175,194	1,001,103		Ohio	7		1,216,014	
Indiana	3	136,566	824,049		West Virginia	3		440,732	
New Jersey	14	345,241	1,956,897		Calif., 1 establishment; Ill., 1; Ind., 1; Mich., 1; Pa., 1; Tenn., 1	6		1,859,345	
Ohio	4	141,691	622,318		Garden pottery, total	18		368,634	
Pa., 4 establishments; W. Va., 2; Wis., 1	7	251,608	1,140,081		Ohio	8		234,961	
Other—					Ala., 2 establishments; Calif., 5; Fla., 1; Mo., 1; N. C., 1	10		133,653	
Calif., 1 establishment; Ill., 2; Ind., 1; N. J., 5; Ohio, 1; W. Va., 1	11	19,776	137,840		Art pottery, total	55		2,325,123	
Lavatories, total	24	347,899	4,779,710		California	6		25,542	
New Jersey	9	146,429	1,984,051		Massachusetts	3		32,922	
Calif., 3 establishments; W. Va., 2; Wis., 1	6	51,011	662,752		North Carolina	5		34,122	
Ill., 2; Ind., 2; Ohio, 3; Pa., 2	9	150,369	2,132,907		Ohio	11		1,207,583	
Other bathroom and toilet fixtures, total	21		3,393,279		Ala., 2 establishments; Fla., 1; Ga., 3; Ky., 2	8		13,950	
New Jersey	9		441,004		Ark., 2; Mo., 1; W. Va., 1	4		129,773	
Calif., 2 establishments; Ill., 2; Ind., 1; Ohio, 4; Pa., 1; W. Va., 1; Wis., 1	12		2,952,275		Colo., 2; Tex., 1; Wash., 1	4		53,820	
Other fixtures, total	14		1,452,049		Ill., 2; Ind., 1; Mich., 1; Minn., 1; N. J., 5; N. Y., 1	5		385,301	
New Jersey	6		477,789		Saggers, total	77		1,307,960	
Ill., 1 establishment; Ind., 1; Ohio, 2; Pa., 2; W. Va., 2	8		974,260		California	4		71,217	
Semivitreous or porcelain (all clay) plumbing fixtures (exclusive of fittings), total value			3,965,429		Illinois	5		99,220	
Closet bowls and flush tanks: Calif., 1 establishment; N. J., 2; Ohio, 2	5		389,141		Indiana	5		176,424	
Lavatories and bathtubs: N. J., 4 establishments; Ohio, 1	5		231,600		New Jersey	22		220,228	
Laundry tubs and kitchen sinks: N. J., 4 establishments; Ohio, 1	5		529,032		New York	4		180,879	
Other fixtures, total	24		2,815,656		Ohio	22		233,778	
New Jersey	12		2,309,627		Pennsylvania	4		59,493	
Calif., 2 establishments; Ind., 1; N. Y., 1; Ohio, 3; Pa., 3; Va., 1; W. Va., 1	12		506,029		West Virginia	5		151,373	
					Ky., 1 establishment; Md., 2; Mich., 2; Oreg., 1	6		115,368	
					Other pottery products (including red and brown, white-lined cooking ware, porcelain china, and gas and electric logs), total	54		6,067,430	
					New Jersey	12		1,737,491	
					Ohio	19		3,366,299	
					Calif., 6 establishments; Tex., 1; Wash., 1	8		143,834	
					Ga., 1; La., 1; Miss., 1; S. C., 1	4		55,775	
					Ill., 3; Ind., 1; Mo., 1	5		197,136	
					Md., 1; Mass., 1; N. Y., 2; Pa., 2	6		599,914	

## CENSUS OF MANUFACTURES: 1929

TABLE 6.—SUMMARY FOR ESTABLISHMENTS CLASSIFIED ACCORDING TO THEIR MAJOR PRODUCTS, WITH PER CENT WHICH PRODUCTION OF SUCH ESTABLISHMENTS FORMED OF TOTAL PRODUCTION OF ALL ESTABLISHMENTS, FOR THE UNITED STATES: 1929

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Horse-power	TOTAL PRODUCTION		PRODUCTION BY ESTABLISHMENTS CLASSIFIED ACCORDING TO MAJOR PRODUCTS					
							Quantity <sup>2</sup>	Value <sup>3</sup>	Quantity <sup>3</sup>	Value <sup>3</sup>	Per cent of total			
											Quantity	Value		
Total.....	2,062	128,745	\$150,574,307	\$108,706,106	\$405,556,966	595,755		\$406,507,775						
Common brick.....	735	21,091	23,429,946	15,170,068	68,829,177	171,414	Thousands	5,605,359	58,732,635	Thousands	4,940,071	\$52,389,027	89.7	89.2
Face brick.....	244	13,387	15,021,021	10,756,122	38,913,711	95,799		2,139,408	36,119,820		1,850,316	31,310,437	87.0	86.7
Terra cotta.....	26	4,243	6,585,716	2,891,471	15,149,313	11,175	Tons	133,958	13,921,244	Tons	130,814	13,421,068	97.7	96.4
Hollow building tile.....	146	8,615	9,781,800	7,421,825	28,149,480	57,243		4,163,521	30,142,207		3,201,332	23,930,705	78.3	79.4
Roofing tile.....	30	1,459	1,908,097	829,474	4,127,634	7,618	Squares	370,771	3,943,847	Squares	321,855	3,423,220	86.8	86.8
Floor, ceramic-mosaic, enameled, faience, and wall tile.....	75	9,478	10,526,569	6,977,292	28,326,018	18,546	Square feet	83,739,068	28,901,988	Square feet	79,059,079	27,430,829	94.4	94.9
Vitrified brick or block.....	34	2,486	3,266,130	2,238,528	8,312,936	20,144	Thousands	367,650	7,503,930	Thousands	325,570	6,657,180	88.6	88.7
Drain tile.....	148	1,897	1,966,088	1,335,412	5,400,965	16,000	Tons	858,521	6,515,718	Tons	596,991	4,430,184	69.5	68.0
Sewer pipe.....	77	9,642	9,837,087	6,542,224	24,756,323	33,613		1,075,453	21,830,167		1,554,077	19,414,560	92.8	91.0
Fire-clay products.....	140	12,832	14,807,791	13,882,815	44,810,560	56,073	( <sup>4</sup> )	42,376,118		( <sup>4</sup> )	39,874,044		94.3	
Red earthenware.....	49	687	863,740	343,827	2,388,304	2,595		2,798,161			2,201,318		78.7	
Stoneware (except chemical) and yellow and Rockingham ware.....	39	1,036	1,865,903	1,135,123	4,751,294	4,176		4,144,056			3,557,080		85.8	
White ware, including cream-color, white granite, semiporcelain, and semivitreous porcelain.....	48	12,484	14,889,315	8,427,920	32,192,541	16,755		32,066,498			31,550,937		98.4	
Hotel china.....	17	4,712	5,110,462	1,863,874	10,596,829	4,782		10,476,285			10,209,131		97.4	
Vitreous china plumbing fixtures (exclusive of fittings).....	40	5,488	8,462,165	5,984,595	25,718,546	11,498		24,992,047			24,400,056		97.6	
Porcelain electrical supplies (exclusive of fittings).....	44	6,679	7,995,290	7,104,252	22,791,811	15,518		22,135,474			21,658,020		97.8	
Nonclay refractories.....	38	5,175	6,846,283	11,007,236	29,084,379	27,692		29,205,897			27,205,615		93.2	
Other.....	132	6,154	7,350,304	4,794,048	21,257,145	21,214		31,201,617						

<sup>1</sup> The items in this column represent the total values of all products made by establishments engaged primarily in the manufacture of the specified commodities (line 1, Table 3).

<sup>2</sup> The items in these columns represent the total production of the specified commodities, regardless of the classification of the establishments reporting them, and include data for the output of plants reporting products valued at less than \$5,000 (lines 2, 4, and 5, Table 3).

<sup>3</sup> The items in these columns represent the values of the specified commodities made as primary products by the establishments reporting.

<sup>4</sup> Reported as 992,129 M brick and 182,280 tons of special shapes.

<sup>5</sup> Reported as 891,446 M brick and 172,014 tons of special shapes.

THE CLAY-PRODUCTS INDUSTRIES

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TABLE 7.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929; FOR THE CLAY-PRODUCTS INDUSTRIES, IN COMBINATION AND SEPARATELY

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
<b>THE CLAY-PRODUCTS INDUSTRIES</b>												
Prime movers and electric motors driven by purchased energy, aggregate.....	26,150	Horsepower 595,755	20,673	Horsepower 584,460	16,658	Horsepower 567,345	8,143	Horsepower 434,197	7,353	Horsepower 464,817	100.0	100.0
Prime movers, total.....	1,961	211,268	2,250	242,993	2,706	281,690	3,472	319,039	5,007	390,518	26.5	73.5
Steam, total.....	1,484	186,025	1,764	217,905	2,202	255,876	3,011	300,324	4,321	374,374	31.2	69.2
Engines.....	1,448	181,726	1,724	213,977	2,149	252,395	2,969	295,701	(1)	(1)	30.5	68.1
Turbines.....	36	4,290	40	3,928	53	3,481	42	4,023	(1)	(1)	0.7	1.1
Internal-combustion engines.....	468	24,630	481	24,716	481	24,902	458	18,509	666	21,654	4.1	4.3
Water wheels and water turbines.....	9	607	5	372	23	912	3	146	20	490	0.1	(1)
Electric motors driven by purchased energy.....	24,189	384,487	18,423	341,467	13,952	285,655	4,671	115,158	2,346	68,299	64.5	26.5
Electric motors, total.....	27,926	420,124	22,024	378,555	17,210	325,287	6,926	147,501	3,787	94,741	100.0	100.0
Driven by purchased energy.....	24,189	384,487	18,423	341,467	13,952	285,655	4,671	115,158	2,346	68,299	91.5	78.1
Driven by energy generated in establishments reporting.....	3,737	35,637	3,601	37,088	3,258	39,632	2,254	32,343	1,441	26,442	8.5	21.9
Electric generators <sup>1</sup> .....	329	Kilowatts 30,425	352	Kilowatts 36,524	390	Kilowatts 30,545						
Electric energy purchased <sup>4</sup> .....		Kilowatt-hours 411,285,304										
<b>CLAY PRODUCTS (EXCEPT POTTERY) AND NONCLAY REFRACTORIES</b>												
Prime movers and electric motors driven by purchased energy, aggregate.....	10,915	Horsepower 533,887	14,326	Horsepower 529,581	11,617	Horsepower 517,204	6,587	Horsepower 403,167	6,583	Horsepower 442,480	100.0	100.0
Prime movers, total.....	1,772	192,940	2,029	222,696	2,465	260,920	3,179	299,311	4,671	377,785	26.1	73.9
Steam, total.....	1,328	168,616	1,581	198,117	2,000	236,097	2,769	281,815	4,064	357,285	31.6	69.6
Engines.....	1,299	164,855	1,547	194,898	1,963	232,809	2,730	277,577	(1)	(1)	30.9	68.5
Turbines.....	29	3,761	34	3,219	37	3,288	39	4,238	(1)	(1)	0.7	1.0
Internal-combustion engines.....	437	23,894	444	23,774	453	24,128	409	17,456	591	20,145	4.5	4.3
Water wheels and water turbines.....	7	490	4	205	12	695	1	40	16	355	0.1	(1)
Electric motors driven by purchased energy.....	15,143	340,947	12,297	307,485	9,162	256,284	3,408	105,846	1,912	64,695	68.9	26.1
Electric motors, total.....	17,139	367,501	14,227	334,768	11,097	288,246	4,838	133,354	3,090	88,406	100.0	100.0
Driven by purchased energy.....	15,143	340,947	12,297	307,485	9,152	256,284	3,408	105,846	1,912	64,695	92.8	79.4
Driven by energy generated in establishments reporting.....	1,996	26,554	1,930	27,283	1,945	31,962	1,430	27,508	1,178	23,711	7.2	20.6
Electric generators <sup>1</sup> .....	281	Kilowatts 29,438	290	Kilowatts 27,581	310	Kilowatts 29,512						
Electric energy purchased <sup>4</sup> .....		Kilowatt-hours 368,622,270										
<b>POTTERY, INCLUDING PORCELAIN WARE</b>												
Prime movers and electric motors driven by purchased energy, aggregate.....	9,235	Horsepower 61,868	6,347	Horsepower 54,879	5,041	Horsepower 50,141	1,556	Horsepower 29,040	770	Horsepower 22,337	100.0	100.0
Prime movers, total.....	189	18,328	221	20,897	241	20,770	293	19,728	336	18,733	29.6	67.9
Steam, total.....	156	17,409	183	19,788	202	19,779	242	18,509	257	17,089	28.1	63.7
Engines.....	149	16,871	177	19,079	186	19,586	239	18,124	(1)	(1)	27.3	62.4
Turbines.....	7	538	6	709	16	193	3	385	(1)	(1)	0.9	1.3
Internal-combustion engines.....	31	742	37	942	28	774	49	1,113	75	1,569	1.2	3.8
Water wheels and water turbines.....	2	177	1	167	11	217	2	106	4	135	0.3	0.4
Electric motors driven by purchased energy.....	9,040	43,540	6,126	33,982	4,800	29,371	1,263	9,312	434	3,604	70.4	32.1
Electric motors, total.....	10,787	52,623	7,797	43,787	6,113	37,041	2,087	14,147	697	6,335	100.0	100.0
Driven by purchased energy.....	9,040	43,540	6,126	33,982	4,800	29,371	1,263	9,312	434	3,604	82.7	65.8
Driven by energy generated in establishments reporting.....	1,741	9,083	1,671	9,805	1,313	7,670	824	4,835	263	2,731	17.3	34.2
Electric generators <sup>1</sup> .....	48	Kilowatts 6,987	62	Kilowatts 8,943	80	Kilowatts 10,033						
Electric energy purchased <sup>4</sup> .....		Kilowatt-hours 42,663,034										

<sup>1</sup> Not called for separately on schedule.

<sup>2</sup> Less than one-tenth of 1 per cent.

<sup>3</sup> Data for electric generators not called for on schedule prior to 1925.

<sup>4</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc. No data are available for years prior to 1929.



## CONCRETE PRODUCTS

Description of the industry.—This industry classification covers establishments engaged primarily in the manufacture of concrete products, such as building block and tile, brick, cast stone, pipe, posts, vaults, and miscellaneous articles made of sand and gravel, or of sand and crushed rock or cinders, bound together with cement. The classification does not cover concrete construction work on buildings, bridges, etc.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1904 TO 1929

(Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size. No comparable data available for years prior to 1904)

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	2,438	16,505	\$22,688,062	\$34,035,184	\$92,900,749	\$58,895,565	67,651
1927	2,330	17,808	24,897,709	33,913,086	93,259,206	59,346,120	54,342
1925	1,666	14,722	20,761,376	27,792,116	75,213,986	47,421,870	38,361
1923	1,128	10,760	14,834,042	20,485,547	53,602,321	33,116,774	30,748
1921	1,123	6,984	8,690,770	13,483,392	31,768,143	18,284,761	( <sup>3</sup> )
1919	2,785	8,378	9,810,899	13,913,317	53,664,332	19,761,015	22,178
1917	3,548	10,265	6,307,752	8,903,630	21,933,630	13,030,000	20,274
1914	3,439	9,967	5,342,063	7,042,942	18,595,688	11,552,746	12,000
1909	477	2,500	1,402,858	1,430,238	4,128,221	2,697,983	2,750
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929	4.6	-7.3	-8.9	0.4	-0.4	-0.8	24.5
1925-1927	39.9	21.0	19.9	22.0	24.0	25.1	41.7
1923-1925	47.7	36.7	40.0	35.7	40.3	43.2	24.8
1921-1923	0.4	54.2	70.7	51.9	68.7	81.1	-----
1919-1921	-59.7	-16.6	-6.7	-3.1	-5.6	-7.4	-----
1919-1929	-12.5	97.0	143.7	144.6	176.0	198.0	205.0
1909-1919	-10.0	-15.9	74.3	97.5	81.0	71.0	83.4

<sup>1</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Not called for on schedule.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size.]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>	
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy			
United States	1929	2,438	8,458	16,505	67,651	6,719	60,932	\$8,349,404	\$22,688,062	\$34,035,184	\$32,497,625	\$1,537,559	\$92,900,749	\$58,895,565	
	1927	2,330	8,308	17,808	54,342	7,120	47,222	7,402,907	24,897,709	33,913,086	32,530,175	1,382,911	93,259,206	59,346,120	
	1919	2,785	1,446	8,378	22,178	10,209	11,969	2,290,989	9,310,899	13,913,317	13,410,496	502,821	33,664,332	19,761,015	
Individual States:															
	Alabama	1929	26	47	222	894	30	864	94,321	193,548	514,494	498,961	15,838	1,215,179	700,685
	1927	18	36	266	682	286	346	69,632	263,835	425,122	405,240	19,832	1,192,868	767,746	
1919	7	5	28	25	10	15	10,020	29,017	43,182	44,899	288	122,937	77,755		
Arizona	1929	10	7	67	197	-----	107	18,569	69,542	103,905	101,048	2,857	280,020	176,115	
1927	4	5	31	80	-----	80	8,700	30,171	43,555	42,725	830	113,475	69,920		
1919	7	5	33	56	26	30	7,201	47,207	228,949	227,455	1,494	298,592	69,043		
California	1929	171	233	1,561	5,794	265	5,529	655,481	2,372,861	3,082,705	8,010,251	72,454	8,715,404	5,032,699	
1927	141	259	1,624	8,638	266	3,372	640,891	2,496,376	2,916,157	2,855,438	60,719	8,753,228	5,837,071		
1919	114	78	608	842	271	571	117,619	716,362	855,325	839,580	15,745	2,254,140	1,398,821		
Colorado	1929	13	20	189	1,169	506	663	32,122	238,292	608,458	582,417	26,041	1,176,424	567,966	
1927	10	11	44	110	30	80	18,373	45,098	77,024	73,472	3,552	200,352	123,328		
1919	14	17	50	70	37	33	26,688	44,549	59,472	58,407	1,065	154,438	94,066		

See footnotes at end of table.







CENSUS OF MANUFACTURES: 1929

TABLE 3.—CONCRETE PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1929, 1927, AND 1925

[In making use of the statistics in this report, it must be borne in mind that they relate solely to concrete products. For example, the figures for brick refer only to brick made of cement and do not include data for brick made of clay. The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products]

KIND	1929	1927	1925	KIND	1929	1927	1925
1. Concrete-products industry, all products, total value.....	\$92,900,749	\$93,259,206 <sup>1</sup>	\$78,546,515	Concrete products, all industries—Contd.			
2. Concrete products.....	92,244,077	92,606,987	78,546,515	Conduits and pipes—Continued.			
3. Other products (not normally belonging to the industry).....	656,672	752,219	( <sup>2</sup> )	Pressure pipe, reinforced—			
4. Concrete products made as secondary products in other industries, value.....	1,011,935	\$1,212,885	\$1,247,800	Tons.....	111,637	778,184	746,603
Concrete products, all industries:				Value.....	\$2,291,833	\$2,167,144	\$1,832,673
Aggregate value (sum of 2 and 4).....	93,256,012	93,719,872	79,794,375	Sewer pipe, plain and reinforced—			
Building materials, total value.....	48,595,161	\$50,203,240	\$50,467,753	Total tons.....	1,003,673	7819,972	7400,182
Art-marble and Spanish floor tile, value.....	738,205	522,510	359,953	Total value.....	\$12,370,687	\$10,362,812	\$5,160,009
Block and tile, except roofing tile—				Plain (4" to 24")—			
Tons.....	4,327,452	5,007,574	4,183,945	Tons.....	310,894	( <sup>3</sup> )	( <sup>3</sup> )
Value.....	\$30,471,523	\$37,151,488	\$31,193,535	Value.....	\$3,777,615	( <sup>3</sup> )	( <sup>3</sup> )
Brick—				Reinforced (24" to 108")—			
Tons.....	162,512	227,266	363,858	Tons.....	692,779	( <sup>3</sup> )	( <sup>3</sup> )
Value.....	\$1,064,633	\$1,636,368	\$2,532,246	Value.....	\$8,593,072	( <sup>3</sup> )	( <sup>3</sup> )
Cast stone—				Household and other accessories—			
Tons.....	332,318	320,101	354,164	Total tons.....	78,068	60,776	81,480
Value.....	\$12,927,249	\$13,714,584	\$12,843,418	Total value.....	\$2,815,944	\$2,312,487	\$2,650,772
Fireplaces and mantels, value.....	\$524,456	( <sup>3</sup> )	( <sup>3</sup> )	Garbage boxes—			
Roofing tile—				Tons.....	4,990	3,730	2,361
Total tons.....	137,052	118,365	\$110,555	Value.....	\$202,142	\$209,977	\$128,096
Total value.....	\$2,869,092	\$3,178,290	\$3,538,601	Garden furniture—			
Large—				Tons.....	7,995	7,197	4,860
Tons.....	125,961	91,717	( <sup>3</sup> )	Value.....	\$497,001	\$455,668	\$407,173
Value.....	\$2,587,893	\$2,401,426	( <sup>3</sup> )	Incinerators—			
Small—				Tons.....	1,270	( <sup>3</sup> )	( <sup>3</sup> )
Tons.....	11,091	26,648	( <sup>3</sup> )	Value.....	\$61,789	( <sup>3</sup> )	( <sup>3</sup> )
Value.....	\$281,199	\$776,864	( <sup>3</sup> )	Laundry trays—			
Circular structures—				Tons.....	36,430	36,382	60,455
Total tons.....	213,357	151,738	111,892	Value.....	\$1,101,829	\$1,109,784	\$1,620,920
Total value.....	\$2,216,123	\$1,724,257	\$1,424,406	Septic tanks and sanitary fittings—			
Cistern and manhole blocks—				Tons.....	27,383	13,467	13,804
Tons.....	63,521	44,299	27,940	Value.....	\$993,183	\$440,658	\$434,584
Value.....	\$494,405	\$373,030	\$223,199	Monuments and grave markers—			
Silo blocks—				Tons.....	3,702	2,000	2,245
Tons.....	27,873	43,638	34,043	Value.....	\$189,770	\$131,102	\$92,794
Value.....	\$361,619	\$554,100	\$517,179	Burial vaults—			
Staves and slabs—				Tons.....	82,640	52,023	34,529
Tons.....	121,963	63,803	49,409	Value.....	\$3,270,846	\$2,088,037	\$1,081,853
Value.....	\$1,360,089	\$797,127	\$984,028	Paving materials—			
Conduits and pipes—				Total tons.....	54,163	55,728	28,395
Total tons.....	1,818,587	1,860,217	1,283,429	Total value.....	\$694,793	\$649,748	\$422,768
Total value.....	\$23,189,021	\$24,291,427	\$17,761,052	Crossing slabs—			
Culvert pipe—				Tons.....	15,492	4,197	1,223
Tons.....	857,587	7344,774	7340,389	Value.....	\$213,602	\$60,049	\$17,107
Value.....	\$4,879,229	\$4,406,814	\$4,480,831	Precast sidewalk slabs and curbing—			
Drain tile—				Tons.....	28,849	38,447	22,229
Tons.....	75,563	95,033	79,919	Value.....	\$353,479	\$417,100	\$290,003
Value.....	\$714,879	\$840,254	\$704,033	Precast units for railroad use—			
Electric conduits—				Tons.....	9,822	18,084	4,943
Tons.....	12,878	11,473	1,857	Value.....	\$127,712	\$172,599	\$109,656
Value.....	\$295,002	\$267,097	\$43,762	Poles and posts—			
Handmade pipe—				Total tons.....	28,203	37,498	21,984
Tons.....	( <sup>3</sup> )	66,175	( <sup>3</sup> )	Total value.....	\$1,412,405	\$1,808,120	\$1,339,335
Value.....	( <sup>3</sup> )	\$928,559	( <sup>3</sup> )	Fence posts—			
Irrigation pipe—				Tons.....	8,884	13,601	7,540
Tons.....	254,861	794,360	7138,806	Value.....	\$129,229	\$223,798	\$146,736
Value.....	\$3,054,609	\$1,252,901	\$1,783,874	Lighting standards—			
Machine-made pipe—				Tons.....	17,801	23,264	13,776
Tons.....	( <sup>3</sup> )	345,468	201,813	Value.....	\$1,247,494	\$1,565,245	\$1,171,620
Value.....	( <sup>3</sup> )	\$3,947,138	\$3,617,445	Mail-box posts and transmission poles—			
Metal boxes—				Tons.....	1,518	633	618
Tons.....	2,748	4,778	4,960	Value.....	\$35,682	\$19,077	\$20,979
Value.....	\$82,182	\$128,708	\$138,425	Premixed concrete, value.....	\$7,618,069	( <sup>3</sup> )	( <sup>3</sup> )
				Other concrete products, <sup>4</sup> value.....	\$1,919,830	\$3,298,509	\$2,705,784
				Concrete products not reported in detail, value.....	\$1,334,020		
				Concrete products not distributed, value.....		\$1,212,885	\$1,247,800

<sup>1</sup> The difference between the value of products for 1925 as shown in Table 1 and in Table 3 is explained as follows: Table 1 was compiled from data reported by regular manufacturers of concrete products whose output during the census year was valued at \$5,000 or more, and covers both concrete products and secondary products (products other than concrete) made by these manufacturers. Table 3 presents figures for concrete products only, as reported (a) by establishments covered by Table 1, (b) by manufacturers whose products were valued at less than \$5,000, and (c) by builders and contractors.

<sup>2</sup> Not reported separately.  
<sup>3</sup> This amount can not be distributed by kind.  
<sup>4</sup> Does not include the value of fireplaces and mantels, which was included in that of "Other concrete products" for 1927 and 1925.  
<sup>5</sup> Not called for separately on schedule; included in value of "Other concrete products."  
<sup>6</sup> Does not include data for cement roofing tile, valued at \$476,073 (quantity not reported), made in establishments classified in the roofing-materials industry for 1925. Establishments manufacturing cement roofing tile were included in the concrete-products industry for 1929 and 1927.  
<sup>7</sup> Some of this class of pipe may have been reported as "handmade" and "machine-made" for 1927 or "machine-made" for 1925, but the 1929 schedule did not call for data under these headings.  
<sup>8</sup> Battery walls and boxes, columns, cribbing, grease traps, piling, terrazzo steps, troughs, vents, and well curbing; the figures for 1927 and 1925 also include data for fireplaces and mantels, incinerators, and premixed concrete.  
<sup>9</sup> See footnote 3.

# CONCRETE PRODUCTS

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TABLE 4.—CONCRETE PRODUCTS, BY KIND, QUANTITY, AND VALUE, BY STATES: 1929

(The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups)

KIND AND STATE	Number of establishments	Tons	Value	KIND AND STATE	Number of establishments	Tons	Value
Art-marble and Spanish floor tile, total.....	24	( <sup>1</sup> )	\$738,205	Fireplaces and mantels, total.....	44	( <sup>1</sup> )	\$524,456
California.....	4	( <sup>1</sup> )	101,826	California.....	7	( <sup>1</sup> )	38,407
Illinois.....	4	( <sup>1</sup> )	309,356	Michigan.....	5	( <sup>1</sup> )	48,064
Texas.....	4	( <sup>1</sup> )	64,588	Ohio.....	4	( <sup>1</sup> )	42,050
N. J., 1 est.; N. Y., 1; Pa., 1; Vt., 1.....	4	( <sup>1</sup> )	22,656	Mass., 1 est.; N. J., 1; N. Y., 3; Pa., 1.....	0	( <sup>1</sup> )	28,364
Other States (Ala., 1 est.; Mich., 1; Minn., 1; Mo., 1; N. C., 1; Ohio, 2; Wis., 1).....	8	( <sup>1</sup> )	149,779	Other States (Ga., 3 est.; Idaho, 1; Ill., 4; Ind., 1; Ky., 2, Md., 2; N. C., 1; Okla., 2; Oreg., 1; Tex., 1; Wash., 2; Wis., 2).....	22	( <sup>1</sup> )	367,543
Block and tile, total.....	1,406	4,327,452	30,471,526	Roofing tile, large, total.....	38	125,961	2,587,593
Arizona.....	0	8,700	67,829	Michigan.....	4	1,253	34,240
California.....	23	54,626	323,954	New Jersey.....	5	28,024	557,573
Connecticut.....	15	22,803	210,157	New York.....	3	2,473	62,657
Delaware.....	10	24,501	157,294	Ill., 3 est.; Ind., 1; Ohio, 1; Pa., 4.....	9	84,451	1,733,609
Florida.....	10	40,099	249,140	Other States (Ala., 2 est.; Calif., 2; Fla., 2; Iowa, 1; Ky., 1; La., 1; Mo., 1; N. C., 1; Tenn., 1; Tex., 2; Va., 1; W. Va., 1; Wis., 1).....	17	2,760	199,523
Georgia.....	3	22,918	185,869	Roofing tile, small, total.....	38	11,091	281,199
Illinois.....	107	269,073	1,902,193	Illinois.....	3	330	11,832
Indiana.....	44	154,773	758,193	Ohio.....	3	303	8,117
Iowa.....	26	35,575	322,877	Tennessee.....	4	1,940	62,467
Kansas.....	12	20,850	149,311	Virginia.....	3	420	9,114
Kentucky.....	16	34,849	268,281	Conn., 1 est.; Mass., 1; N. Y., 1.....	3	1,580	46,026
Maine.....	7	5,027	39,668	Ind., 2 est.; Pa., 3.....	5	361	25,082
Maryland.....	35	103,065	741,983	Mich., 2 est.; Wis., 1.....	3	591	17,079
Massachusetts.....	49	104,360	1,159,732	Other States (Calif., 1 est.; Colo., 2; Fla., 1; Iowa, 1; La., 1; Minn., 1; Miss., 1; Mo., 3; Nebr., 1; N. C., 1; Tex., 1).....	14	5,066	101,455
Michigan.....	150	621,637	3,888,651	Cistern and manhole blocks, total.....	92	63,521	494,405
Minnesota.....	55	115,770	725,041	Illinois.....	17	20,759	166,523
Missouri.....	12	78,651	600,464	Indiana.....	4	2,183	20,377
Nebraska.....	12	57,988	274,481	Massachusetts.....	4	609	6,353
New Jersey.....	130	513,938	3,823,727	Michigan.....	6	5,719	40,422
New York.....	146	447,320	3,315,481	Minnesota.....	8	7,591	38,333
North Carolina.....	8	7,632	63,590	New York.....	8	3,770	31,884
Ohio.....	121	348,574	2,312,874	Ohio.....	5	2,665	21,825
Oklahoma.....	5	7,657	51,729	Pennsylvania.....	6	4,931	41,219
Oregon.....	10	3,793	34,305	Washington.....	4	275	2,083
Pennsylvania.....	207	714,974	4,979,792	Wisconsin.....	10	5,228	43,956
Rhode Island.....	8	11,148	94,101	Conn., 1 est.; Me., 1; N. J., 4; R. I., 1.....	7	7,014	56,593
South Dakota.....	5	6,142	46,374	Kans., 3 est.; Mo., 1; Nebr., 1.....	5	1,643	13,223
Tennessee.....	14	32,771	230,662	Other States (Calif., 1 est.; Md., 2; N. C., 1; Oreg., 2; Utah, 1; Va., 1).....	8	1,134	11,014
Texas.....	18	80,248	242,168	Silo blocks, total.....	28	27,873	361,619
Virginia.....	15	45,836	428,401	Iowa.....	3	1,583	20,266
Washington.....	14	10,774	91,342	Minnesota.....	5	1,213	14,219
West Virginia.....	20	35,906	293,598	N. J., 1 est.; N. Y., 2; Ohio, 2; Pa., 1.....	6	2,126	20,715
Wisconsin.....	72	244,577	1,878,342	Ill., 1 est.; Ind., 1; Mich., 4; Wis., 2.....	8	16,672	229,854
Ala., 2 est.; Miss., 2.....	4	5,548	41,820	Other States (Calif., 1 est.; Colo., 1; Kans., 3; S. Dak., 1).....	5	6,279	76,565
Ark., 1 est.; La., 2.....	3	3,382	26,133	Staves and slabs, total.....	63	121,963	1,360,099
Colo., 2 est.; Nev., 2; Utah, 2.....	0	11,362	104,152	California.....	3	1,092	11,524
Other States (D. C., 2 est.; Idaho, 1; N. H., 2; N. Dak., 2; S. C., 1).....	8	19,949	157,347	Indiana.....	5	5,854	76,734
Brck, total.....	148	162,512	1,064,633	Michigan.....	5	4,615	47,684
Iowa.....	6	1,420	10,262	Minnesota.....	13	14,418	143,612
Maine.....	4	1,056	6,856	Wisconsin.....	4	483	6,414
Massachusetts.....	10	38,680	236,660	Iowa, 6 est.; Kans., 4; S. Dak., 1.....	11	10,576	111,491
Michigan.....	5	2,502	14,663	Other States (Colo., 2 est.; Ill., 5; N. Y., 2; Ohio, 4; Tenn., 1; Tex., 1; Va., 1; Wash., 1).....	17	52,166	542,265
Minnesota.....	7	231	1,991	Culvert pipe, total.....	168	357,587	4,379,229
Nebraska.....	3	628	4,620	California.....	13	7,228	89,455
New Jersey.....	11	8,203	57,818	Illinois.....	10	20,871	282,001
New York.....	20	20,935	155,186	Iowa.....	9	6,743	75,004
Pennsylvania.....	17	30,731	189,624	Kansas.....	7	11,476	159,161
Wisconsin.....	12	8,142	55,580	Kentucky.....	5	22,337	248,346
Ala., 2 est.; Fla., 1; N. O., 1; Tex., 4.....	8	14,247	101,446	Michigan.....	6	8,530	112,758
Del., 1 est.; D. C., 1; Md., 2; R. I., 1; Va., 1; W. Va., 1.....	7	12,828	79,318	Minnesota.....	11	28,682	327,791
Ill., 9 est.; Ind., 6; Ohio, 5.....	20	12,301	73,458	Missouri.....	4	3,295	57,731
Kans., 1 est.; Mo., 3; N. Dak., 1.....	5	4,262	30,662	Nebraska.....	4	7,732	101,264
Ariz., 2 est.; N. Mex., 1; Utah, 1.....	4	4,368	30,915	New York.....	9	12,555	162,944
Calif., 1 est.; Oreg., 4; Wash., 4.....	9	1,972	16,174	North Carolina.....	6	12,592	146,549
Cast stone, total.....	814	332,818	12,927,249	North Dakota.....	3	3,529	60,151
Alabama.....	3	650	27,427	Oregon.....	12	10,896	126,199
Arizona.....	3	641	41,090	Pennsylvania.....	8	61,874	636,277
California.....	26	31,456	1,004,440	South Carolina.....	4	16,050	177,354
Florida.....	8	9,373	394,812	Texas.....	7	7,734	115,369
Georgia.....	3	1,347	59,872	Washington.....	16	17,370	246,631
Illinois.....	23	18,237	542,020	Conn., 1 est.; Me., 1; Mass., 1; N. J., 1.....	4	21,227	291,964
Indiana.....	9	2,029	69,591	Ala., 1 est.; Fla., 1; Ga., 1; Miss., 3; Tenn., 2; Va., 1; W. Va., 1.....	10	46,712	607,672
Iowa.....	6	2,183	90,179	Other States (Colo., 1 est.; Idaho, 2; Ind., 3; Mont., 1; Nev., 1; Ohio, 2; Okla., 1; S. Dak., 4; Utah, 1; Wis., 3; Wyo., 1).....	20	30,554	353,948
Kansas.....	5	3,942	183,516				
Kentucky.....	4	825	34,416				
Massachusetts.....	13	41,053	1,433,211				
Michigan.....	13	9,152	349,399				
Minnesota.....	7	1,073	43,434				
Nebraska.....	5	6,317	34,508				
New Jersey.....	11	12,550	568,698				
New York.....	32	68,843	3,025,885				
Ohio.....	23	10,639	502,950				
Pennsylvania.....	29	12,055	437,666				
Tennessee.....	5	3,357	117,094				
Texas.....	14	17,451	699,247				
Washington.....	8	7,105	368,910				
West Virginia.....	15	8,790	30,709				
Wisconsin.....	6	6,937	255,939				
Conn., 3 est.; Mo., 3; R. I., 1.....	7	24,234	920,793				
Del., 1 est.; D. C., 2; Md., 5.....	8	8,994	421,329				
N. C., 3 est.; S. C., 2; Va., 3.....	8	8,787	364,347				
Colo., 3 est.; Idaho, 1; Oreg., 3; Utah, 2.....	9	4,613	193,179				
Other States (Ark., 1 est.; La., 3; Miss., 1; Mo., 6; Okla., 9).....	14	17,735	742,591				

See footnotes at end of table.

## CENSUS OF MANUFACTURES: 1929

TABLE 4.—CONCRETE PRODUCTS, BY KIND, QUANTITY, AND VALUE, BY STATES: 1929—Continued

(See note at head of this table)

KIND AND STATE	Number of establishments	Tons	Value	KIND AND STATE	Number of establishments	Tons	Value
Drain tile, total.....	132	75,563	\$714,879	Garden furniture, total.....	190	7,995	\$497,001
California.....	10	3,105	34,600	Alabama.....	4	84	5,489
Illinois.....	8	5,504	53,813	California.....	11	355	23,935
Indiana.....	11	12,605	120,793	Georgia.....	4	83	5,204
Iowa.....	6	3,344	28,914	Illinois.....	17	683	40,401
Michigan.....	11	6,304	62,125	Indiana.....	8	158	10,232
Minnesota.....	17	13,283	111,900	Iowa.....	7	41	2,515
Ohio.....	11	7,723	67,688	Maryland.....	4	30	2,734
Oregon.....	9	1,789	21,584	Michigan.....	11	125	8,114
Texas.....	3	336	5,763	Nebraska.....	5	146	8,867
Virginia.....	4	1,222	12,090	New Jersey.....	9	826	53,672
Washington.....	12	4,543	40,746	New York.....	7	900	54,680
Wisconsin.....	9	8,813	80,931	Ohio.....	20	355	15,631
Mass., 1 est.; N. J., 1; N. Y., 5; Pa., 3; R. I., 1.....	11	4,548	43,018	Tennessee.....	5	216	11,441
Other States (Fla., 3 est.; Mo., 1; Nebr., 1; Nev., 1; N. C., 2; Okla., 1; Utah, 1).....	10	2,364	24,614	Texas.....	5	240	18,851
Electric conduits (Ill., 1 est.; Iowa, 1; Mass., 1; N. Y., 1; Tex., 1).....	5	12,578	295,602	Virginia.....	6	277	16,056
Irrigation pipe, total.....	91	254,801	3,054,609	Washington.....	3	34	2,137
Arizona.....	3	4,630	65,572	Wisconsin.....	8	153	9,337
California.....	70	206,493	2,409,595	Conn., 1 est.; Me., 3; Mass., 5; N. H., 1; Pa., 20; R. I., 1.....	31	2,365	143,095
Oregon.....	5	796	13,809	Ky., 2 est.; N. C., 4; S. C., 2.....	8	108	6,438
Texas.....	4	29,040	405,041	Ark., 1 est.; La., 2; Okla., 3.....	6	349	21,687
Other States (Idaho, 2 est.; La., 2; Minn., 1; Wash., 3; Wis., 1).....	9	13,830	161,002	Other States (Colo., 1 est.; Kans., 2; Minn., 3; Mo., 2; Nev., 1; Oreg., 1; S. Dak., 1).....	11	453	20,688
Meter boxes, total.....	26	2,748	82,182	Incinerators (Calif., 5 est.; Conn., 1).....	6	1,270	51,789
Oregon.....	3	94	2,149	Laundry trays, total.....	52	30,430	1,101,829
Washington.....	8	121	5,620	California.....	5	7,173	217,025
Other States (Calif., 3 est.; Conn., 1; Ill., 3; Ind., 1; Kans., 2; Ohio, 1; Okla., 1; S. C., 1; Tex., 1; Va., 1).....	15	2,533	74,413	Illinois.....	6	7,818	226,904
Pressure pipe (Calif., 6 est.; Colo., 2; Conn., 1; Idaho, 2; Mass., 1; N. J., 1; Oreg., 1; Pa., 2; Wash., 1).....	17	111,637	2,291,833	Michigan.....	4	2,051	88,572
Sewer pipe, plain, total.....	127	310,894	3,777,015	Ohio.....	4	4,050	138,231
California.....	13	32,203	416,257	Oregon.....	3	906	31,853
Colorado.....	3	4,178	51,704	Conn., 1 est.; Mass., 2.....	3	1,723	53,074
Florida.....	6	8,762	110,373	N. J., 2 est.; N. Y., 5; Pa., 3.....	10	6,298	185,270
Georgia.....	3	14,028	170,096	Ind., 1 est.; Kans., 1; Minn., 2; Wis., 1.....	5	1,740	55,377
Indiana.....	4	6,113	79,251	Fla., 1 est.; La., 1; Md., 2.....	4	2,340	67,341
Louisiana.....	4	22,888	218,585	Colo., 1 est.; Wash., 2.....	3	1,110	37,882
Michigan.....	6	60,816	732,694	Septic tanks and sanitary fittings, total.....	146	27,883	963,193
Missouri.....	3	6,464	83,309	California.....	19	1,600	57,964
North Carolina.....	5	3,878	42,896	Florida.....	4	608	20,835
Oregon.....	11	11,273	114,921	Illinois.....	8	926	28,165
Texas.....	7	21,922	324,732	Indiana.....	3	81	2,430
Washington.....	16	15,019	185,542	Iowa.....	4	48	1,790
Conn., 1 est.; Me., 1; Mass., 3; N. J., 4; N. Y., 8; Pa., 3.....	20	27,416	321,746	Massachusetts.....	7	541	16,688
Ill., 2 est.; Ohio, 1; Wis., 1.....	4	16,740	200,883	Michigan.....	22	1,581	71,190
Ky., 2 est.; S. C., 2; Va., 2; W. Va., 1.....	7	13,825	203,308	North Carolina.....	3	207	5,710
Ala., 2 est.; Miss., 2; Okla., 2; Tenn., 3.....	9	41,190	446,932	Oregon.....	7	333	9,267
Other States (Idaho, 2 est.; Iowa, 1; Minn., 1; Nebr., 1; S. Dak., 1).....	6	4,073	65,386	Texas.....	4	133	3,550
Sewer pipe, reinforced, total.....	133	692,779	8,593,072	Washington.....	11	485	15,870
Connecticut.....	5	6,973	87,780	Other States (Colo., 1 est.; Conn., 5; Ky., 2; La., 1; Md., 1; Minn., 3; Miss., 1; Mo., 2; Nebr., 1; N. J., 3; N. Y., 5; Ohio, 7; Okla., 1; Pa., 12; Tenn., 4; Va., 4; Wis., 1).....	54	20,040	729,924
Illinois.....	7	86,323	921,636	Monuments and grave markers, total.....	55	3,702	189,770
Louisiana.....	3	7,181	71,035	Iowa.....	3	19	1,203
Michigan.....	7	98,848	1,220,130	Texas.....	6	188	10,463
New Jersey.....	10	103,388	1,275,690	Other States (Ala., 2 est.; Ark., 1; Calif., 4; Conn., 1; Fla., 1; Ga., 1; Ill., 2; Ind., 1; La., 2; Me., 2; Md., 1; Mass., 2; Mich., 2; Minn., 2; Mo., 1; N. H., 1; N. J., 3; N. Y., 2; Ohio, 1; Oreg., 1; Pa., 4; S. C., 1; S. Dak., 1; Tenn., 3; Va., 1; Wash., 1; Wis., 2).....	46	3,495	178,109
New York.....	9	42,251	509,210	Burial vaults, total.....	263	82,640	3,270,846
Ohio.....	10	42,470	543,408	Alabama.....	9	1,591	65,336
Pennsylvania.....	7	33,007	372,462	California.....	5	1,504	62,651
Texas.....	8	14,489	160,504	Connecticut.....	3	1,350	42,685
Virginia.....	3	4,167	59,173	Georgia.....	5	694	27,820
Wisconsin.....	3	18,544	311,804	Illinois.....	27	10,891	609,823
Kans., 4 est.; Minn., 2; Mo., 4; S. Dak., 1.....	11	25,739	338,649	Indiana.....	23	5,782	286,599
Md., 2 est.; N. C., 3; S. C., 1; W. Va., 3.....	9	27,368	332,094	Iowa.....	9	897	40,693
Fla., 2 est.; Ga., 2.....	4	11,188	159,707	Maine.....	3	323	10,800
Ala., 3 est.; Ky., 1; Miss., 1; Tenn., 3.....	8	28,912	300,779	Massachusetts.....	8	1,843	71,540
Other States (Calif., 8 est.; Ind., 9; Me., 1; Mass., 1; Mont., 1; N. H., 2; Okla., 2; Oreg., 2; R. I., 1; Wash., 3; Wyo., 1).....	29	142,136	1,839,011	Michigan.....	23	4,768	164,488
Garbage boxes, total.....	20	4,990	202,142	Missouri.....	5	1,514	63,238
Michigan.....	5	2,781	91,635	Nebraska.....	5	1,107	50,026
Other States (Calif., 1 est.; Colo., 1; Fla., 1; Ill., 7; Ind., 1; Md., 1; Minn., 1; Tenn., 1; Va., 1).....	15	2,209	110,507	New Jersey.....	5	3,940	260,915
				New York.....	17	10,744	389,776
				Ohio.....	31	6,272	279,248
				Pennsylvania.....	35	11,260	468,794
				Virginia.....	5	1,186	62,453

See footnotes at end of table.

# CONCRETE PRODUCTS

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TABLE 4.—CONCRETE PRODUCTS, BY KIND, QUANTITY, AND VALUE, BY STATES: 1929—Continued

(See note at head of this table)

KIND AND STATE	Number of establishments	Tons	Value	KIND AND STATE	Number of establishments	Tons	Value
<b>Burial vaults—Continued.</b>				<b>Fence posts—Continued.</b>			
Washington.....	4	613	\$31,083	Conn., 1 est.; Del., 1; Me., 1; N. H., 1; N. Y., 6; Pa., 4.....	14	3,153	\$41,888
Wisconsin.....	11	960	40,033	Other States (Calif., 1 est.; Colo., 1; Ill., 2; Ind., 1; Iowa, 2; Kans., 1; Ky., 1; Mich., 4; Miss., 1; Mo., 1; Ohio, 4; Oreg., 2; Tex., 1; Wis., 2; Wyo., 1).....	25	5,177	75,605
Ky., 3 est.; N. C., 1; S. C., 2; Tenn., 3.....	0	1,031	39,843	Lighting standards (Calif., 2 est.; Ill., 6; Mo., 2; Nebr., 1; N. Y., 1; Pa., 1; Wash., 3; Wis., 1).....	17	17,801	1,247,494
Other States (Colo., 1 est.; Del., 1; Kans., 3; Md., 2; Minn., 3; Miss., 1; N. H., 2; N. Dak., 1; Okla., 1; S. Dak., 3; Tex., 1; W. Va., 2).....	21	8,370	263,078	Mail-box posts and transmission poles (Calif., 1 est.; Ill., 1; Mo., 1; N. J., 1; Ohio, 1; Oreg., 1).....	6	1,518	35,682
Crossing slabs (Calif., 2 est.; Fla., 1; Ill., 1; Me., 1; Mich., 2; Minn., 1; Miss., 1; Nebr., 1; N. J., 1; Ohio, 2; Okla., 1; Tex., 1; Wis., 1).....	16	15,492	213,602	Premixed concrete, total.....	30	( <sup>2</sup> )	7,018,099
Precast sidewalk slabs and curbing, total.....	37	28,849	353,479	Alabama.....	4	( <sup>2</sup> )	337,952
Minnesota.....	3	1,959	21,656	Pennsylvania.....	5	( <sup>2</sup> )	253,390
New York.....	7	9,125	102,232	Conn., 1 est.; N. J., 1; N. Y., 3.....	5	( <sup>2</sup> )	422,899
Other States (Calif., 2 est.; Conn., 1; Fla., 2; Ill., 2; Iowa, 1; La., 2; Mass., 1; Mich., 1; Mo., 1; Nebr., 1; N. J., 3; Pa., 6; Tex., 1; Va., 1; Wash., 2).....	27	17,765	229,551	Ill., 2 est.; Ind., 1; Ohio, 3; Wis., 1.....	7	( <sup>2</sup> )	277,263
Precast units for railroad use (Ill., 1 est.; Minn., 1; N. Y., 2; Ohio, 2; Pa., 2).....	8	9,822	127,712	Iowa, 1 est.; Kans., 2; Minn., 1; Mo., 2; Nebr., 1.....	7	( <sup>2</sup> )	3,559,219
Fence posts, total.....	47	8,884	129,229	Ariz., 2 est.; Calif., 4; Oreg., 2; Wash., 2.....	10	( <sup>2</sup> )	1,124,389
Massachusetts.....	9	28	419	Other States (Ark., 1 est.; D. C., 2; Fla., 1; La., 2; Miss., 1; N. C., 1; Okla., 1; Tenn., 1; Tex., 1; Va., 1).....	12	( <sup>2</sup> )	1,042,967
Washington.....	5	520	11,117				

<sup>1</sup> Data incomplete.  
<sup>2</sup> No data.

TABLE 5.—PRINCIPAL MATERIALS CONSUMED IN THE CONCRETE-PRODUCTS INDUSTRY, BY KIND, QUANTITY, AND COST, BY STATES: 1929

[This table presents statistics for all States for which separate figures can be shown without disclosing consumption by individual establishments. Some of the "Other States," however, reported larger quantities of some classes of materials than some of those shown separately. The difference between the sum of the costs of the several kinds of materials shown in this table and the total cost of materials as given in Tables 1 and 2 is due to the fact that this table covers only certain specified materials, whereas the others cover all materials.]

STATE	CEMENT		SAND AND GRAVEL		CRUSHED STONE		STATE	CEMENT		SAND AND GRAVEL		CRUSHED STONE	
	Barrels	Cost	Cubic yards	Cost	Cubic yards	Cost		Barrels	Cost	Cubic yards	Cost	Cubic yards	Cost
United States.....	7,847,406	\$15,865,044	4,802,930	\$7,195,400	971,140	\$1,946,833	Minnesota.....	322,917	\$661,911	244,810	\$334,738	3,785	\$7,071
Alabama.....	136,708	225,809	68,239	110,788	2,798	2,538	Mississippi.....	48,135	93,157	22,967	44,316	( <sup>2</sup> )	( <sup>2</sup> )
Arizona.....	14,312	41,249	18,048	27,213	( <sup>1</sup> )	( <sup>1</sup> )	Missouri.....	636,068	1,143,380	367,493	553,538	215,595	446,039
California.....	639,702	1,298,793	383,791	637,890	94,062	200,633	Nebraska.....	79,224	158,100	63,357	94,151	( <sup>2</sup> )	( <sup>2</sup> )
Colorado.....	66,542	167,351	27,992	33,335	( <sup>1</sup> )	( <sup>1</sup> )	New Jersey.....	650,507	1,300,403	358,436	617,393	47,161	68,569
Connecticut.....	91,542	197,128	35,647	68,918	12,164	32,510	New York.....	627,719	1,309,992	378,189	579,218	59,720	147,624
Delaware.....	17,880	37,868	4,530	8,962	6,986	17,120	North Carolina.....	37,745	98,043	14,129	24,537	5,275	18,048
District of Columbia.....	113,104	205,500	94,026	177,424	( <sup>2</sup> )	( <sup>2</sup> )	North Dakota.....	8,917	20,577	6,685	11,061	( <sup>1</sup> )	( <sup>1</sup> )
Florida.....	77,281	149,740	38,911	60,042	14,941	50,006	Ohio.....	413,724	840,647	292,657	417,191	43,080	73,313
Georgia.....	57,932	116,329	26,681	42,937	5,111	12,786	Oklahoma.....	51,917	115,060	19,315	37,045	7,264	20,074
Idaho.....	2,786	6,108	2,330	4,060	( <sup>1</sup> )	( <sup>1</sup> )	Oregon.....	53,990	136,010	35,164	63,573	4,106	5,816
Illinois.....	450,011	960,433	247,192	384,245	69,585	141,752	Pennsylvania.....	750,094	1,510,649	419,186	623,322	140,765	252,777
Indiana.....	274,088	530,889	135,694	182,184	8,628	11,517	Rhode Island.....	18,875	36,429	8,396	10,232	( <sup>2</sup> )	( <sup>2</sup> )
Iowa.....	69,427	143,327	39,083	56,910	2,730	3,364	South Carolina.....	29,443	67,543	9,384	17,308	6,545	13,812
Kansas.....	69,036	149,486	32,564	40,877	12,575	22,791	South Dakota.....	10,516	44,933	10,614	17,178	( <sup>2</sup> )	( <sup>2</sup> )
Kentucky.....	54,338	110,325	39,304	61,642	4,336	7,796	Tennessee.....	91,766	175,654	53,031	83,865	18,189	32,333
Louisiana.....	95,078	194,808	93,806	136,982	7,379	10,696	Texas.....	161,141	362,468	107,855	139,341	15,029	32,321
Maine.....	9,786	18,794	4,238	5,113	( <sup>2</sup> )	( <sup>2</sup> )	Utah.....	5,537	14,199	3,062	4,686	( <sup>2</sup> )	( <sup>2</sup> )
Maryland.....	110,422	236,176	71,701	101,256	12,253	26,599	Virginia.....	141,875	273,659	57,250	57,432	52,309	80,849
Massachusetts.....	240,521	490,069	102,473	187,695	15,093	36,144	Washington.....	116,724	249,573	53,586	85,762	12,794	28,000
Michigan.....	625,484	1,213,419	477,815	711,727	6,286	9,250	West Virginia.....	42,474	97,316	25,011	38,592	2,680	6,880
							Wisconsin.....	294,245	604,467	177,129	287,759	31,170	58,980
							Other States.....	21,563	57,117	11,070	18,682	39,746	71,525

<sup>1</sup> None reported.  
<sup>2</sup> Included in figure for "Other States" to avoid disclosing data for individual establishments.

## CENSUS OF MANUFACTURES: 1929

TABLE 6.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	7,882	Horse-power 67,051	6,401	Horse-power 54,342	4,347	Horse-power 38,361	3,002	Horse-power 22,178	2,853	Horse-power 20,274	100.0	100.0
Prime movers, total.....	590	6,719	646	7,120	546	6,026	1,370	10,209	1,927	14,221	9.9	46.0
Steam, total.....	137	2,594	83	2,650	94	2,570	181	4,048	298	6,137	3.8	18.2
Engines.....	137	2,594	83	2,650	91	2,492	177	4,006	(1)	(1)	3.8	18.1
Turbines.....					3	78	4	42	(1)	(1)		0.1
Internal-combustion engines.....	421	4,100	545	4,363	450	3,431	1,165	5,810	1,623	8,012	6.1	26.2
Water wheels and water turbines.....	2	25	18	87	2	25	24	351	6	72	(1)	1.6
Electric motors driven by purchased energy.....	7,322	60,932	5,755	47,222	3,801	32,335	1,632	11,969	926	6,053	90.1	54.0
Electric motors, total.....	7,326	60,945	5,757	47,230	3,838	32,677	1,647	12,067	989	6,472	100.0	100.0
Driven by purchased energy.....	7,322	60,932	5,755	47,222	3,801	32,335	1,632	11,969	926	6,053	100.0	99.2
Driven by energy generated in establishments reporting.....	4	13	2	8	37	342	15	98	63	419	(2)	0.8
Electric generators.....	3	Kilowatts 18 Kilowatt-hours	1	Kilowatts 12	4	Kilowatts 203	(3)	(3)	(3)	(3)		
Electric energy purchased <sup>4</sup> .....		21,008,462		(5)		(5)		(3)		(3)		

<sup>1</sup> Not called for separately on schedule.

<sup>2</sup> Less than one-tenth of 1 per cent.

<sup>3</sup> Not called for on schedule.

<sup>4</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

<sup>5</sup> Data incomplete.

# CONCRETE PRODUCTS

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TABLE 7.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:															
1929.....	16,505	<i>15,599</i>	13,502	14,780	16,939	17,832	18,175	18,292	18,491	18,506	17,776	16,034	14,330	72.5	
1925.....	14,722	<i>11,084</i>	11,459	13,096	14,939	15,672	16,479	16,582	16,536	16,472	15,928	14,832	13,671	66.6	
1919.....	8,378	<i>5,049</i>	5,184	5,972	8,123	9,268	9,897	10,092	10,483	10,588	9,806	8,609	7,525	48.0	
1914.....	10,255	<i>6,186</i>	6,311	7,843	11,372	12,840	13,201	13,118	12,779	12,360	10,951	8,942	7,157	46.9	
1909.....	9,957	<i>4,866</i>	5,221	7,115	10,445	12,037	12,748	12,759	12,884	12,785	11,426	9,613	7,607	37.7	
Alabama.....	222	231	220	242	242	249	244	224	232	211	211	179	177	71.1	
Arizona.....	67	77	85	94	86	64	68	67	66	50	50	49	46	48.9	
California.....	1,561	1,578	1,652	1,648	1,617	1,579	1,591	1,566	1,510	1,529	1,504	1,470	1,484	89.0	
Colorado.....	139	10	12	63	157	244	228	200	227	276	299	288	268	3.3	
Connecticut.....	393	352	337	288	349	368	387	408	410	490	489	467	395	58.4	
Delaware.....	65	60	62	52	63	63	81	62	63	62	60	59	60	62.0	
District of Columbia.....	119	63	82	91	155	132	138	119	124	131	130	130	125	43.9	
Florida.....	239	218	<i>214</i>	216	224	237	224	219	255	268	265	269	266	79.6	
Georgia.....	141	<i>122</i>	123	141	147	149	165	153	154	142	136	131	133	78.9	
Idaho.....	9	<i>2</i>	<i>2</i>	7	9	9	7	12	12	11	15	13	6	13.3	
Illinois.....	1,108	<i>811</i>	819	957	1,132	1,255	1,310	1,296	1,316	1,358	1,201	994	850	59.8	
Indiana.....	532	<i>485</i>	429	488	586	551	536	516	555	605	641	568	488	66.3	
Iowa.....	170	100	<i>98</i>	122	163	200	216	210	209	216	198	177	129	45.4	
Kansas.....	223	157	<i>163</i>	181	230	252	260	283	316	287	212	194	161	48.4	
Kentucky.....	127	95	<i>91</i>	104	129	151	146	144	180	138	124	124	116	66.9	
Louisiana.....	177	168	180	187	183	184	190	169	167	170	181	175	179	82.6	
Maine.....	31	<i>18</i>	18	21	29	38	46	48	39	37	36	26	26	26.5	
Maryland.....	306	<i>285</i>	252	280	346	352	347	337	327	327	302	302	277	63.9	
Massachusetts.....	673	584	557	582	689	743	788	759	755	730	705	648	564	72.1	
Michigan.....	1,046	799	757	902	1,080	1,125	1,173	1,261	1,310	1,302	1,197	931	742	68.6	
Minnesota.....	428	285	<i>284</i>	285	463	497	541	534	516	518	503	389	321	52.5	
Mississippi.....	90	<i>57</i>	59	85	92	93	100	103	110	117	110	88	69	48.7	
Missouri.....	553	<i>367</i>	379	481	511	550	575	618	650	693	661	608	539	53.0	
Nebraska.....	129	<i>104</i>	106	116	126	138	141	137	145	145	139	139	106	71.7	
New Jersey.....	1,301	1,132	<i>1,119</i>	1,174	1,288	1,427	1,435	1,480	1,432	1,389	1,333	1,231	1,199	76.6	
New York.....	1,497	1,272	<i>1,224</i>	1,371	1,535	1,649	1,678	1,717	1,633	1,555	1,574	1,447	1,311	71.3	
North Carolina.....	147	126	<i>123</i>	145	154	160	169	168	154	149	147	137	133	72.2	
North Dakota.....	14	4	3	6	17	33	23	21	22	21	18	9	1	4.3	
Ohio.....	976	<i>799</i>	795	892	967	1,065	1,112	1,104	1,090	1,090	1,093	922	795	69.2	
Oklahoma.....	124	<i>85</i>	89	92	145	141	129	181	181	138	122	125	88	52.8	
Oregon.....	101	88	<i>79</i>	106	103	102	105	103	107	109	110	103	94	71.8	
Pennsylvania.....	1,523	<i>1,232</i>	1,296	1,372	1,616	1,657	1,600	1,632	1,678	1,678	1,639	1,503	1,322	76.4	
Rhode Island.....	53	<i>26</i>	32	31	51	62	68	83	85	88	71	48	35	28.0	
South Carolina.....	66	33	70	92	70	59	69	68	59	60	58	48	42	45.7	
South Dakota.....	80	<i>4</i>	4	10	34	41	50	47	57	43	34	17	10	7.0	
Tennessee.....	232	<i>197</i>	201	227	283	296	303	303	319	279	256	240	229	61.8	
Texas.....	522	508	529	530	519	538	513	522	549	535	511	520	486	88.5	
Utah.....	10	4	5	6	7	10	17	14	11	11	11	14	8	17.6	
Virginia.....	266	<i>220</i>	235	246	272	287	307	306	311	288	264	229	224	70.7	
Washington.....	300	181	<i>179</i>	201	255	265	273	279	359	463	425	405	316	38.7	
West Virginia.....	122	118	118	126	148	126	131	125	133	125	123	98	80	61.6	
Wisconsin.....	522	<i>371</i>	374	445	555	616	645	632	630	595	537	476	393	57.5	
Wyoming.....	17	<i>14</i>	14	14	14	14	14	14	24	24	24	15	14	58.3	

## CRUCIBLES (GRAPHITE)

**Description of the industry.**—This industry classification covers establishments engaged primarily in the manufacture of graphite crucibles, retorts, and stopper heads. At censuses prior to that for 1925, establishments engaged primarily in the manufacture of clay

crucibles were also assigned to this industry, and for this reason no comparable data are available for years prior to 1925, except for 1919, for which year data for graphite crucibles were tabulated separately from those for clay crucibles.

**TABLE 1.—SUMMARY FOR THE UNITED STATES: 1929, 1927, 1925, AND 1919**

[Data for establishments with products under \$5,000 in value included for 1919 but not for 1925 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1,2</sup>	Value added by manufacture <sup>3</sup>	Horsepower
1929.....	11	321	\$430,141	\$1,035,414	\$2,044,724	\$1,909,310	1,680
1927.....	11	258	343,552	772,155	1,982,135	1,209,980	1,688
1925.....	11	284	380,783	754,817	2,001,518	1,330,701	1,476
1919 <sup>4</sup> .....	6	239	257,119	1,045,718	2,146,236	1,100,518	008
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....		24.4	25.2	34.1	48.6	57.8	-0.5
1925-1927.....		-9.2	-0.8	2.3	-5.2	-9.5	14.4
1919-1929.....	(5)	34.3	67.3	-1.0	37.2	73.5	178.3

<sup>1</sup> The figure for 1929 refers to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Includes values of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of crucibles: 1929, \$192,988; 1927, \$173,201; 1925, \$75,257. Corresponding amount for 1919 not available. Does not include following values of crucibles made as secondary products by establishments classified in other industries: 1927, \$693,857; 1925, \$750,015. No comparable data for 1919.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Revised to cover graphite crucibles only. See "Description of the industry," above.

<sup>5</sup> Per cent not computed where base is less than 100.

**TABLE 2.—GENERAL STATISTICS, BY STATES: 1929 AND 1927**

[Pennsylvania is the only State for which separate statistics can be given without disclosing data for individual establishments. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States.....	1929	11	92	321	1,680	485	1,195	\$310,540	\$430,141	\$1,035,414	\$850,123	\$85,291	\$2,044,724	\$1,909,310
	1927	11	102	258	1,688	430	1,258	370,452	343,552	772,155	684,419	87,736	1,982,135	1,209,980
	1919 <sup>4</sup>	6	60	239	608	420	188	160,739	257,119	1,045,718	1,004,711	41,007	2,146,236	1,100,518
Pennsylvania.....	1929	4	42	118	801	325	470	167,954	160,851	339,248	302,918	36,330	1,132,862	793,614
	1927	4	43	102	750	270	480	196,259	139,894	354,933	326,871	28,062	931,461	676,628
Groups of States: N. J., 3 est.; N. Y., 1.....	1929	4	25	164	305	160	235	79,875	230,387	500,949	471,603	29,346	1,398,550	897,601
	Other States (Conn., 1 est.; Ill., 1; Mass., 1).....	1929	3	25	30	484	-----	484	62,631	38,903	195,217	175,602	19,615	413,312
States not shown separately.....	1927	7	59	156	938	160	778	174,193	203,658	417,222	357,548	59,874	1,050,074	633,452

<sup>1</sup> No proprietors or firm members were reported for this industry.

<sup>2</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> See footnote 2, Table 1.

<sup>5</sup> Revised to cover graphite crucibles only. See "Description of the industry" above. No corresponding revisions of the State figures can be made.

<sup>6</sup> Connecticut, 1 establishment; Illinois 1; Indiana, 1; Massachusetts, 1; New Jersey, 2; New York, 1.

# CRUCIBLES (GRAPHITE)

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**TABLE 3.—PRIME MOVERS, MOTORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929**

	Number	Horse-power		Number	Horse-power
Prime movers and electric motors driven by purchased energy, total:			Prime movers and electric motors—Continued.		
1929.....	138	1,680	Electric motors driven by purchased energy—		
1927.....	155	1,688	1929.....	133	1,195
1925.....	110	1,476	1927.....	150	1,288
Steam engines 1—			1925.....	102	991
1929.....	5	485	Electric energy purchased, <sup>2</sup> 1929.....		<i>Kilowatt-hours</i> 476,774
1927.....	5	430			
1925.....	8	485			

<sup>1</sup> No prime movers other than steam engines were reported for this industry.  
<sup>2</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

**TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929 AND 1925, AND FOR PENNSYLVANIA, 1929**

(Pennsylvania is the only State for which separate statistics can be given without disclosing data for individual establishments. 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 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:														
1929.....	321	<i>312</i>	322	318	310	321	323	325	325	328	319	320	319	95.7
1925 <sup>1</sup> .....	284	318	324	308	262	274	264	<i>247</i>	267	290	290	285	279	76.2
Pennsylvania.....	118	<i>112</i>	119	116	117	119	122	122	120	122	118	117	116	91.8

<sup>1</sup> No comparable data for years prior to 1925.



# EMERY WHEELS AND OTHER ABRASIVE AND POLISHING APPLIANCES

Description of the Industry.—This industry classification covers establishments engaged primarily in the manufacture of abrasive wheels of emery, corundum, and other materials, and of buffing and polishing wheels.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1, 2</sup>	Value added by manufacture <sup>3</sup>	Horsepower
1929	67	3,873	\$5,820,143	\$12,416,663	\$32,154,311	\$19,737,648	18,113
1927	68	3,261	4,608,167	10,839,973	24,181,837	13,341,864	13,464
1925	63	3,352	4,770,854	11,104,457	25,730,434	14,025,977	11,664
1923	57	3,595	4,707,834	10,698,320	25,306,812	14,608,492	11,530
1921	53	2,849	2,870,413	6,183,515	12,558,834	6,375,319	( <sup>4</sup> )
1919	60	5,601	6,878,748	12,228,187	30,949,270	18,721,083	12,968
1914	40	2,387	1,490,898	3,006,472	7,129,741	4,123,269	4,080
1909	51	1,943	1,155,624	2,651,515	6,710,668	4,059,351	3,983
1904	24	801	481,016	705,229	2,062,120	1,356,600	1,962
1899	34	546	303,091	508,753	1,381,675	872,922	994
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929	( <sup>5</sup> )	18.3	26.3	14.5	33.0	47.9	34.5
1925-1927	( <sup>5</sup> )	-2.7	-3.4	-2.4	-6.0	-8.8	15.5
1923-1925	( <sup>5</sup> )	-0.8	1.3	3.8	1.7	0.1	1.1
1921-1923	( <sup>5</sup> )	26.2	63.7	73.0	101.5	129.1	-----
1919-1921	( <sup>5</sup> )	-49.1	-51.1	-49.4	-59.4	-65.9	-----
1919-1929	( <sup>5</sup> )	-30.8	-1.0	1.5	3.9	5.4	39.7
1909-1919	( <sup>5</sup> )	188.3	408.7	361.2	361.2	361.2	225.5
1899-1909	( <sup>5</sup> )	255.9	281.3	421.1	385.7	365.0	300.7

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>2</sup> Includes values of miscellaneous commodities, normally belonging to other industries, made as secondary products by establishments classified in this industry, but does not include values of emery wheels and other abrasive and polishing appliances made as secondary products by establishments in other industries. The total values of the principal classes of products normally belonging to this industry, including those made as secondary products by establishments in other industries, sold by manufacturers in 1929, so far as separately reported to the bureau, were as follows: Abrasive grinding wheels, \$30,937,825; buffing and polishing wheels, \$4,585,451.  
<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>4</sup> Not called for on schedule.  
<sup>5</sup> Per cent not computed where base is less than 100.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments. It is necessary, however, to include the figures for the most important State in the industry, namely, Massachusetts, in the "Other States" items. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2, 3</sup>	Value added by manufacture <sup>4</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	67	1,091	3,873	18,113	3,419	14,694	\$2,990,160	\$5,820,143	\$12,416,663	\$11,599,732	\$816,931	\$32,154,311	\$19,737,648
	1927	68	680	3,261	13,464	3,258	10,206	1,628,256	4,608,167	10,839,973	10,146,325	693,648	24,181,837	13,341,864
	1919	60	1,300	5,601	12,968	3,143	9,820	2,387,470	6,878,748	12,228,187	11,297,045	931,142	30,949,270	18,721,083
Connecticut	1929	4	11	85	120	-----	120	50,340	78,034	649,019	640,186	9,433	1,021,792	372,173
	1927	4	15	57	52	-----	52	54,120	64,377	368,742	359,690	9,052	641,959	278,217
	1919	5	25	120	58	-----	58	46,842	98,902	706,440	765,872	2,574	957,318	190,872
Illinois	1929	8	46	139	222	-----	222	241,927	227,099	875,517	858,787	16,730	1,700,866	825,249
	1927	10	42	122	210	-----	210	172,067	174,218	671,811	659,189	12,622	1,321,027	649,216
	1919	6	36	67	46	-----	46	89,830	93,492	324,555	320,796	3,759	720,168	395,613
Michigan	1929	5	40	197	2,696	-----	2,696	159,426	285,797	579,090	536,217	42,873	1,278,805	699,715
	1927	4	32	135	348	-----	348	72,066	162,956	294,005	270,629	695,337	401,332	
New York	1929	8	43	184	328	-----	328	121,165	199,404	708,183	694,045	14,138	1,367,772	659,589
	1927	10	47	165	317	-----	317	141,417	177,242	680,858	676,207	13,561	1,131,557	441,099
Ohio	1929	9	66	325	714	235	479	173,483	321,007	917,912	869,030	48,873	2,108,161	1,190,249
	1927	7	35	237	480	100	380	73,659	235,041	457,114	435,770	21,344	1,012,317	555,203
	1919	5	42	201	378	141	237	94,311	135,802	304,405	275,731	828,801	524,896	
Pennsylvania	1929	9	185	605	2,424	1,408	1,016	449,296	808,830	1,119,551	999,910	119,671	3,924,138	2,804,557
	1927	8	156	389	1,893	1,308	685	352,378	528,518	1,020,079	929,996	96,083	2,723,283	1,697,204
	1919	7	82	286	663	480	107	214,191	335,624	501,511	456,754	44,757	1,404,753	903,242
Other States	<sup>1</sup> 1929	24	700	2,338	11,609	1,778	9,833	1,794,523	3,898,472	7,506,761	7,001,848	565,213	20,752,777	13,186,016
	<sup>2</sup> 1927	25	353	2,156	10,164	1,586	8,314	762,249	3,267,815	7,332,364	6,814,754	517,010	16,656,357	9,323,993
	<sup>3</sup> 1919	37	1,115	4,927	11,828	2,516	9,312	1,942,296	5,214,928	10,331,270	9,479,892	851,378	27,688,230	16,706,960

<sup>1</sup> Not including proprietors and firm members, as follows: 1929, 16; 1927, 15; 1919, 20. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—are as follows: 1929, 4,980; 1927, 3,956; 1919, 6,921.  
<sup>2</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>3</sup> See footnote 2, Table 1.  
<sup>4</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>5</sup> Indiana, 2 establishments; Kentucky, 1; Massachusetts, 13; Missouri, 1; New Jersey, 3; Rhode Island, 1; Washington, 1; Wisconsin, 2.  
<sup>6</sup> Indiana, 1 establishment; Kentucky, 1; Massachusetts, 14; Missouri, 1; New Jersey, 3; North Carolina, 1; Rhode Island, 1; Washington, 1; Wisconsin, 2.  
<sup>7</sup> California, 1 establishment; Indiana, 2; Massachusetts, 14; Michigan, 3; Missouri, 1; New Jersey, 3; New York, 11; Rhode Island, 1; Washington, 1.

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**TABLE 3.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929**

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	1,497	Horse-power 18,113	1,204	Horse-power 13,404	1,015	Horse-power 11,654	718	Horse-power 12,863	146	Horse-power 4,080	100.0	100.0
Prime movers, total.....	18	3,419	12	3,258	12	3,243	24	3,143	31	3,187	18.9	24.2
Steam, total.....	18	3,419	10	3,038	11	3,239	21	3,131	22	2,538	18.9	24.2
Engines.....	15	1,693	7	1,406	8	1,554	19	1,464	(1)	(1)	9.4	11.3
Turbines.....	3	1,726	3	1,630	3	1,685	2	1,667	(1)	(1)	9.5	12.9
Internal-combustion engines.....			2	220	1	4	3	12	6	444		(2)
Water wheels and water turbines.....									3	206		
Electric motors driven by purchased energy.....	1,479	14,694	1,252	10,206	1,003	8,411	694	9,820	115	893	81.1	75.8
Electric motors, total.....	1,549	15,821	1,331	11,354	1,083	9,508	802	11,812	198	2,113	100.0	100.0
Driven by purchased energy.....	1,479	14,694	1,252	10,206	1,003	8,411	694	9,820	115	893	92.9	83.1
Driven by energy generated in establishments reporting.....	70	1,127	79	1,148	80	1,097	108	1,992	83	1,220	7.1	16.9
Electric generators.....	11	Kilowatts 1,337 Kilowatt-hours 16,088,709	10	Kilowatts 2,196	11	Kilowatts 2,220	(3)	(3)	(3)	(3)		
Electric energy purchased.....				(4)		(4)		(4)		(4)		

(1) Not called for separately on schedule.  
 (2) Less than one-tenth of 1 per cent.  
 (3) Not called for on schedule.  
 (4) This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
 (5) Data incomplete.

**TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929**

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. (See headnote, Table 2.) The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:																
1929.....	3,873	3,713	3,826	3,919	3,963	3,975	3,970	3,985	4,008	3,945	3,881	3,721	<b>3,563</b>	3,653	3,821	86.4
1925.....	3,352	<b>3,059</b>	3,170	3,256	3,262	3,294	3,334	3,346	3,344	3,420	3,486	3,597	3,665	3,743	3,811	81.6
1919.....	5,601	5,711	5,618	5,580	5,450	5,293	5,280	5,172	5,374	5,597	5,830	6,044	<b>6,343</b>	6,343	6,241	85.4
1914.....	2,387	2,554	2,425	2,496	2,570	2,560	2,435	2,381	2,319	2,265	2,202	<b>2,166</b>	2,166	2,241	85.4	
1909.....	1,043	<b>1,729</b>	1,778	1,747	1,799	1,878	1,934	1,947	1,957	2,046	2,076	2,167	<b>2,271</b>	2,271	2,271	76.1
Connecticut.....	85	91	103	102	93	75	80	77	79	80	83	72	<b>61</b>	61	61	59.2
Illinois.....	139	128	135	141	140	130	136	140	142	146	149	138	<b>134</b>	134	134	85.9
Michigan.....	197	203	201	209	198	209	209	204	210	195	193	174	<b>159</b>	159	159	75.7
New York.....	184	211	224	221	212	193	179	169	169	162	158	155	<b>159</b>	159	159	69.2
Ohio.....	325	330	308	321	342	341	347	344	334	334	331	314	<b>310</b>	310	310	80.7
Pennsylvania.....	605	556	566	597	620	649	626	631	637	641	630	567	<b>518</b>	518	518	78.1

## GLASS

**Description of the industry.**—This industry embraces establishments engaged primarily in the manufacture of glass from raw materials, but does not include glass beveling, bending sheet glass, engraving glass, making glass labels, staining and ornamenting glass, or making glassware from purchased "blanks," except to the extent to which these activities are carried on by the same establishments in which the glass is manufactured. The primary products of the industry are: Plate and

window glass of all kinds; pressed and blown glass, comprising tableware, lamps, lamp chimneys, lantern globes, bulbs for electric lamps, opal ware, tubing, etc.; containers for food products, beverages, and medicinal and toilet preparations; and general-purpose containers. A small amount of cutting and decorating is reported by establishments in the glass industry, but most of this is done by those classified in the "Glass products (except mirrors) made from purchased glass" industry.

**TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929**

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy.	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929.....	263	67,527	\$37,795,111	\$103,203,943	\$303,818,560	\$200,524,017	341,070
1927.....	269	65,825	81,352,734	109,911,464	282,394,330	172,482,866	318,298
1925.....	310	69,371	86,735,571	113,652,436	295,659,424	182,306,688	271,639
1923.....	333	73,335	89,897,948	113,170,262	309,353,411	196,183,149	240,528
1921.....	329	64,748	68,224,248	86,036,406	213,471,309	127,434,903	(3)
1919.....	371	77,520	87,526,625	90,780,124	261,884,080	171,103,956	207,338
1914.....	348	74,502	48,655,819	46,016,504	123,085,010	77,068,516	182,934
1909.....	363	68,911	39,299,624	32,119,499	92,095,203	59,975,704	123,132
1904.....	399	63,969	37,288,148	26,145,522	79,607,998	53,462,476	91,476
1899.....	355	52,818	27,084,710	16,731,009	56,539,712	30,808,703	82,931
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	-2.2	2.6	7.9	-6.0	7.6	16.3	7.4
1925-1927.....	-13.2	-5.1	-6.2	-3.3	-4.6	-5.4	17.2
1923-1925.....	-6.9	-5.4	-3.5	0.4	-4.3	-7.1	12.9
1921-1923.....	1.2	34.0	31.8	31.5	44.9	53.9	-----
1919-1921.....	-11.3	-29.4	-22.1	-5.2	-18.5	-25.5	-----
1919-1929.....	-29.1	-12.9	0.3	13.8	16.0	17.2	64.9
1909-1919.....	2.2	12.5	122.7	182.6	184.4	185.3	68.4
1899-1909.....	2.3	30.5	45.1	92.0	62.9	60.7	132.0

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>3</sup> Not called for on schedule.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	263	5,869	67,527	341,979	115,137	226,842	\$15,586,531	\$87,795,111	\$103,293,943	\$73,114,566	\$30,179,377	\$303,818,500	\$200,524,617
	1927	269	5,629	65,825	318,298	147,967	170,331	13,853,782	81,352,734	109,911,464	79,441,368	30,470,096	282,894,330	173,482,866
	1919	371	6,076	77,520	427,938	154,474	273,464	13,364,569	87,526,625	90,780,124	66,422,262	24,357,882	261,884,080	171,103,956
California	1929	16	243	1,526	6,734	960	5,774	635,579	2,531,757	2,505,225	1,940,751	558,474	9,680,008	7,174,783
	1927	15	230	1,387	5,438	1,010	4,428	601,795	1,803,556	3,031,660	2,469,202	562,398	7,825,657	4,793,997
	1919	7	95	1,333	2,704	45	2,719	216,938	1,654,369	1,325,478	903,703	421,775	3,760,787	2,435,309
Illinois	1929	13	359	4,658	30,340	21,997	8,343	854,342	6,290,708	7,641,188	5,321,949	2,319,239	22,938,002	15,206,814
	1927	13	300	4,806	30,937	27,083	12,254	743,853	6,248,324	8,933,324	6,189,532	2,743,792	21,477,679	12,544,355
	1919	14	301	4,085	10,504	7,057	2,637	548,286	3,740,590	5,559,279	3,451,127	2,108,152	18,244,717	12,685,438
Indiana	1929	26	689	7,315	40,201	23,463	16,738	2,000,823	8,971,125	13,062,478	9,872,455	3,190,023	34,490,483	21,428,005
	1927	26	645	7,811	41,814	26,774	15,040	1,894,965	8,795,283	14,220,530	10,885,023	3,335,507	35,308,231	21,087,701
	1919	35	561	9,350	18,977	13,219	5,758	1,344,425	9,012,581	13,154,606	10,513,348	2,641,268	30,106,632	16,952,046
Maryland	1929	7	140	1,603	3,327	230	3,597	484,116	1,629,597	1,260,254	847,912	412,342	5,039,007	3,779,353
	1927	8	180	1,819	3,035	240	2,795	460,732	1,930,675	1,563,844	1,032,301	531,043	5,487,115	3,923,771
	1919	8	118	1,755	1,848	275	1,573	302,624	1,643,239	1,038,749	650,500	362,249	4,031,841	2,993,092
New Jersey	1929	10	420	4,220	13,970	5,219	8,751	1,122,377	4,469,114	3,903,521	2,484,633	1,418,888	16,283,769	12,380,248
	1927	11	387	4,324	12,276	5,303	6,973	972,665	4,993,597	5,823,426	4,102,167	1,721,259	15,686,810	9,843,384
	1919	21	546	5,942	4,684	2,974	1,710	1,189,765	6,006,747	4,445,218	3,141,992	1,303,226	13,694,877	9,249,459
New York	1929	17	543	3,148	8,047	3,837	4,210	1,626,064	4,469,114	4,773,937	3,503,802	1,270,135	17,856,867	13,082,930
	1927	19	479	3,165	6,011	3,225	3,386	1,037,411	4,364,244	4,778,605	3,508,003	1,270,662	16,150,288	11,371,683
	1919	19	465	3,929	4,893	2,025	2,868	830,327	5,063,901	4,044,961	2,824,041	1,220,920	12,995,741	8,930,780
Ohio	1929	25	654	9,491	39,964	17,351	22,613	1,548,716	12,328,922	13,427,056	9,430,545	3,088,381	30,308,686	25,880,760
	1927	25	649	8,420	32,569	14,977	17,592	1,455,470	11,543,962	13,462,384	10,137,086	3,325,298	33,938,992	20,476,608
	1919	44	826	10,935	37,831	29,245	8,586	1,855,468	12,111,911	12,652,397	8,984,050	3,668,347	35,240,877	22,588,480
Oklahoma	1929	10	90	943	4,013	2,295	1,718	324,933	1,147,719	2,242,227	1,900,769	341,428	17,650,992	2,786,049
	1927	11	92	1,156	2,028	765	1,263	279,764	1,317,860	2,395,760	2,025,391	370,375	4,838,257	2,442,461
	1919	10	113	1,692	2,796	2,300	495	284,312	1,753,686	1,912,295	1,607,933	304,362	4,750,844	2,898,549
Pennsylvania	1929	70	1,574	18,521	114,154	17,097	97,057	4,037,106	24,116,139	30,143,055	20,742,147	9,400,908	81,650,092	50,907,037
	1927	72	1,600	18,205	95,187	34,601	63,586	4,022,578	22,636,627	32,080,270	22,268,576	9,811,694	78,670,803	46,590,533
	1919	102	1,870	21,602	70,280	32,916	17,364	3,762,137	26,471,740	27,658,137	19,896,838	7,761,299	80,479,752	52,821,015
West Virginia	1929	48	770	11,123	31,952	17,945	14,007	1,965,577	14,468,102	17,023,646	12,305,850	4,717,796	48,384,942	31,361,296
	1927	48	809	10,190	28,217	19,830	8,387	1,507,951	12,798,460	16,464,417	12,266,345	4,198,072	44,161,122	27,095,705
	1919	77	875	11,068	29,494	22,722	6,772	2,246,748	13,656,859	13,801,434	11,010,447	2,790,987	42,730,338	28,928,904
Groups of States: Ala., 1 est.; Fla., 1; S. C., 1; Tenn., 2	1929	5	73	530	3,276	438	2,838	190,219	504,022	949,924	672,747	277,177	2,426,262	1,476,338
Ark., 3 est.; La., 3; Mo., 2; Tex., 3	1929	11	275	2,775	34,085	3,805	31,180	681,173	3,860,613	4,631,683	3,179,673	1,452,010	13,350,978	8,719,295
Other States (Kans., 1 est.; Mass., 1; Mich., 1; Minn., 1; R. I., 1)	1929	5	39	1,674	10,516	500	10,016	115,456	2,480,798	1,728,879	896,303	832,576	7,980,588	6,251,709
States not shown separately	1927	21	349	4,572	49,786	14,159	34,627	867,648	4,914,140	7,157,738	4,557,682	2,600,056	18,869,376	11,711,638
	1919	28	306	5,249	23,270	20,796	2,474	783,539	6,471,002	5,187,570	3,432,233	1,755,287	15,847,854	10,660,284

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 31; 1927, 79; 1919, 60. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 73,427; 1927, 71,533; 1919, 83,656.

<sup>2</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.

<sup>5</sup> Arkansas, 3 establishments; Florida, 1; Kansas, 2; Louisiana, 3; Massachusetts, 1; Michigan, 1; Missouri, 2; Rhode Island, 1; South Carolina, 1; Tennessee, 2; Texas, 3; Wyoming, 1.

<sup>6</sup> Arkansas, 3 establishments; Kansas, 5; Louisiana, 2; Massachusetts, 1; Michigan, 1; Missouri, 4; Rhode Island, 1; South Carolina, 1; Tennessee, 1; Texas, 2; Virginia, 4; Washington, 1; Wisconsin, 2.

## CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1925 TO 1929

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products]

KIND	1929	1927	1925	KIND	1929	1927	1925
1. Glass industry, all products, total value.....	\$303,618,560	\$282,394,330	\$265,959,424	Glass and glassware, all industries—Continued.			
2. Glass and glassware.....	\$299,717,063	\$276,128,830	\$286,481,704	Pressed and blown glass (except containers)—Continued.			
3. Other products (not normally belonging to the industry).....	\$4,101,497	\$6,265,491	\$9,477,720	Shades, globes, and other gas and electric goods (except electric bulbs and insulation)—			
4. Glass and glassware made as secondary products in other industries, value.....	(1)	\$633,344	(1)	Number of establishments.....	27	27	30
				Value.....	\$9,976,886	\$8,153,569	\$10,314,792
Glass and glassware, all industries: Aggregate value (sum of 2 and 4).....	\$299,717,063	\$276,762,183	\$286,481,704	Tubing—			
Plate glass—				Number of establishments.....	7	7	6
Total cast, square feet.....	185,489,080	157,546,621	165,379,637	Pounds.....	23,066,504	21,519,336	16,859,946
Polished—				Value.....	\$4,750,300	\$4,023,468	\$3,934,680
Number of establishments.....	15	18	19	Bulbs for electric lamps, opal ware, specialties, and other pressed and blown glass products, value.....	\$32,619,035	\$29,908,625	\$23,132,488
Square feet.....	148,742,970	118,123,960	117,369,400	Glass containers—			
Value.....	\$50,191,585	\$44,258,486	\$57,207,447	Beverage containers—			
Window glass—				Pressure ware—			
Number of establishments.....	20	23	42	Number of establishments.....	33	35	
Square feet.....	402,558,961	481,021,850	507,150,590	Gross.....	4,130,462	3,730,876	
Value.....	\$25,962,167	\$26,813,507	\$37,524,728	Value.....	\$16,689,679	\$15,995,378	
Obscured glass, including cathedral and skylight glass, and opalescent sheet glass—				Nonpressure ware—			
Number of establishments.....	19	20	21	Number of establishments.....	18	18	
Square feet.....	34,298,632	41,544,699	53,951,313	Gross.....	437,414	412,692	
Value.....	\$5,255,514	\$5,062,992	\$6,015,578	Value.....	\$1,775,863	\$1,724,379	
Wire glass—				Medicinal and toilet preparation containers (both pressed and blown)—			
Rough (sold as such)—				Number of establishments.....	51		
Number of establishments.....	11	11	12	Gross.....	15,791,724		
Square feet.....	38,924,249	25,795,402	28,743,480	Value.....	\$41,486,352		
Value.....	\$4,278,321	\$2,746,466	\$3,546,039	General-purpose containers—			
Polished—				Number of establishments.....	29		
Number of establishments.....	7	6	6	Gross.....	1,357,841		
Square feet.....	3,893,008	3,319,647	4,165,466	Value.....	\$5,783,827		
Value.....	\$1,713,885	\$1,631,238	\$2,263,599	Food-products containers—			
Pressed and blown glass (except containers)—				Narrow-neck blown bottles (packers' ware)—		22,049,187	
Tableware and ovenware—				Number of establishments.....		\$71,376,945	
Number of establishments.....	47	38	37	Gross.....	37		
Value.....	\$17,204,957	\$13,140,897	\$12,230,201	Value.....	2,956,480		
Pressed tumblers and goblets—				Wide-mouth blown bottles and jars (packers' ware)—			
Number of establishments.....	21	22	18	Number of establishments.....	44		
Dozens.....	23,125,547	27,280,521	29,678,011	Gross.....	6,488,966		
Value.....	\$7,303,071	\$7,773,776	\$8,678,725	Value.....	\$22,946,043		
Blown tumblers, stem ware, and bar goods—				Pressed ware (packers')—			
Number of establishments.....	26	29	32	Number of establishments.....	6	5	
Value.....	\$7,477,174	\$8,702,482	\$7,099,853	Gross.....	761,480	762,708	
Lenses—				Value.....	\$2,592,803	\$2,446,561	
Motor-vehicle—				Milk bottles—			
Number of establishments.....	9	11	18	Number of establishments.....	25	21	27
Dozens.....	2,321,171	(2)	(2)	Gross.....	2,610,083	2,180,575	2,086,300
Value.....	\$2,032,982	\$1,579,031	\$2,743,674	Value.....	\$11,695,602	\$11,479,596	\$10,588,306
Other, value.....	\$932,949			Fruit jars (home-pack)—			
Lamps—				Number of establishments.....	11	10	14
Number of establishments.....	8	9	8	Gross.....	1,153,374	1,515,863	1,288,425
Value.....	\$571,205	\$455,019	\$426,615	Value.....	\$8,524,974	\$11,367,687	\$6,640,756
Chimneys—				Other glass products, value.....	\$5,109,925	\$5,182,057	\$9,637,146
Number of establishments.....	16	18	18				
Dozens.....	3,018,763	2,987,453	3,438,879				
Value.....	\$1,951,567	\$2,260,935	\$2,657,910				
Lantern globes—							
Number of establishments.....	16	16	13				
Dozens.....	942,014	869,247	1,079,683				
Value.....	\$671,685	\$636,099	\$866,822				

1 No glass products reported by other industries.

2 Data incomplete.

3 Reported as "bottles and jars" of the following classes: Prescriptions, vials, and druggists' ware, \$15,037,247; beverage (soda, ginger ale, grape juice, mineral, etc.), \$18,594,646; packers and preservers (other than home-pack), \$20,896,538; battery jars and other electrical goods (of this group), \$902,912; patent and proprietary, \$16,930,470; demijohns and carboys, \$673,416; other bottles and jars, \$10,037,116.

TABLE 4.—PRINCIPAL MATERIALS CONSUMED IN THE INDUSTRY, BY KIND AND QUANTITY, BY STATES: 1929 AND 1927

[This table presents statistics for all States for which separate figures can be given without disclosing the consumption by individual establishments. Some of the "Other States," however, reported greater consumption of these materials than some of the States shown separately]

[Tons, 2,000 pounds]

STATE	Silica sand	Soda ash	Salt cake	Lime	Lime-stone	STATE	Silica sand	Soda ash	Salt cake	Lime	Lime-stone
United States: <sup>1</sup>						New York:					
1929.....	1,973,644	678,461	47,284	138,645	264,302	1929.....	89,025	28,186	494	6,352	4,133
1927.....	1,758,839	604,048	42,607	127,533	235,050	1927.....	81,940	27,465	473	5,983	3,870
California:						Ohio:					
1929.....	88,880	29,171	95	1,275	15,488	1929.....	232,963	81,220	3,719	13,921	28,792
1927.....	54,873	19,568	314	3,066	8,521	1927.....	180,560	64,679	2,729	8,420	20,579
Illinois:						Oklahoma:					
1929.....	208,157	73,467	4,133	21,986	(?)	1929.....	40,945	15,937	1,166	1,852	6,330
1927.....	198,240	70,165	3,739	25,924	28,967	1927.....	27,585	13,459	814	2,430	4,600
Indiana:						Pennsylvania:					
1929.....	270,658	97,784	3,635	14,980	33,542	1929.....	476,451	161,471	14,575	31,587	73,769
1927.....	246,616	91,890	3,464	14,166	35,329	1927.....	452,381	148,400	14,717	25,015	79,206
Maryland:						West Virginia:					
1929.....	20,554	7,683	(?)	2,243	(?)	1929.....	306,580	103,936	9,809	29,162	29,067
1927.....	18,228	7,018	(?)	2,061	(?)	1927.....	281,796	92,735	7,684	21,381	18,031
New Jersey:						Other States:					
1929.....	50,122	30,165	(?)	2,796	13,035	1929.....	159,694	49,441	9,658	12,541	45,546
1927.....	72,628	27,268	(?)	8,672	4,680	1927.....	143,993	41,601	8,673	9,788	25,314

<sup>1</sup> In addition, 1,154,285 tons of grinding sand was reported for 1929 and 1,151,207 tons for 1927, but the distribution by States can not be given for this material without disclosing data for individual establishments.

<sup>2</sup> Can not be shown separately without disclosing data for individual establishments; included in item for "Other States."

<sup>3</sup> Includes quantities reported for Maryland and New Jersey.

<sup>4</sup> Includes quantities reported for Illinois and Maryland.

TABLE 5.—FURNACES AND GLASS MACHINES, BY STATES: 1929

FURNACES	Number of establishments	ACTIVE FURNACES			IDLE FURNACES		GLASS MACHINES	Number of establishments	Number of machines	Capacity (square feet per 24 hours)
		Number	Using gas as fuel, capacity (tons per 24 hours)	Using other fuel, capacity (tons per 24 hours)	Number	Capacity (tons per 24 hours)				
Continuous tank furnaces, total.....	185	403	11,548	2,846	47	1,544	Window-glass machines:			
California.....	12	21	137	280			Cylinder (Ark., 1 est.; Ind., 1; Okla., 1; Pa., 2; Tex., 1).....	6	60	732,720
Illinois.....	9	26	88	1,022	3	96	Fourcalt (Ind., 1 est.; Kans., 1; Pa., 3; W. Va., 3).....	8	70	721,076
Indiana.....	20	45	1,691	178	7	190	Libby-Owens and Pittsburgh Plate Glass (Ark., 1 est.; La., 1; Ohio, 1; W. Va., 2).....	5	47	1,217,544
Maryland.....	4	9	46	98			Plate-glass machines:			
New Jersey.....	9	23	395	381	3	55	Rough—			
New York.....	8	22	232	509	3	152	Continuous-flow (Ill., 1 est.; Mich., 1; Minn., 1; Mo., 1; Ohio, 1; Pa., 2; Tenn., 1).....	8	152	354,122
Ohio.....	17	37	1,188	90	8	210	Other (Ind., 3 est.; Mo., 2; Ohio, 2; Pa., 4; Tenn., 2; W. Va., 2).....	15	59	391,638
Oklahoma.....	10	13	505		2	21	Polished—			
Pennsylvania.....	49	103	3,505	83	12	551	Continuous-flow (Mich., 1 est.; Minn., 1; Mo., 1; Ohio, 1; Pa., 2; Tenn., 1).....	7	417	294,418
West Virginia.....	28	66	2,974		4	100	Other (Ind., 1 est.; Mo., 1; Ohio, 2; Okla., 1; Pa., 4; W. Va., 1).....	10	112	264,618
Other States <sup>1</sup> .....	18	38	787	116	5	169				
Intermittent or day tank furnaces, total.....	68	144	581	48	30	90	GLASS MACHINES—continued			
California.....	6	13	24				Pressed and blown ware:			
Indiana.....	8	14	58	16			Automatic feed—			
Ohio.....	5	9	11	12			Full automatic forming machines, total.....	111	916	6,902
Pennsylvania.....	13	42	144	4	5	16	California.....	10	47	280
West Virginia.....	20	52	81		10	29	Illinois.....	7	76	561
Other States <sup>1</sup> .....	11	14	263	16	15	45	Indiana.....	15	129	951
Pot furnaces, total.....	70	230	1,681	548	29	558	Maryland.....	4	27	156
Illinois.....	4	20		286			New Jersey.....	6	72	504
Indiana.....	4	17	25	15			New York.....	8	52	420
Maryland.....	4	6	8	24			Ohio.....	11	128	995
New York.....	8	11	24	32	7	34	Oklahoma.....	6	28	162
Ohio.....	9	24	395	128	4	193	Pennsylvania.....	29	231	1,709
Pennsylvania.....	23	111	841	33	7	268	West Virginia.....	9	100	908
West Virginia.....	13	20	153				Other States <sup>4</sup> .....	6	26	286
Other States <sup>1</sup> .....	5	21	235	30	11	63	Partial automatic forming machines (Ala., 1 est.; Calif., 1; Ind., 3; Md., 1; N. Y., 1; Pa., 1; W. Va., 1).....	9	44	128
							Hand feed—			
							Full automatic forming machines (Ind., 1 est.; La., 1; N. J., 1; Ohio, 2; Pa., 4; W. Va., 3).....	12	61	150
							Partial automatic forming machines (Calif., 2 est.; Ill., 1; Ind., 4; La., 1; N. J., 2; N. Y., 1; Ohio, 3; Pa., 2; W. Va., 3).....	19	88	165

<sup>1</sup> Alabama, 1 establishment; Arkansas, 3; Florida, 1; Kansas, 1; Louisiana, 2; Michigan, 1; Minnesota, 1; Missouri, 1; Rhode Island, 1; South Carolina, 1; Tennessee, 2; Texas, 3.

<sup>2</sup> Illinois, 1 establishment; Louisiana, 2; New Jersey, 3; New York, 4; Oklahoma, 1.

<sup>3</sup> Massachusetts, 1 establishment; Missouri, 1; New Jersey, 3.

<sup>4</sup> Florida, 1 establishment; Rhode Island, 1; South Carolina, 1; Tennessee, 1; Texas, 2.

CENSUS OF MANUFACTURES: 1929

TABLE 6.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	16,880	<i>Horsepower</i> 341,979	11,386	<i>Horsepower</i> 313,298	8,795	<i>Horsepower</i> 271,639	4,431	<i>Horsepower</i> 207,338	2,200	<i>Horsepower</i> 162,934	100.0	100.0
Prime movers, total.....	399	115,137	417	147,967	500	145,820	1,034	154,474	1,051	148,710	33.7	74.5
Steam, total.....	218	81,603	231	111,974	260	98,094	435	99,140	661	105,061	23.9	47.8
Engines.....	176	32,821	193	48,204	227	55,098	411	80,715	(1)	(1)	9.0	38.9
Turbines.....	42	48,842	38	63,650	33	43,896	24	18,425	(1)	(1)	14.3	8.9
Internal-combustion engines.....	181	33,474	166	35,993	240	46,826	371	52,877	385	43,448	9.8	25.5
Water wheels and water turbines.....							228	2,457	5	201		1.2
Electric motors driven by purchased energy.....	16,481	226,842	10,969	170,331	8,295	125,819	3,397	52,894	1,239	14,224	66.3	25.5
Electric motors, total.....	25,273	359,316	19,713	282,518	17,958	259,167	9,720	143,125	6,018	92,896	100.0	100.0
Driven by purchased energy.....	16,481	226,842	10,969	170,331	8,295	125,819	3,397	52,894	1,239	14,224	63.1	36.9
Driven by energy generated in establishments reporting.....	8,792	132,474	8,744	112,187	9,663	133,348	6,323	90,261	4,779	78,672	36.9	63.1
Electric generators.....	217	<i>Kilowatts</i> 78,709 <i>Kilowatt-hours</i>	222	<i>Kilowatts</i> 82,761	337	<i>Kilowatts</i> 106,151	(?)	(?)	(?)	(?)		
Electric energy purchased <sup>1</sup> .....		502,313,691		(?)		(?)		(?)		(?)		

<sup>1</sup> Not called for separately on schedule.  
<sup>2</sup> Not called for on schedule.

<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>4</sup> Data incomplete.

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum is of maximum		
		January	February	March	April	May	June	July	August	September	October	November	December			
<b>United States:</b>																
1929.....	67,527	65,646	68,024	68,850	<b>69,391</b>	68,718	69,298	65,822	67,072	67,915	68,732	67,439	<i>65,450</i>	91.4		
1925.....	69,371	67,400	69,438	71,323	70,663	69,194	67,907	<i>65,598</i>	65,833	68,501	71,767	72,670	72,068	90.3		
1919.....	77,520	74,571	78,413	79,693	79,450	78,191	74,719	<i>65,055</i>	68,993	78,072	83,190	85,416	84,477	78.2		
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	67.7		
1909.....	68,911	72,931	75,720	78,921	77,692	70,550	73,038	<i>40,222</i>	43,839	56,127	71,746	78,454	81,665	49.3		
California.....	1,526	<i>1,547</i>	1,472	1,474	1,486	1,551	1,589	1,531	1,526	1,532	1,638	1,611	1,510	82.3		
Illinois.....	4,658	4,554	4,806	4,744	4,901	4,891	4,828	4,785	4,792	4,603	4,541	4,547	<i>3,940</i>	80.4		
Indiana.....	7,315	7,633	7,694	8,081	8,157	7,802	7,422	7,516	7,079	6,961	6,828	6,747	<i>5,857</i>	71.8		
Maryland.....	1,603	1,793	1,844	1,773	1,750	1,519	1,509	1,364	<i>1,325</i>	1,549	1,562	1,593	1,607	71.7		
New Jersey.....	4,220	4,117	4,331	4,410	4,181	4,266	4,106	<i>3,808</i>	4,007	4,108	4,446	4,483	4,218	87.2		
New York.....	3,148	<i>2,925</i>	2,945	2,959	2,978	3,066	3,181	3,016	3,189	3,230	3,479	3,465	3,337	84.1		
Ohio.....	9,491	8,737	9,157	9,241	9,523	9,607	9,653	9,043	9,883	9,831	9,913	9,583	9,110	87.8		
Oklahoma.....	943	877	934	1,001	994	1,020	1,199	895	867	909	920	920	894	68.1		
Pennsylvania.....	18,521	18,169	18,602	18,811	18,769	18,604	18,941	18,445	18,368	18,597	19,028	18,458	<i>17,476</i>	91.8		
West Virginia.....	11,123	10,662	11,120	11,165	11,409	11,019	11,483	<i>10,402</i>	10,951	11,401	11,437	11,170	11,254	90.6		

# GLASS PRODUCTS (EXCEPT MIRRORS) MADE FROM PURCHASED GLASS

Description of the industry.—This industry classification covers establishments engaged primarily in glass cutting, glass beveling, bending sheet glass, engraving on glass, making glass labels, and staining and ornamenting glass. Products include cut-glass tableware; scientific glass apparatus; leaded, stained, and art-glass windows; and druggists' glassware.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1,2</sup>	Value added by manufacture <sup>3</sup>	Horsepower
1929	431	6,029	\$7,814,551	\$16,318,693	\$33,273,003	\$16,954,370	5,757
1927	400	4,465	6,214,552	8,778,568	22,527,581	13,549,013	3,310
1925	410	4,860	6,516,711	13,330,933	27,943,048	14,612,115	3,531
1923	434	5,137	6,012,204	11,808,850	25,029,557	13,217,721	4,732
1921	462	4,682	5,574,401	10,807,873	22,209,476	11,401,598	(4)
1919	616	6,480	6,154,831	14,357,878	28,443,321	14,085,443	5,042
1914	635	5,067	4,670,370	7,142,669	16,445,839	9,303,230	3,358
1909	583	9,362	5,240,277	6,246,444	16,101,129	9,854,685	4,529
1904	453	8,379	4,359,199	4,621,164	13,137,653	8,516,489	3,489
1899	511	4,914	2,393,711	3,534,950	8,750,042	5,215,052	2,098
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	7.8	35.0	25.7	85.9	49.0	25.1	73.6
1925-1927	-2.4	-8.1	-4.6	-34.1	-20.1	-7.3	-6.1
1923-1925	-5.6	-5.8	7.9	12.9	11.7	10.5	-26.4
1921-1923	-6.1	10.1	8.4	9.3	12.7	15.9	
1919-1921	-25.0	-27.7	-9.4	-24.7	-21.9	-19.1	
1919-1929	-30.0	-7.0	27.0	13.7	17.0	20.4	14.2
1909-1919	5.7	-30.8	17.3	129.9	76.7	42.9	11.3
1899-1909	14.1	90.5	119.3	76.7	84.0	89.0	115.9

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Includes following values of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of glass products (except mirrors) from purchased glass: 1929, \$372,634; 1927, \$817,073; 1925, \$846,637; corresponding amounts for earlier years not available. Does not include following values of cut, stained, and ornamented glass, made by establishments engaged primarily in other industries: 1929, \$10,937,328; 1927, \$8,027,301; 1925, \$6,231,810; 1923, \$550,672; 1921, \$1,053,773; 1919, \$1,555,375. Amounts shown include following values of cut glassware and decorated glassware made in the glass-manufacturing industry: 1929, \$4,780,106; 1927, \$3,883,011; 1925, \$3,984,087; corresponding data for earlier years not available and not included in values given.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Not called for on schedule.



CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

Table with columns: STATE, Census year, Number of establishments, Salaried officers and employees, Wage earners (average for the year), HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT (Total, Prime movers, Motors run by purchased energy), Salaries, Wages, COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY (Total, Materials and containers, Fuel and purchased energy), Value of products, Value added by manufacture.

1 Not including proprietors and firm members, as follows: For 1929, 301; 1927, 343; 1919, 531. The total numbers of persons engaged—proprietors and firm members... 2 For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products. 3 See footnote 2, Table 1. 4 Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture. 5 Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals. 6 Withheld from publication in order to avoid disclosing data for individual establishments. 7 Colorado, 2 establishments; District of Columbia, 1; Florida, 1; Georgia, 2; Idaho, 1; Iowa, 2; Kansas, 1; Kentucky, 2; Maine, 1; Nebraska, 1; North Carolina, 1; Oregon, 1; Washington, 2. 8 Alabama, 2 establishments; Colorado, 2; Florida, 2; Georgia, 2; Idaho, 1; Kansas, 1; Kentucky, 3; Louisiana, 1; Maine, 2; Nebraska, 1; North Carolina, 1; Oklahoma, 1; Oregon, 2; Tennessee, 2; Virginia, 2.

# GLASS PRODUCTS

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**TABLE 3.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929**

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
		Horse-power		Horse-power		Horse-power		Horse-power		Horse-power		
Prime movers and electric motors driven by purchased energy, aggregate.....	2,070	5,767	1,218	3,316	1,084	3,531	966	5,042	762	5,358	100.0	100.0
Prime movers, total.....	9	241	10	283	23	679	47	1,010	113	2,837	4.2	20.2
Steam engines.....	6	171	5	186	11	461	13	628	39	1,738	3.0	12.4
Internal-combustion engines.....	3	70	5	97	10	163	32	352	69	934	1.2	7.0
Water wheels and water turbines.....					2	45	2	30	5	165		0.8
Electric motors driven by purchased energy.....	2,061	5,516	1,208	3,033	1,061	2,872	919	4,023	649	2,521	95.8	79.8
Electric motors, total.....	2,061	5,516	1,208	3,033	1,061	2,872	923	4,023	691	2,760	100.0	100.0
Driven by purchased energy.....	2,061	5,516	1,208	3,033	1,061	2,872	919	4,023	649	2,521	100.0	93.3
Driven by energy generated in establishments reporting.....							4	70	42	238		1.7
Electric generators.....		Kilowatts		Kilowatts	2	Kilowatts	(1)	(1)	(1)	(1)		
Electric energy purchased <sup>2</sup> .....		Kilowatt hours		(*)		(*)		(1)		(1)		

<sup>1</sup> Not called for on schedule.  
<sup>2</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>3</sup> Data incomplete.

**TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929**

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:														
1929.....	6,029	6,243	6,554	6,533	6,177	5,811	5,709	5,878	6,133	6,136	5,816	5,751	5,698	85.4
1925.....	4,860	4,633	4,797	4,898	4,853	4,873	4,807	4,764	4,783	4,848	4,961	5,041	4,981	92.9
1919.....	6,480	6,423	5,744	5,990	6,068	6,185	6,333	6,510	6,849	6,856	7,112	7,802	7,383	73.5
1914.....	8,037	8,437	8,524	8,447	8,283	8,002	7,834	7,380	7,993	8,140	7,987	7,937	7,840	86.6
1909.....	9,362	9,064	9,301	9,424	9,326	9,080	9,018	8,552	9,229	9,601	9,915	9,912	9,932	86.1
California.....	111	109	109	109	111	110	108	107	109	110	110	114	120	89.2
Colorado.....	8	10	10	11	10	9	10	4	4	5	4	4	11	34.4
Connecticut.....	121	204	188	147	122	112	110	106	104	78	77	105	103	37.7
Illinois.....	257	250	247	262	234	232	247	266	268	273	283	272	245	82.0
Indiana.....	170	177	175	176	170	171	172	162	172	171	190	189	182	85.3
Iowa.....	6	6	6	6	6	6	6	6	6	6	6	6	6	72.2
Maryland.....	64	65	59	67	60	53	71	70	70	62	59	67	79	83.8
Massachusetts.....	171	171	171	171	174	172	173	170	159	171	173	179	179	62
Michigan.....	63	62	69	69	65	65	64	66	65	64	68	62	62	80.8
Minnesota.....	50	55	57	56	48	45	44	47	46	49	48	52	51	77.2
Missouri.....	90	96	96	96	84	95	79	84	92	93	91	90	91	79.2
New Jersey.....	1,043	1,210	1,245	1,225	1,211	1,139	1,083	973	973	934	851	845	845	67.9
New York.....	1,492	1,424	1,470	1,515	1,504	1,464	1,456	1,440	1,523	1,539	1,647	1,503	1,518	92.0
Ohio.....	708	558	603	656	701	685	738	807	895	967	639	651	600	57.7
Oregon.....	12	11	11	11	12	11	11	12	12	12	12	12	13	84.6
Pennsylvania.....	1,324	1,508	1,722	1,652	1,329	1,098	1,027	1,224	1,309	1,263	1,321	1,273	1,161	59.6
Rhode Island.....	18	18	18	18	18	17	17	17	17	18	18	18	16	88.9
Texas.....	51	49	49	50	51	51	51	51	51	52	51	51	51	94.2
Washington.....	12	12	12	13	13	12	11	11	12	13	13	13	14	78.6
West Virginia.....	122	123	123	119	121	121	120	122	123	123	123	123	123	95.7
Wisconsin.....	77	69	68	73	81	82	79	78	79	81	79	81	73	82.9

# GRAPHITE, GROUND AND REFINED

Description of the industry.—This industry classification covers establishments engaged primarily in the extraction from the ore and the refining of graphite (plumbago or black lead). Graphite is reported to a considerable extent as a secondary product by estab-

lishments engaged primarily in other lines of manufacture, but the value of such production outside the industry can not be shown without disclosing the output of individual establishments.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	11	494	\$627,235	\$1,457,860	\$3,759,969	\$2,302,109	3,156
1927	13	289	340,510	1,319,161	2,931,584	1,612,423	3,011
1925	11	228	278,224	1,328,188	2,569,437	1,241,299	2,927
1923	8	244	304,437	1,082,018	2,184,009	1,102,591	2,700
1921	11	152	185,468	709,441	1,456,864	759,423	(3)
1919	24	497	434,317	1,092,684	2,239,587	1,149,903	7,445
1914	11	250	181,125	723,100	1,724,330	1,001,140	2,602
1909	9	162	88,768	405,479	1,139,587	734,108	1,472
1904	11	218	107,810	117,300	342,379	225,079	922
1899	11	137	64,376	216,560	429,173	212,613	805
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	(9)	70.9	81.2	10.5	28.3	42.8	4.8
1925-1927	(9)	26.8	22.4	-0.7	14.1	20.9	2.9
1923-1925	(9)	-6.6	-8.6	22.8	17.6	12.6	8.4
1921-1923	(9)	60.5	64.1	53.8	50.0	46.3	-----
1919-1921	(9)	-69.4	-57.3	-35.6	-34.9	-34.3	-----
1919-1929	(9)	-0.6	44.4	33.4	67.9	100.7	-57.6
1909-1919	(9)	206.8	389.3	169.5	96.5	56.2	408.8
1899-1909	(9)	18.2	37.9	87.2	165.5	245.3	82.9

<sup>1</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Not called for on schedule.

<sup>4</sup> Per cent not computed where base is less than 100.

TABLE 2.—GENERAL STATISTICS, BY GROUPS OF STATES: 1929

[This table presents statistics for States in groups, it being impossible to give separate figures for any one State without disclosing exactly or approximately, the data supplied by individual establishments. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employes <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>2</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	11	65	494	3,156	720	2,436	\$185,619	\$627,235	\$1,457,860	\$1,366,478	\$91,382	\$3,759,969	\$2,302,109
	1927	13	72	289	3,011	1,660	1,351	233,529	340,510	1,319,161	1,214,637	104,474	2,931,584	1,612,423
	1919	24	157	497	7,445	3,176	4,269	277,267	434,317	1,092,684	946,449	146,235	2,239,587	1,149,903
Groups of States:														
N. J., 1 est.; N. Y., 1; Pa., 3	1929	5	16	51	1,191	720	471	56,257	89,332	715,404	606,432	18,972	1,049,881	334,477
Other States (Calif., 1 est.; Ill., 1; Mich., 2; Ohio, 1; Tex., 1)	1929	6	49	443	1,965	-----	1,965	129,362	537,903	742,456	670,046	72,410	2,710,688	1,967,632

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 2; 1927, 2; 1919, 10. The total numbers of persons engaged—proprietors and firm members, salaried officers and employes, and wage earners—as reported for the industry, are as follows: For 1929, 561; 1927, 363; 1919, 604.

<sup>2</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> See "Description of the industry," above.

<sup>5</sup> Alabama, 1 establishment; California, 1; Illinois, 2; Michigan, 2; New Jersey, 2; New York, 1; Ohio, 1; Pennsylvania, 2; Texas, 1.

<sup>6</sup> Alabama, 9 establishments; California, 3; Illinois, 1; Massachusetts, 1; Michigan, 2; New Jersey, 1; New York, 2; Pennsylvania, 5.

# GRAPHITE, GROUND AND REFINED

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**TABLE 3.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929**

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	175	<i>Horse-power</i> 3,156	97	<i>Horse-power</i> 3,011	85	<i>Horse-power</i> 2,927	141	<i>Horse-power</i> 7,443	167	<i>Horse-power</i> 2,602	100.0	100.0
Prime movers, total.....	6	720	12	1,000	12	1,600	27	3,176	15	2,172	22.8	42.7
Steam engines.....			2	500	2	500	17	2,408	5	665		33.2
Internal-combustion engines.....	1	70	3	370	3	370	4	233	2	206	2.2	3.1
Water wheels and water turbines.....	5	650	7	790	7	790	6	475	8	1,301	20.0	6.4
Electric motors driven by purchased energy.....	169	2,436	85	1,351	73	1,267	114	4,269	152	430	77.2	57.3
Electric motors, total.....	170	2,444	85	1,351	73	1,267	120	4,391	155	445	100.0	100.0
Driven by purchased energy.....	169	2,436	85	1,351	73	1,267	114	4,269	152	430	99.7	97.2
Driven by energy generated in establishments reporting.....	1	8					6	122	3	15	0.3	2.8
Electric generators.....	3	<i>Kilowatts</i> 51		<i>Kilowatts</i>	2	<i>Kilowatts</i> 27	(1)	(1)	(1)	(1)		
Electric energy purchased <sup>2</sup> .....		<i>Kilowatt-hours</i> 1,799,127		(1)		(1)		(1)		(1)		

<sup>1</sup> Not called for on schedule.

<sup>2</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

<sup>3</sup> Data incomplete.

**TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909**

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

	Average number employed during year	NUMBER EMPLOYED ON 15TH DAY OF 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: <sup>1</sup>														
1929.....	494	353	371	<b>366</b>	492	532	570	574	594	719	694	405	<i>260</i>	36.2
1925.....	228	235	232	<b>237</b>	230	231	233	223	223	229	230	218	<i>216</i>	91.1
1919.....	497	474	478	<b>454</b>	525	538	465	463	497	575	510	518	467	79.0
1914.....	250	253	259	<b>255</b>	255	250	263	248	187	213	270	261	283	65.1
1909.....	102	133	143	<b>139</b>	154	157	165	177	168	177	173	174	182	73.1

<sup>1</sup> No statistics for States can be given without disclosing exactly or approximately, the data reported by individual establishments.

## HONES, WHETSTONES, AND SIMILAR PRODUCTS

**Description of the industry.**—This industry classification covers establishments engaged primarily in the manufacture, from purchased materials, of hones, whetstones, oilstones, and similar articles. (Manufacturers whose principal products are artificial abrasive wheels are assigned to the "Emery wheels and other abrasive and polishing appliances" industry.)

**Change in classification.**—At the census for 1929 establishments engaged in the manufacture, from materials quarried by themselves, of such products

as hones, whetstones, etc., were not treated as manufacturing establishments, as at former censuses, but were classified in the "Abrasive materials" industry of the Mines and Quarries group. Because of this change, the figures given in this report are not comparable with those for preceding census years.

**Omission of State statistics.**—In order to avoid disclosing the data reported by individual establishments, no State statistics are given for this industry.

TABLE 1.—GENERAL STATISTICS, FOR THE UNITED STATES: 1929

[See "Omission of State statistics," above]

ITEM	Number or amount	ITEM	Number or amount
Number of establishments.....	16	Cost of materials, containers for products, fuel, and purchased electric energy, total.....	\$340,669
Salaried officers and employees.....	15	Materials and containers.....	\$214,433
Wage earners (average for the year).....	174	Fuel and purchased energy.....	\$26,236
Horsepower (rated capacity) of power equipment, total.....	850	Value of products.....	\$868,811
Prime movers.....	725	Value added by manufacture <sup>1</sup> .....	\$528,142
Motors run by purchased electric energy.....	125		
Salaries.....	\$40,554		
Wages.....	\$182,155		

<sup>1</sup> Illinois, 2 establishments; New Hampshire, 1; New Jersey, 2; New York, 1.

<sup>2</sup> Not including 3 proprietors and firm members.

<sup>3</sup> This item represents sales (shipments or deliveries) by manufacturers. (See GENERAL EXPLANATIONS—Value of Products.) It includes \$76,610, the value of miscellaneous commodities, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of hones, whetstones, etc., but does not include \$182,600, the value of hones, whetstones, etc., made as secondary products by establishments classified in other industries, including those engaged in both quarrying and manufacturing. (See "Change in classification," above.)

<sup>4</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture

TABLE 2.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY: 1929

TYPE	Number	Capacity	Per cent distribution of rated horsepower capacity	TYPE	Number	Capacity	Per cent distribution of rated horsepower capacity
Prime movers and electric motors driven by purchased energy, aggregate.....	27	Horsepower 850	100.0	Electric motors, total.....	52	Horsepower 631	100.0
Prime movers, total.....	6	725	85.3	Driven by purchased energy.....	21	125	19.8
Steam engines.....	3	615	72.4	Driven by energy generated in establishments reporting.....	31	509 Kilowatts	80.2
Water wheels and water turbines.....	3	110	12.9	Electric generators.....	2	280 Kilowatt-hours	
Electric motors driven by purchased energy.....	21	125	14.7	Electric energy purchased <sup>1</sup> .....		193,941	

<sup>1</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

TABLE 3.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES: 1929

See "Omission of State statistics," above. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures

MONTH	Number employed on the 15th day of month or nearest representative day	MONTH	Number employed on the 15th day of month or nearest representative day	MONTH	Number employed on the 15th day of month or nearest representative day
Average number employed during year.....	174	May.....	<b>160</b>	November.....	180
January.....	<i>166</i>	June.....	168	December.....	170
February.....	160	July.....	173	Per cent minimum is of maximum.....	88.3
March.....	171	August.....	188		
April.....	167	September.....	183		
		October.....	187		

# LIME

Description of the industry.—This industry designation is applied to establishments engaged in the production of lime, chiefly from limestone but to a small extent from shell and other substances. The principal products are quicklime and hydrated (slaked) lime. The quarrying and the burning of limestone are usually carried on by the same establishment, and for such establishments the statistics given cover both branches of the work. (Establishments engaged exclusively in the quarrying of limestone, which is not a manufacturing operation, are not classified in this industry.)

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1904 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	237	8,554	\$9,476,314	\$13,907,760	\$35,815,658	\$21,907,898	90,276
1927	260	10,903	12,190,918	17,209,467	41,557,458	24,317,091	84,195
1925	283	12,095	14,002,128	20,049,363	50,736,499	30,687,130	87,871
1923	301	12,290	13,522,069	19,700,191	47,243,756	27,543,565	74,205
1921	292	10,345	9,801,651	14,214,205	31,015,437	18,801,282	( <sup>3</sup> )
1919	476	11,405	10,869,196	14,296,925	33,970,463	19,673,538	51,735
1914	627	12,429	6,039,608	7,557,670	18,390,805	10,833,135	39,079
1909	853	13,697	5,980,174	6,730,906	17,951,987	11,221,081	27,627
1904	620	11,152	4,597,113	5,437,150	14,751,170	9,314,020	18,158
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	-8.8	-21.5	-22.3	-19.5	-13.0	-9.9	7.2
1925-1927	-8.1	-9.9	-12.9	-13.9	-18.0	-20.8	-4.2
1923-1925	-6.0	-1.6	3.6	1.8	7.4	11.4	18.4
1921-1923	3.1	18.8	38.0	38.6	52.3	63.9	
1919-1921	-38.7	-9.3	-9.8	-6	-8.7	-14.0	
1919-1929	-50.2	-25.0	-12.8	-2.7	5.4	11.4	74.5
1909-1919	-44.2	-17.9	81.8	112.4	89.2	76.3	87.3

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Not called for on schedule.

<sup>4</sup> No comparable data for years prior to 1904.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census-year	Number of establishments	Salaried officers and employees	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	237	832	8,554	90,276	13,523	76,753	\$2,049,311	\$9,476,314	\$13,907,760	\$7,705,917	\$0,201,843	\$35,815,658	\$21,907,898
	1927	260	1,073	10,903	84,195	16,591	67,604	2,855,483	12,190,918	17,209,467	9,690,298	7,579,109	41,557,458	24,317,091
	1919	476	1,101	11,405	51,735	23,140	28,595	1,995,380	10,869,196	14,296,925	8,269,470	6,027,446	33,970,463	19,673,538
Individual States:														
Alabama	1929	6	16	276	1,224	72	1,152	38,003	210,439	618,130	389,203	228,927	1,103,036	484,906
	1927	10	48	571	3,449	592	2,857	118,944	410,615	841,524	576,228	265,296	1,508,109	606,585
	1919	10	32	291	809	409	400	67,951	304,741	640,216	440,329	199,886	1,148,696	508,481
California	1929	7	17	144	1,948		1,948	46,149	193,293	256,838	160,203	96,635	679,382	422,544
	1927	10	18	235	1,408	60	1,348	48,348	339,321	390,289	236,169	154,180	1,068,269	677,950
	1919	8	25	159	345	235	110	38,646	166,397	281,199	146,344	134,865	564,182	282,953
Connecticut	1929	5	4	86	687	50	637	9,360	111,660	272,530	194,147	78,383	558,277	285,747
	1927	6	10	179	879		879	25,245	250,227	337,714	232,767	104,947	705,269	367,555
	1919	5	14	191	85		85	26,000	196,289	419,166	267,602	121,594	770,206	351,010
Illinois	1929	9	21	223	3,009	115	2,894	55,304	305,459	636,080	295,456	240,624	1,265,003	728,923
	1927	8	25	305	2,860	40	2,820	75,188	377,828	454,282	232,438	221,844	1,230,323	776,041
	1919	11	54	378	1,668	370	1,298	90,809	409,141	330,652	233,157	97,495	1,064,548	733,896

See footnotes at end of table.







CENSUS OF MANUFACTURES: 1929

TABLE 5.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
		Horse-power		Horse-power		Horse-power		Horse-power		Horse-power		
Prime movers and electric motors driven by purchased energy, aggregate	4,073	90,276	3,409	84,195	3,179	87,871	1,633	51,735	1,103	39,079	100.0	100.0
Prime movers, total	241	13,523	252	16,591	308	24,073	472	23,140	670	27,826	15.0	44.7
Steam, total	120	8,079	146	11,074	218	17,944	329	19,946	543	25,388	9.0	38.5
Engines	115	6,829	140	9,983	203	13,678	320	18,732	(1)	(1)	7.0	36.2
Turbines	5	1,250	6	1,091	15	4,266	9	1,214	(1)	(1)	1.4	2.3
Internal-combustion engines	119	4,919	104	4,837	128	4,902	139	2,944	123	2,122	5.4	5.7
Water wheels and water turbines	2	625	2	680	22	1,227	4	250	10	316	0.6	0.6
Electric motors driven by purchased energy	3,832	76,753	3,157	67,604	2,811	63,798	1,161	28,595	427	11,253	85.0	55.3
Electric motors, total	4,038	80,503	3,380	70,650	3,092	70,276	1,333	32,155	519	12,851	100.0	100.0
Driven by purchased energy	3,832	76,753	3,157	67,604	2,811	63,798	1,161	28,595	427	11,253	95.3	88.9
Driven by energy generated in establishments reporting	206	3,750	173	3,046	281	6,478	172	3,560	92	1,598	4.7	11.1
Electric generators	24	Kilowatts 3,817 Kilowatt-hours	28	Kilowatts 2,946	47	Kilowatts 8,539	(?)	(?)	(?)	(?)		
Electric energy purchased <sup>1</sup>		62,574,070		( <sup>2</sup> )		( <sup>2</sup> )		( <sup>2</sup> )		( <sup>2</sup> )		

<sup>1</sup> Not called for separately on schedule.  
<sup>2</sup> Not called for on schedule.  
<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>4</sup> Data incomplete.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:														
1929	8,554	7,038	7,994	8,744	9,177	9,337	9,010	9,025	8,920	8,720	8,452	8,039	<b>7,324</b>	80.0
1925	12,095	<i>10,688</i>	11,154	11,909	12,748	12,755	12,037	12,529	12,827	12,700	12,339	11,671	11,187	83.3
1919	11,405	10,442	<i>10,370</i>	10,844	11,515	11,572	11,306	11,445	12,034	12,143	11,869	11,809	11,511	85.4
1914	12,429	11,076	<i>10,811</i>	11,961	13,164	13,407	13,154	13,342	13,745	13,670	12,876	11,768	<i>10,174</i>	74.0
1909	13,897	<i>10,686</i>	11,072	13,074	14,447	14,705	14,541	14,552	15,264	15,547	15,157	14,522	13,686	68.6
Alabama	276	<i>259</i>	<i>259</i>	280	271	273	278	298	288	276	272	266	292	86.9
California	144	176	153	155	147	147	133	126	<i>125</i>	126	135	156	148	71.4
Connecticut	86	83	95	86	93	92	91	79	83	85	74	77	94	77.9
Illinois	223	191	200	214	224	260	273	260	292	294	228	232	103	37.7
Indiana	334	324	328	340	340	345	367	348	325	339	328	322	298	81.2
Iowa	79	60	58	60	74	80	86	90	98	98	93	84	62	59.2
Maryland	256	250	237	264	273	272	270	259	253	260	233	220	220	77.7
Massachusetts	317	304	311	309	322	331	325	325	321	329	304	318	308	91.5
Michigan	167	154	139	135	156	168	177	178	183	188	197	194	168	68.0
Missouri	621	525	506	612	650	649	678	725	701	655	635	605	504	69.5
New York	154	<i>123</i>	133	166	175	180	162	147	147	155	153	138	161	71.1
Ohio	1,044	1,040	1,067	1,151	1,204	1,095	1,028	1,068	1,055	1,077	998	912	854	92.3
Pennsylvania	1,462	1,335	1,325	1,280	1,410	1,588	1,806	1,591	1,566	1,554	1,474	1,383	<i>1,261</i>	89.8
Tennessee	377	373	371	368	363	363	363	363	374	374	401	413	401	87.9
Texas	413	403	405	415	410	438	429	409	414	420	424	403	386	88.1
Utah	81	82	83	94	90	86	94	101	76	71	73	66	59	58.4
Vermont	137	123	125	146	151	145	146	147	140	133	136	121	128	80.1
Virginia	728	630	675	778	879	846	746	757	750	724	710	650	678	65.8
Washington	171	192	158	172	176	153	153	157	148	191	211	187	151	70.1
West Virginia	332	303	356	438	470	398	350	391	410	384	353	319	324	67.9
Wisconsin	208	201	203	214	216	236	234	222	210	191	193	195	183	77.5

## MARBLE, GRANITE, SLATE, AND OTHER STONE PRODUCTS

Description of the industry.—This industry classification covers establishments engaged primarily in cutting, shaping, and finishing marble, granite, slate, and other stone for building, monumental, and miscellaneous uses. The census does not cover the numerous small yards which are engaged in the purchase and sale of finished or partly finished monuments and tombstones but which do no work on them except lettering and finishing to individual order. The manufacture of grindstones, pulpstones, hones, and whetstones is not included in this industry.

Inclusion of data for quarrying.—The quarrying and the finishing of stone are carried on to some extent by the same establishments. In some instances the

returns covered both quarrying and manufacturing operations, and although every effort was made to eliminate the data for quarrying it was not possible in all cases to do so. The extent to which these enter into the statistics is shown by the following figures for the establishments which included such data in their reports:

	Total for the industry	Total for establishments which included quarrying data in reports
Number of establishments.....	1,881	201
Number of wage earners employed (average for the year).....	37,817	9,102
Wages.....	\$63,040,864	\$11,830,326
Materials, fuel, and purchased electric energy.....	\$57,637,838	\$3,341,666
Value of products.....	\$192,163,916	\$24,387,680

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1904 TO 1929

[Data for establishments with products under \$5,000 in value included for 1916 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size. No comparable data are available for years prior to 1904]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929.....	1,881	37,817	\$63,040,864	\$57,637,838	\$192,163,916	\$134,526,078	305,915
1927.....	1,978	40,474	68,490,655	66,328,248	201,181,281	134,853,033	295,174
1925.....	2,356	36,575	59,592,678	66,976,305	193,046,836	126,070,531	240,297
1923.....	2,091	40,056	61,599,519	66,882,788	191,537,444	124,654,656	213,133
1921.....	2,025	30,260	44,135,464	53,067,050	137,241,121	84,174,071	( <sup>3</sup> )
1919.....	4,240	32,768	38,354,822	49,524,841	129,164,653	79,640,312	169,177
1914.....	4,901	54,891	37,960,517	37,802,355	107,054,593	69,252,258	206,115
1909.....	4,064	65,603	42,846,384	37,397,134	113,092,967	75,695,883	185,031
1904.....	2,608	51,110	31,899,300	26,568,526	84,843,934	58,275,408	101,255
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	-4.9	-6.6	-8.0	-12.1	-4.5	-0.2	3.6
1925-1927.....	-16.0	10.7	14.9	-1.0	4.2	7.0	22.8
1923-1925.....	-12.4	-8.7	-3.3	.1	.8	1.1	12.7
1921-1923.....	-8.0	32.4	39.6	26.0	39.6	48.1	-----
1919-1921.....	-81.0	-7.7	15.1	7.2	6.8	5.7	-----
1919-1929.....	-55.6	15.4	64.4	16.4	48.8	68.9	80.8
1909-1919.....	-14.6	-50.1	-9.9	32.4	14.2	5.2	-8.6

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Not called for on schedule.

## CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employes <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages <sup>2</sup>	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>3</sup>	Value added by manufacture <sup>4</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States.....	1929	1,881	5,916	37,817	305,915	55,267	250,648	\$18,495,840	\$63,040,804	\$57,037,838	\$52,548,013	\$5,089,825	\$192,163,916	\$134,526,078
	1927	1,978	6,033	40,474	295,174	61,382	233,792	16,719,146	68,490,655	60,323,248	60,774,569	5,553,679	201,181,281	134,853,033
	1919	1,240	4,672	32,768	169,177	75,149	*91,028	8,760,854	38,354,822	49,524,341	16,037,831	3,488,510	129,161,693	79,040,312
Individual States:														
Alabama.....	1929	19	77	489	3,849	540	3,309	327,924	522,314	641,467	550,244	82,223	1,921,076	1,279,009
	1927	16	65	360	2,400	4	2,396	154,192	348,502	654,090	590,280	54,866	1,332,407	878,311
	1919	33	29	260	1,857	105	1,752	40,230	218,234	246,833	221,372	25,461	601,622	444,789
Arkansas.....	1929	10	16	42	370	15	355	17,420	59,939	77,500	69,814	7,692	224,600	147,064
	1927	8	3	49	411	135	276	5,000	15,175	80,299	78,798	10,601	256,266	166,987
	1919	49	14	102	393	225	168	20,463	92,204	163,161	153,029	10,132	423,315	260,154
California.....	1929	65	175	927	8,823	390	8,433	555,973	1,742,556	2,202,480	2,199,600	92,760	6,114,588	3,822,108
	1927	74	224	1,184	9,800	512	9,288	609,436	2,265,331	2,395,575	2,275,469	120,106	6,677,369	4,281,794
	1919	128	101	530	3,876	506	3,370	133,222	732,036	1,060,549	1,011,778	48,771	2,829,544	1,708,095
Colorado.....	1929	18	34	120	4,230	2,575	1,655	87,142	217,117	214,824	180,928	24,896	657,233	442,414
	1927	16	26	75	1,091	130	961	62,622	148,625	214,911	200,019	14,892	545,476	341,595
	1919	27	18	87	340	30	310	28,813	128,610	217,243	211,034	6,209	540,626	323,383
Connecticut.....	1929	29	63	372	3,063	590	2,473	214,818	688,242	632,061	458,786	73,275	1,935,773	1,403,712
	1927	31	61	343	2,105	677	1,518	168,677	671,163	549,177	490,368	49,819	1,798,780	1,244,603
	1919	70	33	244	1,631	865	766	83,255	328,287	426,093	399,368	20,735	1,122,473	696,385
Delaware.....	1929	4	5	20	101		101	8,587	26,291	25,864	24,689	1,175	88,150	62,266
	1927	12	6	49	248	107	141	8,794	59,876	157,971	150,321	7,650	308,909	148,929
	1919	14	8	43	71	21	50	10,543	44,888	133,003	131,067	1,930	229,752	90,749
District of Columbia.....	1929	7	27	129	1,298		1,298	68,956	193,056	263,702	240,040	14,662	702,134	488,432
	1927	9	20	152	1,210		1,210	54,273	248,326	339,612	315,478	18,134	846,740	513,123
	1919	12	10	116	159	57	102	36,230	112,170	162,952	159,032	8,820	430,972	244,620
Florida.....	1929	6	12	69	403		403	29,601	69,419	102,419	95,933	6,481	242,437	140,063
	1927	8	16	86	260	14	246	30,565	107,672	136,894	129,674	7,220	331,826	194,932
	1919	10	10	53	77	4	73	12,707	53,787	84,326	82,070	2,256	189,545	105,219
Georgia.....	1929	59	236	2,303	11,220	2,192	9,028	518,047	2,391,110	1,955,956	1,700,124	186,832	8,190,276	6,240,320
	1927	57	243	2,490	13,048	3,927	9,121	488,096	2,530,409	2,021,830	1,723,732	298,098	8,388,710	6,366,889
	1919	84	164	1,713	5,087	3,437	1,650	307,175	1,447,912	1,546,157	1,363,750	182,401	4,955,812	3,400,055
Illinois.....	1929	110	288	1,189	11,296	157	11,139	1,146,528	2,519,466	3,135,793	2,935,953	199,840	8,905,745	5,709,052
	1927	121	305	1,573	9,882	468	9,414	1,124,833	3,473,420	4,799,482	4,595,759	303,723	12,624,159	7,824,177
	1919	247	272	1,081	6,089	1,694	4,195	470,357	1,498,329	3,611,626	3,373,904	137,722	7,442,776	3,931,150
Indiana.....	1929	59	891	3,342	33,709	825	32,944	2,917,973	5,839,072	4,906,350	4,309,814	596,536	20,603,933	15,697,583
	1927	60	987	3,267	37,431	2,845	34,586	2,494,244	5,798,468	5,790,153	5,180,291	609,862	18,990,228	13,170,073
	1919	166	382	2,904	16,668	6,610	10,052	741,524	2,134,068	2,529,301	2,228,103	301,133	7,611,501	5,082,200
Iowa.....	1929	18	40	144	1,500		1,500	102,683	239,287	322,416	297,999	24,417	998,627	676,211
	1927	19	53	248	1,607	5	1,602	163,039	404,867	610,017	573,007	37,010	1,028,989	1,018,972
	1919	58	36	244	979	94	885	100,990	330,301	1,030,067	1,000,385	29,082	2,168,561	1,138,491
Kansas.....	1929	13	32	108	775		775	86,079	196,137	319,096	302,074	17,622	766,965	447,269
	1927	14	30	86	813		813	58,513	150,767	238,712	225,330	13,826	566,094	327,382
	1919	58	8	158	600	182	378	49,993	183,557	538,480	526,664	12,882	1,161,145	622,065
Kentucky.....	1929	22	81	329	2,592	541	2,051	214,868	453,417	575,768	535,077	40,691	1,545,959	970,191
	1927	23	70	274	2,213	305	1,908	127,617	490,628	640,846	596,767	44,079	1,804,231	1,163,885
	1919	63	79	246	1,217	1,637	534	129,564	373,673	721,454	684,611	30,843	1,584,702	803,243
Louisiana.....	1929	10	14	118	520	200	320	60,401	184,387	187,332	174,929	12,403	625,772	438,440
	1927	8	10	85	377	169	208	38,741	184,436	168,314	153,303	9,009	571,488	463,174
	1919	15	22	109	301	189	112	47,700	188,141	236,324	225,842	10,482	603,460	367,139
Maine.....	1929	29	58	996	6,327	2,278	4,049	169,725	1,375,382	551,303	463,142	38,161	2,888,046	2,330,743
	1927	40	52	924	7,258	2,138	5,120	194,091	1,319,027	519,890	398,017	121,869	2,697,009	2,177,123
	1919	130	72	1,041	6,198	3,206	2,902	120,992	1,118,187	601,561	477,342	124,119	2,327,976	1,726,416
Maryland.....	1929	34	102	566	4,426	295	6,221	340,833	933,398	1,149,734	1,067,361	82,873	3,043,941	1,894,207
	1927	39	94	729	4,280	386	3,894	285,634	1,073,932	1,282,111	1,195,259	86,862	3,131,494	1,849,383
	1919	83	74	563	1,507	600	701	136,351	644,096	802,181	763,757	38,224	1,967,568	1,165,887
Massachusetts.....	1929	141	270	2,064	15,886	6,102	9,794	848,443	3,682,476	2,441,529	2,148,073	293,456	9,785,206	7,293,677
	1927	167	288	2,166	12,409	4,698	8,311	890,888	3,820,379	3,208,439	2,873,256	335,183	10,839,589	7,625,150
	1919	239	204	1,936	11,653	7,080	4,573	394,893	2,275,147	2,519,241	2,275,617	7,125,060	4,605,819	
Michigan.....	1929	44	169	583	4,676		4,676	646,731	1,213,922	1,826,677	1,728,261	98,416	4,723,279	2,896,602
	1927	45	135	509	4,165	51	4,114	450,786	1,063,115	1,751,639	1,676,045	74,091	4,484,650	2,733,014
	1919	103	115	365	2,098	181	1,917	201,101	547,499	1,021,490	985,338	30,152	2,579,563	1,558,073
Minnesota.....	1929	65	230	1,781	13,566	898	12,768	654,189	2,645,673	2,220,959	1,903,213	326,746	7,703,151	5,473,123
	1927	52	194	1,340	11,362	995	10,367	528,680	2,194,621	1,982,887	1,721,784	261,103	6,352,415	4,369,692
	1919	109	173	1,021	6,841	1,256	5,666	281,713	1,282,349	1,901,809	1,779,686	122,123	4,721,138	2,819,329
Mississippi.....	1929	5	11	52	301	20	341	20,320	56,517	267,628	260,939	6,689	499,995	232,277
	1927	7	14	60	290		296	23,866	49,445	129,490	122,780	6,710	324,331	194,841
	1919	12	10	78	114	10	164	15,166	59,297	195,287	190,324	4,963	380,042	194,356
Missouri.....	1929	50	189	810	7,868	717	7,151	380,434	1,173,212	1,276,965	1,153,647	123,318	4,185,066	2,608,701
	1927	48	133											

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TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919—Continued

[See note at head of this table]

STATE	Census year	Number of establishments	Salaried officers and employes <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
Individual States—Continued.														
Montana	1929	7	11	34	203	64	229	\$25,409	\$51,903	\$24,499	\$20,184	\$4,315	\$172,271	\$147,772
	1927	6	8	16	224	—	224	8,071	27,267	24,631	21,264	3,367	97,363	72,732
	1919	13	18	45	248	2	246	29,770	77,000	89,069	84,547	4,462	290,634	207,525
Nebraska	1929	11	49	105	1,277	—	1,277	127,824	185,315	263,423	244,644	18,779	813,890	550,407
	1927	12	47	189	1,062	65	997	106,489	226,284	363,659	344,327	19,332	922,344	558,685
	1919	45	61	161	681	41	640	112,081	232,283	700,933	682,904	18,029	1,474,340	778,407
New Hampshire	1929	31	29	492	3,983	982	3,001	65,111	843,091	452,386	392,896	59,490	1,741,218	1,288,832
	1927	42	50	608	4,835	1,750	3,085	113,464	1,045,599	546,334	466,839	79,495	2,146,802	1,600,468
	1919	70	53	776	4,975	2,667	2,418	92,044	992,844	419,082	338,651	80,431	2,130,643	1,711,561
New Jersey	1929	41	137	701	4,905	775	4,130	526,885	1,664,827	1,458,580	1,388,947	60,633	5,980,279	3,621,699
	1927	42	119	699	4,192	683	3,509	420,301	1,734,470	1,735,933	1,658,542	77,391	5,741,720	4,005,787
	1919	114	108	636	2,480	1,431	1,049	231,296	898,008	1,095,994	1,054,609	41,385	2,939,900	1,843,906
New York	1929	234	797	4,410	31,610	4,214	27,396	3,063,931	10,841,887	9,270,327	8,708,606	561,731	29,545,301	20,274,974
	1927	238	758	4,839	30,126	2,420	27,706	2,657,542	12,240,429	10,477,829	9,878,347	599,482	33,788,532	23,311,703
	1919	436	463	2,640	11,700	6,315	5,385	919,778	3,795,553	5,970,912	5,739,384	240,528	13,509,118	7,529,296
North Carolina	1929	31	87	854	4,427	1,448	2,979	221,240	1,080,953	868,475	788,503	79,972	2,950,818	2,088,343
	1927	32	60	940	4,457	1,440	3,017	115,236	1,266,366	840,594	756,331	84,263	2,965,466	2,124,872
	1919	58	87	935	1,795	1,175	620	139,788	866,028	494,665	426,535	68,130	2,112,881	1,618,216
Ohio	1929	75	248	1,353	13,047	2,515	10,532	794,139	2,140,340	2,515,522	2,342,088	173,434	8,399,739	5,884,217
	1927	66	218	1,548	16,033	5,437	10,596	723,121	2,505,343	2,626,766	2,436,266	190,500	8,372,885	5,745,619
	1919	101	287	1,504	8,179	4,654	3,525	562,605	1,912,274	2,517,753	2,362,589	154,864	7,201,876	4,684,123
Oklahoma	1929	16	34	173	1,171	230	941	147,082	281,035	335,661	316,570	19,091	1,245,259	909,598
	1927	15	27	186	844	180	664	115,423	265,808	383,842	364,038	19,894	979,997	596,155
	1919	48	23	117	475	248	227	33,947	160,275	304,254	293,630	10,615	687,691	383,337
Oregon	1929	11	23	87	944	—	944	93,678	158,278	180,702	170,169	10,533	614,271	433,669
	1927	10	19	83	604	—	604	41,314	153,171	168,847	159,010	9,837	593,967	494,969
	1919	17	25	55	318	—	318	43,126	89,370	149,167	141,035	8,132	354,138	204,971
Pennsylvania	1929	169	348	3,440	20,718	6,844	13,874	943,728	4,783,046	3,919,951	3,463,797	454,154	12,636,522	8,716,571
	1927	197	400	3,955	25,899	9,916	15,983	988,736	5,765,173	5,048,612	4,484,703	563,909	14,388,749	9,790,137
	1919	489	383	3,697	17,921	12,948	4,973	625,423	3,721,571	4,311,573	3,953,897	355,676	11,131,630	6,820,057
Rhode Island	1929	12	42	268	2,009	200	1,809	125,777	501,609	414,555	373,076	41,479	1,275,919	861,355
	1927	14	43	350	1,566	29	1,537	90,319	610,996	437,318	391,996	45,322	1,386,028	951,710
	1919	44	35	321	1,650	674	976	54,881	463,126	390,662	351,478	39,184	1,173,630	782,068
South Carolina	1929	12	17	111	612	38	574	33,224	145,493	104,917	97,099	7,818	419,355	305,438
	1927	11	24	104	705	70	635	43,991	131,962	112,141	104,368	7,773	413,771	301,630
	1919	35	27	121	347	58	289	53,072	138,934	273,357	264,265	9,062	597,434	324,077
Tennessee	1929	31	166	1,464	10,469	1,050	9,410	515,013	1,818,232	2,614,049	2,409,988	204,061	6,841,449	4,227,400
	1927	38	162	1,628	10,941	834	10,107	575,932	1,928,885	2,509,294	2,284,510	224,784	6,741,933	4,232,699
	1919	85	87	819	5,020	3,094	1,926	148,319	672,084	893,880	804,910	88,707	2,223,099	1,329,119
Texas	1929	61	72	467	9,645	245	9,400	172,537	692,861	906,061	840,078	65,983	2,490,769	1,584,708
	1927	62	65	439	2,666	508	2,160	167,544	624,141	704,493	643,005	61,488	2,085,775	1,381,282
	1919	126	79	459	1,821	708	1,113	109,900	538,664	881,901	837,066	44,815	2,150,465	1,277,504
Utah	1929	6	6	25	307	27	280	10,200	34,519	54,001	49,566	4,435	138,578	84,575
	1927	4	8	22	200	23	177	8,407	40,116	40,930	36,169	4,701	91,765	50,835
	1919	18	17	50	269	44	225	23,279	75,272	139,270	135,551	3,719	339,633	200,363
Vermont	1929	209	526	5,287	46,257	14,883	31,374	1,350,235	8,589,718	6,331,237	5,646,046	685,191	23,131,193	16,799,956
	1927	203	645	5,205	45,440	16,198	29,242	1,426,010	8,411,063	7,869,937	7,126,510	743,427	21,317,503	18,447,596
	1919	287	494	5,400	30,590	7,855	22,735	1,156,730	6,276,307	6,165,841	5,574,615	591,226	17,426,011	11,269,170
Virginia	1929	26	113	867	3,643	2,482	1,166	218,411	885,762	604,942	530,057	74,885	2,243,974	1,644,032
	1927	29	133	1,012	5,649	2,942	2,707	249,090	999,755	1,067,833	916,108	91,727	2,668,233	1,693,393
	1919	66	46	441	1,176	771	405	98,204	399,727	483,204	442,022	43,182	1,149,065	663,891
Washington	1929	16	35	201	2,573	150	2,423	90,837	320,953	290,294	274,082	21,222	822,236	526,082
	1927	20	35	206	2,124	385	1,739	74,599	370,305	282,950	256,979	25,871	835,799	652,819
	1919	27	47	150	836	142	694	73,612	221,683	319,318	304,192	18,726	927,686	607,698
West Virginia	1929	6	12	28	310	46	264	32,521	33,698	58,693	54,800	3,403	191,925	133,322
	1927	8	6	41	378	103	275	11,655	59,293	93,866	88,833	5,093	121,169	101,393
	1919	35	15	83	345	303	33	22,544	97,143	243,401	239,215	4,186	595,255	291,851
Wisconsin	1929	51	178	882	8,291	894	7,397	510,262	1,477,723	1,603,912	1,484,489	119,423	4,790,193	3,186,251
	1927	55	148	1,335	6,292	1,117	5,085	491,702	2,051,915	1,826,273	1,670,389	155,884	5,869,551	4,038,278
	1919	131	206	1,287	5,118	2,118	3,000	437,495	1,424,697	1,791,594	1,583,659	129,815	4,720,440	3,021,936
Groups of States:														
Ariz., 2 est.; Idaho, 2	1929	4	8	16	135	25	110	9,390	12,056	15,894	15,274	620	50,518	40,624
N. Dak., 1 est.; S. Dak., 3	1929	4	8	59	385	—	385	20,500	96,818	46,503	37,410	9,039	251,633	205,175
States not shown separately	1929	10	20	77	998	—	998	44,109	108,717	75,558	63,074	12,434	330,147	274,530
	1919	41	43	137	923	155	768	87,118	187,057	562,308	511,958	20,259	1,162,723	670,515

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 1,525; 1927, 1,094; 1919, 4,774. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 45,295; 1927, 43,201; 1919, 42,214.  
<sup>2</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>4</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.  
<sup>5</sup> Arizona, 2 establishments; Idaho, 3; North Dakota, 1; South Dakota, 4.  
<sup>6</sup> Arizona, 6 establishments; Idaho, 6; Nevada, 4; New Mexico, 1; North Dakota, 12; South Dakota, 11; Wyoming, 1.

## CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRODUCTS, BY KIND AND VALUE, FOR THE UNITED STATES: 1929 AND 1927

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for 1927 represent production. See GENERAL EXPLANATIONS—Value of Products]

	1929	1927	Per cent of increase or decrease (-)		1929	1927	Per cent of increase or decrease (-)
Aggregate.....	\$192,163,010	\$201,181,281	-4.5	Stones for ornamental and miscellaneous uses, total.....	\$13,984,125	\$14,481,174	-3.4
Building stones, total.....	114,633,068	122,731,466	-6.6	Marble, total.....	1,684,359	1,682,171	0.1
Marble, total.....	41,524,559	45,759,500	-9.3	Statuary.....	87,623	30,151	142.4
For exterior use.....	6,217,315	4,531,053	37.2	Table tops.....	493,247	384,270	28.4
For interior use.....	35,307,244	41,228,447	-14.4	Other, including pedestals.....	1,103,489	1,267,858	-12.5
Granite, total.....	11,437,410	11,495,703	-0.5	Granite, total.....	5,820,355	6,241,016	-6.7
For exterior use.....	11,422,148	11,326,196	0.8	Paving blocks.....	2,641,241	2,890,725	-8.6
For interior use.....	15,262	169,507	-91.0	Curbing.....	1,547,165	2,086,439	-25.8
Limestone, total.....	51,301,968	52,240,008	-1.8	Other.....	1,631,949	1,263,858	29.1
For exterior use.....	50,447,014	51,273,617	-1.6	Slate, total.....	3,345,761	3,409,934	-1.9
For interior use.....	854,954	966,391	-11.5	Blackboards and school slates.....	1,779,940	1,545,565	15.2
Slate, total.....	6,691,540	7,281,512	-8.1	Switchboard panels and other electrical insulation.....	1,099,631	1,527,469	-28.0
For roofing.....	5,207,711	6,001,063	-13.2	Other.....	466,184	336,900	38.4
For interior use.....	1,483,829	1,280,449	15.9	Limestone.....	283,040	150,357	88.2
Other stones (sandstone, bluestone, etc.), total.....	3,677,591	5,954,743	-38.2	Other stones (sandstone, bluestone, onyx, etc.).....	2,850,610	2,997,696	-4.9
For exterior use.....	3,148,522	4,739,801	-33.6	Stone not reported in detail.....	1,653,326	1,442,086	14.6
For interior use.....	529,069	1,215,442	-56.5	Other products, value, and receipts for contract and custom work.....	1,719,508	2,832,887	-39.3
Monumental stones (monuments, tombstones, and other stone articles for cemetery use), total.....	60,173,889	59,693,668	0.8				
Marble.....	9,825,606	10,781,524	-8.9				
Granite.....	49,634,842	48,462,006	2.4				
Other stones (limestone, slate, etc.).....	713,941	450,138	58.0				

<sup>1</sup> Does not include the following values of stone reported as secondary products by establishments classified in other industries: 1929, \$178,146; 1927, \$724,007.

TABLE 4.—PRODUCTS, BY KIND AND VALUE, BY STATES: 1929

[The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups]

KIND AND STATE	Value	KIND AND STATE	Value	KIND AND STATE	Value
<b>BUILDING STONES FOR EXTERIOR USE</b>		<b>BUILDING STONES FOR EXTERIOR USE—continued</b>		<b>BUILDING STONES FOR EXTERIOR USE—continued</b>	
Marble, total.....	\$6,217,315	Limestone, total.....	\$50,447,014	Other stones (sandstone, bluestone, etc.), total.....	\$3,148,522
California.....	112,871	Connecticut.....	253,286	Maryland.....	44,361
Illinois.....	267,593	District of Columbia.....	471,654	New Jersey.....	52,622
New Jersey.....	340,330	Illinois.....	4,335,611	New York.....	418,689
New York.....	1,805,773	Indiana.....	19,469,574	Ohio.....	1,801,005
Pennsylvania.....	113,074	Iowa.....	336,264	Pennsylvania.....	97,541
Other States (Ala., Colo., Conn., D. C., Fla., Ga., Iowa, Kans., Ky., La., Md., Mich., Miss., Mo., N. H., N. C., Ohio, Oreg., S. C., Tenn., Vt., Va., Wash., W. Va., Wis.).....	3,577,674	Kansas.....	236,218	Wisconsin.....	19,611
Granite, total.....	11,422,148	Kentucky.....	686,873	Ariz., Colo., Mont.....	15,026
Connecticut.....	344,956	Maryland.....	890,821	Calif., Wash.....	165,647
District of Columbia.....	43,411	Massachusetts.....	694,136	Ill., Mich., Minn., Mo.....	65,981
Maine.....	590,649	Michigan.....	3,453,974	Other States (Conn., D. C., Ky., Mass., Va., W. Va.).....	468,148
Maryland.....	201,045	Minnesota.....	745,546	<b>BUILDING STONES FOR INTERIOR USE</b>	
Massachusetts.....	1,911,893	Missouri.....	842,798	Marble, total.....	35,307,244
Minnesota.....	1,695,667	Nebraska.....	220,723	California.....	3,142,818
New Hampshire.....	1,068,832	New Jersey.....	3,055,161	Illinois.....	1,634,710
New York.....	1,808,411	New York.....	6,436,393	Massachusetts.....	1,069,980
North Carolina.....	438,155	Ohio.....	2,329,566	Michigan.....	671,785
Pennsylvania.....	452,594	Pennsylvania.....	2,055,358	Minnesota.....	938,210
Rhode Island.....	378,702	Tennessee.....	280,042	Missouri.....	1,069,271
Texas.....	50,366	Virginia.....	88,163	New Jersey.....	922,213
Vermont.....	525,163	Wisconsin.....	1,110,770	New York.....	8,967,839
Calif., Wash.....	1,011,151	Ala., Fla., Ga., La., N. C., Ark., Okla., Tex.....	1,327,188	New York.....	1,028,157
Colo., Mont., Oreg., Utah.....	91,104	Other States (Calif., Colo., Del., W. Va.).....	72,991	Ohio.....	
Ala., Fla., Ga., La., Miss., Tenn., Va.....	548,021	Roofing slate, total.....	5,207,711	Pennsylvania.....	986,946
Ill., Iowa, Kans., Mich., Mo., Wis.....	171,712	New York.....	286,575	Tennessee.....	5,388,943
Other States (Ky., N. J., Ohio, Okla., W. Va.).....	90,316	Pennsylvania.....	1,841,249	Texas.....	516,621
		Vermont.....	2,441,420	Texas.....	274,056
		Virginia.....	524,820	Washington.....	867,299
		Other States (Calif., La., Me., Md., N. J.).....	113,647	Conn., R. I., Vt.....	1,288,770
				Ind., Iowa, Kans., Nebr., Wis.....	396,448
				Colo., Oreg., Utah.....	1,403,709
				Ala., Ga., La., N. C., Va.....	
				Other States (Ark., Del., Ky., Me., Md., Okla.).....	1,736,990
				Granite (Calif., Conn., Kans., N. Y., N. C., Vt., Wash.).....	15,262

MARBLE, GRANITE, SLATE, ETC.

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TABLE 4.—PRODUCTS, BY KIND AND VALUE, BY STATES: 1929—Continued

(See note at head of this table)

KIND AND STATE	Value	KIND AND STATE	Value	KIND AND STATE	Value
<b>BUILDING STONES FOR INTERIOR USE—continued</b>		<b>MONUMENTS, TOMBSTONES, AND OTHER STONE ARTICLES FOR CEMETERY USE—continued</b>		<b>STONES FOR ORNAMENTAL AND MISCELLANEOUS USES—continued</b>	
Limestone, total.....	\$854,954	Granite—Continued		Other marble, including pedestals, total.....	\$1,103,489
Michigan.....	9,930	Florida.....	\$57,675	New York.....	757,935
Minnesota.....	236,509	Georgia.....	1,157,980	Ill., Kans., Mich., Minn., Mo., Wis.....	144,232
New York.....	202,185	Illinois.....	2,013,572	Other States (Calif., Del., Ga., La., Md., N. J., N. C., Ohio, Pa., Vt., Va.).....	201,322
Other States (Calif., Colo., Fla., Ill., Ind., Ky., Mass., Mo., Nebr., N. J., N. C., Ohio, Tenn., Wash., W. Va. Wis.).....	356,330	Indiana.....	464,681	Granite paving blocks, total.....	2,641,241
Slate, total.....	1,483,829	Iowa.....	603,229	Maine.....	1,369,355
Massachusetts.....	68,200	Kansas.....	340,138	Massachusetts.....	521,625
Pennsylvania.....	1,202,394	Kentucky.....	392,952	New Hampshire.....	100,003
Conn., Del., N. J., N. Y., Ohio, R. I., Vt.....	103,258	Louisiana.....	215,672	Wisconsin.....	225,359
Other States (Ill., Mich., Minn., Mo., Wash.).....	119,878	Maine.....	311,773	Other States (Calif., Conn., Ga., N. C., Pa., S. C., Vt.).....	414,999
Other stones (sandstone, bluestone, etc.), total.....	529,069	Maryland.....	396,404	Granite curbing, total.....	1,547,165
Massachusetts.....	30,389	Massachusetts.....	4,072,656	Connecticut.....	44,219
Conn., N. Y., Ohio, Pa.....	363,448	Michigan.....	425,648	Georgia.....	369,924
Other States (Calif., Colo., Ill., Minn., Mo., N. C., Tex., Wash., W. Va.).....	135,232	Minnesota.....	3,454,380	Maine.....	128,814
<b>MONUMENTS, TOMBSTONES, AND OTHER STONE ARTICLES FOR CEMETERY USE</b>		Missouri.....	722,287	Massachusetts.....	509,720
Marble, total.....	9,825,608	Montana.....	183,315	New York.....	98,477
Alabama.....	157,045	Nebraska.....	375,201	Pennsylvania.....	95,543
Arkansas.....	68,390	New Hampshire.....	458,103	Other States (Del., La., N. H., N. C.).....	240,468
California.....	157,183	New Jersey.....	433,763	Other granite, total.....	1,631,949
Colorado.....	10,390	New York.....	6,075,957	Georgia.....	116,082
Connecticut.....	105,018	North Carolina.....	1,119,430	Massachusetts.....	326,345
Florida.....	68,360	Ohio.....	1,607,200	Other States (Conn., Ill., Me., Mich., Minn., N. H., N. Y., N. C., Pa., R. I., Utah, Vt., Wis.).....	1,168,619
Georgia.....	2,828,732	Oklahoma.....	262,085	Slate blackboards and school slates, total.....	1,779,946
Illinois.....	118,175	Oregon.....	289,417	Pennsylvania.....	1,723,508
Indiana.....	110,429	Pennsylvania.....	2,533,736	Other States (Ill., Ky., Mich., N. J., Ohio, R. I.).....	56,438
Kansas.....	31,166	Rhode Island.....	533,313	Switchboard panels and other electrical insulation, slate, total.....	1,099,631
Kentucky.....	68,489	South Carolina.....	309,926	Pennsylvania.....	265,568
Louisiana.....	119,159	Tennessee.....	269,866	Vermont.....	331,044
Maine.....	56,785	Texas.....	1,182,135	Other States (Calif., Ill., La., Me., Mass., Minn., N. Y., Wash.).....	502,119
Maryland.....	193,018	Utah.....	67,335	Other slate, total.....	466,184
Massachusetts.....	76,359	Vermont.....	14,222,681	Pennsylvania.....	40,387
Michigan.....	75,660	Virginia.....	344,579	Vermont.....	268,442
Minnesota.....	17,676	Washington.....	211,951	Other States (Iowa, Ky., Me., N. Y.).....	157,355
Mississippi.....	233,049	Wisconsin.....	2,040,995	Limestone, total.....	283,040
Missouri.....	185,769	Del., D. C., W. Va.....	111,668	Indiana.....	94,587
New Hampshire.....	26,070	Other States (Idaho, Miss., N. Dak., S. Dak.).....	352,310	Mass., N. J., N. Y.....	37,512
New Jersey.....	123,993	Other stones (limestone, slate, etc.), total.....	713,941	Other States (Ala., Calif., Mich., Mo., Tenn., Tex., Va., W. Va.).....	130,941
New York.....	655,889	Indiana.....	33,604	Other stones (sandstone, bluestone, onyx, etc.), total.....	2,850,610
North Carolina.....	306,552	Missouri.....	5,427	New York.....	448,030
Ohio.....	256,745	New Jersey.....	2,273	Pennsylvania.....	136,039
Oklahoma.....	20,374	New York.....	226,454	Other States (Calif., Colo., Conn., Fla., Ill., Ind., Mass., Mich., Minn., N. H., N. J., Ohio, Tex., Vt., Va., Wash., W. Va., Wis.).....	2,266,541
Oregon.....	9,553	Pennsylvania.....	87,130		
Pennsylvania.....	426,496	Wisconsin.....	2,720		
South Carolina.....	44,530	Ala., Fla., La., Md., S. C., Tenn., Va.....	54,510		
Tennessee.....	680,040	Other States (Ark., Calif., Conn., Del., Ill., Ky., Me., Mass., Nebr., Ohio, Ore., Tex., Vt., W. Va.).....	301,823		
Texas.....	188,061	<b>STONES FOR ORNAMENTAL AND MISCELLANEOUS USES</b>			
Utah.....	13,918	Marble statuary, total.....	87,623		
Virginia.....	173,221	California.....	16,856		
Washington.....	50,577	Other States (Del., Kans., Mo., N. J., N. Y., Pa., Tex., Vt., Va., Wis.).....	70,767		
Wisconsin.....	98,385	Marble table tops, total.....	493,247		
Other States (Del., D. C., Idaho, Iowa, Mont., Nebr., N. Dak., R. I., Vt., W. Va.).....	2,127,510	Illinois.....	105,241		
Granite, total.....	49,634,342	New York.....	349,043		
Alabama.....	132,142	Other States (Calif., Kans., La., Mass., Minn., Mo., Nebr., N. H., N. J., Ohio, Pa., Vt., Wis.).....	38,963		
Arkansas.....	43,405				
California.....	852,413				
Colorado.....	505,706				
Connecticut.....	545,827				

## CENSUS OF MANUFACTURES: 1929

TABLE 5.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	15,370	<i>Horse-power</i> 305,915	13,811	<i>Horse-power</i> 295,174	11,105	<i>Horse-power</i> 240,207	7,871	<i>Horse-power</i> 169,177	7,454	<i>Horse-power</i> 209,115	100.0	100.0
Prime movers, total.....	692	55,267	776	61,382	901	64,065	1,806	75,149	3,132	139,118	18.1	44.4
Steam, total.....	501	33,313	531	40,428	579	45,030	1,011	60,083	2,059	110,150	10.9	35.5
Engines.....	496	32,320	525	37,888	573	41,251	1,000	59,373	(1)	(1)	10.6	35.1
Turbines.....	5	993	6	2,540	6	3,785	11	710	(1)	(1)	.3	.4
Internal-combustion engines.....	155	6,736	189	5,313	262	5,447	766	10,175	994	12,529	2.2	6.0
Water wheels and water turbines.....	36	15,218	50	15,041	60	13,582	29	4,891	79	16,433	5.0	2.9
Electric motors driven by purchased energy.....	14,678	250,648	13,035	233,792	10,204	176,232	6,065	94,028	4,322	66,997	81.9	55.6
Electric motors, total.....	16,260	277,224	14,741	264,249	11,951	210,295	6,728	106,033	5,621	94,976	100.0	100.0
Driven by purchased energy.....	14,678	250,648	13,035	233,792	10,204	176,232	6,065	94,028	4,322	66,997	90.4	88.7
Driven by energy generated in establishments reporting.....	1,588	26,576	1,706	30,457	1,747	34,063	663	12,005	1,299	27,979	9.6	11.3
Electric generators.....	73	<i>Kilowatts</i> 21,062 <i>Kilowatt-hours</i> 151,906,038	97	<i>Kilowatts</i> 21,741	186	<i>Kilowatts</i> 22,960	(?)	(?)	(?)	(?)	-----	-----
Electric energy purchased <sup>1</sup> .....	-----	-----	-----	(4)	-----	(4)	-----	(?)	-----	(?)	-----	-----

<sup>1</sup> Not called for separately on schedule.

<sup>2</sup> Not called for on schedule.

<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

<sup>4</sup> Data incomplete.

MARBLE, GRANITE, SLATE, ETC.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Percent minimum is of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
United States:															
1929.....	37,817	<i>34,686</i>	34,881	<b>36,937</b>	38,304	39,068	39,475	39,143	<b>39,761</b>	39,528	38,908	37,462	35,631	87.1	
1925.....	36,576	<i>33,649</i>	34,013	<b>35,210</b>	36,917	37,774	37,746	37,904	<b>37,939</b>	37,906	37,693	36,601	35,553	88.7	
1919.....	32,768	<i>25,808</i>	25,604	<b>28,177</b>	31,447	33,333	34,518	35,528	<b>35,942</b>	36,275	<b>38,275</b>	35,900	34,909	69.8	
1914.....	54,891	<i>48,563</i>	<b>47,642</b>	51,474	56,387	58,324	59,288	59,478	<b>59,949</b>	59,141	56,941	52,443	49,062	79.5	
1909.....	65,603	<i>53,677</i>	54,453	<b>60,032</b>	66,623	69,040	70,348	71,644	<b>72,187</b>	72,004	70,432	67,060	59,682	74.9	
Alabama.....	489	491	491	491	490	<i>483</i>	<i>483</i>	486	488	491	489	<i>495</i>	492	97.6	
Arkansas.....	42	40	40	43	48	48	47	41	42	39	39	58	43	79.2	
California.....	927	928	<i>891</i>	<i>891</i>	908	936	936	954	926	<b>974</b>	932	911	940	91.5	
Colorado.....	120	<i>105</i>	112	120	127	<b>129</b>	127	119	122	120	126	120	110	81.4	
Connecticut.....	372	<i>367</i>	289	319	335	339	394	398	420	453	448	437	362	58.9	
Delaware.....	20	<i>21</i>	<i>21</i>	<i>20</i>	<i>20</i>	<i>20</i>	<i>20</i>	21	21	<i>20</i>	<i>20</i>	<i>20</i>	<i>20</i>	95.2	
District of Columbia.....	129	122	<i>120</i>	121	131	135	136	137	134	131	124	127	128	87.6	
Florida.....	60	49	<i>48</i>	58	60	61	64	69	69	66	60	57	66	69.6	
Georgia.....	2,303	2,175	2,203	2,342	2,346	2,345	2,405	2,398	2,412	2,411	2,316	<i>2,129</i>	2,156	88.3	
Illinois.....	1,189	1,221	1,194	1,220	1,234	1,213	1,206	1,210	1,203	1,187	1,181	1,132	1,067	86.6	
Indiana.....	3,342	2,977	<i>2,923</i>	3,091	3,367	3,521	3,620	3,351	3,617	<i>3,665</i>	3,504	3,375	3,064	79.8	
Iowa.....	144	<i>100</i>	<i>100</i>	130	154	166	171	162	144	154	156	151	140	58.5	
Kansas.....	108	100	<i>95</i>	99	107	118	111	108	110	104	116	120	108	79.2	
Kentucky.....	329	<i>266</i>	280	337	350	346	335	349	338	334	350	335	323	76.0	
Louisiana.....	118	<i>96</i>	109	109	184	123	121	118	123	124	122	121	121	77.4	
Maine.....	996	449	<i>440</i>	915	1,131	1,175	1,228	1,172	1,158	1,176	1,159	995	959	35.8	
Maryland.....	566	545	<i>520</i>	534	535	539	579	578	578	573	594	<b>608</b>	599	87.5	
Massachusetts.....	2,064	1,887	1,974	2,065	2,143	2,200	2,162	2,162	2,208	2,076	2,082	<i>2,087</i>	1,721	77.9	
Michigan.....	583	478	<i>473</i>	502	581	607	616	607	635	642	<b>648</b>	627	595	73.0	
Minnesota.....	1,781	1,653	<i>1,613</i>	1,727	1,819	1,825	1,836	1,864	1,858	1,818	1,794	1,812	1,747	80.5	
Mississippi.....	52	<i>44</i>	45	49	48	53	55	53	54	54	55	57	54	77.2	
Missouri.....	810	<i>757</i>	779	826	832	818	843	863	854	863	828	802	762	87.7	
Montana.....	34	20	<i>18</i>	32	38	40	45	40	44	40	36	31	20	40.0	
Nebraska.....	105	<i>75</i>	96	93	106	113	113	112	112	109	117	110	107	64.1	
New Hampshire.....	492	<i>352</i>	436	458	519	534	523	543	561	544	515	453	438	68.1	
New Jersey.....	701	<i>582</i>	626	645	664	676	787	781	781	781	737	733	637	73.0	
New York.....	4,410	4,045	<i>4,008</i>	4,242	4,544	4,474	4,516	4,509	4,708	4,685	4,539	4,407	4,243	85.2	
North Carolina.....	854	821	794	864	869	877	804	885	900	853	792	790	790	87.4	
Ohio.....	1,353	<i>1,181</i>	1,151	1,226	1,444	1,503	1,507	1,482	1,468	1,404	1,421	1,326	1,180	75.0	
Oklahoma.....	173	200	<i>162</i>	163	160	163	173	182	180	179	186	166	173	76.0	
Oregon.....	87	95	100	88	79	81	79	80	98	88	85	87	81	79.0	
Pennsylvania.....	3,440	<i>3,143</i>	3,165	3,365	3,409	3,572	3,551	3,618	3,600	<i>3,627</i>	3,545	3,401	3,279	86.7	
Rhode Island.....	268	245	240	<i>239</i>	250	258	268	286	291	296	287	293	259	80.5	
South Carolina.....	111	108	<i>105</i>	106	112	110	110	110	111	116	113	113	114	90.5	
Tennessee.....	1,464	1,427	1,484	1,511	1,514	1,514	1,451	1,446	1,462	1,428	1,465	1,427	<i>1,419</i>	93.5	
Texas.....	467	442	439	451	474	489	492	468	497	497	504	460	393	78.0	
Utah.....	25	24	26	25	27	33	25	24	24	23	25	25	24	60.7	
Vermont.....	5,287	5,411	5,462	5,557	5,404	5,429	5,338	5,281	5,294	5,269	5,194	5,035	<i>4,852</i>	87.3	
Virginia.....	807	805	800	798	773	784	827	809	828	833	815	818	796	92.8	
Washington.....	201	<i>166</i>	170	192	204	210	215	222	219	210	197	222	187	74.8	
West Virginia.....	28	25	<i>23</i>	30	29	31	31	28	28	30	27	26	26	74.2	
Wisconsin.....	882	<i>632</i>	740	768	806	911	948	949	957	959	1,019	927	940	62.0	



## MINERALS AND EARTHS, GROUND OR OTHERWISE TREATED

**Description of the industry.**—This industry classification covers establishments engaged primarily in the grinding or pulverizing of certain earths, rocks, or minerals, such as barium, barytes, bentonite, borax, chalk, clays, Cornwall stone, corundum, diatomaceous earth, emery, feldspar, flint, fluorspar, glass sand, haydite, iron oxide ores, kaolin, limerock, magnesite, manganese ore, mica, oxaluma, pumice, quartz, silica, sintered flue dust, spar, sulphur, and talc.

**Change in classification.**—At the census for 1929 establishments engaged in grinding and treating minerals and earths mined or quarried by themselves were not classified as manufacturing establishments, as at former censuses, but were assigned to the appro-

appropriate industries in the Mines and Quarries group. The reports made by some of these establishments at former censuses had not shown clearly whether they were engaged in both quarrying and manufacturing or in manufacturing alone, but the canvass for the decennial census of Mines and Quarries has enabled the Bureau to ascertain in each case the exact nature of the operations performed, with the result that it has become possible to classify all these establishments properly, retaining in the "Minerals and earths, ground or otherwise treated" industry only those engaged wholly in manufacturing. Because of this change, the figures given in this report are not comparable with those for preceding census years.

TABLE 1.—GENERAL STATISTICS, BY STATES: 1929

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. No comparable figures are available for years prior to 1929. See "Change in classification," above.]

STATE	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
				Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States.....	88	367	1,679	39,117	2,832	36,285	\$1,202,305	\$2,187,923	\$8,937,883	\$7,818,767	\$1,119,116	\$17,409,056	\$8,471,173
Individual States:													
California.....	9	60	132	3,017	-----	3,017	166,411	201,912	717,450	651,493	65,957	1,596,436	378,986
Illinois.....	6	20	71	2,403	165	2,238	76,881	111,926	280,292	211,350	68,942	690,948	419,656
Massachusetts.....	5	20	72	1,185	630	555	104,185	103,567	467,234	441,893	25,341	820,416	359,182
New Jersey.....	9	28	97	1,839	80	1,759	122,015	130,234	1,052,286	990,874	61,412	1,709,268	656,972
New York.....	18	69	309	4,160	100	4,060	215,746	467,132	1,839,613	1,686,336	153,277	4,302,457	2,462,844
North Carolina.....	7	35	236	926	433	493	108,194	158,134	534,953	510,998	23,955	1,025,680	490,727
Ohio.....	9	26	103	3,658	682	2,976	76,620	149,566	383,120	273,259	109,861	902,264	519,144
Pennsylvania.....	9	43	462	17,756	505	17,251	104,621	644,658	2,566,348	2,070,585	495,763	4,180,931	1,614,633
Groups of States:													
Conn., 1 est.; Me., 1; N. H., 2; R. I., 1	5	20	50	939	-----	939	85,579	68,521	241,560	210,340	31,220	495,877	254,317
Ind., 1 est.; Ky., 1; W. Va., 1	3	10	25	772	225	547	26,635	32,554	207,513	185,349	22,164	319,984	112,481
Other States (Colo., 1 est.; Md., 2; Mo., 1; N. Mex., 1; Tenn., 1; Tex., 1; Va., 2; Wash., 1; Wis., 2; Wyo., 1)	13	36	122	2,462	12	2,450	115,418	119,779	647,524	586,290	61,234	1,349,755	702,231

<sup>1</sup> Not including 7 proprietors and firm members.

<sup>2</sup> The "Value of products" figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. The total includes \$52,127, the value of miscellaneous commodities, normally belonging to other industries, made as secondary products by establishments engaged primarily in grinding or otherwise treating minerals and earths, but does not include \$1,625,703, the value of minerals and earths ground or otherwise treated by establishments engaged primarily in other industries.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

# MINERALS AND EARTHS

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TABLE 2.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY: 1929

TYPE	Number	Capacity	Per cent distribution of rated horse-power capacity	TYPE	Number	Capacity	Per cent distribution of rated horse-power capacity
Prime movers and electric motors driven by purchased energy, aggregate.....	1,272	<i>Horse-power</i> 39,117	100.0	Electric motors, total.....	1,251	<i>Horse-power</i> 36,359	100.0
Prime movers, total.....	27	2,832	7.2	Driven by purchased energy.....	1,245	36,285	99.8
Steam, total.....	15	1,620	4.1	Driven by energy generated in establishments reporting.....	6	74	0.2
Engines.....	14	1,535	3.9	Electric generators.....	1	<i>Kilowatts</i> 60	
Turbines.....	1	85	0.2	Electric energy purchased <sup>1</sup> .....		<i>Kilowatt-hours</i> 74,219,548	
Internal-combustion engines.....	7	582	1.5				
Water wheels and water turbines.....	5	630	1.6				
Electric motors driven by purchased energy.....	1,245	36,285	92.8				

<sup>1</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

TABLE 3.—WAGE EARNERS, BY MONTHS, BY STATES: 1929

This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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: 1929.....	1,679	1,603	1,618	1,636	1,678	1,681	1,683	1,714	1,750	1,740	1,751	1,707	<i>1,594</i>	91.0
California.....	132	<i>112</i>	118	128	137	137	130	126	148	146	188	135	124	75.7
Illinois.....	71	<i>66</i>	66	66	58	61	57	80	85	88	87	81	74	60.2
Massachusetts.....	72	<i>62</i>	65	72	73	78	77	75	71	74	71	68	68	79.5
New Jersey.....	97	103	98	95	93	91	93	107	101	97	97	97	89	83.2
New York.....	309	295	291	<i>289</i>	307	800	314	329	324	311	325	317	310	87.8
North Carolina.....	236	239	226	229	250	251	237	235	243	234	248	234	211	84.1
Ohio.....	103	111	116	104	98	97	102	106	105	109	110	106	74	65.8
Pennsylvania.....	462	<i>430</i>	447	469	467	464	478	466	476	472	463	463	449	90.0

# MIRRORS

**Description of the industry.**—This industry classification covers establishments engaged primarily in the manufacture of mirrors, both framed and unframed, such as pier glasses, mantel mirrors, hall mirrors, mirrors for show cases, automobile mirrors, and hand mirrors.

**TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929**

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	304	4,782	\$6,941,976	\$15,659,049	\$31,842,740	\$16,183,691	8,414
1927	250	4,308	6,360,813	16,188,614	31,424,043	15,236,329	7,630
1925	218	4,153	6,104,015	19,713,293	34,948,504	15,235,211	6,306
1923	195	3,464	4,870,043	20,091,199	33,467,973	13,376,774	5,722
1921	180	2,368	3,232,984	10,082,161	16,739,545	6,657,384	( <sup>3</sup> )
1919	186	2,599	2,819,140	12,498,733	20,830,775	8,332,042	4,233
1914	182	3,184	1,967,811	6,018,970	10,189,431	4,175,461	4,480
1909	148	2,994	1,763,397	5,904,706	9,570,797	3,666,091	3,664
1904	119	2,649	1,374,807	4,587,349	7,605,435	3,018,086	2,361
1899	103	2,555	1,231,089	4,995,671	8,004,301	3,008,630	1,987
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	21.6	11.0	9.1	-3.3	1.3	6.2	10.8
1925-1927	14.7	3.7	4.2	-17.9	-10.1	( <sup>4</sup> )	21.0
1923-1925	11.8	19.9	25.1	-1.9	4.4	13.9	10.2
1921-1923	8.3	46.3	50.9	99.3	99.9	100.9	-----
1919-1921	-3.2	-8.9	14.7	-19.3	-19.6	-20.1	-----
1919-1929	63.4	84.0	146.2	25.3	52.9	94.2	98.8
1909-1919	25.7	-13.2	89.0	111.7	117.6	127.3	15.8
1899-1909	43.7	17.2	43.2	18.2	19.6	21.0	86.7

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>3</sup> Not called for on schedule.  
<sup>4</sup> Less than one-tenth of 1 per cent increase.

**TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919**

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	304	905	4,782	8,414	1,317	7,097	\$2,504,154	\$6,941,976	\$15,659,049	\$15,296,567	\$362,482	\$31,842,740	\$16,183,691
	1927	250	860	4,308	7,630	1,680	5,950	2,266,992	6,360,813	16,188,614	15,534,143	354,471	31,424,043	15,236,329
	1919	186	549	2,599	4,233	2,189	2,044	1,382,014	2,819,140	12,498,733	12,320,827	177,906	20,830,775	8,332,042
Individual States: California	1929	36	39	249	706	7	699	116,486	467,273	824,151	905,324	18,827	2,081,037	1,106,896
	1927	27	73	262	556	-----	556	201,932	426,872	1,028,571	1,014,527	14,044	2,057,332	1,028,761
	1919	12	6	50	111	-----	111	8,337	76,598	200,035	195,342	4,693	361,010	100,975
Illinois	1929	24	101	492	632	150	482	279,738	898,039	1,263,008	1,227,007	36,061	2,944,958	1,681,890
	1927	21	71	356	571	210	361	261,556	674,349	1,257,108	1,225,238	31,870	2,582,618	1,325,508
	1919	12	44	223	407	260	147	83,087	274,121	1,121,443	1,106,309	15,134	1,791,360	669,917
Indiana	1929	11	39	414	711	100	611	114,532	401,920	1,110,318	1,097,507	21,811	2,212,816	1,093,498
	1927	10	75	423	525	-----	525	191,489	399,856	1,675,816	1,553,393	22,423	2,080,363	1,104,547
	1919	6	14	71	161	71	90	41,970	63,907	435,630	429,405	6,225	667,978	232,348
Maryland	1929	4	11	50	60	-----	60	17,304	49,904	107,006	102,620	4,386	247,663	140,657
Massachusetts	1929	5	26	97	145	75	70	58,289	139,636	263,057	255,044	8,613	609,519	345,462
	1927	6	20	133	239	75	164	37,407	188,304	367,955	348,982	18,973	785,139	417,184
	1919	6	15	77	177	79	98	37,525	78,960	166,733	160,165	6,568	471,096	304,363

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919—Continued

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employes <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
<b>Individual States—Continued.</b>														
Michigan	1929	8	23	139	247	85	162	\$65,679	\$203,872	\$456,626	\$442,555	\$14,071	\$928,927	\$472,301
	1927	7	24	163	237	85	152	73,161	253,331	590,553	579,503	11,050	1,142,462	551,909
Minnesota	1929	5	12	37	90		90	25,275	56,020	96,450	93,837	3,113	236,366	139,986
	1927	4	2	22	74		74	2,748	32,167	47,952	44,934	3,018	113,406	65,514
Missouri	1929	10	16	83	216		216	33,407	120,970	348,645	339,178	9,467	650,762	302,117
	1927	10	18	72	175		175	47,567	112,168	321,759	315,901	5,858	587,327	295,586
	1919	8	10	54	130		130	15,728	60,486	189,231	184,382	3,949	328,619	140,388
New Jersey	1929	16	37	232	372		372	128,328	322,222	761,404	743,116	18,288	1,434,743	673,330
	1927	13	21	138	255		255	63,517	199,769	408,558	393,112	16,446	867,152	458,624
	1919	8	12	82	119		42	30,591	75,806	164,678	156,796	7,882	306,567	141,979
New York	1929	75	281	1,300	1,741	300	1,441	753,720	2,200,213	3,734,604	3,643,073	91,531	8,349,353	4,614,749
	1927	50	237	1,086	1,701	870	1,131	665,724	1,860,137	3,031,319	2,937,342	93,977	7,343,001	4,311,682
	1919	57	174	840	1,117	705	412	560,200	1,111,441	4,342,392	4,292,596	49,796	7,392,516	3,050,124
North Carolina	1929	6	26	156	432	110	322	81,660	165,418	1,528,823	1,515,757	13,066	2,142,312	613,489
	1927	9	20	198	377	40	337	66,530	209,966	1,783,941	1,767,934	16,007	2,465,924	681,983
	1919	4	9	137	350	200	150	15,820	113,275	901,372	889,701	11,671	1,677,349	675,977
Ohio	1929	16	49	209	430		430	156,676	312,159	550,850	530,514	20,336	1,292,784	741,934
	1927	16	32	195	419		419	98,668	296,845	588,501	568,445	20,116	1,251,036	662,475
	1919	10	38	243	312	106	206	111,738	148,250	711,591	697,198	14,393	1,099,215	387,624
Oregon	1929	4	7	21	89		89	27,443	36,922	142,277	139,584	2,693	242,266	99,989
Pennsylvania	1929	27	68	484	965	55	910	217,024	645,694	1,532,404	1,485,019	46,785	3,098,493	1,566,089
	1927	23	71	474	883	150	733	178,164	648,206	1,381,034	1,345,743	35,291	2,852,814	1,471,780
	1919	18	60	293	358	165	193	169,650	270,155	1,231,868	1,213,911	17,457	2,052,901	821,533
Tennessee	1929	4	13	79	185	50	135	28,512	73,467	271,927	263,500	8,427	510,855	238,958
	1927	5	14	109	145		145	30,695	92,114	323,371	314,865	8,506	618,779	295,408
	1919	4	28	63	149	110	39	67,970	52,601	457,739	453,620	4,116	651,104	193,365
Texas	1929	6	4	20	51	5	46	5,034	27,025	40,776	39,681	1,095	108,753	67,977
	1927	(5)	(5)	(3)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
	1919	3	6	6	4	4	4	6,338	12,761	12,761	12,508	253	25,150	13,289
Virginia	1929	8	24	155	351	155	196	75,113	145,358	822,731	811,881	10,850	1,479,413	656,682
	1927	6	34	107	220	175	51	91,238	96,417	607,152	596,207	10,945	832,627	332,627
	1919	4	47	76	109		109	24,644	31,154	228,643	224,420	4,123	306,000	77,457
Washington	1929	8	26	70	104		104	73,201	138,544	176,428	171,215	5,213	449,308	272,880
	1927	7	22	76	202	100	102	51,368	139,192	303,568	291,586	11,982	572,499	268,931
Wisconsin	1929	8	22	92	199	75	124	72,260	141,157	310,765	301,783	8,982	600,211	289,446
	1927	7	47	151	480	200	280	107,761	344,591	1,244,283	1,232,867	11,416	1,985,646	741,363
	1919	7	23	68	320	275	45	50,357	87,252	396,960	388,889	8,101	713,768	316,778
<b>Groups of States:</b>														
Ala., 1 est.; Fla., 1; Ga., 1; La., 1	1929	4	8	25	46		46	20,330	39,594	164,837	153,800	1,037	267,625	112,788
Ark., 2 est.; Okla., 2	1929	4	12	48	73		73	25,362	62,562	314,056	309,837	4,219	535,311	221,255
Colo., 2 est.; Mont., 1; Nebr., 1; Utah, 1	1929	5	5	18	42		42	5,598	31,689	38,300	36,552	1,748	110,727	72,427
Conn., 1 est.; R. I., 1; Vt., 1	1929	3	10	55	151		151	10,653	61,499	73,201	69,464	3,737	198,240	125,039
Other States (Iowa, 1 est.; Ky., 3; W. Va., 3)	1929	7	46	197	376	150	226	103,532	191,819	627,345	618,619	8,726	1,100,248	532,903
States not shown separately	1927	23	79	343	535	75	460	157,647	384,439	1,327,113	1,303,564	23,549	2,579,578	1,252,465
	1919	27	89	326	804	176	328	104,397	368,536	1,939,227	1,915,582	23,645	3,086,052	1,146,825

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 172; 1927, 153; 1919, 154. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 5,859; 1927, 5,321; 1919, 3,302.

<sup>2</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.

<sup>5</sup> Withheld from publication in order to avoid disclosing data for individual establishments.

<sup>6</sup> Alabama, 1 establishment; Arkansas, 1; Colorado, 1; Connecticut, 1; Iowa, 1; Kansas, 1; Kentucky, 2; Louisiana, 1; Maryland, 2; Nebraska, 1; Oklahoma, 1; Oregon, 3; South Dakota, 1; Texas, 3; Utah, 1; West Virginia, 2.

<sup>7</sup> Arkansas 1 establishment; Connecticut, 2; Georgia, 1; Kansas, 1; Kentucky, 2; Louisiana, 1; Maryland, 1; Michigan, 5; Minnesota, 2; Nebraska, 1; Oklahoma, 1; Oregon, 1; Rhode Island, 1; South Dakota, 1; Washington, 4; West Virginia, 2.

CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRODUCTS, BY KIND AND VALUE, FOR THE UNITED STATES: 1929, 1927, AND 1925

KIND	1929	1927	1925	KIND	1929	1927	1925
1. Mirror industry, all products, total value.....	\$31,842,740	\$31,424,943	\$34,948,504	Mirrors, all industries, aggregate value (sum of 2 and 5).....	\$24,001,242	\$23,848,946	\$28,036,154
2. Mirrors.....	23,116,489	22,910,814	26,078,056	Mirrors, plate-glass, total.....	19,585,131	19,002,125	22,988,169
3. Mirrors and other glass, not reported in detail.....	731,586	678,000	-----	Framed.....	5,349,136	4,821,531	(?)
4. Other products (not normally belonging to the industry) <sup>1</sup> .....	7,994,665	7,836,129	8,870,408	Unframed.....	14,235,995	14,840,594	(?)
5. Mirrors made as secondary products in other industries.....	884,753	938,132	1,958,058	Mirrors, other than plate-glass, total.....	3,531,358	3,248,689	3,089,927
				Framed.....	835,267	427,721	(?)
				Unframed.....	2,696,091	2,820,968	(?)
				Mirrors not reported by kind.....	884,753	938,132	1,958,058

<sup>1</sup> Fancy art glass, leaded glass, stained-glass windows, glass knobs, show cases, wind shields, picture frames, lamps, bathroom cabinets, and beveled and polished plate glass. Receipts for resilvering are also included.  
<sup>2</sup> Not reported separately.

TABLE 4.—PRODUCTS, BY KIND AND VALUE, BY STATES: 1929

[The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups]

KIND AND STATE	Value	KIND AND STATE	Value	KIND AND STATE	Value
Mirrors, plate-glass, framed, total.....	\$5,349,136	Mirrors, plate-glass, unframed—Con.		Mirrors, other than plate-glass, unframed, total.....	\$2,696,091
California.....	300,334	North Carolina.....	\$2,118,532	California.....	28,890
Illinois.....	1,270,743	Ohio.....	614,931	New Jersey.....	413,167
Missouri.....	69,111	Pennsylvania.....	1,020,121	New York.....	1,741,551
New York.....	863,894	Tennessee.....	233,990	Pennsylvania.....	66,869
Ohio.....	228,723	Texas.....	34,914	Ill., Ind., Ohio, Wis.....	210,115
Pennsylvania.....	695,305	Virginia.....	1,221,220	Mich., Minn., Mo.....	48,564
Virginia.....	145,419	Washington.....	155,346	Md., Va.....	43,519
Iowa, Mich., Minn., Nebr., Wis.....	447,187	Wisconsin.....	288,782	Ark., Ga., N. C., Tenn., Tex., W. Va.....	133,917
Ky., Md., Tenn., W. Va.....	243,122	Other States (Ala., Ark., Colo., Conn., Ga., Iowa, Ky., La., Mass., Mont., Nebr., Oreg., Utah, W. Va.).....	1,243,547	Ark., Ga., N. C., Tenn., Tex., W. Va.....	8,499
Oreg., Wash.....	94,174			Mirrors not reported by kind, total.....	884,753
Other States (Colo., Conn., Ind., Mass., Mont., N. J., Okla., Tex., Utah, Vt.).....	1,001,124	Mirrors, other than plate-glass, framed, total.....	835,267	Illinois.....	30,546
Mirrors, plate-glass, unframed, total.....	14,235,995	California.....	48,422	Massachusetts.....	107,482
California.....	911,688	New York.....	351,611	Michigan.....	70,596
Illinois.....	635,968	Ill., Mich., Minn., Ohio.....	84,705	New York.....	441,442
Indiana.....	1,116,418	Other States (Ark., Colo., Ky., Md., Mont., N. J., Okla., Oreg., Pa., Wash., W. Va., Wis.).....	400,529	Ohio.....	148,258
Maryland.....	62,309			Other States (Calif., Conn., Fla., Ga., Ind., Kans., Me., Md., Minn., N. J., N. C., Oreg., Pa., Tex., Va., Wash., Wis.).....	86,421
Michigan.....	569,680				
Minnesota.....	113,320				
Missouri.....	236,105				
New Jersey.....	377,622				
New York.....	3,281,502				

TABLE 5.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	1,691	Horsepower 8,414	1,271	Horsepower 7,630	987	Horsepower 6,306	376	Horsepower 4,233	316	Horsepower 4,480	100.0	100.0
Prime movers, total.....	22	1,317	22	1,680	20	1,442	42	2,189	55	2,085	15.7	51.7
Steam, total.....	20	1,277	21	1,677	16	1,357	30	2,015	36	2,209	15.2	47.6
Engines.....	19	1,272	21	1,677	14	1,097	28	1,815	(?)	(?)	15.1	42.9
Turbines.....	1	6	—	—	2	260	2	200	(?)	(?)	0.1	4.7
Internal-combustion engines.....	2	40	1	3	4	85	11	173	17	301	0.5	4.1
Water wheels and water turbines.....	—	—	—	—	—	—	1	1	2	115	(?)	(?)
Electric motors driven by purchased energy.....	1,669	7,097	1,249	5,950	967	4,864	334	2,044	261	1,795	84.3	48.3
Electric motors, total.....	1,714	7,820	1,304	6,222	1,006	5,044	402	2,426	302	2,060	100.0	100.0
Driven by purchased energy.....	1,669	7,097	1,249	5,950	967	4,864	334	2,044	261	1,795	97.0	84.3
Driven by energy generated in establishments reporting.....	45	223	55	272	39	180	68	382	41	265	3.0	15.7
Electric generators.....	7	Kilowatts 274	6	Kilowatts 299	6	Kilowatts 440	(?)	(?)	(?)	(?)	-----	-----
Electric energy purchased <sup>4</sup> .....	-----	Kilowatt-hours 5,402,779	-----	(?)	-----	(?)	-----	(?)	-----	(?)	-----	-----

<sup>1</sup> Not called for separately on schedule.  
<sup>2</sup> Less than one-tenth of 1 per cent.  
<sup>3</sup> Not called for on schedule.  
<sup>4</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>5</sup> Data incomplete.

MIRRORS

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TABLE 6.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:															
1929.....	4,782	4,711	4,775	4,870	4,835	4,765	4,681	4,704	4,822	4,892	4,821	4,806	<i>4,599</i>	93.5	
1925.....	4,153	4,069	4,078	4,104	4,078	4,051	<i>4,015</i>	4,023	4,084	4,193	4,305	4,400	4,347	91.3	
1919.....	2,599	<i>2,271</i>	2,333	2,385	2,400	2,470	2,585	2,554	2,709	2,777	2,861	2,921	2,922	77.7	
1914.....	3,184	3,306	3,290	3,311	3,252	3,160	3,167	3,130	3,104	3,172	3,151	3,119	<i>3,046</i>	92.0	
1909.....	2,994	<i>2,810</i>	2,855	2,940	2,932	2,898	2,923	2,924	2,976	3,099	3,180	3,192	3,208	87.6	
California.....	249	249	245	248	<i>241</i>	248	245	248	253	248	251	255	253	94.5	
Illinois.....	492	494	496	490	495	492	490	483	497	492	495	498	<i>482</i>	96.3	
Indiana.....	414	431	448	483	453	421	388	428	428	402	399	399	327	67.7	
Maryland.....	50	49	51	47	49	50	51	50	51	52	53	51	51	88.7	
Massachusetts.....	97	94	98	99	97	95	94	95	94	99	102	101	100	91.2	
Michigan.....	139	139	140	142	138	136	<i>134</i>	142	137	139	144	144	137	93.1	
Minnesota.....	37	36	36	36	37	37	37	37	37	37	37	38	38	94.7	
Missouri.....	83	77	80	80	87	90	88	90	85	87	81	72	<i>64</i>	65.3	
New Jersey.....	232	221	237	258	254	247	228	211	214	233	237	227	218	81.8	
New York.....	1,360	1,337	1,337	1,359	1,372	1,364	1,331	<i>1,320</i>	1,381	1,400	1,394	1,382	1,345	94.3	
North Carolina.....	156	152	152	<i>147</i>	150	155	154	155	157	165	164	166	157	88.6	
Ohio.....	200	204	199	201	189	182	208	223	224	225	229	223	205	78.6	
Oregon.....	21	<i>20</i>	<i>20</i>	<i>20</i>	21	<i>20</i>	<i>20</i>	<i>20</i>	21	21	22	25	25	80.0	
Pennsylvania.....	484	467	489	493	490	491	454	<i>464</i>	474	495	502	492	467	93.7	
Tennessee.....	79	77	77	78	80	77	77	83	86	80	81	79	77	89.5	
Texas.....	20	22	19	21	<i>18</i>	19	22	22	23	21	19	20	19	78.3	
Virginia.....	155	150	150	152	<i>147</i>	<i>147</i>	151	153	158	163	163	163	162	90.2	
Washington.....	70	65	64	72	73	76	72	74	75	72	70	67	<i>66</i>	73.7	
Wisconsin.....	92	78	100	103	103	98	84	91	94	97	93	84	78	76.7	

# SAND-LIME BRICK

Description of the industry.—This industry consists | sand and lime molded under heavy pressure and sub-  
in the manufacture of brick from a combination of | jected to the action of steam in a hardening chamber.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1914 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size. No separate data are available for years prior to 1914]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	40	566	\$776,202	\$944,534	\$2,970,923	\$2,026,389	7,346
1927	45	790	1,051,495	1,157,955	3,616,456	2,458,491	8,598
1925	41	801	1,118,634	1,237,970	3,759,729	2,521,759	6,396
1923	31	582	697,850	945,931	2,408,106	1,462,175	4,332
1921	26	374	361,182	500,689	1,220,425	719,736	( <sup>3</sup> )
1919	32	504	501,854	575,402	1,663,052	1,087,650	4,358
1914	45	557	321,956	350,484	994,199	643,715	5,000
Per cent of increase or decrease (—):							
1927-1929	( <sup>4</sup> )	-28.4	-20.2	-18.4	-17.9	-17.6	-14.6
1925-1927	( <sup>4</sup> )	-1.4	-6.0	-6.5	-3.8	-2.5	34.4
1923-1925	( <sup>4</sup> )	37.6	60.3	30.9	56.1	72.5	47.6
1921-1923	( <sup>4</sup> )	55.6	93.2	88.9	97.3	103.2	-----
1919-1921	( <sup>4</sup> )	-25.8	-23.0	-13.0	-26.6	-33.8	-----
1919-1929	( <sup>4</sup> )	12.3	54.7	64.2	78.6	86.3	68.6

<sup>1</sup> The figures for all census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.  
<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>3</sup> Not called for on schedule.  
<sup>4</sup> Per cent not computed where base is less than 100.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Sal- aried officers and em- ploy- ees <sup>1</sup>	Wage earners (aver- age for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufac- ture <sup>3</sup>	
					Total	Prime movers	Motors run by pur- chased energy			Total	Materials	Fuel and purchased energy			
United States	1929	40	137	566	7,346	1,717	5,629	\$370,381	\$776,202	\$944,534	\$707,649	\$236,885	\$2,970,923	\$2,026,389	
	1927	45	143	790	8,598	3,848	4,750	373,340	1,051,495	1,157,955	891,117	266,848	3,616,456	2,458,491	
	1919	32	93	504	4,358	3,818	540	135,773	501,854	575,402	440,703	134,639	1,663,052	1,087,650	
Individual States:															
	Florida	1929	3	6	14	495	355	110	8,267	7,405	12,266	9,125	3,141	39,937	27,671
	1927	3	9	25	452	402	80	25,187	18,627	26,950	16,682	10,208	74,808	47,948	
Michigan	1929	12	43	179	1,638	325	1,313	122,705	264,982	409,792	324,569	85,223	1,133,823	724,031	
	1927	12	37	233	1,773	925	1,148	90,692	337,199	481,104	394,731	86,373	1,390,031	908,927	
	1919	7	17	106	815	755	60	33,213	146,855	217,731	184,736	32,095	530,669	312,938	
New York	1929	3	12	78	1,250	25	1,225	39,210	107,200	119,599	91,437	28,162	327,173	207,574	
	1927	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	
	1919	4	7	49	500	475	25	7,948	46,182	46,968	35,244	11,724	165,471	118,503	
Groups of States:															
	Conn., 1 est., D. C., 1; Mass., 2; N. J., 3; Ind., 1 est.; Mo., 1; Ohio, 2	1929	7	27	118	1,725	150	1,575	81,951	192,294	188,165	132,426	55,739	745,025	556,800
	Minn., 3 est.; S. Dak., 1; Wis., 2	1929	4	15	52	966	22	944	41,412	71,561	72,300	40,323	22,977	245,966	173,666
	Other States (Calif., 1 est.; La., 1; Tex., 2; Utah, 1)	1929	6	19	80	839	600	239	40,698	93,082	80,985	58,570	28,409	301,235	214,250
	States not shown sepa- rately	1929	5	15	45	433	210	223	36,138	39,678	55,427	42,193	13,284	177,764	122,337
	1927	30	97	532	6,343	2,821	3,522	257,461	695,669	649,911	479,704	170,207	2,151,527	1,501,615	
	1919	21	69	349	3,043	2,588	455	94,612	308,817	310,703	220,783	89,920	666,912	656,209	

<sup>1</sup> Not including proprietors and firm members. The total numbers of persons engaged and the numbers of proprietors and firm members, as reported for this industry, are as follows: For 1929, total, 707; proprietors and firm members, 4. For 1927, total, 941; proprietors and firm members, 8. For 1919, total, 600; proprietors and firm members, 3.

<sup>2</sup> The figures for all census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Statistics can not be shown without disclosing data reported by individual establishments.

<sup>5</sup> Alabama, 1 establishment; California, 1; Connecticut, 1; District of Columbia, 1; Georgia, 1; Illinois, 1; Indiana, 2; Louisiana, 1; Massachusetts, 2; Minnesota, 3; Missouri, 1; New Jersey, 3; New York, 2; Ohio, 2; Pennsylvania, 2; South Dakota, 1; Texas, 2; Utah, 1; Wisconsin, 2.  
<sup>6</sup> District of Columbia, 1 establishment; Florida, 2; Georgia, 1; Idaho, 1; Indiana, 3; Louisiana, 1; Massachusetts, 2; Minnesota, 3; Ohio, 1; Pennsylvania, 1; South Dakota, 2; Tennessee, 1; Texas, 1; Wisconsin, 1.

# SAND-LIME BRICK

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**TABLE 3.—SAND-LIME BRICK—PRODUCTION, AND STOCKS ON HAND DECEMBER 31, FOR THE UNITED STATES, 1929, 1928, 1927, 1926, AND 1925, AND BY STATES, 1929**

[Figures are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups]

PRODUCT	1929	1928	1927	1926	1925	STATE REPORTING	1929		
							Quantity	Value	Stocks on hand Dec. 31
1. Sand-lime brick industry, all products, total value.....	\$2,976,923	\$3,702,200	\$3,616,456	\$4,171,150	\$3,759,729				
2. Sand-lime brick.....	2,909,635	3,654,590	3,542,906	3,981,492	3,728,093		Thousands		Thousands
3. Other products (not normally belonging to the industry).....	61,288	47,610	73,550	189,658	31,636	Total.....	269,584	\$2,909,635	22,708
4. Sand-lime brick made as a secondary product in other industries.....	(1)	(2)	102,936	(3)	52,546	Individual States:			
Sand-lime brick, all industries, total value (sum of 2 and 4).....	2,909,635	3,654,590	3,645,842	3,981,492	3,780,639	Florida.....	3,748	39,937	427
Quantity (thousands).....	269,584	313,553	319,618	330,586	315,595	Michigan.....	96,511	1,107,708	5,815
Stocks on hand Dec. 31 (thousands).....	22,708	21,018	25,075	22,033	23,599	New York.....	32,711	327,173	2,532
						Groups of States:			
						Conn., D. C., Mass., N. J.....	66,086	745,025	7,024
						Ind., Mo., Ohio.....	18,173	210,793	1,632
						Minn., S. Dak., Wis.....	37,090	301,285	4,367
						Other States (Calif., La., Tex., Utah).....	15,265	177,764	911

<sup>1</sup> None reported.

<sup>2</sup> Included in second item, above. Data not tabulated separately for years alternating with the biennial-census years.

**TABLE 4.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929**

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
		Horse-power		Horse-power		Horse-power		Horse-power		Horse-power		
Prime movers and electric motors driven by purchased energy, aggregate.....	430	7,346	350	8,598	220	6,396	63	4,358	66	5,606	100.0	100.0
Prime movers, total.....	17	1,717	34	3,848	37	3,743	40	3,818	51	5,207	23.4	87.6
Steam, total.....	14	1,670	32	3,823	34	3,700	32	3,770	48	5,252	22.7	86.5
Engines.....	14	1,670	28	3,023	29	3,485	32	3,770	(1)	(1)	22.7	86.5
Turbines.....			4	800	5	205			(1)	(1)		
Internal-combustion engines.....	3	47	2	25	3	43	8	48	3	15	0.0	1.1
Electric motors driven by purchased energy.....	413	5,629	316	4,750	183	2,653	23	540	15	339	76.6	12.4
Electric motors, total.....	414	5,649	316	4,750	184	2,663	26	560	15	339	100.0	100.0
Driven by purchased energy.....	413	5,629	316	4,750	183	2,653	23	540	15	339	99.0	96.4
Driven by energy generated in establishments reporting.....	1	20			1	10	3	20			0.4	3.6
Electric generators <sup>1</sup> .....	1	30	2	11	1	25						
Electric energy purchased <sup>2</sup> .....		Kilowatt-hours		Kilowatt-hours		Kilowatt-hours						
		2,836,253										

<sup>1</sup> Not called for separately on schedule.

<sup>2</sup> Data for electric generators not called for on schedule prior to 1925.

<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc. No data available for years prior to 1929.

**TABLE 5.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, AND 1914, AND BY STATES, 1929**

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:															
1929.....	566	613	572	624	598	628	645	618	579	500	491	470	461	71.3	
1925.....	669	669	656	698	805	829	870	916	907	860	822	790	760	73.0	
1919.....	504	514	321	343	408	529	550	609	566	582	572	633	621	49.6	
1914.....	557	404	596	463	544	714	720	686	702	604	515	476	430	55.0	
States, 1929															
Florida.....	14	8	9	8	10	10	22	22	8	34	22	22	22	23.5	
Michigan.....	170	170	150	166	181	193	197	181	193	192	203	183	154	66.0	
New York.....	78	116	110	123	136	111	100	72	60	34	11	30	31	8.1	



## STATUARY AND ART GOODS, FACTORY PRODUCT

**Description of the industry.**—This industry classification covers establishments engaged primarily in the manufacture of ornamental plaster work, plaster casts, ecclesiastical statuary, architectural sculpture, cast-bronze statues, and other art goods of cement, plaster, and composition. (The production of statuary by individual sculptors in their own studios is not, of course, a manufacturing process, and therefore is not covered by the census of manufactures.) Bronze statues

cast in bronze foundries engaged primarily in the manufacture of other classes of products are included among the products of the "Nonferrous-metal alloys and products, not including aluminum products" industry. The term "art goods" is necessarily vague, as there are many products of other industries to which it might be applied; but the art goods covered by this classification are more or less closely related to the art of sculpture.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1904 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1,2</sup>	Value added by manufacture <sup>3</sup>	Horsepower
1929.....	171	2, 112	\$4, 235, 907	\$2, 044, 955	\$10, 045, 159	\$8, 000, 204	1, 539
1927.....	136	2, 028	4, 403, 742	2, 414, 919	10, 187, 247	7, 772, 328	1, 137
1925.....	137	2, 033	4, 188, 087	2, 078, 478	9, 329, 892	7, 251, 414	1, 840
1923.....	150	1, 807	3, 243, 690	1, 897, 528	7, 550, 015	5, 662, 457	887
1921.....	138	1, 634	2, 741, 429	1, 715, 217	6, 666, 064	4, 951, 747	(*)
1919.....	195	1, 466	1, 718, 067	1, 378, 540	5, 019, 521	3, 640, 861	652
1914.....	190	1, 988	1, 682, 745	842, 289	3, 909, 559	3, 067, 250	781
1909.....	194	1, 699	1, 339, 063	680, 330	3, 441, 546	2, 761, 216	429
1904.....	135	1, 507	1, 030, 481	392, 374	2, 416, 730	2, 024, 356	342
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	25.7	4.1	-3.8	-15.3	-1.4	2.9	35.4
1925-1927.....	-0.7	-0.2	5.1	16.2	9.2	7.2	-15.1
1923-1925.....	-8.7	12.5	29.1	9.5	23.6	28.3	51.1
1921-1923.....	8.7	10.6	18.3	10.6	13.2	14.2	-----
1919-1921.....	-29.2	11.5	59.8	24.4	32.8	36.0	-----
1919-1929.....	-12.3	44.1	146.8	48.3	100.1	119.7	125.7
1909-1919.....	0.5	-13.7	28.2	102.6	45.9	31.9	59.0

<sup>1</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Includes values of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of statuary and art goods: 1929, \$399,180; 1927, \$550,074; 1925, \$35,146. No corresponding data available for earlier years. Does not include following values of statuary and art goods made as secondary products by establishments classified in other industries: 1929, \$463,470; 1927, \$651,103; 1925, \$447,791; 1923, \$217,024; 1921, \$39,907; 1919, \$226,471. No corresponding data available for earlier years.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Not called for on schedule.

# STATUARY AND ART GOODS

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TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of Products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	171	393	2,112	1,589	189	1,360	\$1,196,213	\$4,235,907	\$2,044,955	\$1,955,659	\$89,296	\$10,045,159	\$5,006,204
	1927	136	318	2,025	1,137	178	959	1,130,189	4,403,742	2,414,919	2,320,435	94,494	10,187,247	7,772,828
	1919	195	207	1,466	682	124	558	354,837	1,716,067	1,378,540	1,328,493	50,047	5,019,521	3,640,981
Individual States:														
California	1929	25	26	181	143	3	140	51,149	315,960	209,630	204,702	4,937	870,955	661,316
	1927	21	18	150	37		37	41,228	305,313	155,562	152,370	3,192	702,763	547,201
	1919	24	11	54	3		3	7,841	79,049	46,245	45,521	724	196,701	150,466
Illinois	1929	21	105	417	352	150	202	344,212	831,223	383,006	362,481	20,525	2,068,741	1,685,735
	1927	17	96	535	402	150	252	505,676	1,165,153	917,374	897,314	20,060	3,240,095	2,322,721
	1919	15	68	438	160	60	100	114,828	520,316	411,005	396,986	14,019	1,640,453	1,226,448
Louisiana	1929	3		4	1		1		4,500	4,200	4,200		19,100	14,900
Massachusetts	1929	9	19	117	66		66	54,712	242,686	97,573	93,299	4,274	530,366	432,793
	1927	10	31	147	174		174	92,379	294,862	211,123	203,218	7,905	754,145	543,022
	1919	11	8	62	13		13	13,150	84,526	45,515	44,435	1,050	208,295	102,780
Michigan	1929	6	4	50	6		6	6,715	127,880	31,016	29,321	1,696	227,584	196,568
	1927	3	2	48	3		3	2,470	161,282	23,613	22,314	1,299	190,867	173,254
	1919	4	1	14				780	10,415	8,807	8,348	459	54,757	46,950
Minnesota	1929	4	8	34	14		14	22,474	59,479	28,851	26,954	1,897	166,694	137,843
	1927	(6)	(6)	(6)	(6)		(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
	1919	5	6	35	11		11	7,100	43,683	19,877	18,339	1,588	107,282	87,405
Missouri	1929	10	21	81	63		63	42,596	145,126	98,825	94,427	4,398	347,224	248,399
	1927	5	11	67	35		35	27,530	122,386	83,839	78,874	3,965	282,418	198,579
	1919	9	6	63	72		72	12,494	72,816	41,204	39,623	1,581	172,226	131,022
Nebraska	1929	3		15	6		6		14,868	18,700	18,460	240	49,046	30,846
New Jersey	1929	8	6	47	9		9	14,940	76,968	70,535	74,095	2,440	206,937	130,402
	1927	6	10	45	2		2	24,158	60,618	68,488	67,213	1,275	203,615	135,127
	1919	8	7	61	9		9	8,977	67,167	64,495	63,208	1,287	192,595	128,100
New York	1929	34	88	495	170		170	320,540	1,348,652	464,307	446,081	18,226	2,785,188	2,320,881
	1927	30	72	483	203		203	218,326	1,278,494	386,308	359,069	27,209	2,458,476	2,072,168
	1919	59	51	293	209	7	202	102,909	363,168	284,974	270,427	14,547	1,039,092	754,118
Ohio	1929	4	15	120	47		47	69,179	172,268	74,137	68,370	5,267	473,030	398,892
	1927	5	14	95	19		19	62,260	159,557	63,012	59,639	3,373	425,295	362,283
	1919	10	21	116	121	55	66	42,793	120,469	216,739	212,151	4,588	522,717	305,978
Oregon	1929	3	2	9	6		6	4,900	13,007	6,876	6,604	272	37,174	30,298
Pennsylvania	1929	15	35	223	142	36	106	96,828	361,423	217,565	207,562	10,003	901,384	683,819
	1927	13	25	171	130	28	102	74,470	281,453	210,595	193,966	16,629	678,225	467,630
	1919	16	12	89	13	2	11	16,755	139,475	112,991	108,848	4,148	355,840	242,858
Wisconsin	1929	6	30	123	173		173	77,232	219,667	100,061	91,795	8,266	519,148	419,087
	1927	5	13	116	24		24	36,368	264,899	94,698	91,349	3,349	593,802	400,104
	1919	9	10	48	11		11	16,158	55,263	26,201	25,024	1,177	152,294	126,093
Groups of States:														
Colo., 2 est.; Utah, 1	1929	3	4	11	5		5	12,300	15,136	6,599	6,050	549	45,247	38,648
Ind., 1 est.; Ky., 3	1929	4	7	31	30		30	16,833	52,256	16,529	14,264	2,265	118,787	97,258
Other States (Ala., 1 est.; D. C., 1; Fla., 2; Ga., 1; Iowa, 1; Md., 1; Tenn., 2; Tex., 1; Wash., 3)	1929	13	23	154	306		306	61,603	234,808	210,536	206,494	4,042	683,554	473,018
States not shown separately	1927	21	27	171	108		108	45,024	319,695	200,307	194,079	6,228	741,546	541,239
	1919	26	8	193	62		62	11,052	150,440	100,487	95,588	4,899	377,260	276,778

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 178; 1927, 124; 1919, 233. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for this industry, are as follows: For 1929, 2,681; 1927, 2,470; 1919, 1,906.

<sup>2</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture; See footnote 2, Table 1.

<sup>4</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.

<sup>5</sup> Withheld from publication in order to avoid disclosing data for individual establishments.

<sup>6</sup> Colorado, 2 establishments; District of Columbia, 1; Georgia, 1; Indiana, 1; Kentucky, 2; Louisiana, 1; Maryland, 2; Minnesota, 3; Nebraska, 1; Oregon, 1; Texas, 1; Virginia, 1; Washington, 4.

<sup>7</sup> Colorado, 4 establishments; Connecticut, 4; District of Columbia, 2; Georgia, 1; Indiana, 1; Kentucky, 2; Louisiana, 1; Maryland, 2; Nebraska, 1; Oregon, 1; Texas, 3; Virginia, 1; Washington, 3.

CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
		Horse-power		Horse-power		Horse-power		Horse-power		Horse-power		
Prime movers and electric motors driven by purchased energy, aggregate.....	370	1,539	299	1,137	243	1,340	134	682	93	781	100.0	100.0
Prime movers, total.....	5	189	2	178	8	244	5	124	5	345	12.3	18.2
Steam engines.....	1	150	1	150	1	120	1	60	2	245	9.7	8.8
Internal-combustion engines.....	4	39	1	28	7	124	4	64	3	100	2.0	9.4
Electric motors driven by purchased energy.....	365	1,350	297	959	235	1,096	129	558	88	436	87.7	81.8
Electric motors, total.....	381	1,505	331	1,119	250	1,196	160	811	114	591	100.0	100.0
Driven by purchased energy.....	365	1,350	297	959	235	1,096	129	558	88	436	89.7	88.8
Driven by energy generated in establishments reporting.....	16	155	34	160	15	100	31	253	26	155	10.3	31.2
Electric generators.....	2	Kilowatts 150 Kilowatt-hours 852,649	2	Kilowatts 131	1	Kilowatts 150	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )		
Electric energy purchased <sup>2</sup> .....				( <sup>3</sup> )		( <sup>3</sup> )		( <sup>3</sup> )		( <sup>3</sup> )		

<sup>1</sup> Not called for on schedule.  
<sup>2</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>3</sup> Data incomplete.

TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Percent minimum is of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
United States:														
1929.....	2,112	2,030	2,015	2,080	2,059	2,002	2,049	2,068	2,113	2,179	2,224	2,348	2,173	85.3
1925.....	2,033	1,880	1,831	1,935	1,972	1,995	2,041	2,051	2,065	2,194	2,217	2,146	2,070	82.6
1919.....	1,466	1,245	1,323	1,383	1,373	1,425	1,445	1,461	1,498	1,550	1,618	1,632	1,638	76.9
1914.....	1,988	1,896	1,907	1,959	1,935	1,941	1,951	1,921	2,086	2,044	2,065	2,089	2,052	90.3
1909.....	1,690	1,554	1,555	1,551	1,605	1,676	1,703	1,751	1,788	1,829	1,817	1,798	1,763	83.9
California.....	181	169	174	178	168	174	190	192	185	185	190	186	182	87.5
Illinois.....	417	458	421	442	416	412	402	401	423	416	426	401	390	85.2
Louisiana.....	4	4	4	4	4	4	4	4	4	4	4	4	4	
Massachusetts.....	117	118	119	115	122	120	113	115	116	117	119	112	113	91.8
Michigan.....	50	58	46	51	48	42	41	49	53	49	50	58	59	70.7
Minnesota.....	34	33	33	33	33	34	35	35	32	32	33	36	36	88.9
Missouri.....	81	70	74	78	84	81	82	84	84	89	87	80	79	78.7
Nebraska.....	15	14	14	14	14	18	18	16	16	16	18	14	14	87.5
New Jersey.....	47	48	47	46	47	45	57	43	48	50	44	44	47	70.2
New York.....	495	477	481	495	468	457	490	499	495	531	536	534	495	85.6
Ohio.....	120	110	119	112	109	108	113	121	107	124	168	129	122	63.7
Oregon.....	9	9	9	9	10	8	9	11	9	10	8	10	8	72.7
Pennsylvania.....	223	228	229	229	227	224	225	215	221	228	226	209	213	91.3
Wisconsin.....	123	82	99	118	160	127	123	127	127	127	130	128	123	51.3

## WALL PLASTER, WALL BOARD, INSULATING BOARD, AND FLOOR COMPOSITION

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of gypsum board, gypsum and other plasters, fiber wall and insulating board (except as explained below), and floor composition. Establishments engaged in mixing lime and other materials for sale as premixed plaster are classified in this industry, but those engaged in burning lime to be used in lime plaster are assigned to the lime industry. Establishments which manufacture wall board or insulating board on paper machines without further processing it are classified in the

paper industry, and therefore no data for such establishments are included except in Tables 3 and 4. Some of the material designated as "Wall board" is used for purposes other than as a substitute for lath and plaster.

Comparative statistics of products (Table 3).—Prior to 1927 the industry was canvassed by means of the "general schedule," which did not call for the quantities and the values of the several classes of products in detail, and consequently Table 3 gives figures for 1927 and 1929 only.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1923 TO 1929

[No comparable data for years prior to 1923]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929.....	236	7,462	\$10,180,391	\$28,312,628	\$70,602,746	\$42,350,118	142,354
1927.....	221	10,014	14,411,777	31,998,385	83,856,008	51,857,623	116,230
1925.....	222	10,978	16,078,362	39,553,463	90,957,045	51,403,382	82,863
1923.....	195	9,289	14,893,572	33,124,267	78,800,539	40,676,272	62,521
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	0.8	-25.5	-29.4	-11.5	-15.7	-18.3	22.5
1925-1927.....	-0.5	-8.8	-10.4	-19.1	-7.8	0.9	40.3
1923-1925.....	13.8	18.2	8.0	19.4	23.2	26.4	32.5

<sup>1</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturer; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

## CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929 AND 1927

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States.....	1929	236	1,489	7,462	142,354	21,209	121,148	\$3,640,261	\$10,180,391	\$28,312,628	\$23,787,272	\$4,525,356	\$70,662,746	\$42,350,118
	1927	221	1,849	10,014	116,230	25,097	91,133	4,423,677	14,411,777	31,998,385	26,916,238	5,083,147	83,850,008	51,867,623
Individual States:														
California.....	1929	39	106	291	5,149	650	4,499	268,065	521,250	1,767,968	1,632,897	135,071	3,212,007	1,444,030
	1927	35	137	365	4,613	200	4,413	296,009	504,502	1,815,944	1,705,933	110,011	3,217,806	1,401,862
Colorado.....	1929	4	5	20	929	-----	929	6,685	25,209	97,612	82,209	15,403	173,945	76,333
Illinois.....	1929	22	92	177	2,367	790	1,577	258,385	301,696	820,692	766,565	54,187	2,097,111	1,276,419
	1927	17	69	107	1,269	660	599	200,399	185,632	751,498	724,457	27,041	1,573,800	821,802
Iowa.....	1929	8	91	605	7,997	1,125	6,872	197,269	900,079	2,204,961	1,739,144	555,817	4,515,820	2,220,865
	1927	11	128	918	9,349	2,028	7,321	250,160	1,408,847	2,114,109	1,423,874	690,235	6,835,187	4,721,078
Kentucky.....	1929	4	15	21	184	-----	184	23,886	22,327	91,298	88,832	2,466	154,072	62,774
Michigan.....	1929	8	49	433	14,816	799	14,017	137,292	610,080	2,253,612	1,828,230	425,882	3,044,225	1,690,612
	1927	13	126	791	9,823	1,189	8,634	354,240	1,088,355	3,042,240	2,581,829	460,411	6,164,295	3,122,655
Minnesota.....	1929	6	98	336	6,512	1,230	5,282	211,474	429,479	1,150,027	1,000,801	149,226	3,397,064	2,247,037
	1927	5	82	300	4,413	1,020	3,393	185,559	359,348	1,082,769	925,243	167,526	2,683,381	1,600,612
Missouri.....	1929	7	24	41	254	-----	254	47,819	71,521	160,904	155,700	5,204	428,784	267,880
	1927	4	17	44	246	5	241	40,420	97,926	167,326	153,630	3,096	496,246	338,926
Nevada.....	1929	3	18	109	4,172	3,850	822	45,301	100,326	322,731	249,092	73,639	781,408	458,677
	1927	3	41	228	4,095	3,300	795	121,239	305,133	516,079	363,596	152,483	1,071,805	555,726
New Jersey.....	1929	10	48	209	1,865	965	880	172,401	291,811	682,411	641,726	40,685	1,850,273	1,167,862
	1927	9	96	400	1,741	973	768	344,382	722,845	1,407,593	1,330,675	76,918	1,330,675	820,531
New York.....	1929	40	256	1,885	38,098	710	37,388	680,285	2,850,604	7,993,072	6,784,593	1,208,479	17,290,052	9,290,980
	1927	41	415	3,416	39,719	1,895	37,824	1,186,233	5,428,390	10,646,046	9,205,275	1,340,771	25,938,165	15,392,119
Ohio.....	1929	9	67	553	3,583	2,135	1,445	171,196	613,417	1,747,644	1,620,413	127,231	3,919,646	2,172,002
	1927	11	144	805	4,106	2,435	1,671	320,157	1,196,006	2,290,540	1,936,695	353,845	5,894,503	3,008,963
Pennsylvania.....	1929	14	73	128	4,757	-----	4,757	170,310	181,376	515,084	469,030	56,054	1,154,026	639,842
	1927	8	29	81	1,244	-----	1,244	80,268	147,679	449,106	410,268	38,848	868,110	419,004
Texas.....	1929	7	54	460	7,769	1,230	6,539	119,295	655,413	1,795,960	1,542,562	253,398	3,841,307	2,045,407
	1927	6	78	547	4,293	1,090	3,203	173,169	736,421	1,287,444	952,509	334,935	4,186,731	2,899,287
Utah.....	1929	3	11	47	539	495	94	25,922	65,067	43,775	32,669	11,116	189,573	145,796
Washington.....	1929	7	30	108	831	-----	831	103,156	134,070	392,310	374,577	17,733	920,445	537,135
	1927	7	58	92	1,352	-----	1,352	83,154	130,154	490,924	465,303	25,621	954,919	463,995
Wisconsin.....	1929	4	19	39	486	-----	486	51,236	51,454	271,601	260,304	11,297	681,387	409,786
Groups of States:														
Ariz., 2 est.; N. Mex., 1; Wyo., 2.....	1929	5	11	38	680	326	355	21,161	52,218	92,166	71,095	21,071	208,787	116,621
Kans., 3 est.; Mont., 2; Nebr., 1; S. Dak., 2.....	1929	8	35	143	2,893	775	2,118	77,597	183,743	365,021	275,943	89,078	1,268,672	603,651
Conn., 1 est.; Mass., 4; N. H., 1; R. I., 1; Vt., 1.....	1929	8	81	279	6,615	1,500	5,115	217,483	422,270	1,019,743	840,490	179,253	2,569,998	1,550,255
Other States (D. C., 1 est.; Fla., 1; Ind., 4; La., 2; Md., 3; Miss., 2; Okla., 3; Oreg., 1; Va., 2; W. Va., 1).....	1929	20	306	1,540	31,808	5,107	26,701	634,043	1,636,981	4,434,036	3,340,470	1,093,566	18,054,178	13,690,142
States not shown separately.....	1927	51	429	1,920	29,977	10,302	19,675	788,352	2,090,639	6,046,767	4,735,961	1,310,806	20,643,636	14,596,869

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 43; 1927, 36. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 8,904; 1927, 11,899.

<sup>2</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for 1927 represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Arizona, 2 establishments; Colorado, 3; Connecticut, 1; Georgia, 1; Indiana, 2; Kansas, 4; Kentucky, 3; Louisiana, 2; Maryland, 5; Massachusetts, 3; Mississippi, 1; Montana, 2; Nebraska, 1; New Hampshire, 1; New Mexico, 1; Oklahoma, 3; Oregon, 2; Rhode Island, 1; South Dakota, 2; Utah, 2; Vermont, 1; Virginia, 2; West Virginia, 1; Wisconsin, 3; Wyoming, 2.

# WALL PLASTER, WALL BOARD, ETC.

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**TABLE 3.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1929 AND 1927**

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for 1927 represent production. See GENERAL EXPLANATIONS—Value of Products]

KIND	1929	1927	Per cent of increase or decrease (—)	KIND	1929	1927	Percent of increase or decrease (—)
1. Wall plaster, wall board, insulating board, and floor composition industry, all products, total value.....	\$70,662,746	\$83,856,008	-15.7	Wall plaster, wall board, insulating board, and floor composition—Continued.			
2. Wall plaster, wall board, insulating board, and floor composition.....	61,658,841	74,658,116	-17.4	Wall plasters—Continued.			
3. Other products (not normally belonging to the industry).....	9,003,905	9,197,892	-2.1	Plasters, other than gypsum—Contd.			
4. Wall plaster, wall board, insulating board, and floor composition made as secondary products in other industries, value.....	14,671,502	7,276,124	101.6	Portland-cement stucco—			
Wall plaster, wall board, insulating board, and floor composition, all industries: Aggregate value (sum of 2 and 4).....	\$76,330,343	\$81,934,240	-6.8	Tons.....	55,327	34,839	60.2
Wall plasters, total—				Value.....	\$1,728,321	\$1,086,172	59.1
Tons.....	3,310,615	4,354,227	-24.0	Other—			
Value.....	\$25,936,198	\$35,855,589	-27.7	Tons.....	107,342	56,793	89.0
Gypsum plasters, total—				Value.....	\$3,073,970	\$1,249,061	146.1
Tons.....	3,137,108	4,233,004	-25.9	Gypsum board, total—			
Value.....	\$20,683,228	\$32,506,243	-36.4	Tons.....	1,118,783	(?)	
Neat plaster (unfibered)—				Equivalent in square feet.....	976,898,473	929,954,714	5.0
Tons.....	442,907	(?)		Value.....	\$17,698,082	\$20,222,353	-12.5
Value.....	\$3,506,257	(?)		Wall board—			
Sanded plaster—				Tons.....	764,367	(?)	
Tons.....	336,122	554,673	-39.4	Equivalent in square feet.....	625,662,042	658,780,359	-5.0
Value.....	\$2,240,281	\$4,143,818	-45.9	Value.....	\$12,230,859	\$15,629,492	-23.2
Fibered plaster—				Plaster board and lath—			
Tons.....	1,639,313	(?)		Tons.....	354,416	(?)	
Value.....	\$10,408,142	(?)		Equivalent in square feet.....	350,736,431	271,174,355	29.3
Gaging and finish plaster—				Value.....	\$5,467,223	\$4,292,861	27.4
Tons.....	72,535			Fiber wall board, and rigid and flexible fiber insulation, total value.....	\$30,046,379	\$22,781,594	31.9
Value.....	\$958,911			Reported in square feet—			
Plaster of Paris, including molding and casting, pottery, foundry, terra-cotta, dental, and plate-glass plaster—				Square feet.....	546,116,268	403,653,834	35.3
Tons.....		349,460	-14.5	Value.....	\$10,945,281	\$15,718,661	7.8
Value.....		\$4,343,524	-30.2	Reported in tons—			
Other gypsum plaster—				Tons.....	133,077	72,594	83.3
Tons.....	226,153			Value.....	\$13,101,098	\$7,062,933	85.5
Value.....	\$2,071,429			Fiber wall board and rigid fiber insulation, total value.....	\$27,430,559	(?)	
Plasters, other than gypsum, total—				Reported in square feet—			
Tons.....	178,507	121,223	43.1	Square feet.....	457,481,315	(?)	
Value.....	\$5,252,970	\$3,349,646	56.8	Value.....	\$14,329,461	(?)	
Magnesite stucco—				Reported in tons—			
Tons.....	10,338	29,591	-65.1	Tons.....	133,077	72,594	83.3
Value.....	\$460,079	\$1,014,413	-55.6	Value.....	\$13,101,098	\$7,062,933	85.5
				Flexible fiber insulation—			
				Square feet.....	88,634,953	(?)	
				Value.....	\$2,615,820	(?)	
				Floor composition, total value.....	\$2,649,684	\$3,074,404	-13.8
				Magnesite.....	\$1,193,388	\$2,155,182	-44.9
				Mastic (hot and cold).....	\$578,523	(?)	
				Premixed concrete or cement <sup>1</sup> .....	\$55,660	\$71,247	-21.9
				Other.....	\$822,113	\$837,976	-1.9

<sup>1</sup> For 1929, 309,331 tons of gypsum block and tile, valued at \$2,579,890; 953,015 tons of gypsum rock, \$1,717,381; miscellaneous products, \$4,706,655. For 1927, 63,733,561 square feet of gypsum blocks, valued at \$3,682,131; 655,634 tons of gypsum rock, \$1,709,221; miscellaneous products, \$3,806,540.

<sup>2</sup> Not called for on schedule.

<sup>3</sup> These figures represent 2,423,785 tons of neat plaster, valued at \$18,080,543 (not comparable with neat plaster, unfibered, reported for 1920); 648,953 tons of stucco, \$3,819,770; 256,133 tons of other gypsum plaster, \$2,113,588.

<sup>4</sup> Not shown separately.

<sup>5</sup> Statistics on the production of premixed concrete for general use will be found in the report on "Concrete Products."

CENSUS OF MANUFACTURES: 1929

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, BY STATES: 1929

[The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups]

KIND AND STATE	Number of establishments	Quantity	Value	KIND AND STATE	Number of establishments	Quantity	Value
<b>GYPSUM PLASTERS</b>				<b>WALL PLASTERS, OTHER THAN GYPSUM—CON.</b>			
Neat plaster (unfibered), total.....	55	Tons 442,907	\$3,566,257	Portland-cement stucco, total.....	59	Tons 55,827	\$1,728,321
Iowa.....	6	46,020	253,959	California.....	17	25,981	709,218
Michigan.....	4	30,185	178,715	Missouri.....	3	3,028	105,088
Texas.....	3	12,463	83,034	New York.....	10	12,389	418,703
Ariz., 1 est.; Colo., 2.....	3	4,603	34,009	Ohio.....	5	1,070	47,338
Mont., 1 est.; Nev., 3; N. Mex., 1; Utah, 2; Wyo., 1.....	8	11,500	76,477	Pennsylvania.....	6	3,643	137,689
Calif., 4 est.; Wash., 1.....	5	21,454	108,977	Utah, 1 est.; Wash., 3.....	4	1,171	57,787
Other States (Conn., 1 est.; Ind., 1; Kans., 1; Ky., 1; Mass., 1; N. H., 1; N. J., 1; N. Y., 8; Ohio, 3; Okla., 2; Pa., 2; S. Dak., 1; Va., 2; Wis., 1).....	26	316,782	2,740,996	Ill., 2 est.; Ind., 1; Iowa, 2.....	5	3,079	96,501
Sanded plaster, total.....	44	336,122	2,240,291	Other States (Fla., 1 est.; Ky., 1; La., 1; Md., 1; Mass., 1; N. J., 2; Tenn., 1; Tex., 1).....	9	4,800	166,985
Kentucky.....	3	9,319	78,067	Other, total.....	48	107,342	3,073,976
New York.....	15	134,237	788,701	Missouri.....	4	4,255	176,980
Ohio.....	6	49,128	295,694	New York.....	6	11,394	383,581
Other States (Conn., 1 est.; Ind., 1; Iowa, 3; La., 1; Mass., 1; Mich., 3; N. H., 1; N. J., 3; Pa., 3; Va., 1; Wis., 2).....	20	143,438	1,007,839	Conn., 1 est.; Mass., 4; N. J., 5.....	10	14,529	526,789
Fibered plaster, total.....	71	1,039,313	10,408,142	D. C., 1 est.; Ohio, 4; Pa., 6.....	11	10,221	998,677
California.....	4	103,800	796,457	Other States (Calif., 7 est.; Ill., 1; Ind., 1; Iowa, 1; Minn., 1; Nebr., 1; S. C., 1; Tex., 2; Utah, 1; Wis., 1).....	17	66,943	1,017,937
Iowa.....	7	254,461	1,164,352	<b>WALL BOARD</b>			
Michigan.....	7	171,246	859,780	Gypsum wall board, total.....	31	764,367	12,230,859
Nevada.....	3	72,565	525,385	Iowa.....	3	72,914	1,456,311
New York.....	13	647,648	3,515,047	New York.....	7	197,749	4,189,364
Ohio.....	5	124,575	641,453	Texas.....	4	121,597	2,390,715
Texas.....	4	212,803	838,070	Other States (Calif., 1 est.; Ind., 2; Mass., 1; Mich., 4; N. H., 1; Ohio, 3; Okla., 1; Pa., 2; Va., 1; Wash., 1).....	17	372,107	4,104,469
Ariz., 1 est.; Colo., 2; N. Mex., 1.....	4	26,902	181,850	Gypsum plaster board and lath, total.....	32	354,416	5,467,223
Mont., 2 est.; Utah, 2; Wyo., 2.....	6	59,583	411,511	New York.....	7	111,207	1,712,553
Other States (Ill., 1 est.; Ind., 2; Kans., 1; Ky., 1; Mass., 1; Minn., 1; Okla., 3; Pa., 2; S. Dak., 1; Va., 2; Wash., 1; W. Va., 1; Wis., 1).....	18	255,430	1,544,207	Texas.....	3	7,954	116,574
Gaging and finish plaster, total.....	26	72,535	968,911	Other States (Calif., 2 est.; Ind., 1; Iowa, 3; Mass., 1; Mich., 4; N. H., 1; N. J., 1; N. Mex., 1; Ohio, 3; Okla., 1; Pa., 2; Va., 1; Wash., 1).....	22	235,255	3,644,096
Calif., 2 est.; Tex., 2; Wash., 1.....	5	6,962	62,445	Fiber wall board and rigid fiber insulation, total.....	35	(1)	27,430,559
Iowa, 2 est.; Mich., 3; Wis., 1.....	6	19,631	204,344	Conn., 3 est.; Mass., 3.....	6	(1)	251,226
Nev., 2 est.; Utah, 2.....	4	3,776	43,467	N. J., 4 est.; N. Y., 8; Pa., 2.....	14	(1)	8,073,485
Other States (Conn., 1 est.; N. H., 1; N. J., 1; N. Y., 4; Ohio, 3; Pa., 1).....	11	42,166	648,655	Other States (Calif., 1 est.; Ill., 1; Kans., 1; La., 1; Minn., 6; Miss., 1; Mo., 1; Wash., 2; Wis., 1).....	15	(1)	19,105,848
Plaster of Paris, including molding and casting, pottery, foundry, terra-cotta, dental, and plate-glass plaster, total.....	30	226,153	2,071,429	Flexible fiber insulation (Mass., 1 est.; Minn., 3; Ohio, 1).....	5	Square feet 88,634,953	2,615,820
Michigan.....	6	53,653	288,030	<b>FLOOR COMPOSITION</b>			
New York.....	5	41,106	525,144	Magnesite, total.....	31		1,193,388
Other States (Calif., 2 est.; Conn., 1; Iowa, 2; Kans., 1; Nev., 3; Ohio, 3; Okla., 1; Pa., 2; Tex., 1; Utah, 1; Va., 1; Wash., 1).....	19	131,394	1,258,255	California.....	8		110,379
Other gypsum plaster, total.....	28	120,078	1,438,198	Illinois.....	6		487,488
Mass., 1 est.; N. Y., 4; Ohio, 2; Pa., 1; R. I., 1; Va., 1.....	10	17,327	467,491	New York.....	5		218,190
Other States (Calif., 3 est.; Ind., 1; Iowa, 1; Kans., 1; Mich., 2; Nev., 2; Okla., 1; Tex., 2; Utah, 1; Va., 2).....	16	102,751	970,707	N. J., 3 est.; Ohio, 1; Pa., 3.....	7		300,090
<b>WALL PLASTERS, OTHER THAN GYPSUM</b>				Other States (Fla., 1 est.; Iowa, 1; Md., 1; Mo., 1; Wash., 1).....	5		77,295
Magnesite stucco, total.....	19	10,338	450,679	Mastic (hot and cold) (Calif., 1 est.; Ill., 6; Md., 1; N. Y., 1; Pa., 1; Tex., 1).....	11		578,523
N. J., 3 est.; N. Y., 3; Pa., 3.....	9	8,255	375,313	Premixed concrete or cement (Ill., 2 est.; Mo., 1; N. J., 1; N. Y., 1; Pa., 1).....	6		55,600
Ill., 2 est.; Iowa, 1; Mo., 1; Nebr., 1.....	5	1,232	41,931	Other (Calif., 2 est.; Ill., 6; N. J., 2; R. I., 1).....	11		822,113
Other States (Calif., 2 est.; Colo., 1; Fla., 1; Md., 1).....	5	851	33,435				

<sup>1</sup> Quantity figure incomplete.

TABLE 5.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS, ELECTRIC MOTORS, AND GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY
	Number	Capacity	Number	Capacity	Number	Capacity	
		Horsepower		Horsepower		Horsepower	1929
Prime movers and electric motors driven by purchased energy, aggregate.....	6,586	142,354	4,717	116,230	2,834	82,843	100.0
Prime movers, total.....	110	21,206	112	25,097	127	24,876	14.9
Steam, total.....	76	15,231	87	19,397	88	23,911	10.7
Engines.....	67	10,057	80	11,197	80	15,705	7.1
Turbines.....	9	5,174	7	8,200	8	8,206	3.6
Internal-combustion engines.....	32	5,650	21	5,205	35	5,620	4.0
Water wheels and water turbines.....	2	325	4	495	4	345	0.2
Electric motors driven by purchased energy.....	6,476	121,148	4,605	91,133	2,707	52,987	85.1
Electric motors, total.....	7,276	134,095	5,701	109,864	3,822	75,978	100.0
Driven by purchased energy.....	6,476	121,148	4,605	91,133	2,707	52,987	89.7
Driven by energy generated in establishments reporting.....	800	13,847	1,096	18,731	1,115	22,991	10.3
Electric generators.....	41	Kilowatts 7,586	57	Kilowatts 13,631	65	Kilowatts 13,798	
Electric energy purchased <sup>1</sup> .....		Kilowatt-hours 157,912,188		( <sup>2</sup> )		( <sup>2</sup> )	

<sup>1</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc..  
<sup>2</sup> Data incomplete.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929 AND 1925, AND BY STATES, 1929

This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:														
1929.....	7,462	7,011	7,026	7,290	7,393	7,614	7,789	7,938	8,096	8,065	7,847	7,081	6,397	79.0
1925.....	10,978	8,875	10,020	10,657	10,935	11,205	11,276	11,261	11,427	11,846	11,469	11,294	10,665	84.8
California.....	291	295	275	306	304	307	298	268	312	272	281	306	278	86.9
Colorado.....	20	10	18	19	20	19	23	22	20	21	26	21	20	38.5
Illinois.....	177	133	158	166	169	177	174	177	195	206	204	188	180	64.6
Iowa.....	605	573	571	589	611	640	674	690	680	629	598	546	459	66.5
Kentucky.....	21	21	18	21	22	28	22	25	23	20	20	20	18	69.2
Michigan.....	433	403	405	424	442	431	445	444	423	460	538	408	367	88.2
Minnesota.....	336	343	350	361	368	339	340	344	309	314	313	312	342	84.4
Missouri.....	41	39	41	39	44	47	43	47	44	42	37	37	37	78.7
Nevada.....	109	131	112	120	114	124	119	120	116	99	92	95	70	53.4
New Jersey.....	209	203	212	209	205	232	213	217	228	223	197	186	178	76.7
New York.....	1,885	1,905	1,958	1,970	1,958	1,962	2,052	2,029	1,988	1,903	1,784	1,663	1,481	76.7
Ohio.....	553	522	521	522	531	571	594	614	601	583	576	546	461	73.5
Pennsylvania.....	123	111	80	75	93	94	96	89	95	211	238	185	165	31.8
Texas.....	460	411	443	491	483	481	513	509	483	484	464	462	353	68.8
Utah.....	47	39	58	44	48	49	51	52	57	55	49	45	40	66.7
Washington.....	108	116	126	126	113	110	113	104	108	110	100	88	88	68.3
Wisconsin.....	39	38	34	33	38	40	41	40	44	44	48	39	32	69.6



# Group 11.—IRON AND STEEL AND THEIR PRODUCTS, NOT INCLUDING MACHINERY

## THE GROUP AS A WHOLE

Group 11 comprises two subgroups, namely: (1) Crude iron and steel and rolled products, and (2) other iron and steel products except those classified in Groups 13, 14, and 15. The industries in the second subgroup use as their principal materials the products of those in the first subgroup, and as a result the total cost of materials and the total value of products for the group as a whole include large amounts of duplication.

Establishments which roll iron and steel and operate departments for further processing the rolled products, such as wrought pipe, bolts and nuts, wire, and tin plate and terneplate, are assigned in their entirety to the "Steel works and rolling mills" industry, except that blast-furnace departments are classified separately. The several industries which constitute the subgroup "Other iron and steel products" embrace establishments operated entirely independently of rolling mills, although some of them are under the same ownership. Thus the statistics for certain of these industries by no means indicate the full extent of the manufacturing operations involved in the production of the various classes of commodities covered by the industry designations. In the detailed product tables, however, value figures, and in many cases quantity figures also, are given, so far as data are available, covering the total output of the individual

classes of commodities, whether made in rolling mills or in plants classified in other industries. For example, Table 5, page 957, shows the total value of pipes and tubes made in rolling mills, and in addition the value of products reported by establishments, other than rolling mills, engaged primarily in the manufacture of pipes and tubes, and the figures for wire and wire products are shown in a similar manner in Table 5, page 1016.

This group differs slightly from the corresponding one as constituted at the census for 1927, the changes being as follows:

(1) The former "Pens, steel and brass" industry, in Group 11, has been transferred to Group 16, in which it forms a part of the "Pens, fountain and stylographic; pen points, gold, steel, and brass" industry.

(2) Some of the establishments formerly classified in the "Tools, not including edge tools, machine tools, files, or saws" industry, in Group 11, have been transferred to "Machine-tool accessories and small metal-working tools," a new industry in Group 13.

The table on page below lists all industries in Group 11 and gives summary statistics for each, with comparative figures for earlier census years; and detailed reports for the individual industries, all of which have previously been published in pamphlet form, are presented on pages 910 to 1025.

### SUMMARY FOR GROUP 11.—IRON AND STEEL AND THEIR PRODUCTS, NOT INCLUDING MACHINERY: 1914 TO 1929

[The totals for 1927 and prior years have been revised for comparison with those for 1929 by deducting the figures for the former "Pens, steel and brass" industry, which now forms a part of the "Pens, fountain and stylographic; pen points, gold, steel, and brass" industry, in Group 16. Data for establishments with products under \$5,000 in value included for 1919 and 1914 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products	Value added by manufacture <sup>1</sup>	Horsepower
Aggregate for the group.....	1929	6,640	880,882	\$1,380,080,821	\$3,862,873,486	\$7,137,928,058	\$3,275,054,572	9,200,822
	1927	6,340	834,987	1,263,812,344	3,544,015,067	6,197,594,589	2,682,079,522	8,322,739
	1925	6,063	850,783	1,283,840,796	3,734,084,771	6,460,222,488	2,726,137,717	7,518,726
	1923	6,353	892,185	1,324,172,787	4,152,741,170	6,827,070,885	2,674,020,209	7,250,009
	1921	6,251	871,426	1,730,875,339	2,140,171,488	3,455,541,016	1,315,369,557	( <sup>2</sup> )
	1919	7,617	857,764	1,243,726,202	3,423,280,065	5,887,843,071	2,464,563,606	6,429,067
	1914	6,326	617,776	421,746,126	1,315,690,489	2,137,113,329	821,422,840	4,557,572
Crude iron and steel and rolled products, total....	1929	591	419,534	730,974,110	2,514,370,848	4,137,214,269	1,622,837,421	7,532,530
	1927	602	389,270	645,533,998	2,269,210,331	3,488,744,476	1,210,534,145	6,781,088
	1925	595	399,914	660,297,150	2,429,378,098	3,711,354,460	1,281,076,362	6,143,927
	1923	658	424,913	696,760,621	2,872,027,903	4,181,038,011	1,289,910,108	5,999,041
	1921	628	254,213	354,356,924	1,366,174,970	1,901,430,596	535,255,626	( <sup>2</sup> )
	1919	695	416,748	711,409,825	2,301,862,254	3,623,368,934	1,321,506,680	5,399,574
	1914	587	278,072	210,923,024	855,405,752	1,236,318,548	380,912,796	3,925,899
Iron and steel: Blast furnaces.....	1929	105	24,960	41,958,509	610,293,691	771,425,464	161,131,773	( <sup>2</sup> )
	1927	110	27,958	44,258,499	579,555,030	708,904,238	129,349,202	( <sup>2</sup> )
	1925	122	29,188	45,312,168	617,416,880	785,286,229	147,809,349	1,380,394
	1923	169	36,712	58,935,384	827,629,665	1,007,613,340	179,983,075	1,686,419
	1921	134	18,698	29,369,685	361,049,516	419,771,244	58,721,728	( <sup>2</sup> )
	1919	195	41,660	73,709,395	621,286,496	794,466,558	173,180,062	1,581,407
	1914	160	29,356	22,780,626	264,580,080	317,653,983	53,073,923	1,222,273

See footnotes at end of summary.

# IRON AND STEEL AND THEIR PRODUCTS

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## SUMMARY FOR GROUP 11.—IRON AND STEEL AND THEIR PRODUCTS, NOT INCLUDING MACHINERY: 1914 TO 1929—Continued

[See note at head of this table]

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products	Value added by manufacture <sup>1</sup>	Horsepower
<b>Crude iron and steel and rolled products—Con.</b>								
<i>Iron and steel: Steel works and rolling mills (including all departments, such as bolt and nut, wire, tinplate, etc.)</i>								
	1929	488	394, 574	\$989, 015, 541	\$1, 904, 083, 157	\$3, 365, 788, 806	\$1, 461, 705, 648	<sup>2</sup> 7, 532, 530
	1927	486	361, 312	601, 275, 499	1, 689, 656, 295	2, 779, 840, 238	1, 090, 184, 943	<sup>3</sup> 6, 781, 058
	1925	473	370, 726	614, 984, 982	1, 811, 961, 218	2, 946, 068, 231	1, 134, 107, 013	4, 763, 533
	1923	489	388, 201	637, 825, 137	2, 044, 398, 238	3, 154, 324, 671	1, 109, 926, 433	4, 313, 522
	1921	494	235, 515	324, 987, 239	1, 005, 125, 454	1, 481, 659, 352	476, 533, 898	( <sup>4</sup> )
	1919	500	375, 088	637, 637, 430	1, 080, 575, 758	2, 828, 902, 376	1, 148, 326, 618	3, 818, 167
	1914	427	248, 716	188, 142, 398	560, 825, 692	918, 664, 565	327, 838, 873	2, 703, 596
<b>Other iron and steel products, total</b>								
	1929	5, 049	461, 348	650, 012, 711	1, 348, 496, 638	3, 000, 713, 789	1, 652, 217, 151	1, 668, 292
	1927	5, 738	445, 697	618, 278, 346	1, 275, 404, 736	2, 708, 850, 113	1, 433, 445, 377	1, 541, 672
	1925	5, 468	450, 889	623, 643, 646	1, 304, 706, 673	2, 747, 327, 322	1, 442, 620, 649	1, 374, 789
	1923	5, 695	467, 272	627, 412, 266	1, 280, 713, 273	2, 665, 732, 374	1, 385, 019, 101	1, 259, 068
	1921	5, 623	317, 213	376, 518, 415	773, 996, 488	1, 554, 110, 419	780, 113, 931	( <sup>4</sup> )
	1919	6, 922	441, 016	532, 319, 377	1, 121, 417, 811	2, 264, 474, 737	1, 143, 056, 926	1, 030, 123
	1914	5, 739	339, 704	210, 823, 102	460, 284, 737	900, 794, 781	440, 510, 044	661, 708
<i>Iron and steel products exclusive of those made in steel works and rolling mills (or departments of such mills):</i>								
<i>Bolts, nuts, washers, and rivets</i> <sup>4</sup>								
	1929	117	16, 175	22, 115, 532	44, 211, 765	102, 392, 099	58, 180, 314	66, 343
	1927	115	18, 014	17, 324, 418	39, 301, 814	78, 876, 170	37, 574, 356	<sup>5</sup> 57, 403
	1925	127	13, 907	17, 647, 305	38, 506, 711	75, 925, 784	37, 419, 073	<sup>6</sup> 59, 767
	1923	126	15, 962	20, 207, 049	41, 873, 677	84, 431, 047	42, 557, 370	48, 036
	1921	125	10, 148	10, 260, 344	18, 547, 629	35, 778, 454	17, 225, 825	( <sup>7</sup> )
	1919	144	17, 967	20, 673, 834	44, 277, 117	89, 743, 882	45, 466, 765	49, 859
	1914	102	10, 658	5, 960, 824	12, 912, 649	23, 403, 405	10, 400, 756	28, 885
<i>Forgings</i> <sup>4, 6</sup>								
	1929	218	20, 882	34, 505, 349	71, 606, 964	150, 218, 947	84, 641, 983	147, 491
	1927	219	15, 594	28, 539, 551	52, 101, 996	105, 035, 719	52, 983, 724	127, 975
	1925	227	20, 483	31, 587, 006	68, 577, 495	135, 918, 624	67, 341, 129	121, 056
	1923	244	27, 723	40, 539, 328	93, 590, 528	180, 824, 712	87, 234, 184	138, 263
	1921	252	10, 947	20, 950, 139	45, 291, 495	85, 082, 938	39, 791, 443	( <sup>7</sup> )
	1919	261	29, 135	40, 602, 802	83, 561, 111	177, 119, 105	95, 567, 994	104, 870
	1914	213	11, 277	7, 849, 883	15, 800, 471	30, 747, 450	15, 446, 979	38, 527
<i>Galvanizing and other coating</i> <sup>7</sup>								
	1929	65	1, 125	1, 563, 716	3, 939, 417	7, 666, 541	3, 727, 124	2, 268
	1927	59	953	1, 448, 940	3, 722, 411	6, 950, 355	3, 228, 444	2, 657
	1925	54	804	1, 127, 862	2, 891, 944	5, 938, 158	3, 041, 214	1, 881
	1923	51	877	1, 183, 464	3, 363, 099	6, 327, 338	2, 964, 269	1, 858
	1921	51	685	843, 620	2, 161, 406	4, 017, 820	1, 856, 414	( <sup>7</sup> )
	1919	52	1, 665	2, 247, 953	10, 532, 288	14, 475, 682	3, 943, 394	1, 571
	1914	48	1, 580	922, 264	6, 292, 804	8, 480, 109	2, 187, 305	2, 385
<i>Iron and steel processed</i> <sup>7</sup>								
	1929	46	511	878, 459	1, 088, 672	3, 865, 480	2, 776, 808	2, 210
	1927	33	231	392, 273	509, 690	1, 443, 289	633, 599	1, 716
	1925	28	306	559, 638	642, 699	2, 113, 770	1, 471, 071	1, 670
<i>Nails, spikes, etc.</i> <sup>4</sup> (exclusive of those made in the "Wire drawn from purchased rods or bars" industry)								
	1929	55	2, 027	2, 553, 417	5, 955, 661	12, 854, 745	6, 899, 084	9, 096
	1927	56	2, 100	2, 670, 016	5, 156, 906	11, 753, 468	6, 596, 562	8, 073
	1925	58	2, 227	2, 609, 778	5, 645, 626	12, 318, 494	6, 672, 808	8, 102
	1923	61	2, 849	3, 235, 142	7, 005, 168	13, 299, 740	6, 294, 572	10, 275
	1921	56	2, 412	2, 575, 961	5, 670, 025	10, 976, 307	5, 308, 282	( <sup>7</sup> )
	1919	65	3, 355	3, 397, 562	8, 874, 747	17, 683, 344	8, 708, 597	8, 071
	1914	64	2, 644	1, 507, 689	3, 594, 319	7, 198, 600	3, 604, 281	8, 136
<i>Springs, steel, except wire</i> <sup>4</sup>								
	1929	86	5, 842	9, 313, 927	25, 372, 478	46, 672, 319	21, 269, 841	24, 318
	1927	94	5, 763	8, 912, 961	24, 598, 568	43, 820, 633	19, 222, 065	22, 293
	1925	98	5, 897	8, 988, 669	23, 609, 007	44, 469, 221	20, 860, 214	22, 492
	1923	114	8, 634	12, 782, 130	31, 748, 019	50, 392, 180	27, 644, 161	25, 393
	1921	126	5, 358	6, 779, 358	16, 007, 255	31, 750, 373	15, 743, 118	( <sup>7</sup> )
	1919	112	8, 981	11, 157, 874	28, 019, 180	51, 479, 535	28, 480, 355	16, 660
	1914	84	3, 703	2, 601, 848	6, 142, 927	11, 594, 992	5, 452, 065	8, 925
<i>Structural and ornamental iron and steel work</i> <sup>4</sup>								
	1929	1, 482	54, 947	87, 785, 606	244, 696, 254	477, 036, 827	232, 340, 878	266, 175
	1927	1, 284	52, 392	84, 578, 045	243, 446, 072	440, 376, 360	196, 930, 288	251, 670
	1925	1, 136	48, 341	77, 411, 499	237, 652, 611	420, 997, 579	183, 844, 968	211, 732
	1923	1, 056	51, 591	80, 832, 875	225, 487, 217	406, 117, 279	180, 930, 082	205, 518
	1921	1, 021	32, 897	47, 455, 082	151, 010, 906	250, 085, 446	99, 074, 540	( <sup>7</sup> )
	1919	1, 146	43, 962	64, 920, 132	168, 800, 715	294, 962, 419	126, 161, 704	165, 179
	1914	1, 235	47, 167	33, 428, 913	87, 621, 537	159, 377, 557	71, 753, 320	109, 038
<i>Wrought pipe, welded and heavy riveted</i> <sup>4</sup>								
	1929	50	11, 417	18, 762, 303	70, 120, 941	124, 658, 966	54, 538, 025	68, 630
	1927	44	11, 083	16, 069, 091	55, 778, 864	98, 186, 341	42, 407, 477	53, 938
	1925	42	10, 871	17, 156, 545	59, 142, 447	94, 695, 553	35, 553, 106	41, 306
	1923	53	10, 633	17, 704, 689	57, 965, 845	90, 823, 189	32, 857, 344	40, 912
	1921	57	8, 728	11, 234, 413	37, 093, 041	56, 662, 278	19, 560, 237	( <sup>7</sup> )
	1919	50	10, 428	14, 919, 678	51, 155, 653	81, 860, 115	30, 713, 462	23, 625
	1914	36	8, 845	6, 750, 360	26, 295, 788	37, 655, 229	11, 350, 441	17, 532
<i>Cast-iron pipe</i>								
	1929	72	19, 741	22, 551, 778	<sup>8</sup> 34, 289, 365	80, 260, 550	45, 971, 185	60, 757
	1927	82	22, 982	25, 982, 106	48, 224, 970	95, 088, 622	46, 863, 652	63, 196
	1925	77	23, 033	27, 438, 033	48, 846, 502	<sup>10</sup> 100, 919, 173	<sup>10</sup> 52, 072, 581	54, 820
	1923	73	21, 576	25, 019, 953	48, 804, 425	92, 674, 088	43, 800, 663	47, 239
	1921	70	12, 496	13, 135, 992	23, 897, 020	44, 321, 548	20, 424, 528	( <sup>7</sup> )
	1919	59	12, 625	14, 705, 398	25, 386, 552	50, 235, 101	24, 848, 549	28, 741
	1914	59	12, 557	7, 075, 976	16, 930, 141	26, 659, 365	9, 729, 224	25, 864

See footnotes at end of summary.

CENSUS OF MANUFACTURES: 1929

SUMMARY FOR GROUP 11.—IRON AND STEEL AND THEIR PRODUCTS, NOT INCLUDING MACHINERY: 1914 TO 1929—Continued

[See note at head of this table]

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products	Value added by manufacture <sup>1</sup>	Horsepower
<b>Other iron and steel products—Continued.</b>								
Doors, shutters, and window sash and frames, metal.	1929	148	9,557	\$17,065,422	\$30,178,161	\$72,160,388	\$41,982,227	25,027
	1927	117	8,050	15,564,458	25,602,238	65,279,973	39,677,735	20,626
	1925	92	6,791	12,899,071	21,627,746	50,078,034	28,450,288	16,699
	1923	37	2,439	4,332,767	5,604,210	15,307,111	9,762,001	3,981
	1921	45	1,782	2,880,909	4,289,274	12,466,701	8,177,427	(2)
	1919	57	2,077	2,729,774	4,577,934	10,877,001	6,299,067	4,013
Firearms.	1929	43	1,985	1,537,688	1,995,885	5,183,602	3,187,717	3,170
	1927	21	6,838	9,209,551	4,117,099	21,970,367	17,853,268	15,427
	1925	20	6,130	7,933,639	5,047,555	19,452,372	14,404,817	15,747
	1923	20	4,470	5,583,907	3,174,446	15,179,363	12,004,917	14,580
	1921	21	6,204	7,592,695	3,643,914	17,604,549	14,020,035	15,639
	1919	20	4,726	5,730,487	2,690,085	12,883,842	10,187,757	(2)
Hardware not elsewhere classified.	1929	26	11,287	13,333,495	7,613,784	30,181,370	22,567,586	26,167
	1927	29	7,064	5,067,053	2,669,618	10,543,753	7,874,135	7,374
	1925	485	52,306	67,702,255	76,480,210	229,477,507	152,997,297	112,705
	1923	485	47,834	60,827,474	71,877,055	208,253,586	136,376,531	99,674
	1921	473	52,349	65,661,817	77,502,839	225,052,644	147,549,805	98,278
	1919	456	52,205	63,470,745	80,697,525	215,960,129	135,362,004	84,006
Plumbers' supplies, not including pipe or vitreous-china sanitary ware.	1929	585	35,228	36,240,193	41,620,050	120,699,728	79,079,678	(2)
	1927	585	40,180	49,273,749	62,815,358	168,661,444	105,846,086	74,240
	1925	597	43,724	23,831,573	30,860,582	77,359,608	46,499,086	56,839
	1923	255	27,060	37,066,997	49,032,599	129,673,784	80,641,185	100,821
	1921	231	29,245	40,212,198	55,633,327	145,262,311	89,028,984	90,293
	1919	239	33,280	46,953,808	69,610,253	167,878,414	104,268,161	84,534
Safes and vaults.	1929	234	27,201	38,046,537	51,409,378	132,064,774	81,195,396	59,973
	1927	27	3,033	4,438,698	6,392,461	19,862,192	12,969,731	10,866
	1925	25	3,386	4,494,497	7,226,295	18,439,550	11,213,255	9,608
	1923	273	19,881	28,986,604	39,462,568	105,974,662	66,512,094	64,840
	1921	218	13,690	18,055,095	25,910,223	60,020,261	34,110,038	43,408
	1919	205	14,071	18,193,669	25,076,378	56,614,894	34,533,616	42,484
Screw-machine products and wood screws <sup>11</sup> .	1929	190	13,234	16,943,362	21,564,854	52,945,878	31,581,024	37,594
	1927	168	8,653	9,344,553	10,038,983	25,783,731	15,744,743	(2)
	1925	154	15,151	16,969,393	20,536,431	55,475,042	34,039,611	31,281
	1923	78	8,089	4,260,132	5,408,124	13,464,442	8,056,318	15,892
	1921	240	39,621	58,974,874	72,708,268	228,310,254	155,601,986	137,339
	1919	232	42,893	64,551,149	76,535,267	225,158,390	148,323,123	132,723
Steam fittings and steam and hot-water heating apparatus.	1929	225	43,260	63,979,276	77,856,905	228,929,986	151,573,080	109,313
	1927	236	44,141	64,806,855	83,297,279	221,954,313	138,657,034	91,085
	1925	274	30,868	30,596,053	50,213,402	127,366,887	77,153,485	(2)
	1923	261	36,686	45,742,525	72,016,393	160,285,488	88,269,095	67,494
	1921	265	26,388	16,737,870	26,921,102	68,922,434	37,001,332	38,392
	1919	53	4,110	5,769,097	21,946,559	37,825,027	15,878,468	15,289
Steel barrels, kegs, and drums.	1929	39	2,853	3,985,629	14,735,518	24,104,660	9,369,151	11,229
	1927	33	2,021	2,914,381	12,743,280	19,928,094	7,184,814	7,739
	1925	39	2,663	3,363,374	14,818,038	23,248,707	8,430,660	7,907
	1923	31	2,013	2,322,503	9,266,744	14,525,010	5,258,266	(2)
	1921	33	3,322	4,435,444	15,151,210	24,942,650	9,791,440	10,554
	1919	609	46,616	65,146,509	100,747,049	271,747,009	170,990,960	113,100
Stoves and ranges (other than electric) and warm-air furnaces.	1929	564	45,180	64,327,405	93,095,971	258,285,829	165,189,858	100,009
	1927	564	40,614	66,299,303	95,872,779	264,302,952	168,430,173	94,126
	1925	586	49,612	68,331,163	102,567,934	268,261,713	165,093,779	87,664
	1923	512	32,451	39,308,223	62,217,128	144,285,460	82,068,341	(2)
	1921	483	43,433	53,899,963	79,275,286	201,509,992	122,234,706	60,698
	1919	551	37,325	26,868,488	33,954,970	89,390,038	55,435,068	49,055
Tin cans and other tinware, not elsewhere classified.	1929	232	31,497	38,173,246	194,980,803	296,901,426	101,914,623	77,332
	1927	236	29,721	35,000,822	169,421,340	252,478,691	84,057,351	64,005
	1925	221	29,901	34,391,598	175,778,593	290,359,961	84,581,368	48,728
	1923	241	30,511	32,816,010	135,080,053	215,971,256	79,991,203	41,252
	1921	244	22,711	24,595,432	108,747,954	168,304,813	59,550,359	(2)
	1919	301	34,386	34,493,399	165,170,736	239,964,000	68,793,264	30,234
Tools and cutlery: Cutlery (not including silver and plated cutlery) and edge tools.	1929	294	22,584	12,217,359	53,840,817	81,930,880	28,060,063	17,863
	1927	239	14,991	17,651,292	14,789,335	78,690,872	63,871,537	40,886
	1925	230	15,832	18,892,154	15,180,385	76,688,444	58,608,059	43,419
	1923	211	10,407	20,226,033	20,562,009	80,205,252	59,701,243	51,673
	1921	211	10,671	19,750,933	17,159,825	72,477,013	55,817,188	43,171
	1919	210	14,345	14,749,993	14,073,967	49,341,204	34,367,237	(2)
Files.	1929	304	19,859	20,048,465	19,477,437	66,620,570	47,152,133	38,555
	1927	252	16,561	9,075,896	8,185,000	25,540,987	17,855,288	34,665
	1925	33	3,974	5,239,808	3,052,675	14,114,378	11,061,703	12,091
	1923	36	3,948	5,144,087	3,135,955	12,973,734	9,837,779	10,979
	1921	38	4,209	5,393,274	3,517,726	13,540,953	10,023,227	11,534
	1919	37	4,590	5,805,294	3,840,256	13,565,444	9,725,185	11,155
Files.	1929	39	3,695	3,174,612	2,309,087	7,647,252	5,338,165	(2)
	1927	50	5,767	6,192,444	4,227,880	17,016,593	13,388,683	11,897
	1925	39	4,349	2,135,430	1,595,225	5,608,157	4,012,932	8,771
	1923	48	4,349	2,135,430	1,595,225	5,608,157	4,012,932	8,771
	1921	48	4,349	2,135,430	1,595,225	5,608,157	4,012,932	8,771
	1919	48	4,349	2,135,430	1,595,225	5,608,157	4,012,932	8,771

See footnotes at end of summary.

# IRON AND STEEL AND THEIR PRODUCTS

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## SUMMARY FOR GROUP 11.—IRON AND STEEL AND THEIR PRODUCTS, NOT INCLUDING MACHINERY: 1914 TO 1929—Continued

[See note at head of this table]

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products	Value added by manufacture <sup>1</sup>	Horsepower
<b>Other iron and steel products—Continued.</b>								
<b>Tools and cutlery—Continued.</b>								
<b>Saws</b> -----								
	1929	81	4, 137	\$5, 727, 416	\$6, 884, 331	\$22, 614, 958	\$15, 730, 627	11, 804
	1927	77	4, 182	5, 753, 856	7, 674, 394	22, 627, 990	14, 953, 596	14, 526
	1925	71	4, 710	5, 873, 393	8, 224, 443	24, 709, 211	16, 484, 768	14, 287
	1923	80	5, 420	6, 730, 442	9, 739, 996	30, 786, 858	21, 046, 862	13, 298
	1921	79	5, 788	4, 086, 840	6, 479, 913	18, 185, 297	11, 705, 384	( <sup>2</sup> )
	1919	112	5, 610	6, 280, 807	11, 792, 224	31, 460, 657	19, 068, 833	15, 046
	1914	100	4, 560	3, 019, 497	4, 714, 186	12, 617, 165	7, 802, 979	11, 744
<b>Tools, not including edge tools, machine tools, files, or saws</b> -----								
	1929	534	10, 305	25, 808, 289	32, 110, 507	99, 462, 032	67, 351, 525	65, 965
	1927	405	16, 447	20, 041, 443	28, 057, 884	76, 607, 297	48, 549, 858	57, 024
	1925	657	25, 232	34, 464, 964	37, 056, 684	117, 430, 624	80, 373, 940	85, 963
	1923	663	25, 340	34, 294, 113	39, 023, 373	121, 263, 093	82, 239, 720	78, 696
	1921	700	29, 100	37, 168, 834	43, 205, 844	123, 158, 303	79, 952, 459	75, 248
	1919	714	19, 453	22, 643, 499	25, 550, 113	70, 523, 416	44, 973, 303	( <sup>2</sup> )
	1919	1, 125	35, 585	43, 836, 089	45, 796, 967	144, 201, 668	98, 404, 701	67, 730
	1914	661	16, 866	10, 216, 885	12, 235, 269	33, 892, 511	21, 657, 242	37, 248
<b>Vault, sidewalk, and floor lights, coal-hole covers, and ventilating equipment</b> <sup>12</sup> -----								
	1923	24	206	446, 178	1, 213, 248	2, 990, 885	1, 777, 637	264
	1921	25	245	365, 043	1, 170, 094	2, 150, 382	950, 288	( <sup>2</sup> )
	1919	41	316	424, 197	810, 579	2, 155, 864	1, 345, 285	269
	1914	45	601	456, 977	958, 754	2, 051, 051	1, 092, 297	486
<b>Wire, drawn from purchased bars or rods (covers fabricated wire products made in the same establishments)</b> -----								
	1929	81	22, 467	35, 110, 335	126, 182, 429	213, 997, 410	87, 814, 981	150, 620
	1927	73	19, 866	30, 038, 299	128, 092, 414	190, 700, 790	62, 617, 376	152, 574
	1925	68	18, 544	26, 927, 604	127, 250, 514	184, 462, 536	57, 212, 022	138, 115
	1923	64	21, 310	29, 861, 860	133, 883, 057	196, 364, 212	62, 481, 155	123, 923
	1921	61	14, 832	17, 809, 545	62, 705, 464	99, 945, 614	37, 240, 150	( <sup>2</sup> )
	1919	66	19, 741	29, 289, 667	102, 813, 591	162, 151, 236	59, 337, 645	119, 301
	1914	54	17, 600	11, 020, 729	56, 424, 494	81, 841, 012	25, 416, 518	83, 900
<b>Wirework, not elsewhere classified</b> -----								
	1929	547	22, 338	27, 912, 231	68, 144, 047	146, 805, 049	78, 061, 002	48, 864
	1927	512	21, 697	26, 439, 144	63, 093, 221	128, 535, 753	65, 442, 662	45, 858
	1925	462	19, 268	23, 834, 812	59, 604, 126	115, 428, 672	55, 824, 746	35, 943
	1923	443	16, 783	19, 340, 549	62, 279, 608	100, 248, 108	47, 968, 500	31, 617
	1921	413	11, 485	13, 314, 017	37, 030, 301	66, 384, 507	29, 345, 206	( <sup>2</sup> )
	1919	558	15, 224	15, 505, 992	60, 754, 070	90, 549, 245	39, 795, 175	29, 036
	1914	552	12, 126	6, 719, 222	24, 113, 708	41, 789, 394	17, 675, 686	21, 405

<sup>1</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>2</sup> Not called for on schedule.

<sup>3</sup> Horsepower data for blast furnaces included with those for steel works and rolling mills.

<sup>4</sup> Similar products are manufactured to a large extent by steel works and rolling mills. The figures here given refer only to establishments engaged primarily in the manufacture of the specified classes of products.

<sup>5</sup> Revised; revision not carried into total for subgroup or aggregate for group.

<sup>6</sup> Includes figures for "Horseshoes, not made in rolling mills," a separate industry classification prior to 1929.

<sup>7</sup> Largely custom work.

<sup>8</sup> No comparable data available for earlier years.

<sup>9</sup> Does not include cost of foundry supplies, which was not called for on the schedule for 1929 but was included for 1927 and earlier years.

<sup>10</sup> Revised; revision carried to total for subgroup but not to aggregate for group.

<sup>11</sup> Includes figures for "Screws, wood," a separate industry classification prior to 1929.

<sup>12</sup> Adjusted for comparison with 1929. See text, p. 906.

<sup>13</sup> Abandoned as a separate classification after 1923. Manufacturers of these products are now classified in other industries.

## BOLTS, NUTS, WASHERS, AND RIVETS, NOT MADE IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of bolts, nuts, rivets, lock washers, plate washers, riveting burrs, turnbuckles, toggle bolts, etc. No detailed product statistics are given for this industry, but the total production of bolts, nuts, etc., in all

industries is shown in Table 5 (p. 956) of the "Steel works and rolling mills" report.

The phrase "not made in plants operated in connection with rolling mills" refers to production in plants operated entirely independently of rolling mills, although in some cases under the same ownership.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1,2</sup>	Value added by manufacture <sup>3</sup>	Horsepower
1929.....	117	16,175	\$22,115,532	\$44,211,785	\$102,392,099	\$58,180,314	66,343
1927.....	115	13,614	17,324,418	38,301,814	75,870,170	37,574,356	47,403
1925.....	127	13,907	17,942,305	38,506,711	75,925,784	37,410,073	49,767
1923.....	126	15,902	20,207,049	41,873,677	84,431,047	42,557,370	48,036
1921.....	125	10,148	10,269,344	18,547,629	35,773,454	17,225,825	( <sup>4</sup> )
1919.....	144	17,967	20,973,834	44,277,117	89,743,882	45,466,765	49,959
1914.....	102	10,658	5,960,824	12,912,649	23,403,405	10,490,750	28,885
1909.....	108	11,345	5,793,243	12,804,335	24,484,907	11,680,572	22,037
1904.....	88	8,090	3,642,268	7,807,239	14,687,108	6,879,869	13,681
1899.....	72	7,660	2,991,857	8,071,071	13,978,382	5,907,311	8,982
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	1.7	13.8	27.7	15.4	34.9	54.8	15.6
1925-1927.....	-9.4	-2.1	-3.4	-0.5	-0.1	0.4	-4.0
1923-1925.....	0.8	-12.9	-11.2	-8.0	-10.1	-12.1	24.4
1921-1923.....	0.8	57.3	96.8	125.8	136.0	147.1	-----
1919-1921.....	-13.2	-43.5	-51.0	-58.1	-60.1	-62.1	-----
1919-1929.....	-18.7	-10.0	5.4	-0.1	14.1	28.0	32.8
1909-1919.....	33.3	58.4	262.0	245.8	266.5	239.3	126.7
1899-1909.....	( <sup>5</sup> )	48.1	93.6	58.6	76.2	97.7	145.3

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> For total production of bolts, nuts, washers, rivets, etc., in 1929, 1927, and 1925, by all plants (including those operated in connection with rolling mills), see Table 5 of report for "Steel works and rolling mills" industry (p. 956).

<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Revised.

<sup>5</sup> Not called for on schedule.

<sup>6</sup> Per cent not computed where base is less than 100.

# BOLTS, NUTS, WASHERS, AND RIVETS

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TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Certain of the States for which statistics are given in combination with those for others reported larger values of products than some of the States shown separately. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employes <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	117	2,034	16,175	66,343	17,228	49,115	\$6,949,294	\$22,115,532	\$44,211,785	\$41,014,443	\$2,207,342	\$102,392,099	\$58,180,314
	1927	115	1,931	13,614	47,003	14,779	42,624	5,636,016	17,324,418	38,301,814	36,377,850	1,923,964	75,876,170	37,574,856
	1919	144	2,000	17,907	49,959	17,402	32,557	5,306,419	20,973,834	44,277,117	42,127,433	2,149,684	89,743,882	45,466,765
Individual States:														
California	1929	5	30	173	368		368	127,562	226,575	606,111	656,546	9,565	1,328,505	662,394
	1927	4	15	87	364		364	73,202	109,499	206,076	198,473	7,603	440,632	234,556
	1919	5	9	67	281		281	33,054	71,229	314,377	305,871	8,500	513,531	190,154
Connecticut	1929	5	30	214	1,140	860	280	118,542	253,465	445,487	423,120	22,307	1,156,234	710,747
	1927	9	40	222	967	600	367	113,796	294,571	496,714	468,509	28,205	1,248,018	751,304
	1919	15	80	760	2,635	1,755	850	164,308	753,982	1,096,437	1,032,413	64,024	2,994,629	1,898,192
Illinois	1929	16	199	1,457	3,527	1,300	2,227	658,420	1,866,424	4,431,859	4,248,673	183,186	10,605,959	6,174,100
	1927	15	149	992	3,174	1,500	1,674	447,022	1,252,369	3,006,876	2,903,413	102,963	6,525,007	3,518,631
	1919	13	141	900	1,463	946	517	375,950	1,030,761	3,069,179	2,985,055	84,124	6,108,948	3,039,769
Indiana	1929	8	106	1,012	4,861	612	4,249	312,232	1,441,813	3,865,077	3,644,398	220,679	7,470,012	3,604,935
	1927	6	71	841	5,041	700	4,341	249,543	1,005,977	3,034,981	2,848,810	180,171	5,516,290	2,481,219
	1919	6	107	1,150	4,117	650	3,467	270,676	1,239,491	3,431,687	3,249,865	181,822	6,298,763	2,804,076
Massachusetts	1929	8	163	1,377	3,240	1,986	1,254	470,213	1,885,222	1,842,579	1,721,850	120,729	5,464,302	3,621,723
	1927	7	170	1,342	2,604	1,736	868	407,363	1,744,491	1,614,279	1,514,757	99,522	4,522,812	2,908,533
	1919	11	145	1,471	2,120	1,684	436	321,464	1,612,887	3,149,678	3,038,490	111,188	5,763,078	2,618,400
Michigan	1929	9	33	288	2,206		2,206	164,001	460,146	1,087,659	1,004,984	82,675	2,221,087	1,133,428
	1927	6	33	197	1,190		1,190	88,998	288,543	704,033	654,077	51,976	1,296,318	590,255
	1919	6	52	423	970		970	161,514	544,432	943,762	865,167	78,595	1,941,884	998,122
Ohio	1929	24	579	5,738	26,254	4,972	21,282	2,061,903	7,935,972	14,286,996	13,534,582	752,414	33,853,705	19,586,709
	1927	21	540	4,619	18,755	2,830	16,225	1,732,567	5,604,837	12,886,981	12,274,009	612,372	24,886,148	11,999,167
	1919	23	487	4,778	11,053	3,166	7,887	1,457,265	6,020,081	10,849,298	9,825,714	523,584	23,451,461	13,102,103
Pennsylvania	1929	16	490	3,493	14,402	4,748	9,659	1,818,272	4,510,838	11,185,236	10,681,368	553,868	25,345,592	14,160,356
	1927	18	463	2,831	15,043	4,958	10,085	1,275,546	3,588,339	8,416,884	7,946,277	470,307	16,272,426	7,865,842
	1919	31	596	4,546	15,571	5,647	9,924	1,540,830	5,051,106	12,681,028	11,911,770	669,252	23,102,220	10,521,201
Rhode Island	1929	5	96	818	2,527		2,527	241,737	981,319	1,235,461	1,137,535	97,920	3,521,107	2,285,646
	1927	5	83	761	2,361		2,361	200,066	882,225	1,270,221	1,186,168	93,058	2,746,388	1,461,167
	1919	7	96	920	1,870		1,870	214,979	984,819	1,117,019	1,031,970	85,049	2,968,244	1,861,225
Groups of States:														
N. J., 3 est.; N. Y., 7.	1929	10	183	1,012	4,867	1,940	2,927	609,204	1,778,889	2,619,793	2,474,184	145,609	7,034,664	4,414,871
Oreg., 1 est.; Wash., 2.	1929	3	18	118	554		554	75,324	157,144	590,951	570,760	20,191	1,008,466	417,515
Other States (Ala., 2 est.; Md., 1; Minn., 2; Wis., 3)	1929	8	98	535	2,397	815	1,582	291,884	617,725	1,954,576	1,806,443	88,133	3,382,466	1,427,800
States not shown separately	1927	24	367	1,722	7,904	2,755	5,149	1,948,223	2,853,267	6,654,549	6,382,757	271,792	12,428,221	5,773,672
	1919	27	287	2,946	9,879	2,979	6,900	766,379	3,665,136	8,224,652	7,881,112	343,540	16,604,115	8,379,463

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 17; 1927, 27; 1919, 39. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 18,236; 1927, 15,572; 1919, 20,005.  
<sup>2</sup> For 1929, sales (shipments or deliveries) by manufacturers; for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>4</sup> Revised.  
<sup>5</sup> Alabama, 2 establishments; Iowa, 1; Maryland, 1; Minnesota, 2; Missouri, 1; New Jersey, 6; New York, 6; Oregon, 1; Washington, 1; Wisconsin, 3.  
<sup>6</sup> Alabama, 1 establishment; Georgia, 1; Maine, 1; Maryland, 1; Minnesota, 1; Missouri, 1; New Jersey, 7; New York, 9; Oregon, 1; Washington, 1; Wisconsin, 3.

TABLE 3.—PRINCIPAL MATERIALS CONSUMED IN THE INDUSTRY, BY KIND, QUANTITY, AND COST, BY STATES: 1929

[Quantities and costs of principal materials consumed were reported by only 108 of the 117 establishments in this industry. The combined value of products reported by these 108 establishments amounted to \$101,235,217, or 98.9 per cent of the aggregate value of products of the 117 establishments in the industry. The principal reason for the difference between the sum of the costs of the several kinds of materials shown in this table and the total cost of materials as given in Tables 1 and 2 is found in the fact that this table covers only certain specified materials, whereas the others cover all materials]

KIND AND STATE	Quantity		Cost	KIND AND STATE	Quantity		Cost
	Pounds				Pounds		
Iron and steel rods and bars, total	1,232,835,245		\$26,233,309	Iron and steel, all other forms, total	94,590,976		\$2,146,240
Illinois	99,164,122		2,036,218	Illinois	17,200,543		374,203
Indiana	172,994,431		3,396,069	Pennsylvania	9,830,571		238,674
Massachusetts	12,195,676		268,203	Other States (Ala., Calif., Conn., Ind., Mass., Mich., Minn., N. J., N. Y., Ohio, Oreg., R. I., Wash., Wis.) <sup>1</sup>	67,559,862		1,533,363
Michigan	5,151,981		172,480	Copper, brass, and bronze, total	9,131,028		2,012,673
Ohio	357,960,203		7,656,016	Illinois	2,289,390		528,834
Pennsylvania	422,859,551		8,717,906	Rhode Island	838,700		190,038
Rhode Island	28,224,693		692,337	Other States (Calif., Conn., Ind., Mass., Mich., N. J., N. Y., Ohio, Pa., Wis.) <sup>1</sup>	6,002,633		1,293,801
Other States (Ala., Calif., Conn., Md., Minn., N. J., N. Y., Oreg., Wash.) <sup>1</sup>	134,874,679		3,294,080	Aluminum (Conn., Ill., Mass., Pa., Wis.) <sup>1</sup>	127,153		43,430
Iron and steel wire, total	260,605,488		7,746,399				
Illinois	19,754,513		588,223				
Massachusetts	17,004,680		728,893				
Ohio	149,172,828		4,309,296				
Pennsylvania	40,545,039		1,200,106				
Other States (Conn., Mich., N. J., N. Y., R. I., Wis.) <sup>1</sup>	28,128,422		919,881				

<sup>1</sup> Combined to avoid disclosing data for individual establishments

CENSUS OF MANUFACTURES: 1929

TABLE 4.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1919, AND 1914, AND OF GENERATORS, 1929 AND 1927; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	5,670	Horse-power 66,343	3,745	Horse-power 157,403	2,402	Horse-power 49,959	1,084	Horse-power 28,885	100.0	100.0
Prime movers, total.....	41	17,228	47	14,779	116	17,402	123	15,234	26.0	34.8
Steam, total.....	33	16,733	39	14,229	84	15,061	73	12,004	25.2	30.1
Engines.....	28	9,360	36	9,556	80	14,906	( <sup>2</sup> )	( <sup>2</sup> )	14.1	29.8
Turbines.....	5	7,373	3	4,673	4	145	( <sup>2</sup> )	( <sup>2</sup> )	11.1	0.3
Internal-combustion engines.....	3	185	6	405	22	1,661	33	2,040	0.3	3.3
Water wheels and water turbines.....	5	310	2	145	10	690	17	1,190	0.5	1.4
Electric motors driven by purchased energy.....	5,629	49,115	3,701	142,624	2,286	32,557	961	13,651	74.0	65.2
Electric motors, total.....	6,713	59,680	4,741	154,630	2,810	46,387	1,207	18,562	100.0	100.0
Driven by purchased energy.....	5,629	49,115	3,701	142,624	2,286	32,557	961	13,651	82.3	70.2
Driven by energy generated in establishments reporting.....	1,084	10,565	1,040	12,006	524	13,830	246	4,911	17.7	29.8
Electric generators.....	24	Kilowatts 7,546 Kilowatt-hours	33	Kilowatts 8,750	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )		
Electric energy purchased <sup>4</sup> .....		57,041,950		( <sup>5</sup> )		( <sup>5</sup> )		( <sup>5</sup> )		

<sup>1</sup> Revised.  
<sup>2</sup> Not called for separately on schedule.  
<sup>3</sup> Not called for on schedule.  
<sup>4</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>5</sup> Data incomplete.

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Percent minimum is of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
United States:															
1929.....	16,175	15,001	16,195	16,464	16,714	16,902	16,909	16,990	16,666	16,228	15,938	15,100	<i>14,332</i>	84.4	
1925.....	13,907	14,336	14,450	14,344	13,959	13,748	13,499	13,232	<i>12,095</i>	13,566	13,995	14,211	14,423	90.6	
1919.....	17,967	19,535	18,674	18,564	17,834	16,895	17,273	17,596	17,888	17,773	<i>16,624</i>	18,204	18,414	85.1	
1914.....	10,658	11,166	11,003	11,132	11,328	11,079	10,649	10,787	10,721	10,363	9,948	<i>9,830</i>	9,860	86.8	
1909.....	11,845	10,624	10,981	10,779	10,854	<i>10,560</i>	11,075	10,999	10,842	11,826	12,166	12,507	12,908	82.0	
California.....	173	176	173	174	192	206	204	198	187	183	154	151	<i>150</i>	67.5	
Connecticut.....	214	219	218	214	215	214	215	218	211	213	216	214	<i>206</i>	94.1	
Illinois.....	1,457	1,384	1,394	1,448	1,455	1,497	1,489	1,514	1,530	1,500	1,478	1,429	<i>1,357</i>	88.0	
Indiana.....	1,012	965	966	1,016	1,036	1,059	1,054	1,042	1,024	1,006	1,005	976	<i>961</i>	90.7	
Massachusetts.....	1,377	<i>1,319</i>	1,344	1,347	1,350	1,370	1,410	1,381	1,435	1,416	1,417	1,397	1,337	91.9	
Michigan.....	238	243	272	309	360	358	353	345	300	293	245	203	<i>182</i>	50.6	
Ohio.....	5,738	5,537	5,818	5,930	6,084	6,092	6,217	6,166	6,029	5,669	5,468	5,064	<i>4,779</i>	76.9	
Pennsylvania.....	3,433	3,375	3,562	3,537	3,481	3,546	3,411	3,547	3,439	3,453	3,452	3,284	<i>3,106</i>	87.2	
Rhode Island.....	818	801	797	815	828	843	859	866	815	832	827	802	<i>756</i>	84.9	

# CAST-IRON PIPE

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of cast-iron pipe and fittings for gas, water, sewage, etc. It has little relation to the manufacture of wrought-iron and steel pipe.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1909 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy <sup>1</sup>	Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>	Horsepower
1929	72	19,741	\$22,551,778	\$34,289,365	\$80,260,550	\$45,971,185	69,757
1927	82	22,892	25,982,196	48,224,970	95,088,622	46,863,652	93,196
1925	77	23,033	27,438,033	48,840,592	100,919,173	52,072,551	54,820
1923	73	21,576	25,019,953	48,804,425	92,674,088	43,869,663	47,239
1921	70	12,496	13,135,992	23,897,020	44,321,548	20,424,528	( <sup>4</sup> )
1919	59	12,625	14,705,368	25,386,552	50,235,101	24,848,549	28,741
1914	50	12,557	7,075,976	16,930,141	26,659,365	9,729,224	25,864
1909 <sup>5</sup>	52	12,228	6,502,338	18,884,342	29,153,723	10,269,381	18,737
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	(6)	-13.8	-13.2	-28.9	-15.6	-1.9	10.4
1925-1927	(6)	-0.6	-5.3	-1.3	-5.8	-10.0	15.3
1923-1925	(6)	6.8	9.7	0.1	8.9	18.7	16.0
1921-1923	(6)	72.7	90.5	104.2	109.1	114.8	—
1919-1921	(6)	-1.0	-10.7	-5.9	-11.8	-17.8	—
1919-1929	(6)	56.4	53.4	35.1	59.8	85.0	142.7
1909-1919	(6)	3.2	126.2	34.4	72.3	142.0	53.4

<sup>1</sup> Includes cost of foundry supplies for 1927 and earlier years but not for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.  
<sup>2</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>4</sup> Not called for on schedule.  
<sup>5</sup> No comparable data for years prior to 1909.  
<sup>6</sup> Per cent not computed where base is less than 100.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Certain of the States for which statistics are given in combination with those for others reported larger values of products than some of the States shown separately. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employes <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>4</sup>	Value added by manufacture <sup>5</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials <sup>3</sup>	Fuel and purchased energy <sup>3</sup>		
United States	1929	72	1,286	19,741	99,787	8,205	61,552	\$3,750,877	\$22,551,778	\$34,289,365	\$30,330,692	\$3,958,763	\$80,260,550	\$45,971,185
	1927	82	1,286	22,892	63,196	10,771	52,425	\$3,427,122	25,982,196	48,224,970	45,965,094	2,269,876	95,088,622	46,863,652
	1919	59	1,148	12,625	28,741	11,501	17,240	2,431,212	14,705,398	25,386,552	22,744,779	2,641,773	50,235,101	24,848,549
Individual States:														
Alabama	1929	20	697	9,335	30,967	3,071	27,896	2,067,906	9,572,958	14,656,969	13,010,902	1,646,067	37,208,672	22,551,703
	1927	34	948	10,840	27,140	3,886	23,250	1,727,217	10,619,902	21,238,837	20,337,914	900,923	42,500,922	21,352,085
	1919	21	481	5,285	10,754	3,546	7,208	976,851	5,776,288	9,460,957	8,381,774	1,079,183	18,784,305	9,323,345
New Jersey	1929	9	226	3,635	14,698	1,759	12,939	629,530	4,866,021	7,028,313	6,082,551	945,762	14,860,043	7,831,730
	1927	9	216	3,781	12,329	3,330	8,999	577,527	5,284,921	9,121,268	8,479,916	17,424,468	8,303,200	
	1919	8	213	2,035	3,714	3,197	517	410,348	2,655,154	4,737,153	4,259,465	477,688	9,029,796	4,292,643
New York	1929	5	28	306	867	—	867	89,765	311,546	379,425	328,661	50,767	961,121	581,693
	1927	5	33	300	758	—	758	111,412	420,775	495,864	469,132	26,732	1,236,930	741,066
	1919	5	36	312	767	210	557	101,005	372,939	584,631	531,321	83,310	1,342,422	757,791
Pennsylvania	1929	8	80	1,794	6,326	1,100	5,226	192,604	2,260,310	3,558,500	3,227,664	320,836	7,480,424	3,921,924
	1927	9	105	2,337	6,511	1,100	5,411	275,523	3,294,636	5,222,723	4,958,543	264,180	10,417,794	5,195,071
	1919	7	152	1,707	3,892	1,585	2,307	311,308	2,148,481	4,153,992	3,837,182	316,810	8,709,771	4,558,779
Tennessee	1929	5	41	1,363	1,821	575	1,246	98,819	1,462,719	1,928,516	1,737,193	191,323	4,523,528	2,598,032
	1927	6	64	1,539	2,486	575	1,911	152,833	1,572,092	2,914,264	2,845,016	69,248	5,680,648	2,760,304
Groups of States:														
Calif., 2 est.; Colo., 1; Utah, 1	1929	4	40	359	1,541	300	1,241	97,571	519,283	776,963	697,131	79,832	1,828,346	1,051,383
Ind., 1 est.; Ohio, 5	1929	6	113	1,562	9,332	300	9,032	208,135	1,930,914	3,257,224	2,863,465	398,759	7,014,279	4,357,055
Md., 2 est.; N. C., 1; Va., 3	1929	6	61	1,487	4,235	1,100	3,135	366,487	1,596,027	2,703,452	2,383,035	320,417	5,784,117	3,080,665
States not shown separately	1927	19	220	4,095	13,966	1,880	12,086	583,110	4,789,870	9,232,014	8,874,673	357,441	17,737,830	8,508,860
	1919	18	266	9,614	2,964	6,650	631,700	3,752,566	6,449,819	5,735,637	714,782	12,368,807	5,918,888	

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 9; 1927, 5; 1919, 4. The total numbers of persons engaged—proprietors and firm members, salaried officers and employes, and wage earners—as reported for the industry, are as follows: For 1929, 21,036; 1927, 24,183; 1919, 13,777.  
<sup>2</sup> Includes cost of foundry supplies for 1927 and 1919 but not for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.  
<sup>3</sup> The figures for 1927 are not comparable with those for 1929 and 1919 because of the fact that in reporting for 1927 a number of companies treated coke used for smelting as a material, whereas it should have been reported as a fuel. For quantities and cost of pig-iron and scrap used in the manufacture of cast-iron pipe, see Table 2, Iron and Steel report, p. 940.  
<sup>4</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for 1927 and 1919 represent production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>5</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>6</sup> California, 2 establishments; Colorado, 1; Indiana, 1; Maryland, 2; Michigan, 1; Missouri, 1; North Carolina, 1; Ohio, 5; Oregon, 1; Utah, 1; Virginia, 3.  
<sup>7</sup> California, 1 establishment; Georgia, 1; Indiana, 1; Maryland, 2; Massachusetts, 1; North Carolina, 1; Ohio, 6; Oregon, 1; Tennessee, 1; Virginia, 3.



CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRODUCTS, BY CLASS, QUANTITY, AND VALUE, BY STATES: 1929<sup>1</sup>

The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments. Some of the "Other States," however, reported larger quantities and values of certain classes of products than some of the States shown separately]

CLASS	1929		CLASS	1929	
	Tons (2,000 pounds)	Value		Tons (2,000 pounds)	Value
1. Cast-iron pipe industry, all products, total.....		\$80,260,550	Cast-iron pipe and fittings, all industries—Continued.		
2. Cast-iron pipe and fittings.....		74,615,420	Culvert pipe (Ala., N. J., Ohio).....	21,301	\$1,108,859
3. Other products, including castings (not normally belonging to the industry).....		5,645,130	Soil and plumbers' pipe and fittings, total.....	357,626	18,762,849
4. Cast-iron pipe and fittings made as secondary prod- ucts in other industries.....		11,274,666	Alabama.....	176,842	8,714,903
Cast-iron pipe and fittings, all industries:			New Jersey.....	33,110	2,556,793
Aggregate (sum of 2 and 4).....		85,890,086	New York.....	15,107	839,189
Quantity reported.....	2 1,736,207	78,296,375	Pennsylvania.....	44,618	2,421,550
Quantity not reported.....		7,593,711	Tennessee.....	34,222	1,428,982
Bell and spigot pipe, total.....	1,222,695	44,706,617	Other States (Calif., Ind., Md., N. C., Ohio, Utah).....	53,728	2,803,252
Alabama.....	586,558	21,012,212	Cast-iron fittings for water, gas, steam, and other purposes, total.....		20,127,988
New Jersey.....	250,563	9,035,308	Quantity reported.....	112,022	12,534,277
Other States (Calif., Ill., Ohio, Pa., R. I., Tenn., Utah, Va.).....	355,574	14,658,997	Quantity not reported.....		7,693,711
Flanged pipe (Ala., N. J., Ohio, Pa., Tenn., Va.).....	22,473	1,183,873	Alabama.....		4,639,198
			New Jersey.....		1,381,542
			Other States (Calif., Conn., Ill., Mass., N. Y., Ohio, Pa., Tenn., Utah, Va.).....		14,057,248

<sup>1</sup> No comparable figures for earlier years are available.

<sup>2</sup> Includes data for 334,670 tons cast by centrifugal process.

TABLE 4.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
		Horsepower		Horsepower		Horsepower		Horsepower		Horsepower		
Prime movers and electric motors driven by purchased energy, aggregate.....	3,874	69,757	3,693	63,196	2,654	54,820	1,040	28,741	589	25,864	100.0	100.0
Prime movers, total.....	45	8,205	55	10,771	56	10,770	92	11,601	145	17,000	11.8	40.0
Steam, total.....	43	7,955	48	9,030	47	8,811	90	11,207	135	15,960	11.4	39.3
Engines.....	39	5,822	44	6,896	42	6,681	86	10,547	(1)	(1)	8.3	36.7
Turbines.....	4	2,133	4	2,140	5	2,230	4	750	(1)	(1)	3.1	2.6
Internal-combustion engines.....			6	1,535	8	1,768	1	4	8	1,500		(2)
Water wheels and water turbines.....	2	250	1	200	1	200	1	200	2	200	0.4	0.7
Electric motors driven by purchased energy.....	3,829	61,552	3,638	52,425	2,598	44,041	948	17,240	444	8,198	88.2	60.0
Electric motors, total.....	4,334	69,066	4,887	67,942	3,928	60,881	2,106	35,493	1,616	28,618	100.0	100.0
Driven by purchased energy.....	3,829	61,552	3,638	52,425	2,598	44,041	948	17,240	444	8,198	89.1	48.6
Driven by energy generated in establishments report- ing.....	505	7,514	1,249	15,517	1,330	16,840	1,158	18,253	1,172	20,320	10.9	51.4
Electric generators.....	27	Kilowatts 5,644 Kilowatt- hours	37	Kilo- watts 7,131	39	Kilo- watts 6,712	(3)	(3)	(3)	(3)		
Electric energy purchased.....		42,249,982		(4)		(4)		(4)		(4)		

<sup>1</sup> Not called for separately on schedule.  
<sup>2</sup> Less than one-tenth of 1 per cent.  
<sup>3</sup> Not called for on schedule.

<sup>4</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>5</sup> Data incomplete.

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, AND 1914, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:																
1929.....	19,741	19,317	20,147	19,854	19,995	20,372	20,462	20,604	20,871	20,630	19,337	17,957	17,544	83.1		
1925.....	23,033	23,139	23,362	23,609	23,242	23,117	23,239	22,831	22,849	22,885	22,710	22,576	22,835	95.6		
1919.....	12,625	10,616	9,924	9,765	10,529	11,268	11,482	13,006	13,781	14,625	15,478	16,454	16,585	62.6		
1914.....	12,557	11,810	12,572	13,193	12,701	12,613	12,849	18,221	13,427	13,211	12,555	11,336	11,190	83.3		
Alabama.....	9,335	9,308	9,671	9,492	9,493	9,652	9,475	9,792	9,889	9,811	8,950	8,258	8,277	83.3		
New Jersey.....	3,535	3,552	3,353	3,374	3,430	3,676	3,763	3,755	3,779	3,700	3,484	3,397	3,161	85.6		
New York.....	808		311	813	315	315	816	810	804	301	286	299	284	90.5		
Pennsylvania.....	1,794	1,660	1,615	1,757	1,849	1,838	1,834	1,861	1,814	1,803	1,736	1,697	1,681	82.2		
Tennessee.....	1,363	1,172	1,442	1,394	1,425	1,393	1,570	1,477	1,460	1,383	1,330	1,260	1,069	67.5		

<sup>1</sup> No comparable data for earlier years.

## CUTLERY (NOT INCLUDING SILVER AND PLATED CUTLERY) AND EDGE TOOLS

Description of the industry.—The establishments in this industry are engaged primarily in the manufacture of various kinds of cutting implements, which are divided, for census purposes, into two groups, namely, "cutlery (not including silver and plated cutlery)" and "edge tools." The cutting edge is used

in so many forms that it is impracticable to collect data in detail except for the major classes. The most important of these are table and kitchen cutlery; pocket knives; razors; scissors and shears; axes, adzes, and hatchets; chisels; augers and bits; and cutting dies.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy <sup>1</sup>	Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>	Horsepower
1929.....	239	14,991	\$17,651,292	\$14,789,335	\$78,660,872	\$63,871,537	49,886
1927.....	230	<sup>4</sup> 15,632	<sup>4</sup> 18,892,154	<sup>4</sup> 18,180,385	76,688,444	<sup>4</sup> 58,508,059	43,419
1925.....	211	16,407	20,226,033	20,562,009	80,263,252	59,701,243	51,673
1923.....	211	16,671	19,750,933	17,159,825	72,477,013	55,317,188	43,171
1921.....	210	14,345	14,749,993	14,973,967	49,341,204	34,367,237	(5)
1919.....	304	19,859	20,048,465	19,477,437	66,629,870	47,162,133	88,555
1914.....	252	16,561	9,078,896	8,185,699	25,540,987	17,365,288	34,663
1909.....	281	16,997	8,555,891	7,230,508	22,894,914	15,654,406	32,223
1904.....	254	14,545	7,076,018	6,028,166	18,014,929	12,586,765	32,101
1899.....	275	12,028	5,652,242	5,091,114	14,787,355	9,696,241	26,475
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	3.9	-5.3	-6.6	-18.7	2.6	9.2	14.9
1925-1927.....	9.0	-3.5	-6.6	-11.6	-4.5	-2.0	-16.0
1923-1925.....		-1.6	2.4	19.8	10.7	7.9	19.7
1921-1923.....	0.5	16.2	33.9	14.6	46.9	61.0	-----
1919-1921.....	-30.9	-27.8	-26.4	-23.1	-25.9	-27.1	-----
1919-1929.....	-21.4	-24.5	-12.0	-24.1	18.1	35.5	29.4
1909-1919.....	8.2	16.8	134.3	168.4	191.2	201.2	19.6
1899-1909.....	2.2	41.3	51.4	42.0	54.8	61.4	21.7

<sup>1</sup> Includes cost of mill supplies for 1927 and earlier years but not for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.

<sup>2</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Revised.

<sup>5</sup> Not called for on schedule.

CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials <sup>4</sup>	Fuel and purchased energy		
United States.....	1929	239	1,903	14,991	49,886	24,334	25,552	\$5,414,960	\$17,651,292	\$14,780,335	\$13,521,862	\$1,267,473	\$78,600,872	\$63,871,537
	1927	230	1,911	15,832	43,419	20,268	23,151	4,710,217	18,892,154	18,180,385	10,920,710	1,259,666	76,688,444	58,508,059
	1919	304	2,497	19,859	38,555	22,297	16,253	4,740,961	20,048,465	19,477,437	18,218,533	1,258,854	66,620,870	47,162,133
Individual States:														
California.....	1929	7	2	23	117	-----	117	1,919	38,886	26,951	24,152	2,799	102,056	76,005
	1927	7	4	25	76	-----	76	4,680	44,531	28,452	25,840	2,612	107,098	79,516
	1919	4	2	28	54	-----	54	4,400	42,237	20,134	17,520	2,614	92,902	72,768
Connecticut.....	1929	26	243	2,534	9,504	6,537	2,967	613,278	3,145,040	2,373,845	2,123,578	250,267	8,529,272	6,155,427
	1927	25	271	2,585	8,287	5,580	2,707	523,854	3,160,391	2,447,071	2,220,575	217,496	8,430,907	5,983,536
	1919	37	236	3,424	8,123	6,411	1,712	507,152	3,568,094	2,726,475	2,488,386	238,089	8,811,565	6,086,080
Illinois.....	1929	19	84	440	1,308	-----	1,308	225,897	766,433	493,278	449,367	43,911	2,200,745	1,707,467
	1927	17	81	494	1,132	425	707	221,045	762,460	581,601	517,788	63,813	2,075,939	1,494,338
	1919	18	184	964	1,277	450	827	370,993	1,089,177	1,352,504	1,297,212	55,292	3,849,053	2,496,549
Massachusetts.....	1929	40	531	3,467	10,631	3,706	6,925	1,571,971	3,939,186	3,734,129	3,428,295	305,834	33,603,199	29,929,070
	1927	42	521	3,407	9,502	3,535	5,907	1,314,137	4,173,515	5,883,265	5,594,914	288,351	33,705,477	27,822,212
	1919	51	724	3,988	5,885	2,134	3,751	1,135,721	3,940,686	5,411,837	5,200,738	210,599	19,072,760	14,261,413
Michigan.....	1929	5	23	103	441	160	281	69,272	121,012	106,352	92,337	14,015	495,962	389,610
	1927	4	11	81	250	-----	260	27,477	97,486	67,735	58,711	9,024	236,905	109,170
	1919	5	19	91	151	65	86	29,186	76,415	47,622	41,825	5,707	179,373	131,751
Missouri.....	1929	10	64	351	979	-----	979	179,692	498,407	306,635	358,973	37,602	1,804,283	1,407,648
	1927	7	49	336	818	-----	818	101,841	467,995	420,267	392,555	27,712	1,257,550	837,283
New Hampshire.....	1929	4	22	133	629	207	422	52,524	153,452	133,010	120,600	12,416	443,803	310,787
	1927	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
	1919	4	27	280	530	337	193	42,226	241,933	166,289	154,048	12,241	563,946	397,657
New Jersey.....	1929	20	177	1,143	2,570	800	1,770	520,109	1,406,756	1,183,560	1,097,783	85,777	5,008,893	3,825,333
	1927	21	172	1,507	2,824	1,055	1,769	521,824	1,919,746	1,822,595	1,231,836	90,759	6,091,645	4,769,050
	1919	23	201	1,951	2,672	1,285	1,387	690,297	2,086,414	1,344,397	1,197,581	146,816	5,598,041	4,253,644
New York.....	1929	42	358	3,272	7,484	1,800	5,684	1,212,558	3,929,754	3,596,095	3,386,349	209,746	15,507,058	11,910,903
	1927	42	415	3,498	6,916	2,160	4,756	1,061,831	4,133,933	3,874,468	3,874,468	107,880	13,881,541	9,809,693
	1919	69	616	4,467	6,678	3,311	3,397	978,693	4,421,231	4,274,310	4,042,902	231,348	14,052,399	9,778,059
Ohio.....	1929	18	138	1,026	2,104	95	2,009	339,787	1,032,875	666,527	586,442	80,085	3,135,924	2,469,397
	1927	19	144	1,338	3,112	345	2,767	328,357	1,378,172	945,604	835,536	110,068	3,851,105	2,965,501
	1919	19	178	1,663	3,320	1,660	1,660	363,076	1,612,611	960,559	877,944	82,615	4,254,814	3,294,255
Pennsylvania.....	1929	19	82	657	2,277	715	1,562	200,445	785,440	641,301	590,670	80,631	2,192,005	1,551,604
	1927	18	68	759	2,515	949	1,666	194,138	624,711	579,125	571,220	79,036	2,426,074	1,634,809
	1919	27	155	1,397	5,330	3,696	1,734	297,512	1,343,639	1,736,668	1,006,512	130,156	4,346,759	2,610,091
Wisconsin.....	1929	8	45	216	414	-----	414	127,539	294,672	232,111	210,474	21,637	931,305	699,254
	1927	8	44	192	287	-----	287	127,291	250,890	254,545	235,422	19,123	832,963	578,418
	1919	6	48	177	199	-----	199	69,832	176,843	123,060	111,884	11,176	449,699	326,639
Groups of States:														
Ark., 1 est.; Ind., 2; Iowa, 1	1929	4	20	184	201	-----	201	45,118	163,210	106,677	95,889	10,788	399,542	292,865
Colo., 1 est.; Minn., 2; Wash., 2	1929	5	20	89	205	-----	265	43,299	113,523	63,253	53,689	9,564	319,082	255,809
Me., 2 est.; R. I., 3; Vt., 1; W. Va., 1	1929	7	84	1,272	10,706	10,279	427	171,922	1,192,642	954,189	857,567	96,622	3,093,522	2,739,333
Ky., 1 est.; Md., 3; Penn., 1	1929	5	10	72	256	35	221	21,630	70,098	81,410	75,697	5,719	232,381	150,965
States not shown separately	1927	20	131	1,610	7,690	6,219	1,471	278,692	1,578,315	1,360,137	1,211,845	154,292	3,700,370	2,424,233
	1919	36	147	1,519	4,739	3,048	1,691	250,873	1,449,185	1,314,082	1,181,971	132,111	4,768,299	3,444,217

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 111; 1927, 115; 1919, 173. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 17,005; 1927, 17,858; 1919, 22,529.

<sup>2</sup> Includes cost of mill supplies for 1927 and 1919 but not for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.

<sup>3</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>4</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>5</sup> Revised.

<sup>6</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.

<sup>7</sup> Withheld from publication in order to avoid disclosing data for individual establishments.

<sup>8</sup> Arkansas, 1 establishment; Colorado, 1; Indiana, 4; Iowa, 1; Kentucky, 1; Maine, 1; Maryland, 2; Minnesota, 2; New Hampshire, 2; Rhode Island, 2; Vermont, 1; Washington, 1; West Virginia, 1.

<sup>9</sup> Arkansas, 1 establishment; Indiana, 4; Iowa, 3; Kansas, 1; Kentucky, 1; Maine, 5; Maryland, 4; Minnesota, 3; Missouri, 5; Montana, 1; Rhode Island, 2; Tennessee, 1; Texas, 1; Washington, 3; West Virginia, 1.

# CUTLERY AND EDGE TOOLS

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**TABLE 3.—PRODUCTS, BY CLASS, KIND, AND VALUE, FOR THE UNITED STATES: 1929, 1927, AND 1925**

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products]

CLASS	1929	1927	1925	CLASS	1929	1927	1925
1. Cutlery (not including silver and plated cutlery) and edge-tools industry, all products, total value.....	\$78,660,872	\$76,688,444	\$80,263,252	Cutlery:			
2. Cutlery and edge tools.....	75,522,532	72,912,288	74,553,272	Table and kitchen cutlery.....	\$7,776,263	\$6,518,585	\$8,268,660
3. Other products (not normally belonging to the industry).....	2,917,971	3,497,784	5,643,515	Razors and razor blades—			
4. Receipts for repair work.....	220,369	278,422	66,465	Safety razors (all types).....	1,823,657	39,681,279	39,372,921
5. Cutlery and edge tools made as secondary products in other industries, value.....	5,789,948	6,376,950	2,813,543	Safety-razor blades.....	39,967,357		
Cutlery and edge tools, all industries, total (sum of 2 and 5).....	81,312,480	79,289,138	77,366,820	Other razors.....	404,085	373,482	406,625
				Scissors and shears.....	3,062,730	4,843,527	4,780,288
				Pocket knives.....	5,333,133	5,177,093	5,472,339
				Edge tools:			
				Axes, adzes, and hatchets.....	5,105,479	3,707,998	5,928,196
				Augers, bits, gimlets, and countersinks (woodworking only).....	2,223,844		
				Chisels (except cold chisels).....	896,110	3,024,502	3,302,864
				Cutting dies (for use in cutting cloth, paper, leather, etc.).....	3,981,074	3,056,896	2,158,392
				Cutlery—other and not specified <sup>1</sup> .....	6,630,910	2,937,168	7,681,635
				Edge tools—other and not specified <sup>2</sup> .....	4,107,838	9,968,610	

<sup>1</sup> Includes value of planes.

<sup>2</sup> Knives for use in machines other than agricultural; artisans' knives; barbers', animal, and other hand-power clippers; butcher knives and cleavers; knives, not reported by kind; and blades for these knives.

<sup>3</sup> Machetes, picks, mattocks, putty knives, planes, gouges, and wood-working tools not reported by kind.

**TABLE 4.—PRODUCTS, BY CLASS, KIND, AND VALUE, BY STATES: 1929**

[The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups. Certain of the States not shown separately, however, reported larger values of some classes of products than some of the States for which figures are given]

CLASS AND STATE	Value	CLASS AND STATE	Value	CLASS AND STATE	Value
Cutlery (not including silver and plated cutlery) and edge tools, aggregate.....	\$81,312,480	Cutlery and edge tools—Continued.		Cutlery and edge tools—Continued.	
Cutlery, as specified, total.....	64,998,135	Cutlery, as specified—Continued.		Edge tools, as specified—Continued.	
Table and kitchen cutlery, total.....	7,776,263	Pocket knives—Continued.		Chisels (except cold chisels), total.....	\$896,110
Connecticut.....	2,973,330	New Jersey and Pennsylvania.	\$599,163	Connecticut.....	639,091
Massachusetts.....	2,215,050	Other States (Colo., Ind., Ohio).....	242,463	New York, Ohio, and Pennsylvania.....	41,814
New Jersey.....	278,901	Cutlery—other and not specified, total.....	6,630,910	Other States (Calif., Ill., Mass., Minn.).....	215,205
New York.....	1,808,171	California.....	62,357	Cutting dies (for use in cutting cloth, paper, leather, etc.), total.....	3,981,074
Other States (Ill., N. H., Ohio, Wis.).....	500,802	Connecticut.....	418,854	Connecticut.....	82,961
Safety razors, all types (Mass., N. J., N. Y., Ohio).....	1,823,657	Illinois.....	131,811	Illinois.....	380,284
Safety-razor blades (Md., Mass., N. J., N. Y., Ohio).....	39,967,357	Massachusetts.....	2,011,729	Massachusetts.....	1,097,876
Razors, other than safety, total.....	404,085	Michigan.....	263,359	Missouri.....	1,560,896
New York.....	221,764	New Jersey.....	179,337	New York.....	465,890
Other States (Mass., Ohio, Pa.).....	182,321	New York.....	660,803	Ohio.....	102,932
Scissors and shears, total.....	3,062,730	Ohio.....	704,709	Pennsylvania.....	96,224
New Jersey.....	335,783	Pennsylvania.....	822,203	Other States (Calif., Ind., Me., N. H., Wis.).....	189,037
Ohio.....	646,425	Wisconsin.....	611,104	Edge tools—other and not specified, total.....	4,107,838
Connecticut and Rhode Island.....	1,601,321	Indiana, Iowa, and Kentucky.	296,443	Illinois.....	427,961
Other States (Ark., Iowa, Mich., N. Y., Pa.).....	479,201	Other States (Me., Md., Minn., N. H., Wash.).....	468,201	Ohio.....	76,075
Pocket knives, total.....	5,333,133	Edge tools, as specified, total.....	16,314,345	Other States (Calif., Conn., Ind., Md., Mass., Mich., N. J., N. Y., Pa., Tenn., Vt., W. Va., Wis.).....	3,593,802
Connecticut.....	745,607	Axes, adzes, and hatchets, total.....	5,105,479		
New York.....	2,750,342	Maine.....	106,766		
Massachusetts and Rhode Island.....	995,558	Pennsylvania.....	963,151		
		Other States (Conn., Ill., Md., Mich., Mo., N. J., N. Y., Ohio, Vt., W. Va.).....	4,035,562		
		Augers, bits, gimlets, and countersinks (woodworking only), total.....	2,223,844		
		Connecticut.....	543,610		
		Illinois and Ohio.....	1,209,934		
		Other States (Mass., Minn., Pa.).....	470,300		

CENSUS OF MANUFACTURES: 1929

TABLE 5.—PRINCIPAL MATERIALS CONSUMED IN THE INDUSTRY, BY KIND, QUANTITY, AND COST, BY STATES: 1929

[Quantities and costs of the principal materials were reported by only 176 of the 239 establishments in this industry. The combined value of products reported by these 176 establishments amounted to \$64,917,509, or 82.6 per cent of the aggregate value of products for the industry. Another reason for the difference between the sum of the costs of the several kinds of materials shown in this table and the total cost of materials as given in Tables 1 and 2 is found in the fact that this table covers only specified materials, whereas the others cover all materials.]

KIND AND STATE	Total cost	Quantity reported		Quantity not reported, cost	KIND AND STATE	Total cost	Quantity reported		Quantity not reported, cost
		Quantity	Cost				Quantity	Cost	
Rolled steel, total.....	\$4,796,472	Tons 22,159	\$4,796,472		Steel forgings—Continued		Tons		
Arkansas.....	13,672	145	13,672	Illinois.....	\$46,134	94	\$38,621	\$7,513	
California.....	3,840	13	3,840	Kentucky.....	8,334	44	8,334		
Colorado.....	2,470	22	2,470	Massachusetts.....	5,377	63	5,377		
Connecticut.....	829,677	5,951	829,677	Michigan.....	32,083	135	10,083	22,000	
Illinois.....	86,787	316	86,787	New Jersey.....	52,818	111	16,150	36,668	
Indiana.....	4,399	38	4,399	New York.....	51,800			51,800	
Iowa.....	246	2	246	Ohio.....	500	1	500		
Kentucky.....	4,466	32	4,466	Vermont.....	0,356	54	0,356		
Maine.....	1,814	14	1,814	West Virginia.....	4,458	17	4,458		
Maryland.....	11,058	56	11,058	Wisconsin.....	1,100	5	1,100		
Massachusetts.....	2,242,567	2,485	2,242,567	Nickel and its alloys, total.....	316,389	1,148,098	316,389		
Michigan.....	21,162	304	21,162	Arkansas.....	434	869	434		
Minnesota.....	3,390	31	3,390	Connecticut.....	201,262	801,507	201,262		
Missouri.....	101,943	1,544	101,943	New Hampshire.....	0,540	75,000	0,540		
New Hampshire.....	46,414	215	46,414	New Jersey.....	380,844	600	285		
New Jersey.....	344,714	767	344,714	New York.....	162,457	161,378	84,570		
New York.....	380,844	2,191	380,844	Ohio.....	144,934	24,163	15,319		
Ohio.....	162,457	1,244	162,457	Pennsylvania.....	144,934	3,773	3,773		
Pennsylvania.....	144,934	2,328	144,934	Rhode Island.....	4,399	70,000	4,200		
Rhode Island.....	71,490	358	71,490	Silver, total.....	181,407			181,407	
Vermont.....	4,399	56	4,399	Connecticut.....	11,246			11,246	
West Virginia.....	254,695	3,868	254,695	Massachusetts.....	392			392	
Wisconsin.....	59,034	280	59,034	New Jersey.....	24,611			24,611	
Steel forgings, purchased as such, total.....	214,451	542	96,470	\$117,081	New York.....	144,598			144,598
California.....	306	1	306	Ohio.....	560			560	
Connecticut.....	5,185	17	5,185						

TABLE 6.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	5,483	Horse-power 49,886	3,815	Horse-power 43,419	3,283	Horse-power 51,673	2,315	Horse-power 38,555	850	Horse-power 34,665	100.0	100.0
Prime movers, total.....	99	24,334	105	20,268	142	24,963	200	22,297	267	28,862	48.8	67.8
Steam, total.....	44	18,452	45	14,170	71	18,194	85	14,106	109	18,225	87.0	36.6
Engines.....	35	4,438	38	5,530	63	7,371	80	13,492	(1)	(1)	8.9	35.0
Turbines.....	9	14,014	7	8,640	8	10,823	5	614	(1)	(1)	28.1	1.6
Internal-combustion engines.....	12	720	12	876	17	916	45	1,905	75	3,368	1.5	4.9
Water wheels and water turbines.....	43	5,162	48	5,222	54	5,853	70	6,286	83	7,274	10.3	16.3
Electric motors driven by purchased energy.....	5,384	25,552	3,710	23,151	3,141	26,710	2,115	10,258	583	5,803	51.2	42.2
Electric motors, total.....	6,463	38,041	4,561	35,223	3,676	31,353	2,518	24,085	965	14,495	100.0	100.0
Driven by purchased energy.....	5,384	25,552	3,710	23,151	3,141	26,710	2,115	10,258	583	5,803	67.2	67.5
Driven by energy generated in establishments reporting.....	1,079	12,489	851	12,072	535	4,643	403	7,827	382	8,692	32.8	32.5
Electric generators.....	33	Kilowatts 12,733 Kilowatt-hours	39	Kilowatts 10,065	48	Kilowatts 5,924	(1)	(1)	(1)	(1)		
Electric energy purchased <sup>1</sup> .....		29,542,352	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)		

<sup>1</sup> Not called for separately on schedule.

<sup>2</sup> Not called for on schedule.

<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

<sup>4</sup> Data incomplete.

# CUTLERY AND EDGE TOOLS

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TABLE 7.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, AND 1914, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:														
1929	14,991	14,985	15,115	15,244	14,972	14,628	14,568	<i>14,423</i>	14,789	15,215	15,468	15,494	14,977	93.1
1925	16,407	15,820	16,345	16,877	16,843	16,466	16,228	15,730	<i>15,182</i>	15,998	16,912	17,169	17,315	87.7
1919	19,859	<i>18,967</i>	19,565	19,644	19,272	19,666	19,453	19,497	19,097	19,903	20,842	21,087	21,322	88.9
1914	16,561	17,005	<i>17,437</i>	17,327	17,168	16,962	16,807	<i>16,835</i>	16,425	16,112	16,277	16,084	15,794	87.9
California	23	24	22	25	24	23	23	22	<i>19</i>	20	21	25	27	70.4
Connecticut	2,534	2,728	2,707	2,689	2,613	2,508	2,453	2,442	<i>2,418</i>	2,427	2,472	2,465	2,495	88.7
Illinois	449	450	447	435	444	443	445	<i>424</i>	443	455	476	472	449	89.1
Massachusetts	3,467	3,259	3,293	3,290	3,161	<i>3,155</i>	3,271	3,453	3,569	3,633	3,880	4,059	3,606	77.2
Michigan	103	108	106	104	105	102	100	<i>97</i>	100	105	101	102	104	89.8
Missouri	351	331	<i>324</i>	323	336	358	364	353	<i>368</i>	362	356	359	368	88.0
New Hampshire	133	141	143	149	144	137	<i>120</i>	124	124	123	134	134	134	81.1
New Jersey	1,143	1,074	1,112	1,153	1,176	1,170	1,178	1,159	1,198	1,180	1,181	<i>1,068</i>	1,070	89.1
New York	3,272	3,329	3,390	3,498	3,372	3,211	3,073	<i>2,923</i>	3,091	3,280	3,280	3,351	3,266	83.6
Ohio	1,026	1,024	1,016	1,022	1,041	1,049	1,055	1,013	1,001	1,030	1,031	1,046	883	93.2
Pennsylvania	657	641	659	663	669	657	658	<i>598</i>	649	693	677	680	644	86.0
Wisconsin	216	237	231	227	227	214	217	212	210	213	211	220	178	75.1

† No comparable figures available for years prior to 1914.

## DOORS, SHUTTERS, AND WINDOW SASH AND FRAMES, METAL

Description of the industry.—The establishments covered by this industry designation are engaged wholly or principally in the manufacture of hollow-metal and solid-metal doors, window sash, and window and door frames; hollow-metal molding and trim; and metal-covered fire retardant doors, window sash, and door and window frames. The manufacture of elevator doors is not, however, included in this industry, but is classified under "Structural and orna-

mental iron and steel work, not made in plants operated in connection with rolling mills."

Detailed statistics of products.—A special schedule calling for detailed data on the several classes of products manufactured in this industry was used for the first time at the census for 1929. No comparable statistics for earlier years are, therefore, available for presentation in Table 3.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	148	9,557	\$17,065,422	\$30,178,161	\$72,160,388	\$41,982,227	25,027
1927	117	8,050	15,564,458	25,602,238	65,279,073	39,677,735	20,626
1925	92	6,791	12,899,071	21,627,746	50,078,034	28,450,288	16,699
1923	37	2,429	4,332,757	5,604,210	15,367,111	9,762,901	3,981
1921	45	1,782	2,880,909	4,289,274	12,466,701	8,177,427	( <sup>3</sup> )
1919	57	2,077	2,729,774	4,577,934	10,877,001	6,299,067	4,018
1914	43	1,985	1,537,688	1,995,885	5,183,602	3,187,717	3,170
1909	29	1,601	874,340	1,282,905	3,005,685	1,722,780	1,983
1904	24	699	407,390	601,754	1,477,235	875,481	889
1899	13	117	85,683	115,718	319,629	203,911	190
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	26.5	18.7	9.6	17.9	10.5	5.8	21.3
1925-1927	( <sup>4</sup> )	18.5	20.7	18.4	30.4	39.5	23.5
1923-1925	( <sup>4</sup> )	179.6	197.7	285.9	225.9	191.4	319.5
1921-1923	( <sup>4</sup> )	36.3	50.4	30.7	23.3	19.4	-----
1919-1921	( <sup>4</sup> )	-14.2	5.5	-6.3	14.6	29.8	-----
1919-1929	( <sup>4</sup> )	360.1	525.2	559.2	563.4	500.5	523.6
1909-1919	( <sup>4</sup> )	29.7	212.2	256.8	261.9	265.6	101.9
1899-1909	( <sup>4</sup> )	1,268.4	920.4	1,008.0	840.4	744.9	946.3

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Not called for on schedule.

<sup>4</sup> Per cent not computed where base is less than 100.

# DOORS, SHUTTERS, WINDOW SASH AND FRAMES, METAL

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TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

(This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Certain of the States for which figures are given in combination with those for others, however, reported larger values of products than some of the States shown separately. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size)

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	148	2,350	9,557	25,027	1,797	23,230	\$7,199,256	\$17,065,422	\$30,178,161	\$29,553,694	\$624,467	\$72,160,388	\$41,982,227
	1927	117	2,030	8,050	20,628	1,650	18,978	6,053,343	15,594,458	25,602,238	25,180,530	421,708	65,270,973	34,677,735
	1919	57	561	2,077	4,013	1,680	2,333	1,288,034	2,729,774	4,577,934	4,466,284	111,650	10,877,001	6,200,087
Individual States:														
California	1929	16	133	612	1,645		1,645	375,627	1,020,936	1,423,550	1,397,234	26,316	3,546,617	2,123,067
	1927	11	66	326	833		833	173,147	604,511	783,960	771,704	12,256	2,188,543	1,404,583
Illinois	1929	13	90	406	957	100	857	386,274	744,417	1,094,633	1,069,994	24,639	2,717,325	1,622,692
	1927	15	141	728	1,212		1,212	415,145	1,250,132	1,971,129	1,935,932	35,197	4,781,901	2,810,772
	1919	7	78	460	500		500	187,404	642,835	1,288,712	1,268,411	20,301	2,367,992	1,079,280
Iowa	1929	3	10	29	35		35	17,965	24,186	42,795	41,157	1,638	105,126	62,331
Massachusetts	1929	8	67	302	918		918	202,187	507,705	660,161	638,312	21,849	1,631,367	971,206
	1927	3	6	57	217		217	26,200	95,218	169,377	165,153	4,224	318,544	149,107
Minnesota	1929	3	42	101	337		337	121,848	246,599	391,094	374,791	16,303	883,872	492,778
	1927	3	31	140	185	50	135	60,812	176,876	295,096	280,570	8,526	714,060	418,973
Missouri	1929	7	72	243	531		531	177,819	367,234	599,381	588,205	11,176	1,431,214	831,533
	1927	8	52	197	407		407	129,971	259,725	469,179	460,320	8,859	1,149,546	680,367
New Jersey	1929	5	34	252	796		796	113,609	439,773	550,293	540,334	9,959	1,416,816	866,523
	1927	3	40	178	732		732	136,067	338,546	422,909	412,642	10,267	1,122,227	699,318
New York	1929	60	608	3,156	6,307	1,505	4,802	1,989,974	6,421,529	7,752,848	7,593,115	159,733	21,223,627	13,470,779
	1927	40	615	2,767	5,426	1,396	4,030	1,693,976	6,514,662	6,631,670	6,799,386	141,284	20,723,400	13,791,730
	1919	31	226	690	1,852	1,045	807	57,518	1,338,385	1,623,400	1,576,066	47,394	4,629,287	3,006,827
Ohio	1929	8	241	1,003	3,763	10	3,753	633,458	1,614,020	3,232,047	3,158,501	73,546	8,879,166	5,647,109
	1927	4	196	601	961	10	951	433,956	807,222	1,456,969	1,427,721	29,248	4,477,565	3,020,596
Groups of States:														
Ga., 1 est.; Ky., 1;	1929	4	43	128	706	35	671	70,303	158,547	135,746	126,217	9,529	416,554	280,808
La., 1; Tenn., 1;														
Ind., 4 est.; Mich.,	1929	12	506	1,573	4,252		4,252	1,938,959	2,697,503	6,840,941	6,648,285	102,656	14,381,001	7,540,060
6; Wis., 2	1929	5	504	1,629	4,631	147	4,484	1,162,371	2,779,904	7,341,796	7,268,161	73,635	15,263,369	7,921,573
Md., 1 est.; Pa., 4														
Other States														
(Conn., 1 est.;	1929	4	9	33	149		149	28,862	43,069	112,876	109,388	3,488	264,344	151,468
Okla., 1; Oreg.,														
I; W. Va., 1)														
States not shown separately	1927	24	933	3,058	10,653	194	10,459	3,007,069	5,477,360	13,101,949	12,630,102	171,847	29,804,178	16,702,229
	1919	19	259	618	1,061	65	1,026	493,112	748,554	1,665,762	1,621,807	43,955	3,879,722	2,213,960

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 33; 1927, 29; 1919, 22. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 11,949; 1927, 10,169; 1919, 2,660.

<sup>2</sup> For 1929, sales (shipments or deliveries) by manufacturers; for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Connecticut, 1 establishment; Georgia, 1; Indiana, 4; Iowa, 1; Kentucky, 1; Louisiana, 1; Maryland, 1; Michigan, 5; Pennsylvania, 5; Tennessee, 1; Virginia, 1; Wisconsin, 2.

<sup>5</sup> California, 1 establishment; Indiana, 2; Massachusetts, 1; Michigan, 3; Minnesota, 1; Missouri, 3; Nebraska, 1; New Jersey, 2; Ohio, 3; Tennessee, 1; Virginia, 1.



TABLE 3.—PRODUCTS, BY CLASS AND VALUE, BY STATES: 1929

[These figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments. In certain cases, however, some of the States for which figures are shown in combination with those for others reported larger values of the specified products than some of the States shown separately. No comparable statistics are available for earlier years. (See "Detailed statistics of products," p. 920.)]

CLASS AND STATE	Value	CLASS AND STATE	Value
1. "Doors, shutters, and window sash and frames, metal" industry, all products, total value.....	\$72,160,388	Fire-retardant doors, window sash, and door and window frames, metal covered:	
2. Metal doors, shutters, and window sash and frames.....	57,153,038	Tin-clad, total.....	\$1,412,577
3. Other products (not normally belonging to the industry).....	12,089,192	Illinois.....	192,661
4. Receipts for custom and repair work.....	2,917,558	Massachusetts.....	153,792
5. Metal doors, shutters, and window sash and frames made as secondary products in other industries, value.....	12,215,271	Missouri.....	88,139
<b>Metal doors, shutters, and window sash and frames, total value.....</b>	<b>69,388,009</b>	New York.....	479,149
Hollow-metal doors:		Ohio.....	25,149
Brass and bronze, total.....	218,614	Mich., Minn., and Wis.....	127,216
New York.....	180,894	Other States (Ala., Calif., Ga., Ind., La., N. J., Okla., Oreg., Pa., Tex., and Va.).....	346,471
Other States (Ala., Mass., Minn., Ohio, Pa., and Wash.).....	28,720	Steel-covered, total.....	1,700,668
Iron and steel, total.....	6,875,533	New York.....	1,067,244
California.....	106,756	Pennsylvania.....	17,300
Illinois.....	651,335	Other States (Ala., D. C., Ill., La., Mich., Mo., N. J., Okla., and Oreg.).....	616,124
New Jersey.....	79,600	Kalamein, total.....	4,263,729
New York.....	3,903,381	California.....	146,544
Ohio.....	816,135	Massachusetts.....	600,096
Other States (D. C., Ga., Ind., Iowa, Mass., Minn., Oreg., Pa., Tex., and Wis.).....	1,318,326	New York.....	2,477,619
Hollow-metal window sash:		Ill., Ind., and Mo.....	539,714
Brass and bronze (Md., N. Y., Pa., and Tex.).....	58,062	N. J., Ohio, and Pa.....	260,854
Iron and steel, total.....	1,426,578	Other States (Ala., Ga., Ky., La., Mich., Minn., Okla., Oreg., S. C., Tex., Wash., and Wis.).....	230,002
Illinois.....	250,599	Brass and bronze, total.....	385,970
New Jersey.....	29,000	Massachusetts.....	101,473
Iowa, Minn., and Mo.....	58,000	New York.....	221,644
Md., N. Y., and Pa.....	899,469	Other States (Calif., Ill., Pa., and Wis.).....	62,853
Other States (Calif., Ga., La., Mass., Ohio, Okla., Tex., and Wis.).....	188,913	Other, and not specified, total.....	1,450,924
Hollow-metal window and door frames:		California.....	109,500
Brass and bronze (Calif., Ky., Md., Minn., N. Y., and Pa.).....	207,300	Illinois.....	367,824
Iron and steel, total.....	6,976,076	New York.....	159,294
California.....	123,000	Ind., Mich., and Minn.....	527,838
Illinois.....	272,674	Other States (La., Mass., Mo., N. J., Oreg., Pa., and Wis.).....	286,459
Iowa, Minn., Mo., and Wis.....	180,202	Solid-metal doors, window sash, and window and door frames:	
Md., N. J., N. Y., and Pa.....	5,730,842	Brass and bronze (Calif., Ky., and Pa.).....	276,023
Other States (D. C., Ga., Ind., La., Mass., Ohio, Okla., and Oreg.).....	657,358	Iron and steel, total.....	30,316,728
Hollow-metal molding and trim:		California.....	1,311,204
Brass and bronze, total.....	461,461	Missouri.....	310,705
New York.....	165,705	New York.....	3,387,506
Other States (Conn., Ill., Mass., Minn., Ohio, and Pa.).....	295,756	Ohio.....	15,316,732
Iron and steel, total.....	1,493,460	Pennsylvania.....	1,282,265
New York.....	399,031	Conn., Mass., and N. J.....	408,255
Ill., Ind., Ohio, and Pa.....	980,064	Ill., Ind., Iowa, and Mich.....	7,126,212
Other States (Ala., Calif., Conn., Ga., Mass., Minn., N. J., Oreg., and Wis.).....	112,865	Other States (Ky., Oreg., Tenn., Va., W. Va., and Wis.).....	1,173,789
Ossement windows and frames (iron and steel), total.....	11,844,606		
Michigan.....	2,438,171		
New Jersey.....	7,700		
N. Y. and Pa.....	8,278,983		
Other States (Ala., Calif., Ind., Iowa, La., Md., Mass., Mo., Ohio, Okla., Oreg., S. C., S. Dak., Tex., and Wis.).....	1,119,752		

DOORS, SHUTTERS, WINDOW SASH AND FRAMES, METAL

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TABLE 4.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	3,160	Horse-power 25,027	2,202	Horse-power 20,626	1,729	Horse-power 16,699	351	Horse-power 4,013	190	Horse-power 3,170	100.0	100.0
Prime movers, total.....	14	1,797	15	1,650	15	1,442	17	1,680	23	2,228	7.2	41.9
Steam engines.....	7	830	5	587	3	380	8	1,105	12	1,450	3.3	27.5
Internal-combustion engines.....	3	67	6	163	8	162	6	225	8	219	3	5.6
Water wheels and water turbines.....	4	900	4	900	4	900	3	350	3	550	3.6	8.7
Electric motors driven by purchased energy.....	3,152	23,230	2,187	18,976	1,714	15,257	334	2,333	167	942	92.8	58.1
Electric motors, total.....	3,307	24,637	2,272	20,041	1,779	16,065	363	3,060	211	1,751	100.0	100.0
Driven by purchased energy.....	3,152	23,230	2,187	18,976	1,714	15,257	334	2,333	167	942	94.3	77.8
Driven by energy generated in establishments reporting.....	155	1,407	85	1,065	65	838	29	667	44	839	5.7	22.2
Electric generators.....	7	Kilowatts 765 Kilowatt-hours	5	Kilowatts 695	4	Kilowatts 778	(1)	(1)	(1)	(1)		
Electric energy purchased <sup>2</sup> .....		16,963,375		( <sup>3</sup> )		( <sup>3</sup> )		(1)		(1)		

<sup>1</sup> Not called for on schedule.  
<sup>2</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>3</sup> Data incomplete.

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
United States:														
1929.....	9,557	9,366	9,458	9,464	9,456	9,492	9,623	9,664	9,888	9,830	9,829	9,426	9,243	94.0
1925.....	6,791	6,410	6,335	6,492	6,529	6,740	6,899	7,019	6,908	7,040	7,089	7,063	6,966	89.4
1919.....	2,077	2,295	1,939	1,893	1,792	1,977	1,890	1,952	2,104	2,178	2,271	2,337	2,286	76.7
1914.....	1,985	1,940	2,028	1,921	1,980	1,944	1,817	1,857	1,859	1,957	2,139	2,240	2,132	81.1
1909.....	1,601	1,379	1,412	1,390	1,415	1,422	1,461	1,529	1,648	1,770	1,890	1,932	1,950	70.7
California.....	612	528	540	530	601	628	685	643	651	617	641	654	621	77.1
Illinois.....	406	427	425	402	383	375	391	408	411	418	419	427	389	87.8
Iowa.....	29	25	41	46	45	37	27	18	18	16	17	21	31	34.8
Massachusetts.....	302	282	289	293	293	300	302	311	313	313	307	307	308	90.1
Minnesota.....	191	201	228	225	206	183	178	182	180	168	168	175	192	73.7
Missouri.....	243	202	214	248	262	259	288	260	281	240	232	215	216	70.1
New Jersey.....	252	228	231	245	242	258	240	223	218	271	271	292	306	71.2
New York.....	3,156	3,134	3,201	3,152	3,164	3,113	3,129	3,147	3,293	3,880	3,202	3,115	3,093	96.1
Ohio.....	1,003	999	994	979	988	1,038	1,024	1,033	1,030	1,020	1,040	991	985	86.6

# FILES

Description of the industry.—The establishments in this industry are engaged primarily in manufacturing files and rasps and in recutting files. Their products comprise not only files and rasps for the use of machinists, blacksmiths, cabinetmakers, etc., but also small files for jewelers, dentists, and manicurists.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy <sup>1</sup>	Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>	Horsepower
1929	33	3,974	\$5,239,808	\$3,052,075	\$14,114,378	\$11,061,703	12,091
1927	36	3,948	5,144,987	3,135,955	12,973,734	9,837,779	10,979
1925	38	4,209	5,393,274	3,517,726	13,540,953	10,023,227	11,534
1923	37	4,590	5,805,294	3,840,256	13,565,444	9,725,188	11,166
1921	39	3,595	3,174,612	2,309,037	7,647,252	5,338,105	( <sup>4</sup> )
1919	50	5,707	6,192,444	4,227,880	17,616,563	13,388,683	11,807
1914	48	4,349	2,135,436	1,595,225	5,608,187	4,012,932	8,771
1909	57	4,158	1,977,877	1,595,730	5,691,203	4,095,473	7,308
1904	62	3,276	1,514,412	1,310,978	4,391,745	3,080,767	5,541
1899	86	3,100	1,277,199	1,166,414	3,403,906	2,237,492	4,074
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	( <sup>5</sup> )	0.7	1.8	-2.7	8.8	12.4	10.1
1925-1927	( <sup>5</sup> )	-6.2	-4.0	-10.9	-4.2	-1.9	-4.8
1923-1925	( <sup>5</sup> )	-8.3	-7.1	-8.4	-2	3.1	3.4
1921-1923	( <sup>5</sup> )	27.7	82.9	66.3	77.4	82.2	-----
1919-1921	( <sup>5</sup> )	-37.7	-48.7	-45.4	-56.0	-60.1	-----
1919-1929	( <sup>5</sup> )	-31.1	-15.4	-27.8	-10.9	-17.4	1.6
1909-1919	( <sup>5</sup> )	33.7	213.1	164.9	200.5	226.9	62.9
1899-1909	( <sup>5</sup> )	31.6	64.9	36.8	67.2	33.0	56.2

<sup>1</sup> Includes cost of mill supplies for 1927 and earlier years but not for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.

<sup>2</sup> For 1929, manufacturer's sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>4</sup> Not called for on schedule.

<sup>5</sup> Per cent not computed where base is less than 100.

TABLE 2.—GENERAL STATISTICS, BY STATES, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>4</sup>	
					Total	Prime movers	Motors run by purchased energy			Total	Materials <sup>3</sup>	Fuel and purchased energy			
United States	1929	33	319	3,974	12,091	4,590	7,501	\$981,668	\$5,239,808	\$3,052,075	\$2,611,605	\$441,070	\$14,114,378	\$11,061,703	
	1927	36	300	3,948	10,979	5,400	5,579	848,927	5,144,987	3,135,955	2,651,985	453,970	12,973,734	9,837,779	
	1919	60	552	5,707	11,897	7,513	4,384	953,113	6,192,444	4,227,880	3,670,005	548,875	17,616,563	13,388,683	
Individual States:															
	New Jersey	1929	6	53	530	1,060	1,015	654	191,030	785,878	332,304	266,516	65,788	1,904,719	1,572,415
		1927	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
1919		9	163	1,439	3,140	2,170	970	263,080	1,046,424	1,282,420	1,129,042	153,378	4,527,139	3,244,719	
Ohio	1929	6	45	485	1,740	-----	1,740	96,461	552,100	723,046	666,841	56,805	1,941,608	1,217,962	
	1927	5	30	430	794	-----	794	73,856	492,157	260,793	217,987	42,806	1,100,242	839,449	
Pennsylvania	1929	5	66	900	3,019	1,025	1,994	217,186	1,119,622	531,578	404,170	127,408	2,980,433	2,448,855	
	1927	7	57	917	2,851	1,025	1,826	188,478	1,164,939	720,727	575,022	151,705	3,090,959	2,894,242	
	1919	6	129	1,356	2,353	1,275	1,078	225,334	1,350,402	821,462	685,206	130,250	3,873,777	3,052,315	
Groups of States:															
	Conn., 2 est.; Mass., 1; N. Y., 3; R. I., 2	1929	8	96	1,641	3,702	1,450	2,252	308,106	2,279,517	1,006,083	956,122	130,961	5,435,236	4,330,153
Ill., 2 est.; Ind., 3; Iowa, 1; Mich., 2		1929	8	59	418	1,955	1,100	855	168,825	502,601	369,064	317,956	51,108	1,852,382	1,483,318
	States not shown separately	1927	24	213	2,601	7,334	4,375	2,950	586,593	3,488,791	2,148,435	1,888,976	259,459	8,782,523	6,634,088
1919		35	260	2,972	6,412	4,068	2,344	464,690	3,195,618	2,123,998	1,864,757	259,241	9,215,647	7,091,649	

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 6; 1927, 11; 1919, 24. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 4,299; 1927, 4,259; 1919, 6,343.

<sup>2</sup> Includes cost of mill supplies for 1927 and 1919 but not for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.

<sup>3</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.

<sup>4</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>5</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.

<sup>6</sup> Withheld from publication in order to avoid disclosing data for individual establishments.

<sup>7</sup> Connecticut, 2 establishments; Illinois, 2; Indiana, 2; Iowa, 1; Massachusetts, 1; Michigan, 1; New Jersey, 7; New York, 5; Rhode Island, 3.

<sup>8</sup> Connecticut, 3 establishments; Georgia, 1; Illinois, 2; Indiana, 3; Maine, 1; Massachusetts, 3; Michigan, 5; New Hampshire, 1; New York, 6; Ohio, 5; Rhode Island, 3; Wisconsin, 2.

# FILES

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**TABLE 3.—PRODUCTS, BY CLASS, QUANTITY, AND VALUE: 1929 AND 1927**

(The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for 1927 represent production. See GENERAL EXPLANATIONS—Value of Products)

CLASS	1929	1927	CLASS	1929	1927
1. Files and rasps industry, all products, total value.....	\$14, 114, 378	\$12, 973, 734	Files and rasps, all industries: Total value (sum of 2 and 4).....	\$13, 609, 392	\$12, 475, 823
2. Files and rasps, value.....	\$13, 380, 289	\$12, 346, 529	Metal-working files and rasps—		
3. Other products (not normally belonging to the industry), value, and receipts for repair work.....	\$734, 089	\$627, 205	Dozens.....	8, 247, 179	( <sup>1</sup> )
4. Files and rasps made as secondary products in other industries, value.....	\$229, 103	\$129, 299	Value.....	\$13, 030, 895	\$11, 854, 620
			Woodworking files and rasps—		
			Dozens.....	74, 147	( <sup>1</sup> )
			Value.....	\$116, 347	\$95, 743
			Other files and rasps, value.....	\$462, 150	\$525, 465

<sup>1</sup> No data.

**TABLE 4.—PRODUCTS, BY CLASS AND VALUE, BY STATES: 1929**

(The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Figures are given for the only State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups)

CLASS	Value	CLASS	Value
Files and rasps, total value.....	\$13, 609, 392	Files and rasps—Continued.	
Metal-working files and rasps, total.....	13, 030, 895	Wood-working files and rasps, total.....	\$116, 347
Pennsylvania.....	2, 883, 528	Ind. and R. I.....	74, 024
Ill., Ind., and Ohio.....	3, 280, 682	N. J. and Pa.....	42, 823
Other States (Conn., Ga., Mass., Mich., N. J., N. Y., and R. I.).....	6, 860, 685	Other files and rasps (Calif., Ohio, and Pa.).....	462, 150

**TABLE 5.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929**

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
											Horse-power	Horse-power
Prime movers and electric motors driven by purchased energy, aggregate.....	500	12, 091	355	10, 979	331	11, 534	248	11, 897	100	8, 771	100.0	100.0
Prime movers, total.....	13	4, 590	16	5, 400	22	5, 970	38	7, 513	51	8, 094	38.0	63.2
Steam engines.....	13	4, 590	15	5, 375	21	5, 940	31	7, 232	39	7, 605	38.0	60.8
Internal-combustion engines.....							6	256	11	464		2.2
Water wheels and water turbines.....			1	25	1	30	1	26	1	25		0.2
Electric motors driven by purchased energy.....	487	7, 501	339	5, 579	309	5, 564	210	4, 384	49	677	62.0	36.8
Electric motors, total.....	499	7, 651	353	5, 654	319	5, 720	251	4, 992	73	1, 224	100.0	100.0
Driven by purchased energy.....	487	7, 501	339	5, 579	309	5, 564	210	4, 384	49	677	98.0	87.8
Driven by energy generated in establishments reporting.....	12	150	14	75	10	156	41	608	24	547	2.0	12.2
Electric generators.....	1	Kilo-watts 125 Kilowatt-hours	1	Kilo-watts 125	2	Kilo-watts 120	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )		
Electric energy purchased <sup>2</sup> .....		6, 463, 940		( <sup>1</sup> )		( <sup>1</sup> )		( <sup>1</sup> )		( <sup>1</sup> )		

<sup>1</sup> Not called for on schedule.   <sup>2</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.   <sup>3</sup> Data incomplete.

**TABLE 6.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929**

(This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 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:																
1929.....	3, 974	3, 943	3, 067	4, 014	3, 988	3, 986	3, 957	3, 992	4, 017	4, 061	4, 044	3, 876	3, 845	94.7		
1925.....	4, 209	4, 277	4, 299	4, 349	4, 283	4, 205	4, 120	4, 079	4, 095	4, 149	4, 166	4, 235	4, 246	93.8		
1919.....	5, 767	6, 251	6, 025	5, 728	5, 573	5, 339	5, 268	5, 355	5, 663	5, 821	5, 943	6, 043	6, 165	84.8		
1914.....	4, 349	4, 510	4, 538	4, 639	4, 481	4, 471	4, 410	4, 432	4, 400	4, 204	4, 164	4, 020	4, 015	88.5		
1909.....	4, 158	4, 102	4, 123	4, 119	4, 127	4, 075	4, 068	4, 156	4, 112	4, 104	4, 212	4, 301	4, 399	94.0		
New Jersey.....	530	522	521	526	526	531	527	552	554	541	538	522	493	89.9		
Ohio.....	485	469	473	483	480	476	474	475	489	503	502	487	518	90.9		
Pennsylvania.....	900	912	921	931	902	900	884	899	904	917	919	899	859	90.1		

# FIREARMS

Description of the industry.—The firearms industry, according to the census classification, consists in the manufacture of unmounted firearms—weapons made to be fired from the hand or from the shoulder—and of their parts. Commercial manufacturers only are classified in this industry, no data having been collected from Government establishments.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy <sup>1</sup>	Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>	Horsepower
1929	21	6,838	\$9,202,551	\$4,117,099	\$21,970,367	\$17,853,268	15,427
1927	20	6,130	7,683,659	5,047,556	19,452,372	14,404,817	16,747
1925	20	4,470	5,883,607	3,174,440	15,179,363	12,004,017	14,580
1923	21	6,204	7,592,695	3,643,914	17,064,849	14,020,635	15,639
1921	20	4,728	5,730,487	2,696,085	12,833,842	10,187,757	(1)
1919	26	11,287	13,333,495	7,613,784	30,181,370	22,667,589	26,167
1914	29	7,064	5,067,053	2,609,618	10,543,753	7,874,135	7,374
1909	27	6,002	3,918,852	1,568,734	3,058,499	6,489,705	7,523
1904	30	6,224	3,722,850	1,738,012	3,275,560	6,537,548	16,303
1899	32	4,482	2,542,366	1,305,421	5,444,650	4,139,238	4,359
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	(1)	11.5	16.1	-18.4	12.9	23.9	-2.0
1925-1927	(1)	37.1	42.1	59.0	28.2	20.0	8.0
1923-1925	(1)	-27.9	-26.5	-12.9	-14.1	-14.4	-6.7
1921-1923	(1)	31.3	32.5	35.2	37.1	37.6	-----
1919-1921	(1)	-58.1	-57.0	-64.6	-57.3	-54.9	-----
1919-1929	(1)	-39.4	-30.9	-45.9	-27.2	-26.9	-41.0
1909-1919	(1)	88.1	240.3	385.3	274.5	247.7	247.8
1899-1909	(1)	33.9	54.1	20.2	48.0	50.8	72.0

<sup>1</sup> Includes cost of foundry supplies for 1927 and earlier years but not for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.  
<sup>2</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>4</sup> Not called for on schedule.  
<sup>5</sup> Per cent not computed where base is less than 100.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employes <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials <sup>4</sup>	Fuel and purchased energy		
United States	1929	21	908	6,838	15,427	5,217	10,210	\$1,979,071	\$9,209,551	\$4,117,099	\$3,521,102	\$595,997	\$21,970,367	\$17,853,268
	1927	20	754	6,130	15,747	5,433	10,314	1,679,624	7,983,659	5,047,556	4,576,194	471,361	19,452,372	14,404,817
	1919	26	1,238	11,287	11,287	26,167	14,354	11,813	2,094,183	13,333,495	7,613,784	6,757,191	856,593	30,181,370
Connecticut	1929	8	380	2,079	7,408	4,427	2,981	755,485	4,100,077	1,912,071	1,633,167	278,904	10,165,226	8,253,155
	1927	8	372	3,018	7,567	4,638	2,934	827,055	3,858,388	2,812,037	2,580,971	251,966	9,616,688	6,803,751
	1919	9	388	4,561	15,632	12,866	2,766	827,654	6,060,283	4,297,388	3,354,139	443,249	15,928,706	11,631,318
Massachusetts	1929	4	182	1,692	3,037	550	2,487	451,144	2,105,079	930,612	808,188	122,324	5,739,837	4,809,325
	1927	4	178	1,389	3,024	550	2,474	431,038	1,705,032	874,193	774,531	99,662	4,792,474	3,918,281
	1919	5	186	2,253	2,121	570	1,551	329,905	2,590,197	1,066,207	981,022	105,185	5,644,510	4,578,306
New York	1929	4	340	2,111	4,560	240	4,620	760,630	2,858,969	1,206,681	1,020,006	180,075	5,860,975	4,651,294
	1927	4	193	1,079	5,055	250	4,805	393,851	2,241,368	1,299,216	1,183,801	115,355	4,836,865	3,537,049
	1919	7	613	4,049	8,146	868	7,278	871,157	4,524,422	2,031,742	1,786,522	295,220	8,181,429	6,149,657
Other States	1929	5	6	50	122	-----	122	12,703	84,826	64,835	59,741	5,094	204,329	139,494
	1927	4	11	44	101	-----	101	20,780	68,851	61,209	56,831	4,378	206,345	145,136
	1919	6	51	424	268	50	218	65,467	159,593	218,447	205,508	12,939	426,725	298,278

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 1; 1927, 1; 1919, 9. The total numbers of persons engaged—proprietors and firm members, salaried officers and employes, and wage earners—as reported for the industry, are as follows: For 1929, 7,747; 1927, 6,865; 1919, 12,534.  
<sup>2</sup> The cost of mill supplies included in the figures for 1927, and 1919 but not in those for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.  
<sup>3</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>4</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>5</sup> Colorado, 1 establishment; Michigan, 2; Oklahoma, 1; and Pennsylvania, 1.  
<sup>6</sup> Colorado, 1 establishment; Michigan, 1; Oklahoma, 1; and Pennsylvania, 1.  
<sup>7</sup> Illinois, 1 establishment; Michigan, 1; New Jersey, 1; and Pennsylvania, 2.

# FIREARMS

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**TABLE 3.—PRODUCTS, BY CLASS, NUMBER, AND VALUE, FOR THE UNITED STATES: 1923 TO 1929**

(The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products)

	1929	1927	1925	1923
1. Firearms industry, all products, total value.....	\$21,970,867	\$19,452,372	\$15,179,363	\$17,064,549
2. Firearms and parts.....	17,852,916	16,499,167	14,105,977	15,822,150
3. Other products (not normally belonging to the industry).....	3,553,846	2,273,354	439,968	1,842,399
4. Custom work and repairing.....	1,065,605	679,861	633,418	219,077
5. Firearms and parts made as secondary products in other industries.....	348,532	390,198	183,338	
<b>Firearms and parts, all industries:</b> Total value (sum of 2 and 5).....	<b>\$17,701,448</b>	<b>\$16,899,355</b>	<b>\$14,289,315</b>	<b>\$16,041,227</b>
<b>Pistols and revolvers—</b>				
Number.....	224,768	229,058	282,777	284,322
Value.....	\$2,974,994	\$2,893,952	\$3,261,861	\$3,624,860
<b>Rifles—</b>				
Number.....	457,076	415,621	323,100	380,397
Value.....	\$4,672,123	\$4,436,131	\$3,056,069	\$3,708,874
<b>Shotguns—</b>				
Number.....	580,271	622,686	422,962	484,917
Value.....	\$8,865,944	\$8,422,731	\$6,717,343	\$8,122,248
<b>Parts.....</b>	<b>\$1,288,387</b>	<b>\$1,136,541</b>	<b>\$1,264,042</b>	<b>\$585,250</b>

1 Includes value of a small quantity of ordnance and ordnance accessories made by commercial manufacturers. (See "Description of the industry," p. 926.)

**TABLE 4.—PRODUCTS, BY KIND AND VALUE, BY STATES: 1929**

(The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments)

KIND AND STATE	Value	KIND AND STATE	Value
Firearms and parts, all industries, total.....	\$17,701,448	Firearms, and parts, all industries—Continued.	
Pistols and revolvers (Conn., Mass., N. Y., and Pa.).....	2,974,994	Shotguns, total.....	\$8,865,944
Rifles, total.....	4,672,123	Connecticut.....	2,846,558
Conn., Mass., and N. Y.....	4,431,040	Massachusetts.....	3,490,319
Other States (Mich., Okla., and Pa.).....	140,483	New York.....	2,287,678
		Other States (Calif., Okla., and Pa.).....	241,394
		<b>Parts, total.....</b>	<b>\$1,288,387</b>
		Conn. and Mass.....	916,857
		Other States (Colo., Mich., N. J., N. Y., and Pa.).....	371,530

1 Includes value of a small quantity of ordnance and ordnance accessories made by commercial manufacturers. (See "Description of the industry," p. 926.)

**TABLE 5.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929**

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	831	Horse-power 15,427	675	Horse-power 15,747	572	Horse-power 14,580	860	Horse-power 26,167	228	Horse-power 7,374	100.0	100.0
Prime movers, total.....	25	5,217	23	5,433	32	5,577	14	14,354	28	3,341	33.8	54.9
Steam, total.....	23	4,937	19	4,561	27	4,630	12	14,196	22	3,027	32.0	54.3
Engines.....	16	1,725	17	2,211	18	1,841	6	846	(1)	(1)	11.2	3.3
Turbines.....	7	3,212	2	2,350	9	2,789	6	13,350	(1)	(1)	20.8	51.0
Internal-combustion engines.....	2	280	2	582	2	582	2	158	1	4	1.8	.6
Water wheels and water turbines.....	2	280	2	290	3	365	2	158	5	310	1.8	.6
Electric motors driven by purchased energy.....	806	10,210	652	10,314	540	9,003	846	11,813	200	4,033	66.2	45.1
Electric motors, total.....	1,610	13,064	1,317	13,200	1,398	11,809	1,394	20,843	220	4,561	100.0	100.0
Driven by purchased energy.....	806	10,210	652	10,314	540	9,003	846	11,813	200	4,033	78.2	56.7
Driven by energy generated in establishments reporting.....	804	2,854	665	2,886	858	2,806	548	9,030	20	528	21.8	43.3
Electric generators.....	3	Kilowatts 2,180 Kilowatt-hours 12,632,513	4	Kilowatts 2,626	3	Kilowatts 1,941	(1)	(1)	(1)	(1)	(1)	(1)
Electric energy purchased <sup>2</sup> .....				(1)		(1)		(1)		(1)		

<sup>1</sup> Not called for separately on schedule.

<sup>2</sup> Not called for on schedule.

<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

<sup>4</sup> Data incomplete.

## CENSUS OF MANUFACTURES: 1929

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, AND 1914, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Percent minimum is of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
United States:															
1929	6,838	6,878	6,991	7,011	6,897	6,948	6,869	6,885	6,844	6,798	6,728	6,633	6,477	92.4	
1925	4,470	4,651	4,709	4,761	4,742	4,606	4,505	4,445	4,011	4,107	4,184	4,223	4,691	84.2	
1919	11,287	13,428	12,369	11,606	11,022	10,885	10,545	10,104	10,683	10,926	11,284	11,251	11,251	75.9	
1914	7,064	7,401	7,437	7,443	7,343	7,227	7,018	6,816	6,742	6,926	6,879	6,987	7,549	76.1	
Connecticut	2,979	3,069	3,089	3,100	3,048	3,034	2,994	2,983	2,970	2,937	2,908	2,848	2,774	89.5	
Massachusetts	1,692	1,692	1,623	1,651	1,695	1,704	1,719	1,720	1,716	1,717	1,726	1,735	1,697	91.8	
New York	2,111	2,101	2,223	2,203	2,200	2,155	2,102	2,126	2,102	2,087	2,040	1,989	1,946	87.5	

<sup>1</sup> No comparable figures available for years prior to 1914.

## FORGINGS, IRON AND STEEL, NOT MADE IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—The forgings covered by this classification are those specifically reported as such and manufactured by establishments engaged primarily in the commercial production of forgings. The industry does not include the manufacture of forged products, such as tools, for which separate census classifications are provided, nor of forged parts made and installed by manufacturers of motor vehicles, railroad cars, machinery, etc. Iron and steel forgings are made to a large extent in other industries, but as the products of some of these industries are not classified as forgings, it is impossible to compile statistics showing the total production in all industries.

The phrase "not made in plants operated in connection with rolling mills" refers to production in plants operated entirely independently of rolling mills, although in some cases under the same ownership.

Comparison with earlier years.—The industry classification "Horseshoes, not made in rolling mills," was discontinued after the census for 1927 and is now

treated as a part of the forgings industry. This action was taken because the production of horseshoes outside the rolling-mill industry is of minor importance, having been represented in 1927 by only 10 establishments, reporting \$1,363,488 as their value of products.

The total production of horseshoes, both in plants operated in connection with rolling mills and in the forgings industry, is shown in Table 5 (page 956) of the "Steel works and rolling mills" report.

The United States total for all years and the State figures for 1929 as given in the following tables include data for the production of horseshoes, but the State figures for 1927 and 1919, in Table 2, refer only to the forgings industry as formerly constituted. This condition, however, has only a slight effect on the comparableness of the State figures for the several years, since the total value of products of the horseshoe industry amounted in 1919 to only 1.9 per cent and in 1927 to only 1.3 per cent of the combined value of products of the forgings and horseshoe industries.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929.....	218	20,882	\$34,505,340	\$71,606,964	\$156,248,947	\$84,641,983	147,491
1927.....	219	15,594	23,539,551	52,101,995	105,035,719	52,933,724	127,975
1925.....	227	20,483	31,587,906	68,577,495	135,918,624	67,341,129	121,056
1923.....	244	27,723	40,639,328	93,560,528	180,824,712	87,234,181	136,263
1921.....	252	16,947	20,950,139	45,291,495	85,062,938	39,791,443	(3)
1919.....	261	29,135	40,602,802	83,561,111	177,119,105	93,557,694	104,870
1914.....	213	11,277	7,849,883	15,300,471	30,747,450	15,446,979	38,527
1909.....	191	8,461	5,169,459	10,595,705	21,308,016	10,712,311	28,754
1904.....	146	5,897	3,554,819	6,008,057	12,900,376	6,901,319	16,821
1899.....	97	4,919	2,676,860	5,423,567	10,936,061	5,512,494	8,163
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929.....	-0.5	33.9	46.6	37.4	48.8	59.9	15.2
1925-1927.....	-3.5	-23.9	-25.5	-24.0	-22.7	-21.4	5.7
1923-1925.....	-7.0	-26.1	-22.1	-26.7	-24.8	-22.8	-12.4
1921-1923.....	-3.2	63.6	93.5	106.6	112.5	119.2	-----
1919-1921.....	-3.4	-41.8	-48.4	-45.8	-52.0	-57.5	-----
1919-1929.....	-16.5	-28.3	-15.0	-14.3	-11.8	-9.5	40.6
1909-1919.....	36.6	244.3	685.4	683.6	731.2	773.4	264.7
1899-1909.....	(4)	72.0	93.1	95.4	94.8	94.3	252.2

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Not called for on schedule.

<sup>4</sup> Per cent not computed where base is less than 100.



CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Cen- sus year	Num- ber of estab- lish- ments	Sala- ried officers and em- ploy- ees <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manu- facture <sup>3</sup>
					Total	Prime movers	Motors run by pur- chased energy			Total	Materials	Fuel and purchased energy		
United States	1929	218	2,630	20,882	147,491	24,986	122,505	\$8,715,750	\$34,505,349	\$71,600,904	\$63,646,930	\$7,900,034	\$158,248,947	\$84,641,933
	1927	219	2,325	15,594	127,975	14,789	113,176	7,266,330	23,532,551	52,101,995	46,204,375	5,897,620	105,035,719	52,933,724
	1919	261	4,331	29,135	104,870	30,012	74,858	10,710,958	40,002,802	83,561,111	74,642,889	8,918,222	177,119,105	93,557,094
Individual States:														
California	1929	8	36	197	3,006	130	2,876	103,763	389,641	1,516,703	1,428,023	88,680	2,875,055	1,358,352
	1927	10	28	136	975	180	795	75,572	204,062	620,442	503,685	56,767	1,195,083	574,641
	1919	7	33	224	375	150	225	103,851	335,033	835,755	743,823	91,932	1,511,163	676,408
Connecticut	1929	14	90	650	3,817	787	3,030	288,730	1,081,000	1,843,942	1,655,224	188,718	4,415,321	2,571,379
	1927	13	142	902	4,783	703	4,080	438,051	1,377,548	1,814,980	1,659,474	155,509	4,432,342	2,017,862
	1919	18	458	2,489	5,953	786	5,167	977,543	3,110,058	5,228,516	4,898,356	330,160	13,682,532	8,454,066
Illinois	1929	24	483	3,526	28,137	4,460	23,677	1,415,792	6,490,003	15,100,621	13,685,461	1,435,160	33,417,940	18,317,819
	1927	22	330	1,923	19,707	620	19,087	891,148	3,480,817	9,385,102	8,335,801	1,029,301	18,672,942	9,307,890
	1919	24	308	2,328	10,737	4,733	6,004	967,010	3,181,551	8,076,537	7,233,738	841,779	15,207,256	7,131,719
Indiana	1929	6	111	1,395	8,874	75	8,799	391,461	2,512,556	6,500,118	5,845,591	714,527	11,499,923	4,939,805
	1927	6	101	857	9,110	275	8,835	427,598	1,427,806	4,008,233	3,619,242	473,991	6,364,730	2,266,407
	1919	5	89	972	2,668	811	1,857	192,005	1,373,683	2,491,022	1,063,569	527,453	6,350,294	3,868,272
Massachusetts	1929	12	200	2,146	9,901	676	9,226	886,441	3,490,231	4,574,520	3,944,063	630,463	13,653,247	9,078,721
	1927	11	147	1,157	7,726	675	7,051	645,838	1,823,213	3,128,550	2,621,905	506,651	6,929,604	3,798,108
	1919	14	269	2,172	6,570	1,538	5,041	902,390	2,906,244	5,278,429	4,631,196	647,233	13,299,412	8,020,983
Michigan	1929	19	122	1,500	6,575	450	6,125	495,458	2,528,588	4,379,089	3,764,118	614,971	9,793,350	5,414,270
	1927	18	88	1,011	6,396	400	5,996	353,480	1,690,550	3,474,473	3,171,462	303,011	6,912,902	3,798,489
	1919	16	210	1,596	6,757	2,570	4,187	460,534	2,386,838	4,861,711	4,474,800	386,911	8,559,190	3,697,479
New Jersey	1929	14	298	986	7,806	6,504	1,302	570,857	1,655,068	2,797,772	2,492,300	305,472	6,477,960	3,680,197
	1927	11	86	468	2,921	1,544	1,377	237,480	687,697	1,140,775	940,785	200,390	2,386,454	1,245,679
	1919	16	107	827	3,388	1,194	2,144	403,333	1,246,330	3,076,010	2,083,780	392,224	6,603,377	2,527,367
New York	1929	21	279	1,894	15,183	1,700	13,423	794,190	3,091,105	7,672,807	7,011,451	661,356	15,231,312	7,558,505
	1927	21	282	1,464	11,792	2,192	9,630	842,019	2,170,512	6,160,622	5,071,440	498,182	11,065,005	4,893,383
	1919	30	784	4,081	18,155	4,304	13,851	1,748,107	7,081,562	11,417,190	10,213,587	1,203,603	23,614,347	12,097,157
Ohio	1929	38	537	4,854	34,508	7,370	27,138	2,086,941	7,754,237	15,053,780	13,180,229	1,864,551	33,487,271	18,433,491
	1927	34	515	4,408	32,604	5,435	27,229	1,758,791	5,965,520	12,343,266	10,914,883	1,428,383	25,871,051	13,627,785
	1919	38	740	5,931	21,030	3,875	17,155	1,584,985	7,022,833	18,086,009	16,581,154	2,104,855	39,563,464	20,877,455
Pennsylvania	1929	36	349	2,592	20,213	2,160	18,053	1,090,540	3,695,544	7,917,021	6,841,877	1,075,344	16,421,502	8,504,571
	1927	40	420	2,310	22,612	2,255	20,357	1,063,116	3,263,442	6,281,604	5,377,306	904,298	13,884,531	7,602,927
	1919	48	1,028	6,197	21,151	6,527	14,624	2,493,535	8,188,016	16,948,651	15,205,799	1,742,852	36,708,046	19,759,995
Washington	1929	4	27	121	1,251		1,251	62,626	173,369	370,682	342,371	28,311	764,821	394,139
	1927	6	28	130	914		914	69,089	183,700	414,263	374,370	30,893	779,907	305,704
	1919	11	57	346	1,795	70	1,725	205,772	605,054	1,793,713	1,657,457	136,256	3,154,940	1,361,227
Wisconsin	1929	6	76	623	3,280	75	3,214	297,637	1,131,108	1,957,240	1,715,918	241,322	4,975,209	3,017,069
	1927	5	52	346	3,154		3,154	185,356	633,712	1,263,872	1,100,944	162,928	2,494,779	1,230,907
Groups of States:														
Ala., 4 est.; Ky., 2; Md., 3; Tenn., 1; Va., 1	1929	11	40	269	3,858	525	3,333	162,948	361,625	1,424,588	1,346,462	78,126	2,300,985	876,397
Other States (Colo., 2 est.; Iowa, 1; Mo. 1; Oreg. 1)	1929	5	23	124	1,073	15	1,058	68,363	142,268	438,075	405,042	33,033	934,943	496,868
States not shown separately	1927	12	59	281	3,333	425	3,408	135,369	349,099	1,520,008	1,439,572	80,526	2,687,671	1,167,573
	1919	15	84	1,228	3,413	700	2,713	225,395	1,755,301	3,331,949	2,999,586	332,363	6,588,433	3,256,484

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 43; 1927, 53; 1919, 70. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 23,555; 1927, 17,972; 1919, 33,536.  
<sup>2</sup> For 1929, sales (shipments or deliveries) by manufacturers; for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>4</sup> See "Comparison with earlier years," p. 329.  
<sup>5</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.  
<sup>6</sup> Alabama, 3 establishments; Colorado, 1; Iowa, 1; Kentucky, 2; Maryland, 2; Oregon, 1; Tennessee, 1; and Virginia, 1.  
<sup>7</sup> Maryland, 3 establishments; Minnesota, 1; Missouri, 3; Rhode Island, 1; Virginia, 3; West Virginia, 1; and Wisconsin, 3.

# FORGINGS, IRON AND STEEL

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**TABLE 3.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929**

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	9,893	<i>Horse-power</i> 147,491	7,807	<i>Horse-power</i> 127,976	6,007	<i>Horse-power</i> 121,056	5,291	<i>Horse-power</i> 104,870	1,274	<i>Horse-power</i> 38,627	100.0	100.0
Prime movers, total.....	125	24,986	100	14,799	163	18,834	275	30,012	239	20,856	16.9	28.6
Steam, total.....	103	22,841	75	12,455	132	16,203	226	27,271	184	17,828	15.5	26.0
Engines.....	83	13,439	61	6,482	106	10,084	197	19,080	(1)	(1)	9.1	18.2
Turbines.....	20	9,402	14	5,973	26	6,119	29	8,191	(2)	(2)	6.4	7.8
Internal-combustion engines.....	14	1,710	18	1,960	18	1,690	40	1,718	46	2,073	1.2	1.6
Water wheels and water turbines.....	8	435	7	384	13	941	9	1,023	9	955	0.2	1.0
Electric motors driven by purchased energy.....	9,768	122,505	7,207	113,176	5,844	102,222	5,016	74,858	1,035	17,671	83.1	71.4
Electric motors, total.....	11,352	140,092	8,004	125,364	7,106	118,551	6,100	92,008	1,493	25,774	100.0	100.0
Driven by purchased energy.....	9,768	122,505	7,207	113,176	5,844	102,222	5,016	74,858	1,035	17,671	87.1	81.4
Driven by energy generated in establishments reporting.....	1,584	18,187	797	12,188	1,262	16,329	1,144	17,150	458	8,103	12.9	18.6
Electric generators.....	56	<i>Kilowatts</i> 11,802	42	<i>Kilowatts</i> 7,171	51	<i>Kilowatts</i> 7,499	(2)	(2)	(2)	(2)		
Electric energy purchased <sup>1</sup> .....		<i>Kilowatt-hours</i> 121,416,813		(1)		(1)		(2)		(2)		

<sup>1</sup> Not called for separately on schedule.  
<sup>2</sup> Not called for on schedule.  
<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>4</sup> Data incomplete.

**TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929**

(This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum is of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
<b>United States:</b>														
1929.....	20,392	20,932	21,632	22,280	22,529	22,286	21,988	21,600	21,218	20,706	18,972	<i>18,171</i>	18,270	80.7
1925.....	20,488	<i>19,177</i>	19,533	20,016	20,091	20,422	20,560	20,480	20,593	20,443	21,042	21,563	21,595	87.3
1919.....	29,135	31,479	29,897	29,163	28,578	27,894	<i>27,372</i>	27,784	28,361	28,392	29,392	30,352	30,954	89.0
1914.....	11,277	11,482	11,693	12,008	11,917	11,417	11,014	11,141	11,023	10,937	10,851	<i>10,717</i>	11,124	89.2
1909.....	8,461	7,866	7,818	7,678	<i>7,666</i>	7,960	7,776	7,994	8,929	9,593	10,088	10,468	73.1	
California.....	197	181	192	174	188	192	194	207	203	215	209	206	199	80.9
Connecticut.....	650	605	634	659	665	654	670	692	692	660	648	628	<i>600</i>	85.3
Illinois.....	3,528	3,351	3,395	3,493	3,537	3,683	3,738	3,721	3,693	3,639	3,503	3,319	<i>3,256</i>	86.5
Indiana.....	1,395	1,359	1,462	1,487	1,514	1,496	1,537	1,518	1,460	1,357	1,277	<i>1,084</i>	1,177	70.5
Massachusetts.....	2,146	2,328	2,436	2,484	2,350	2,181	2,120	1,977	2,100	2,134	<i>1,924</i>	2,188	2,141	63.7
Michigan.....	1,500	1,435	1,637	1,698	1,771	1,758	1,647	1,608	1,613	1,534	1,222	1,003	1,172	56.6
New Jersey.....	986	1,160	1,112	1,049	1,081	1,050	1,104	1,045	992	896	938	673	724	58.4
New York.....	1,894	1,880	1,909	1,946	1,968	1,987	1,963	2,001	1,975	1,957	1,933	<i>1,607</i>	1,622	79.8
Ohio.....	4,354	4,883	5,178	5,394	5,496	5,314	5,153	5,001	4,648	4,654	4,377	4,094	<i>4,061</i>	73.7
Pennsylvania.....	2,592	2,601	2,613	2,731	2,733	2,759	2,635	2,655	2,655	2,567	2,487	2,377	<i>2,317</i>	84.6
Washington.....	121	55	114	122	136	111	123	126	126	147	132	117	108	64.6
Wisconsin.....	628	659	651	655	676	710	696	652	606	572	550	555	<i>554</i>	78.0

## GALVANIZING AND OTHER COATING, NOT DONE IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—This industry embraces establishments engaged primarily in the coating of sheets and formed products with zinc (galvanizing or sherardizing), aluminum, lead, etc., and in retinning. (Retinning is included with these processes as an operation distinct from the manufacture of tin plate and terneplate, for which separate production statistics are compiled.) The "Value of products" for the industry represents, to a large extent, receipts for work

done on materials owned by others. (For total production of galvanized sheets, plates, strips, and wire, see report on Steel Works and Rolling Mills.)

The term "not done in plants operated in connection with rolling mills" refers in some cases to plants having no connection with rolling mills, and in other cases to plants under the same ownership as rolling mills but operated as independent units and not usually located adjacent to the rolling mills.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products	Value added by manufacture <sup>1</sup>	Horsepower
1929.....	65	1,125	\$1,563,716	\$3,939,417	\$7,666,541	\$3,727,124	2,266
1927.....	59	953	1,448,940	3,722,411	6,950,855	3,228,444	2,657
1925.....	54	804	1,127,862	2,801,944	5,033,158	3,041,214	1,881
1923.....	51	877	1,183,484	3,363,069	6,327,338	2,964,269	1,856
1921.....	51	685	843,620	2,161,406	4,017,820	1,856,414	(?)
1919.....	52	1,665	2,247,953	10,532,288	14,475,682	3,043,394	1,571
1914.....	48	1,580	922,264	6,292,804	8,480,109	2,187,305	2,385
1909.....	46	1,447	786,796	5,718,099	7,338,330	1,619,631	1,307
1904.....	36	1,256	620,012	4,744,466	6,418,850	1,674,384	1,593
1899.....	28	535	229,406	1,677,584	2,470,703	793,110	397
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	(?)	13.0	7.9	5.8	10.3	15.4	-14.7
1925-1927.....	(?)	18.5	28.5	28.7	17.2	6.2	41.3
1923-1925.....	(?)	-8.3	-4.7	-14.0	-6.2	2.6	1.3
1921-1923.....	(?)	28.0	40.3	55.6	57.5	50.7	-----
1919-1921.....	(?)	-58.9	-62.5	-79.5	-72.2	-52.9	-----
1919-1929.....	(?)	-32.4	-30.4	-62.6	-47.0	-5.5	44.2
1909-1919.....	(?)	15.1	185.7	84.2	97.3	143.5	20.2
1899-1909.....	(?)	170.5	243.0	240.9	197.0	104.2	229.2

<sup>1</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>2</sup> Not called for on schedule.

<sup>3</sup> Per cent not computed where base is less than 100.

# GALVANIZING AND OTHER COATING

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TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Certain of the States for which figures are shown in combination with those for others, however, reported larger values of products than some of the States shown separately. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (aver- for the year)	HORSEPOWER (RATED CAPACITY OF POWER EQUIPMENT)			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products	Value added by manufacture <sup>2</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States.....	1929	65	213	1,125	2,265	50	2,216	\$673,380	\$1,563,716	\$3,939,417	\$3,676,061	\$263,356	\$7,686,541	\$3,727,124
	1927	59	191	953	2,657	132	2,525	583,927	1,448,940	3,722,411	3,497,707	224,704	6,950,855	3,228,444
	1919	52	267	1,065	1,571	605	966	601,841	2,247,953	10,532,288	10,327,925	204,363	14,475,682	3,943,394
Individual States:														
California.....	1929	10	14	78	164	-----	164	29,559	109,464	239,239	217,176	22,063	455,026	245,787
	1927	5	12	54	138	-----	138	22,272	90,190	134,671	117,116	17,555	332,907	198,236
	1919	3	4	15	22	-----	22	11,182	19,240	47,230	39,460	7,770	93,978	46,748
Illinois.....	1929	11	41	150	288	-----	288	148,224	223,577	490,995	452,752	38,243	1,072,607	581,612
	1927	8	28	145	160	-----	160	107,370	232,180	551,813	529,773	31,040	1,097,880	546,067
	1919	8	35	102	94	25	69	103,570	126,384	328,900	300,994	27,906	780,071	451,171
Massachusetts.....	1929	4	11	46	49	-----	49	28,239	68,190	85,661	75,340	10,321	241,541	155,880
New York.....	1929	4	18	127	81	-----	81	44,859	180,835	315,614	290,259	25,355	719,073	403,459
	1927	8	24	128	157	70	87	74,179	107,162	335,009	307,736	27,264	722,485	387,485
	1919	6	24	110	155	105	50	70,922	131,378	251,337	235,198	16,139	671,781	420,444
Ohio.....	1929	6	13	64	195	-----	195	44,167	94,086	149,237	128,527	20,710	376,065	226,828
	1927	10	18	77	379	12	367	62,064	132,681	286,042	269,429	16,613	666,189	380,147
Pennsylvania.....	1929	8	42	277	602	50	552	173,790	361,347	867,147	808,425	58,722	1,697,564	830,417
	1927	8	41	199	496	50	446	149,485	295,097	626,517	579,547	46,970	1,227,184	600,667
	1919	9	42	237	172	13	159	87,897	280,821	806,449	778,776	27,673	1,259,003	452,614
Groups of States:														
Ala., 2 est.; Conn., 1; Md., 3; N. J., 2; W. Va., 1	1929	9	45	197	657	-----	657	99,545	260,815	1,569,079	1,516,075	53,004	2,275,498	706,419
Ind., 1 est.; Mich., 3; Minn., 1; Mo., 1; Wis., 2	1929	8	25	175	211	-----	211	97,899	251,471	199,954	168,609	31,345	736,095	536,741
Other States (Okla., 1 est.; Oreg., 1; Tex., 1; Wash., 1; Wyo., 1)	1929	5	4	11	19	-----	19	6,798	13,628	22,491	18,898	3,693	62,472	39,981
States not shown separately.....	1927	20	68	350	1,327	-----	1,327	168,557	500,630	1,788,368	1,703,106	85,262	2,904,210	1,115,842
	1919	26	162	1,201	1,188	462	726	328,270	1,687,130	9,098,372	8,973,497	124,875	11,670,789	2,572,417

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 24; 1927, 26; 1919, 33. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 1,882; 1927, 1,170; 1919, 1,965.

<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.

<sup>4</sup> Alabama, 1 establishment; Connecticut, 1; Georgia, 1; Indiana, 1; Louisiana, 1; Maryland, 1; Massachusetts, 2; Michigan, 1; Minnesota, 1; Missouri, 1; New Jersey, 2; Oklahoma, 1; Oregon, 1; Washington, 1; West Virginia, 1; and Wisconsin, 3.

<sup>5</sup> Connecticut, 1 establishment; Indiana, 1; Maine, 1; Maryland, 2; Massachusetts, 2; Michigan, 1; Nebraska, 1; New Jersey, 3; Ohio, 6; Oregon, 1; Rhode Island, 1; Washington, 1; West Virginia, 2; and Wisconsin, 3.

## CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	315	Horse-power 2,266	280	Horse-power 2,657	175	Horse-power 1,881	146	Horse-power 1,571	71	Horse-power 2,385	100.0	100.0
Prime movers, total.....	1	50	4	132	6	206	13	605	23	2,007	2.2	38.5
Steam, total.....			3	82	4	152	7	148	12	772		9.4
Engines.....			2	42	3	52	6	123	(1)	(1)		7.8
Turbines.....			1	40	1	100	1	25	(1)	(1)		1.6
Internal-combustion engines.....	1	50	1	50	2	54	6	457	11	1,235	2.2	29.1
Electric motors driven by purchased energy.....	314	2,216	276	2,525	169	1,675	133	966	48	378	97.8	61.5
Electric motors, total.....	314	2,216	276	2,525	171	1,680	239	2,014	157	1,512	100.0	100.0
Driven by purchased energy.....	314	2,216	276	2,525	169	1,675	133	966	48	378	100.0	48.0
Driven by energy generated in establishments reporting.....					2	5	106	1,048	109	1,134		52.0
Electric generators.....		Kilo-watts		Kilo-watts	2	Kilo-watts 50	(?)	(?)	(?)	(?)		
Electric energy purchased <sup>1</sup> .....		Kilowatt-hours 2,454,386		(?)		(?)		(?)		(?)		

<sup>1</sup> Not called for separately on schedule.<sup>2</sup> Not called for on schedule.<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.<sup>4</sup> Data incomplete.

TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimums of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
United States:															
1929.....	1,125	<i>1,016</i>	1,059	1,139	1,206	1,181	1,201	1,189	1,170	1,124	1,154	1,044	1,027	84.2	
1925.....	804	<i>745</i>	807	805	781	801	844	862	789	800	805	802	806	86.2	
1919.....	1,665	<i>1,633</i>	1,746	1,769	1,677	1,694	1,666	1,635	1,644	1,613	<i>1,577</i>	1,563	1,583	84.9	
1914.....	1,580	<i>1,577</i>	1,636	1,771	1,660	1,602	1,663	1,745	1,666	1,678	1,478	<i>1,192</i>	1,236	67.6	
1909.....	1,447	<i>1,169</i>	1,291	1,311	1,423	1,474	1,561	1,475	1,587	1,543	1,568	1,475	1,482	73.7	
California.....	78	<i>68</i>	68	86	70	77	82	76	70	77	91	77	82	74.7	
Illinois.....	150	<i>125</i>	125	142	138	130	157	172	183	164	158	146	160	68.3	
Massachusetts.....	46	<i>39</i>	40	40	49	48	46	47	47	49	62	50	46	75.0	
New York.....	127	<i>122</i>	122	129	136	129	126	123	123	123	136	134	126	89.7	
Ohio.....	64	<i>55</i>	61	64	75	81	76	80	63	56	66	47	39	48.1	
Pennsylvania.....	277	<i>234</i>	273	281	300	312	317	269	276	268	274	261	263	73.8	

## HARDWARE NOT ELSEWHERE CLASSIFIED

Description of the industry.—This industry title refers to a large and rather loosely defined group of metal commodities which do not belong specifically to any of the other industry classifications.

The term "hardware" is of so broad general application that its use in the schedule necessarily entails misunderstanding and differences in interpretation. Obviously it would be impracticable, in drafting the schedule, either to explain in detail just what commodities the word should be understood to cover, or to list all such commodities. Furthermore, it has been found that manufacturers of a general line of metal goods of whatever description do not, in many cases, keep their records in such form as to enable them to supply separate data on their output of classes of hardware which belong to different census classifications.

Moreover, it should be borne in mind that many commodities retailed and generally regarded as hard-

ware are not covered by this industry title. Among the more important of such items are nails and spikes, wire and wire products, small machines such as grinders and lawn mowers, plumbers' supplies, tools and cutlery, screws and bolts, sporting and athletic goods, tinware, and stoves.

Considerable quantities of hardware normally belonging to this industry are made as secondary products by establishments in more or less related industries. In some cases, however, such products are not specifically reported as hardware but are merely listed as "Other products." The value of "Hardware not elsewhere classified" made as secondary products in other industries, as given in Table 3, does not, therefore, cover the total production of hardware in other industries.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers for products, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929.....	485	52,306	\$67,702,255	\$76,480,210	\$229,477,507	\$152,997,297	112,705
1927.....	485	47,834	60,827,474	71,877,055	208,253,586	136,376,531	99,674
1925.....	476	52,349	65,561,817	77,502,839	225,052,644	147,549,805	98,278
1923.....	473	52,205	63,470,745	80,597,525	215,960,129	135,262,604	84,006
1921.....	456	35,228	36,240,193	41,520,050	120,699,728	79,079,678	( <sup>3</sup> )
1919.....	585	40,180	49,273,749	62,815,358	168,661,444	105,846,080	74,240
1914.....	597	43,724	23,831,573	30,860,582	77,350,668	46,499,086	50,839
1909.....	622	41,822	20,985,288	27,529,121	70,092,860	42,563,739	46,700
1904.....	527	35,108	16,204,479	18,461,322	50,590,597	32,129,575	35,485
1899.....	461	29,403	12,639,960	16,295,412	39,996,145	23,700,733	24,648
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929.....		9.3	11.3	6.4	10.2	12.2	13.1
1925-1927.....	1.9	-3.6	-7.2	-7.3	-7.5	-7.6	1.4
1923-1925.....	.6	.3	3.3	-3.8	4.2	9.0	17.0
1921-1923.....	3.7	48.2	75.1	94.1	79.1	71.2	
1919-1921.....	-22.1	-23.7	-26.5	-33.9	-28.5	-25.3	
1919-1929.....	-17.1	12.8	37.4	21.8	36.1	44.5	51.8
1909-1919.....	-5.9	10.4	134.8	128.2	140.6	148.7	59.0
1899-1909.....	34.9	42.2	66.0	68.9	75.2	79.6	89.5

<sup>1</sup> For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> Not called for on schedule.

CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Data for establishments with products under \$5,000 in value are included for 1919 but not for subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size.]

STATE	Census Year	Number of establishments	Salaried officers and employes <sup>1</sup>	Wage earners (average for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, CONTAINERS FOR PRODUCTS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	485	7,820	52,306	112,705	32,302	80,403	\$19,768,563	\$67,702,255	\$76,480,210	\$72,611,196	\$3,869,014	\$229,477,507	\$152,997,297
	1927	485	7,028	47,834	99,674	35,529	64,145	17,313,654	60,827,474	71,877,056	68,449,109	3,427,946	208,253,586	136,876,531
	1919	585	6,507	46,180	74,240	38,823	35,417	13,121,350	49,273,749	62,815,358	59,330,280	3,486,078	108,661,444	106,846,086
Individual States:														
California	1929	27	112	420	782	1	781	287,141	521,925	585,207	566,097	19,110	1,069,154	1,388,947
	1927	18	49	219	404		464	82,388	328,212	253,556	241,775	11,781	880,893	627,327
	1919	17	12	102	271		271	22,015	138,761	182,198	169,993	12,205	406,582	227,384
Connecticut	1929	57	3,307	17,951	41,588	23,062	18,521	6,812,784	22,991,883	19,865,549	18,602,633	1,263,016	71,231,720	51,866,171
	1927	57	3,051	18,201	30,510	22,337	14,173	6,319,050	22,265,701	21,173,720	19,912,500	1,261,220	63,012,785	46,836,065
	1919	68	2,898	20,013	29,018	19,173	9,846	4,928,682	22,289,053	21,661,051	20,238,675	1,422,876	67,150,892	45,489,811
Illinois	1929	84	948	5,141	12,179	3,308	8,871	2,535,859	6,870,204	9,345,846	8,998,352	3,477,494	27,072,415	17,726,660
	1927	88	1,005	5,620	10,971	4,152	6,819	2,434,214	6,994,518	10,183,571	9,812,119	371,452	29,459,127	10,276,556
Indiana	1929	18	128	836	1,552	145	1,407	358,103	969,885	2,458,602	2,401,494	57,108	4,748,781	1,230,170
	1927	13	71	610	2,224	700	1,524	165,959	663,125	1,644,152	1,602,653	41,499	3,889,867	1,736,715
Iowa	1929	5	54	434	613	150	463	189,956	404,881	601,168	568,382	32,784	1,569,947	968,781
	1927	7	54	455	749	125	624	124,456	453,641	820,338	780,891	33,447	2,098,776	1,278,438
	1919	10	138	578	631	125	406	250,824	581,641	918,332	891,209	27,033	2,257,823	1,390,191
Kentucky	1929	4	38	328	442	75	367	120,635	284,331	540,746	520,885	19,801	1,212,205	671,549
	1927	3	23	183	194	75	119	70,840	207,242	264,636	259,211	5,424	875,404	610,709
	1919	4	27	343	772	550	222	78,400	284,920	491,800	463,335	28,474	1,393,062	841,263
Massachusetts	1929	26	143	775	1,655	118	1,537	319,811	964,011	1,206,140	1,214,558	81,682	3,295,400	1,000,260
	1927	29	117	731	1,711	137	1,574	246,459	926,100	1,183,451	1,008,065	84,786	3,070,725	1,896,274
	1919	30	142	500	991	100	591	223,558	462,004	881,507	844,742	86,765	2,452,121	1,870,614
Michigan	1929	31	715	10,077	18,939	1,190	17,749	2,039,236	14,151,517	17,327,556	16,581,662	745,894	47,985,985	30,658,429
	1927	30	624	6,567	15,044	1,312	13,732	1,796,679	9,968,634	12,835,230	12,290,646	644,584	38,121,712	25,286,482
Missouri	1929	9	65	456	971		971	225,195	504,070	777,324	752,288	25,036	1,853,179	1,076,855
	1927	12	63	452	1,167		1,167	244,573	505,661	774,687	734,193	40,494	1,909,691	1,134,944
	1919	9	36	389	439	260	179	255,077	315,981	684,005	670,919	13,982	1,392,894	708,589
New Jersey	1929	24	260	1,071	2,146	270	1,876	919,510	1,333,581	2,904,892	2,788,500	116,392	6,838,718	3,633,526
	1927	26	221	1,221	2,847	1,885	902	622,930	1,337,115	2,366,813	2,261,508	85,805	6,251,615	3,884,202
	1919	34	190	1,565	2,476	2,096	880	474,233	1,576,991	2,899,352	2,296,607	92,745	5,962,923	3,679,271
New York	1929	69	510	3,834	9,618	1,319	8,299	1,666,856	4,361,055	6,228,490	5,943,236	280,254	16,706,142	10,482,652
	1927	73	330	3,793	7,223	1,448	5,775	1,654,019	4,900,592	6,585,920	6,339,590	251,424	17,228,921	10,648,901
	1919	105	680	4,337	7,465	2,986	4,479	1,453,788	4,139,957	7,892,140	7,643,975	348,165	17,651,058	9,758,918
Ohio	1929	36	465	3,927	9,515	960	8,555	1,287,654	5,332,085	4,901,145	5,238,105	15,859,648	10,821,443	
	1927	39	456	3,910	8,314	1,835	6,629	1,313,630	4,543,301	5,310,506	5,012,616	297,890	13,917,382	8,606,676
Pennsylvania	1929	42	609	4,470	7,680	1,466	6,184	1,489,273	5,399,289	5,543,304	5,241,480	301,824	16,624,470	11,081,173
	1927	45	715	4,955	8,700	1,293	7,407	1,617,366	5,858,173	6,354,060	6,084,432	269,628	17,273,763	10,919,702
Rhode Island	1929	7	28	75	66		66	67,147	70,512	187,406	182,346	5,060	220,938	242,432
	1927	6	16	55	80		80	24,833	74,193	177,620	173,162	4,458	342,958	165,338
	1919	4	12	33	32		32	11,128	22,595	130,868	130,187	681	206,678	76,810
Virginia	1929	3	7	92	144		144	36,757	76,625	67,636	61,622	6,014	227,025	159,389
	1927	3	7	105	149		149	49,841	81,339	101,119	95,545	5,574	281,756	180,637
Washington	1929	4	20	55	121		121	37,451	48,428	73,126	69,619	3,507	221,802	148,676
Wisconsin	1929	19	293	1,731	2,805	263	2,602	1,078,658	2,265,609	2,634,087	2,502,040	132,947	9,185,205	6,550,213
	1927	16	133	636	1,305	175	1,130	319,721	804,043	945,981	905,729	40,252	2,870,154	1,930,173
Groups of States:														
Ga., 1 est.; Md., 2	1929	3	5	8	27		27	6,056	11,808	12,756	12,221	535	46,120	33,864
Kans., 2 est.; Nebr., 1	1929	3	9	28	79		79	19,197	31,312	65,059	62,184	2,875	167,159	102,100
N. H., 2 est.; Vt., 2; Me., 2	1929	6	66	345	1,207		1,207	203,265	472,941	687,401	612,401	75,000	1,555,652	908,251
Tenn., 2 est.; Minn., 3	1929	5	32	223	529		529	62,751	193,455	138,448	123,945	14,503	615,543	477,065
Tex., 1 est.; Okla., 2	1929	3	6	29	52	5	47	9,903	32,148	5,464	4,206	1,258	61,403	55,939
States not shown separately	1927	20	93	605	1,822	5	1,817	220,737	684,905	902,596	823,868	78,728	2,262,727	1,360,131
	1919	304	2,472	18,370	33,055	13,533	19,522	5,424,005	19,461,846	27,594,096	26,080,548	1,503,548	69,845,041	42,260,946

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 124; 1927, 188; 1919, 340. The total numbers of persons engaged—proprietors and firm members, salaried officers and employes, and wage earners—as reported by the industry, are as follows: For 1929, 60,250; 1927, 55,050; 1919, 53,027.  
<sup>2</sup> The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.  
<sup>3</sup> Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>4</sup> Data for purchased power other than electric (power transmitted into the plant by belt or shaft) are included in the State items for 1919 but not in the United States totals.  
<sup>5</sup> Alabama, 1 establishment; Colorado, 2; Florida, 1; Georgia, 1; Kansas, 1; Maine, 2; Minnesota, 2; Nebraska, 1; New Hampshire, 2; Oklahoma, 1; Tennessee, 1; Texas, 1; Vermont, 2; and Washington, 2.  
<sup>6</sup> Alabama, 1 establishment; Illinois, 85; Indiana, 10; Kansas, 4; Maine, 2; Maryland, 6; Michigan, 31; Minnesota, 3; Nebraska, 1; New Hampshire, 4; Ohio, 52; Oklahoma, 4; Oregon, 5; Pennsylvania, 64; Tennessee, 3; Texas, 3; Vermont, 2; Virginia, 4; Washington, 3; West Virginia, 1; Wisconsin, 13; and Wyoming, 3.

# HARDWARE NOT ELSEWHERE CLASSIFIED

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**TABLE 3.—PRODUCTS, BY CLASS AND VALUE: 1929, 1927, AND 1925**

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products]

CLASS	1929	1927	1925	CLASS	1929	1927	1925
1. "Hardware not elsewhere classified" industry, all products, total value.....	\$229,477,507	\$208,253,586	\$225,052,644	Hardware not elsewhere classified—Con.			
2. Hardware.....	208,417,177	189,411,970	195,778,918	Casket hardware.....	\$5,912,207	\$4,755,878	\$5,127,795
3. Other products (not normally belonging to the industry).....	23,060,330	18,841,616	29,273,726	Furniture and cabinet hardware other than locks.....	17,138,072	10,693,783	14,268,069
4. Hardware not elsewhere classified, made as secondary products in other industries, value <sup>1</sup> .....	14,500,655	9,474,845	14,490,685	Piano and organ hardware.....	400,619	1,232,370	1,702,729
Hardware not elsewhere classified, all industries, <sup>2</sup> total value (sum of 2 and 4).....	220,917,832	198,886,815	210,269,603	Saddlery and harness hardware.....	3,773,008	5,510,458	6,618,220
Builders' hardware other than locks.....	58,308,832	42,624,749		Trunk and suitcase hardware other than locks.....	2,480,869	3,859,004	4,143,178
Locks:			89,961,105	Vehicle hardware other than locks:			
Cabinet.....	4,456,497			Motor vehicle.....	60,812,953	50,178,037	44,954,758
Padlocks.....	6,647,317	37,281,124		Other vehicle.....	410,994	666,327	
Trunk, suitcase, and luggage.....	2,197,984			Vacuum bottles, jugs, etc.....	5,466,131	5,053,690	4,857,235
Other.....	21,422,492			Other hardware and hardware not reported by class.....	31,583,857	37,031,395	38,635,914

<sup>1</sup> See "Description of the industry," final paragraph, p. 935.  
<sup>2</sup> See "Description of the industry," p. 935.

**TABLE 4.—PRODUCTS, BY CLASS AND VALUE, BY STATES: 1929**

[The figures refer to sales (shipments or deliveries) by manufacturers. See GENERAL EXPLANATIONS—Value of products. Statistics are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups]

CLASS AND STATE	Value	CLASS AND STATE	Value	CLASS AND STATE	Value
Hardware not elsewhere classified, aggregate value.....	\$220,917,832	Locks, total.....	\$34,624,290	Vehicle hardware, other than locks—Con. Motor-vehicle—Continued.	
Builders' hardware other than locks, total.....	58,308,832	California and Washington.....	1,482,555	Illinois.....	\$2,193,344
California and Washington.....	684,084	Connecticut.....	14,285,397	Indiana.....	1,644,966
Connecticut.....	20,465,738	Georgia, Missouri, Oklahoma, and Virginia.....	289,097	Kentucky and Missouri.....	635,022
Illinois.....	11,808,865	Illinois.....	2,916,665	Massachusetts, New Jersey, and Pennsylvania.....	3,098,744
Indiana.....	339,834	Indiana, Michigan, and Kentucky.....	4,247,500	Michigan and Ohio.....	45,043,577
Iowa and Missouri.....	2,359,758	Massachusetts, Rhode Island, and New Jersey.....	511,568	New York.....	2,488,207
Maryland and Pennsylvania.....	6,687,194	New York.....	1,558,327	Other vehicle, total.....	410,994
Massachusetts and Vermont.....	1,691,715	Ohio.....	1,427,761	California, Iowa, and Missouri.....	280,286
Michigan, Minnesota, and Nebraska.....	1,195,194	Pennsylvania.....	3,923,586	Connecticut, Kentucky, Ohio and Pennsylvania.....	130,708
New Jersey.....	1,506,254	Wisconsin.....	3,982,834	Vacuum bottles, jugs, etc., total.....	5,466,131
New York.....	2,721,502	Piano and organ hardware, total.....	400,619	Illinois, Iowa, and Ohio.....	856,954
Ohio.....	2,599,763	Connecticut, Massachusetts, New Hampshire, and New York.....	355,963	Connecticut, Massachusetts, and New Jersey.....	4,609,177
Wisconsin.....	318,931	Illinois, Michigan, and Pennsylvania.....	44,656	Other hardware and hardware not reported by class, total.....	31,583,857
Casket hardware, total.....	5,912,207	Saddlery and harness hardware, total.....	3,773,008	California.....	204,755
California and Washington.....	75,937	Connecticut and New York.....	2,855,501	Colorado, Montana, and Washington.....	52,003
Connecticut.....	1,140,585	New Jersey and Pennsylvania.....	88,037	Connecticut.....	6,623,569
Illinois.....	1,330,276	Indiana, Ohio, Tennessee, and Wisconsin.....	763,394	Illinois.....	3,635,942
Indiana and Ohio.....	1,174,080	Missouri, Oklahoma, and Texas.....	66,076	Indiana and Michigan.....	1,373,428
Iowa, Michigan, and Wisconsin.....	388,478	Trunk and suitcase hardware other than locks, total.....	2,480,869	Iowa and Minnesota.....	199,034
Maine and Massachusetts.....	610,693	California, Illinois, Missouri, Pennsylvania, and Wisconsin.....	704,010	Kansas and Nebraska.....	53,962
New York, North Carolina, and Pennsylvania.....	1,192,158	Connecticut.....	617,422	Kentucky, Louisiana, Maryland, North Carolina, and Tennessee.....	797,825
Furniture and cabinet hardware other than locks, total.....	17,138,072	Massachusetts, New Jersey, and Virginia.....	224,361	Maine, New Hampshire, and Vermont.....	1,345,324
California, Kentucky, and Wisconsin.....	515,418	New York.....	941,076	Massachusetts.....	1,536,282
Connecticut.....	2,154,750	Vehicle hardware other than locks: Motor-vehicle, total.....	60,812,953	Missouri.....	336,737
Illinois.....	4,939,574	California and Wisconsin.....	722,655	New Jersey.....	3,147,274
Indiana and Ohio.....	1,660,352	Connecticut.....	4,986,438	New York.....	4,781,106
Massachusetts and New Hampshire.....	464,357	Ohio.....		Ohio.....	2,960,238
Michigan.....	5,161,372	Pennsylvania.....		Pennsylvania.....	3,876,776
Massachusetts.....	144,200	Rhode Island.....		Rhode Island.....	318,781
Michigan.....	5,161,372	Wisconsin.....		Wisconsin.....	339,751
Missouri.....	144,200				
New Jersey and Pennsylvania.....	799,206				
New York.....	1,268,848				



CENSUS OF MANUFACTURES: 1929

TABLE 5.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSE-POWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
		Horse-power		Horse-power		Horse-power		Horse-power		Horse-power		
Prime movers and electric motors driven by purchased energy, aggregate.....	11,999	112,706	8,098	99,674	6,757	98,278	3,683	74,240	1,877	56,839	100.0	100.0
Prime movers, total.....	128	32,302	131	35,529	180	41,438	336	38,823	453	44,125	28.7	52.3
Steam, total.....	99	31,276	102	34,407	128	39,183	227	35,212	301	39,561	27.8	47.4
Engines.....	77	11,873	79	15,839	105	20,818	212	28,207	(1)	(1)	10.6	38.1
Turbines.....	22	19,403	23	18,568	23	18,345	15	6,915	(1)	(1)	17.2	9.3
Internal-combustion engines.....	17	376	18	597	33	1,368	75	1,975	114	2,780	0.3	2.7
Water wheels and water turbines.....	12	650	11	625	19	907	34	1,630	38	1,784	0.6	2.2
Electric motors driven by purchased energy.....	11,871	80,403	7,967	64,145	6,577	56,840	3,347	35,417	1,424	12,714	71.3	47.7
Electric motors, total.....	13,519	93,962	9,749	79,822	8,271	78,021	4,300	48,982	2,673	27,198	100.0	100.0
Driven by purchased energy.....	11,871	80,403	7,967	64,145	6,577	56,840	3,347	35,417	1,424	12,714	86.5	72.3
Driven by energy generated in establishments reporting.....	1,648	13,559	1,782	15,677	1,694	21,781	959	13,565	1,249	14,484	13.6	27.7
Electric generators.....	66	18,908	58	20,073	99	24,940	(2)	(2)	(2)	(2)		
Electric energy purchased <sup>1</sup> .....		88,318,391		(4)		(4)		(3)		(3)		

<sup>1</sup> Not called for separately on schedule.  
<sup>2</sup> Not called for on schedule.  
<sup>3</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.  
<sup>4</sup> Data incomplete.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, AND 1914, AND BY STATES, 1929

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
United States:															
1929.....	52,306	53,289	54,881	55,125	55,143	54,396	53,788	53,425	52,635	51,369	50,114	47,405	<i>46,094</i>	83.6	
1925.....	52,349	<i>50,676</i>	51,235	52,158	51,977	51,719	52,054	51,817	52,462	52,705	53,547	53,859	53,986	93.9	
1919.....	46,180	<i>42,986</i>	43,218	43,542	43,754	44,170	44,732	46,177	47,799	47,810	48,864	50,315	50,843	84.4	
1914 <sup>1</sup> .....	43,724	<i>45,794</i>	46,181	46,421	45,792	44,721	43,450	42,002	42,440	42,017	42,225	41,999	<i>41,046</i>	89.7	
California.....	420	380	389	397	393	420	428	423	482	449	446	426	427	82.3	
Connecticut.....	17,951	17,641	18,134	18,339	18,205	18,215	18,031	18,142	18,074	17,871	17,883	17,580	<i>17,299</i>	94.3	
Illinois.....	5,141	5,212	5,299	5,284	5,202	5,117	5,113	5,099	5,088	5,188	5,378	4,940	<i>4,771</i>	88.7	
Indiana.....	830	832	887	949	885	859	890	811	809	792	792	620	<i>697</i>	60.5	
Iowa.....	434	471	470	470	489	443	453	423	423	401	409	409	<i>391</i>	83.0	
Kentucky.....	328	357	364	356	350	326	320	299	298	307	331	322	<i>294</i>	80.5	
Massachusetts.....	775	794	810	818	847	805	734	740	797	818	714	732	<i>746</i>	84.3	
Michigan.....	10,077	11,140	11,022	11,055	11,608	11,100	11,077	10,833	10,169	9,276	8,618	7,701	<i>7,331</i>	63.2	
Missouri.....	456	477	450	490	481	469	473	464	462	436	428	415	<i>397</i>	81.0	
New Jersey.....	1,071	1,014	1,101	1,142	1,289	1,241	1,114	1,090	1,090	1,075	963	883	<i>860</i>	66.7	
New York.....	3,834	3,746	3,951	4,005	3,954	3,986	3,839	3,810	3,816	3,924	3,860	3,619	<i>3,488</i>	87.0	
Ohio.....	3,027	3,964	4,407	4,369	4,227	4,240	4,179	4,090	3,960	3,789	3,460	3,231	<i>3,151</i>	71.6	
Pennsylvania.....	4,470	4,667	4,768	4,760	4,629	4,546	4,459	4,423	4,400	4,358	4,244	4,175	<i>4,127</i>	86.6	
Rhode Island.....	75	77	69	68	78	70	68	69	76	85	87	78	<i>77</i>	78.2	
Virginia.....	92	85	88	91	88	90	90	93	97	99	102	96	<i>85</i>	83.2	
Washington.....	55	41	45	42	61	65	81	62	59	43	50	50	<i>50</i>	50.6	
Wisconsin.....	1,731	1,778	1,851	1,868	1,781	1,795	1,813	1,837	1,826	1,790	1,659	1,449	<i>1,351</i>	71.3	

<sup>1</sup> No comparable figures available for years prior to 1914.

## IRON AND STEEL

**Relation of the industries.**—A large part of the pig iron produced by blast furnaces is delivered, mostly in a molten state, to the steel departments of the same establishments, but for census purposes the blast-furnace departments are treated as separate units. A transfer value is assigned to the pig iron thus delivered, and this transfer value is included in the value of products for the blast furnaces and in the cost of materials for the steel works.

**Duplication in combined cost of materials and combined value of products.**—The combined cost of materials and the combined value of products for the two industries include a large amount of duplication resulting from the use of the products of blast furnaces as

materials by steel works. In other words, if these industries were treated as one, the net cost of materials and the net value of products would be materially less than the combined totals for the respective items as they appear in the table below.

**Combined power-equipment statistics.**—Because of the close relationship of the "blast furnace" and "steel works and rolling mills" industries, and particularly because of the fact that in many cases the power for blast furnaces and rolling mills operated under a common ownership is generated in a separate power plant, under the same ownership, it is impossible to obtain complete data separately for the power equipment used in each industry.

TABLE 1.—BLAST FURNACES AND STEEL WORKS AND ROLLING MILLS—COMBINED SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[For separate summary statistics for the two industries, see Table 1, p. 942, and Table 1, p. 951]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	501	419,534	\$730,974,110	\$2,514,376,848	\$4,137,214,269	\$1,622,837,421	7,532,530
1927	602	359,270	645,533,998	2,269,210,331	3,488,744,476	1,216,534,145	6,781,058
1925	595	399,914	660,297,150	2,429,378,098	3,711,354,460	1,281,976,362	6,148,927
1923	658	424,913	696,760,521	2,872,027,903	4,161,935,011	1,289,910,108	5,999,941
1921	628	254,213	354,356,924	1,366,174,970	1,901,430,596	535,255,626	(5)
1919	695	416,748	711,405,825	2,301,862,254	3,623,368,934	1,321,506,680	5,399,674
1914	587	278,072	210,923,024	855,405,752	1,236,318,548	380,912,796	3,925,569
1909	654	278,505	187,807,288	978,138,745	1,377,151,817	399,013,072	3,274,285
1904	605	242,640	141,426,506	620,146,350	908,787,733	236,641,383	2,415,157
1899	668	222,490	120,820,276	522,398,932	803,968,273	231,569,341	1,597,816
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929	-1.8	7.8	13.2	10.8	18.6	33.1	11.1
1925-1927	1.2	-2.7	-2.2	-6.6	-6.0	-4.9	10.4
1923-1925	-9.6	-5.9	-5.2	-15.4	-10.8	-0.6	2.4
1921-1923	4.8	67.1	96.6	110.2	118.9	141.0	-----
1919-1921	-9.6	-39.0	-50.2	-40.6	-47.5	-59.5	-----
1919-1929	-15.0	0.7	2.8	9.2	14.2	22.8	39.5
1909-1919	6.3	49.6	278.8	135.3	163.1	231.2	64.9
1899-1909	-2.1	28.2	55.4	87.2	71.3	41.7	104.9

<sup>1</sup> The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> The 1925 items for wage earners and wages are not strictly comparable with those for earlier years, for the reason that some of the blast-furnace operators failed to include in their reports for 1925 data in regard to wage earners employed in refining blast furnaces, whereas data for such wage earners are included in the figures for other years.

<sup>4</sup> Not called for on schedule.

## CENSUS OF MANUFACTURES: 1929

TABLE 2.—CONSUMPTION OF PIG IRON, SCRAP IRON, AND SCRAP STEEL, BY QUANTITY AND COST, FOR PRINCIPAL CONSUMING INDUSTRIES, FOR THE UNITED STATES: 1929

[An unsuccessful attempt was made to collect data in regard to consumption of pig iron, scrap iron, and scrap steel from manufacturers of motor vehicles. No attempt was made to collect such data from railroad repair shops]

INDUSTRY	Number of establishments	PIG IRON		SCRAP IRON AND SCRAP STEEL	
		Tons (2,240 pounds)	Cost	Tons (2,240 pounds)	Cost
Total.....	13,445	41,402,214	\$677,861,682	30,127,848	\$540,662,624
Agricultural implements.....	94	211,945	4,403,171	92,791	1,308,405
Blast furnaces.....	82			5,873,176	32,744,377
Cars, electric and steam railroad.....	15	47,894	1,050,080	265,049	3,066,332
Cast-iron pipe and fittings.....	72	1,424,837	23,714,870	224,121	3,119,940
Engines, turbines, tractors, and water wheels.....	58	291,751	6,204,655	179,538	2,733,986
Foundry and machine-shop products, not elsewhere classified.....	2,284	3,405,824	68,974,773	2,834,505	40,240,358
Locomotives.....	10	21,404	418,539	6,025	95,318
Machine tools.....	39	65,093	1,351,046	40,512	654,283
Plumbers' porcelain-enameled ware (enameled iron).....	37	235,711	4,445,167	36,260	513,516
Ship and boat building, steel and wooden.....	20	5,429	118,058	1,568	19,405
Pumps and pumping equipment.....	53	64,006	1,318,915	20,270	464,975
Steam fittings and steam and hot-water heating apparatus.....	80	536,397	10,542,338	280,687	4,228,370
Steel works and rolling mills <sup>1</sup> .....	372	34,687,157	547,280,159	20,356,522	449,354,754
Stoves and ranges.....	199	337,732	6,601,880	85,185	1,230,837
Textile machinery and parts.....	30	66,404	1,437,681	20,739	287,665

<sup>1</sup> The figures in this column represent the numbers of establishments reporting the consumption of pig iron, scrap iron, or scrap steel, not the numbers of establishments classified for census purposes in the industries listed. (The total numbers of establishments classified in some of these industries are considerably larger, but many of them do not consume pig iron, scrap iron, or scrap steel.)

<sup>2</sup> Some establishments included data for cinder, scale, sinter, and open-hearth and Bessemer slag scrap. The average cost per ton is, therefore, much smaller for the blast-furnace industry than for others.

<sup>3</sup> Includes data for a steel plant operated by an important manufacturer of motor vehicles.

<sup>4</sup> Includes 13,933,399 tons produced and reworked in the same plants, and 663,170 tons transferred to other plants in the same industry under the same ownership.

TABLE 3.—CONSUMPTION OF PIG IRON, SCRAP IRON, AND SCRAP STEEL, BY STATES: 1929

[This table covers consumption in principal consuming industries. See headnote, Table 2. Statistics are given for each State for which it is possible to publish separate figures without disclosing data for individual establishments, and for the remaining States in groups. Certain of the States for which figures are given in combination with those for others reported larger quantities and costs than some of the States shown separately]

STATE	PIG IRON			SCRAP IRON AND SCRAP STEEL		
	Number of establishments	Tons (2,240 pounds)	Cost	Number of establishments	Tons (2,240 pounds)	Cost
Total.....	2,848	41,402,214	\$677,861,682	3,060	30,127,848	\$540,662,624
Alabama.....	65	2,052,572	25,325,543	55	886,291	8,008,023
Arkansas.....	5	669	14,161	7	11,702	159,507
Connecticut.....	53	156,813	3,377,600	48	151,323	2,120,074
Florida.....	7	639	13,273	12	3,144	31,031
Georgia.....	40	55,421	795,668	44	119,119	1,418,469
Illinois.....	232	3,942,822	65,989,926	236	3,623,550	47,720,247
Indiana.....	144	4,467,542	63,164,276	137	4,063,966	51,245,531
Iowa.....	50	110,656	2,358,180	57	120,219	1,662,500
Kansas.....	16	7,500	195,712	23	90,647	1,139,831
Kentucky.....	25	367,732	6,481,419	29	640,901	8,973,607
Louisiana.....	12	3,436	82,117	15	26,905	357,114
Maine.....	21	8,350	182,421	18	9,546	142,325
Massachusetts.....	135	207,073	4,344,775	147	286,180	3,879,694
Michigan.....	177	874,153	17,939,185	170	756,829	9,671,828
Minnesota.....	57	281,903	5,138,229	68	372,768	5,206,597
Mississippi.....	13	1,848	29,801	14	1,352	18,007
Missouri.....	69	119,311	2,439,431	74	541,897	7,460,711
New Hampshire.....	17	4,834	112,343	17	4,060	58,512
New York.....	265	1,979,087	20,374,426	265	1,769,345	31,457,306
North Carolina.....	28	7,650	139,258	29	11,370	136,132
Ohio.....	321	9,086,890	149,255,890	338	8,483,345	119,698,406
Oklahoma.....	9	2,032	52,070	26	35,513	461,479
Pennsylvania.....	441	13,790,019	235,614,474	445	12,649,535	175,911,074
Rhode Island.....	15	45,668	944,674	15	36,345	513,959
South Carolina.....	12	1,665	31,440	11	1,793	24,887
Tennessee.....	53	175,229	2,883,863	38	84,033	1,240,661
Texas.....	32	10,919	257,741	59	108,283	1,385,470
Vermont.....	17	6,714	153,620	16	7,829	157,141
West Virginia.....	26	804,061	12,377,420	34	906,155	14,899,788
Wisconsin.....	122	356,696	7,246,511	121	289,367	4,600,700
Groups of States:						
Ariz., Calif., Colo., Idaho, Mont., Nev., N. Mex., Oreg., Utah, Wash., Wyo.....	187	666,324	11,895,962	285	1,549,439	18,219,820
Del., D. C., Md., N. J., Va.....	193	1,865,854	29,642,548	198	1,476,974	22,135,884
Nebr., N. Dak., S. Dak.....	3	312	7,716	9	8,114	80,139

# IRON AND STEEL

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**TABLE 4.—BLAST FURNACES AND STEEL WORKS AND ROLLING MILLS—COMBINED STATISTICS FOR PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929**

[See "Combined power-equipment statistics," p. 939]

TYPE	1929		1927		1925		1919		1914		PER CENT DISTRIBUTION OF RATED HORSEPOWER CAPACITY	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	1929	1919
Prime movers and electric motors driven by purchased energy, aggregate.....	69,750	<i>Horsepower</i> 7,532,530	57,496	<i>Horsepower</i> 6,781,058	51,393	<i>Horsepower</i> 6,143,927	31,096	<i>Horsepower</i> 5,399,574	13,572	<i>Horsepower</i> 3,925,869	100.0	100.0
Prime movers, total.....	5,189	5,082,616	5,347	4,864,332	6,151	4,693,218	8,039	4,656,273	7,202	3,722,064	67.5	86.2
Steam, total.....	4,884	4,480,885	5,053	4,304,687	5,807	4,116,033	7,718	4,106,373	6,855	3,440,693	59.6	76.0
Engines.....	3,743	2,431,480	4,057	2,510,947	4,772	2,776,315	6,796	3,243,347	(1)	(1)	32.3	60.1
Turbines.....	1,141	2,055,425	990	1,793,740	1,035	1,339,718	922	863,026	(1)	(1)	27.3	16.0
Internal-combustion engines.....	271	589,686	270	557,295	319	574,447	278	540,488	227	267,789	7.8	10.0
Water wheels and water turbines.....	34	6,045	24	2,350	25	2,738	43	9,412	120	13,582	0.1	0.1
Electric motors driven by purchased energy.....	64,561	2,449,914	52,149	1,916,726	45,242	1,450,709	23,057	743,301	6,370	203,805	32.5	13.8
Electric motors, total.....	170,171	6,322,815	147,336	5,229,206	128,510	4,143,914	92,630	2,593,150	50,968	1,420,297	100.0	100.0
Driven by purchased energy.....	64,561	2,449,914	52,149	1,916,726	45,242	1,450,709	23,057	743,301	6,370	203,805	38.7	28.7
Driven by energy generated in establishments reporting <sup>2</sup> .....	105,610	3,872,901	95,187	3,312,480	83,268	2,693,205	69,573	1,849,849	44,598	1,216,492	61.3	71.3
Electric generators.....	888	<i>Kilowatts</i> 1,608,881	996	<i>Kilowatts</i> 1,497,374	1,091	<i>Kilowatts</i> 1,274,856	(3)	(3)	(3)	(3)	-----	-----
Electric energy purchased <sup>4</sup> .....	-----	<i>Kilowatt-hours</i> 3,540,616,682	-----	(5)	-----	(5)	-----	(5)	-----	(5)	-----	-----

<sup>1</sup> Not called for separately on schedule.

<sup>2</sup> This item covers (1) energy generated and consumed in the same plants; (2) energy generated in power plants attached to blast furnaces and consumed in steel works and rolling mills operated under the same ownership; (3) energy generated in power plants attached to steel works and rolling mills and consumed in blast furnaces under the same ownership; (4) energy generated in separate power plants operated primarily for the purpose of supplying energy to steel works and blast furnaces operated under the same ownership, and consumed in such works and furnaces.

<sup>3</sup> Not called for on schedule.

<sup>4</sup> This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

<sup>5</sup> Data incomplete.

**TABLE 5.—BLAST FURNACES AND STEEL WORKS AND ROLLING MILLS—COMBINED SUMMARY FOR PRIME MOVERS AND ELECTRIC MOTORS RUN BY PURCHASED ENERGY, BY STATES: 1929**

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups]

STATE	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			STATE	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT		
	Total	Prime movers	Motors run by purchased energy		Total	Prime movers	Motors run by purchased energy
Total.....	7,532,530	5,082,616	2,449,914	Pennsylvania.....	2,597,522	1,990,017	607,505
Alabama.....	244,414	192,362	52,052	Washington.....	12,169	-----	12,169
California.....	73,960	100	73,860	West Virginia.....	163,830	125,575	38,255
Illinois.....	532,068	347,356	184,712	Wisconsin.....	49,224	17,740	31,484
Indiana.....	717,951	472,886	245,065	Groups of States:	-----	-----	-----
Kentucky.....	98,008	19,902	78,106	Colo., Iowa, Minn., Nebr., Okla., Tex., and Utah.....	101,648	86,360	15,288
Louisiana.....	976	-----	976	Conn., Me., Mass., and R. I.....	100,269	44,660	55,609
Michigan.....	116,067	90,660	25,507	Del., Ga., Md., Tenn., and Va.....	247,255	181,540	65,715
Missouri.....	45,122	5,490	39,632				
New Jersey.....	83,290	36,263	47,027				
New York.....	556,343	193,963	362,380				
Ohio.....	1,791,330	1,277,842	513,488				
Oregon.....	1,084	-----	1,084				

## BLAST FURNACES

**Description of the industry.**—This classification covers the manufacture, from ore and scrap, of pig iron, ferro-alloys—spiegeleisen, ferromanganese, ferrophosphorus, ferrosilicon, etc.—and castings made direct from the furnace. (The manufacture of electric ferro-alloys is included in the "Chemicals" industry.) In many cases a single establishment operates both blast furnaces and steel works, but, as already explained ("Relation of the industries," p. 939), the statistics for such establishments have been distributed so as to show figures for the blast-furnace operations separately.

**Ferro-alloys.**—At the censuses for 1914 and earlier years the classification was the same as at those for 1921 and subsequent years, but for 1919 the manufacture of ferro-alloys (blast-furnace and electric) was treated as a separate industry, and for this reason the statistics for 1919 are not strictly comparable with those for other years. The statement below gives, for 1919, a combined summary for the blast-furnace industry and the blast-furnace branch of the ferro-alloys industry as then classified. These figures are comparable with those for all other years covered by Table 1. The total production of ferro-alloys, by kind, in blast furnaces and in electric furnaces is shown, for 1929, 1927, and 1925, in Table 10, page 947.

**Charcoal furnaces (Tables 2 and 5).**—The production of charcoal iron was at one time the most important

branch of the industry, and in 1849 the amount of charcoal pig iron smelted was nearly equal to the production by all other fuels combined. Since that year, however, the relative importance of charcoal iron has decreased, until in 1929 it contributed less than one-third of 1 per cent of the total pig-iron output of blast furnaces.

**Active and idle furnaces (Tables 12 and 13).**—As explained in the headnotes to Tables 12 and 13, the statistics as to number and capacity of blast furnaces refer to all furnaces, including idle ones, in plants in which at least a part of the furnaces were in operation at some time within the census year. They do not, however, include data for plants in which no furnaces were in operation at any time within the census year. Thus the numbers of furnaces shown are somewhat larger than the numbers of active furnaces but are somewhat smaller than the total numbers of all furnaces, both active and idle, in existence.

*Summary for blast furnaces, including those classified in the ferro-alloys industry: 1919*

Number of establishments.....	209
Wage earners (average for the year).....	43, 296
Wages.....	\$76, 445, 616
Paid for contract work.....	\$692, 293
Cost of materials, supplies, fuel, and power.....	\$644, 021, 264
Value of products.....	\$824, 383, 203
Value added by manufacture.....	\$180, 361, 939

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[For power-equipment statistics, see Table 4, p. 941]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>
1929.....	105	24, 900	\$41, 958, 569	\$610, 293, 691	\$771, 425, 464	\$101, 131, 773
1927.....	116	27, 058	44, 268, 469	579, 555, 036	708, 904, 238	129, 340, 202
1925.....	122	29, 188	45, 312, 168	617, 416, 880	765, 286, 229	147, 869, 349
1923.....	169	30, 712	58, 985, 384	827, 629, 065	1, 007, 613, 340	179, 983, 676
1921.....	134	18, 698	29, 369, 885	361, 049, 516	419, 771, 244	58, 721, 728
1919.....	185	41, 660	73, 769, 305	621, 250, 466	794, 466, 558	173, 180, 062
1914.....	160	29, 356	22, 780, 626	264, 580, 060	317, 653, 983	53, 073, 923
1909.....	208	38, 429	24, 606, 530	320, 637, 889	391, 429, 283	70, 791, 394
1904.....	190	35, 076	18, 934, 513	178, 941, 018	231, 822, 707	62, 880, 789
1899.....	223	39, 241	18, 484, 400	131, 503, 655	206, 756, 557	75, 252, 992
PER CENT OF INCREASE OR DECREASE (—)						
1927-1929.....	-9.5	-10.7	-5.2	5.3	8.8	24.6
1925-1927.....	-4.9	-4.2	-2.3	-6.1	-7.4	-12.5
1923-1925.....	-27.8	-20.6	-23.1	-25.4	-24.0	-17.8
1921-1923.....	20.1	96.3	100.7	129.2	140.0	206.5
1919-1921.....	-31.3	-65.1	-60.2	-41.9	-47.2	-66.1
1910-1929.....	-46.2	-40.1	-43.1	-1.8	-2.9	-7.0
1900-1919.....	-6.3	8.4	109.8	93.8	103.0	144.6
1899-1909.....	-0.7	-2.1	33.1	143.8	89.3	-5.9

<sup>1</sup> The figures for all census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.

<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>3</sup> The 1925 items for wage earners and wages are not strictly comparable with those for earlier years, for the reason that some of the blast-furnace operators failed to include in their reports for 1925 data in regard to wage earners employed in refining blast furnaces, whereas data for such wage earners are included in the figures for other years.

<sup>4</sup> See "Ferro-alloys," above.

# BLAST FURNACES

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**TABLE 2.—SUMMARY FOR BLAST FURNACES PRODUCING CHARCOAL IRON, FOR THE UNITED STATES: 1899 TO 1929**

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products <sup>1</sup>	Value added by manufacture <sup>2</sup>	Horsepower
1929	5	300	\$344,027	\$2,147,523	\$2,989,223	\$841,700	1,820
1927	8	437	481,895	3,429,809	4,139,591	709,782	4,293
1925	8	413	459,083	4,286,674	5,210,030	923,356	5,089
1923	14	687	758,423	6,627,306	7,738,427	1,111,121	7,007
1921	15	457	418,748	2,963,157	3,052,998	89,841	( <sup>3</sup> )
1919	19	1,440	1,797,007	9,152,805	11,587,066	2,434,261	9,458
1909	26	1,506	917,521	5,609,250	7,815,275	2,206,025	( <sup>4</sup> )
1899	31	1,506	546,358	3,216,895	5,277,870	2,060,975	( <sup>5</sup> )
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	( <sup>6</sup> )	-31.4	-28.6	-37.4	-27.8	18.6	-57.6
1925-1927	( <sup>6</sup> )	5.8	5.0	-20.0	-20.5	-23.1	-15.6
1923-1925	( <sup>6</sup> )	-37.1	-39.5	-35.3	-32.7	-16.9	-27.4
1921-1923	( <sup>6</sup> )	43.8	81.1	133.7	153.5	1,136.8	-----
1919-1921	( <sup>6</sup> )	-68.3	-76.7	-67.6	-73.7	-96.3	-----
1919-1929	( <sup>6</sup> )	-79.1	-80.9	-76.5	-74.2	-65.4	-80.8
1909-1919	( <sup>6</sup> )	-4.4	95.9	63.2	48.3	10.3	-----
1899-1909	( <sup>6</sup> )	0.0	67.9	74.3	48.1	7.0	-----

<sup>1</sup> The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.  
<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>3</sup> Not called for on schedule.  
<sup>4</sup> No comparable data available for 1914 and 1904.  
<sup>5</sup> No data.  
<sup>6</sup> Per cent not computed where base is less than 100.

**TABLE 3.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919**

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Certain of the States for which statistics are given in combination with those for others reported larger values of products than some of the States shown separately. For power-equipment statistics, see Table 4, p. 3]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
							Total	Materials	Fuel and purchased energy		
United States	1929	105	2,416	24,960	\$6,846,369	\$41,958,569	\$610,293,691	\$416,621,821	\$193,671,870	\$771,425,464	\$161,131,773
	1927	116	2,556	27,958	7,335,957	44,258,499	579,555,036	381,622,775	197,932,261	708,904,238	129,349,202
	1919	195	5,255	41,660	13,435,048	73,769,395	621,286,496	385,662,843	235,623,653	704,466,558	173,180,062
Individual States:											
Alabama	1929	10	201	2,398	428,941	2,897,066	23,824,541	16,141,718	7,682,823	35,884,541	12,080,000
	1927	12	226	4,157	620,270	4,574,023	35,558,188	26,028,131	9,530,057	49,455,982	13,897,794
	1919	21	570	6,214	1,361,147	7,177,159	44,871,012	24,302,536	20,568,476	87,018,105	12,147,093
Illinois	1929	6	355	2,547	921,249	4,224,127	63,557,942	40,401,502	23,156,440	82,556,913	19,008,971
	1927	6	365	2,516	904,623	4,085,482	54,613,971	32,895,022	21,718,949	70,943,000	16,329,029
	1919	5	307	2,129	779,733	3,846,614	51,526,758	30,839,824	20,686,934	64,762,411	13,235,653
Indiana	1929	3	136	1,574	414,902	2,609,147	56,240,086	36,297,328	19,942,758	74,180,193	17,940,107
	1927	3	139	1,512	378,264	2,351,469	50,793,954	30,249,635	20,454,319	68,506,841	17,802,887
Michigan	1929	6	66	857	235,858	1,502,103	8,897,285	6,156,577	3,740,708	14,420,760	4,523,475
	1927	8	81	1,069	240,822	1,635,796	12,759,549	6,058,935	6,700,614	15,798,037	3,038,486
	1919	11	102	1,101	213,369	1,719,580	10,228,421	4,904,869	5,393,532	13,533,739	3,236,318
New York	1929	8	121	1,557	419,489	2,776,543	35,273,287	21,255,773	14,517,514	45,914,088	10,140,801
	1927	10	114	1,687	390,170	2,959,358	34,640,104	19,410,179	15,229,925	42,840,789	8,200,065
	1919	9	152	2,210	586,722	4,019,818	40,311,032	21,699,130	18,311,922	51,601,999	11,299,947
Ohio	1929	26	601	5,880	1,734,970	11,143,535	138,160,623	96,454,367	41,694,156	175,084,126	38,933,603
	1927	28	596	6,496	1,781,891	11,553,616	131,089,582	88,061,013	43,627,069	159,719,263	28,029,671
	1919	42	1,282	9,793	2,906,928	20,223,931	137,689,107	88,780,004	48,906,103	179,233,435	41,547,328
Pennsylvania	1929	30	720	8,186	2,082,767	13,918,094	235,043,125	168,547,851	66,495,274	280,711,528	45,668,403
	1927	33	825	8,330	2,486,825	14,018,331	214,516,869	150,015,303	64,501,566	244,501,253	29,984,384
	1919	58	2,009	14,619	5,472,626	27,318,410	244,960,133	162,977,265	81,982,865	311,080,081	66,119,948
Tennessee	1929	5	27	450	74,551	338,412	2,201,778	1,208,097	993,681	3,100,771	898,963
	1927	4	40	339	67,748	347,824	2,512,427	1,407,439	1,104,988	3,537,401	1,024,074
	1919	8	81	884	216,783	882,034	4,566,316	1,969,767	2,596,559	6,217,593	1,651,277
Groups of States:											
Colo., 1 est.; Minn., 2;											
Utah, 1	1929	4	88	460	230,729	687,940	14,188,702	9,046,223	5,112,479	18,445,898	4,287,196
Va., 2 est.; W. Va., 2	1929	4	40	388	97,831	681,822	11,181,964	9,077,606	2,054,358	13,376,038	2,244,074
Other States (Ky., 1 est.;											
Md., 1; Mass., 1)	1929	3	61	663	205,082	1,178,780	20,314,458	12,034,779	8,279,679	27,740,608	7,426,150
States not separately reported	1927	12	170	1,852	456,344	2,729,571	42,560,392	27,496,218	15,064,174	53,601,702	11,041,310
	1919	41	772	5,710	1,897,740	8,581,449	87,066,697	49,889,458	37,177,239	111,019,195	23,952,498

<sup>1</sup> Not including 41 proprietors and firm members reported for 1919. None were reported for 1929 or 1927. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 27,376; 1927, 30,514; 1919, 46,956.  
<sup>2</sup> The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.  
<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.  
<sup>4</sup> The Alabama wage-earner figure for 1927 includes data for a considerable number of wage earners engaged in rebuilding and repairing furnaces, whereas practically all the wage earners reported for 1929 for this State were engaged in the production of pig iron. Furthermore, the replacement of obsolete equipment by new and larger furnaces raised the ratio of production per wage earner for 1929.  
<sup>5</sup> The figures for 1927 and 1919 are not comparable with those for 1929 because of the fact that for 1929 the cost of fuel used in operating a large central power station was apportioned among the several industries using the electric energy, whereas for previous census years the cost of fuel was not thus distributed.  
<sup>6</sup> Colorado, 1 establishment; Kentucky, 1; Maryland, 1; Massachusetts, 1; Minnesota, 2; Utah, 1; Virginia, 2; West Virginia, 2; and Wisconsin, 1.  
<sup>7</sup> Colorado, 1 establishment; Connecticut, 1; Indiana, 3; Kentucky, 4; Maryland, 2; Massachusetts, 1; Minnesota, 2; Missouri, 3; New Jersey, 3; Texas, 1; Virginia, 12; Washington, 1; West Virginia, 4; and Wisconsin, 3.

## CENSUS OF MANUFACTURES: 1929

TABLE 4.—DETAILED STATISTICS OF PRODUCTION, FOR THE UNITED STATES AND FOR SELECTED STATES: 1929

[The figures refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

PRODUCT	United States	Alabama	Illinois and Indiana	New York	Ohio	Pennsylvania
Aggregate value.....	\$771,425,464	\$35,884,541	\$156,747,106	\$45,914,088	\$175,084,126	\$280,711,628
Pig iron (including ferro-alloys):						
Total tons (2,240 pounds).....	42,486,758	2,705,923	8,035,664	2,707,315	9,797,488	14,635,823
Total value.....	\$744,588,193	\$34,562,105	\$150,572,489	\$44,698,710	\$160,488,158	\$274,984,467
For consumption in other plants of same companies—						
Tons.....	32,582,807	1,364,492	7,239,487	1,445,580	7,491,238	11,062,312
Assigned value.....	\$543,722,095	\$14,888,331	\$124,215,739	\$20,930,677	\$124,118,299	\$210,116,383
For sale—						
Tons.....	9,903,951	1,341,431	1,396,177	1,261,735	2,306,250	2,573,511
Value.....	\$200,866,098	\$19,673,774	\$26,356,750	\$23,768,039	\$42,369,859	\$64,868,084
Blast-furnace gas used as fuel, coal equivalent, total tons (2,000 pounds).....	13,927,228	1,083,847	3,792,910	520,138	2,972,271	4,081,459
Consumed by blast-furnace departments, tons.	8,190,550	721,252	2,373,634	298,595	1,566,227	2,728,998
Transferred to plants other than blast furnaces—						
Tons.....	5,736,678	362,595	1,419,276	227,543	1,406,044	1,352,466
Assigned value.....	\$19,019,252	\$883,823	\$5,456,122	\$1,008,357	\$4,474,076	\$4,116,781
Slag (granulated; slag for roofing, paving, etc.).....	\$2,462,419	\$165,788	\$183,725	\$184,849	\$1,671,373	\$167,785
Other products, value, and receipts from sale of electric energy.....	\$5,355,600	\$272,625	\$534,770	\$22,166	\$2,550,514	\$1,442,495
Pig iron (including ferro-alloys made in blast-furnace industry), classified by smelting fuel:						
Coke—						
Total tons (2,240 pounds).....	142,361,895	2,705,923	8,035,664	2,707,315	9,797,488	14,635,823
For consumption.....	32,582,727	1,364,492	7,239,487	1,445,580	7,491,238	11,062,312
For sale.....	10,779,168	1,341,431	1,396,177	1,261,735	2,306,250	2,573,511
Value.....	\$741,682,459	\$34,562,105	\$150,572,489	\$44,698,710	\$160,488,158	\$274,984,467
Charcoal—						
Tons (2,240 pounds).....	124,863					
Value.....	\$2,955,734					
Pig iron (including ferro-alloys made in blast-furnace industry), classified by grade, tons (2,240 pounds):						
Basic, total.....	25,065,384	1,315,578	5,784,047	1,285,684	4,092,913	9,270,749
For consumption.....	22,384,938	( <sup>1</sup> )	5,323,171	1,136,438	4,164,982	8,215,856
For sale.....	2,680,446	( <sup>1</sup> )	461,476	149,246	927,931	1,055,893
Bessemer, total.....	9,463,782		1,836,821	( <sup>1</sup> )	3,109,404	3,770,160
For consumption.....	9,131,242		1,814,029	( <sup>1</sup> )	3,086,160	3,485,875
For sale.....	332,540		22,792		23,244	284,285
Foundry, total.....	4,358,228	1,274,388	389,050	727,002	656,132	656,952
For consumption.....	395,639	( <sup>1</sup> )	( <sup>1</sup> )	74,967	12,095	( <sup>1</sup> )
For sale.....	3,962,589	( <sup>1</sup> )	( <sup>1</sup> )	652,035	644,037	( <sup>1</sup> )
Malleable, total.....	2,349,937		603,078	326,104	900,211	128,878
For consumption.....	274,325		( <sup>1</sup> )	( <sup>1</sup> )	212,303	
For sale.....	2,075,612		( <sup>1</sup> )	( <sup>1</sup> )	687,908	128,878
Low-phosphorus—						
For consumption and for sale.....	370,863	( <sup>1</sup> )		( <sup>1</sup> )		164,563
Forge or mill—						
For consumption and for sale.....	152,063	( <sup>1</sup> )			32,187	106,692
White, mottled, and miscellaneous—						
For consumption and for sale.....	39,429	( <sup>1</sup> )	6,712			
Ferro-alloys made in blast-furnace industry, total.....	648,132	( <sup>1</sup> )		( <sup>1</sup> )	( <sup>1</sup> )	433,724
For consumption.....	122,890	( <sup>1</sup> )				( <sup>1</sup> )
For sale.....	525,242	( <sup>1</sup> )		( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Direct castings—						
For consumption.....	38,940	2,027	6,036	360	15,698	4,105
Pig iron (including ferro-alloys made in blast-furnace industry), classified by method of delivery or casting, tons (2,240 pounds):						
Delivered molten.....	20,463,804	( <sup>1</sup> )	6,775,900	1,271,888	6,739,239	10,863,125
Machine-cast.....	11,332,479	537,877	1,853,728	1,434,885	3,027,277	3,190,235
Sand-cast.....	1,179,181	831,763		( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Chill-cast.....	472,354	( <sup>1</sup> )				( <sup>1</sup> )
Direct castings.....	38,940	2,027	6,036	360	( <sup>1</sup> )	4,105

<sup>1</sup> Includes data for a small tonnage produced by a combination of coke and coal.<sup>2</sup> Produced in Michigan and Tennessee.<sup>3</sup> Included in total for United States but not shown separately, in order to avoid disclosing production by individual establishments.

# BLAST FURNACES

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**TABLE 5.—PIG IRON—PRODUCTION, BY KIND OF SMELTING FUEL, FOR THE UNITED STATES: 1923 TO 1929**

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products. No data are included for ferro-alloys produced by the electric-furnace process]

	1929	1927	1925	1923
Pig iron:				
Total tons (2,240 pounds).....	42,486,758	36,230,420	36,495,562	40,162,855
Total value.....	\$744,588,153	\$688,641,808	\$744,733,899	\$984,983,493
Average per ton.....	\$17.53	\$19.01	\$20.41	\$24.52
Classified according to smelting fuel:				
Coke <sup>1</sup> —				
Tons.....	42,861,895	36,062,847	36,299,824	39,908,639
Value.....	\$741,632,459	\$684,555,918	\$739,584,978	\$977,263,466
Average per ton.....	\$17.51	\$18.98	\$20.37	\$24.49
Charcoal—				
Tons.....	124,863	167,573	195,738	254,216
Value.....	\$2,955,734	\$4,085,895	\$5,148,921	\$7,730,027
Average per ton.....	\$23.67	\$24.38	\$26.31	\$30.41

<sup>1</sup> Includes data for a small tonnage produced by a combination of coke and coal.

**TABLE 6.—PIG IRON—PRODUCTION, FOR CONSUMPTION AND FOR SALE, FOR SELECTED STATES: 1929 AND 1927**

[The figures refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products. No data are included for ferro-alloys produced by the electric-furnace process]

	NUMBER OF ESTABLISHMENTS				PRODUCTION (tons, 2,240 pounds)				Per cent of total	
	Total	Producing for consumption only	Producing for both consumption and sale	Producing for sale only	Total	For consumption	For sale		For consumption	For sale
							By establishments producing for both consumption and sale	By establishments producing for sale only		
United States:										
1929.....	105	17	52	36	42,486,758	32,582,807	5,117,957	4,785,994	76.7	23.3
1927.....	116	16	53	47	36,230,420	26,855,811	4,184,150	5,190,459	74.1	25.9
Illinois and Indiana <sup>1</sup> —										
1929.....	9	2	7	—	8,635,664	7,239,487	1,394,177	—	83.8	16.2
1927.....	9	2	6	1	7,039,810	5,813,650	(?)	(?)	82.6	—
Ohio—										
1929.....	26	6	12	8	9,797,488	7,491,238	1,076,755	1,229,495	76.5	23.5
1927.....	28	7	11	10	8,592,249	6,441,477	743,357	1,317,415	75.8	24.2
Pennsylvania—										
1929.....	30	5	15	10	14,535,823	11,962,312	1,273,049	1,300,462	82.3	17.7
1927.....	33	3	18	12	11,787,957	9,494,189	1,306,340	994,428	80.5	19.5
Other States—										
1929.....	40	4	18	18	9,517,783	5,889,770	1,371,976	2,256,037	61.9	38.1
1927.....	46	4	18	24	8,900,398	5,116,495	1,227,503	2,556,400	57.5	42.5

<sup>1</sup> Combined to avoid disclosing production of individual establishments.

<sup>2</sup> Included in total but not shown separately, in order to avoid disclosing production of individual establishments.

**TABLE 7.—PIG IRON AND FERRO-ALLOYS—PRODUCTION IN THE BLAST-FURNACE INDUSTRY, BY GRADES, FOR THE UNITED STATES: 1929, 1927, 1925, AND 1923**

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

GRADE	TONS (2,240 pounds)				PER CENT DISTRIBUTION				PER CENT OF INCREASE OR DECREASE (—)		
	1929	1927	1925	1923	1929	1927	1925	1923	1927-1929	1925-1927	1923-1925
Pig iron and blast-furnace ferro-alloys, <sup>1</sup> total.....	42,486,758	36,230,420	36,495,562	40,162,855	100.0	100.0	100.0	100.0	17.3	-0.7	-9.1
Basic.....	25,065,384	20,163,521	28,780,490	30,604,173	59.0	55.7	78.9	76.2	24.3	-2.5	-6.0
Bessemer.....	9,463,782	7,906,699	—	—	22.3	21.8	—	—	19.7	—	—
Foundry.....	4,358,228	5,380,296	5,182,279	6,791,418	10.2	14.9	14.2	16.9	-19.1	3.8	-23.7
Malleable.....	2,349,937	1,757,382	1,575,057	1,552,682	5.5	4.8	4.3	3.9	33.7	11.6	1.4
Low-phosphorus (below 0.4 per cent).....	370,863	361,954	269,822	310,888	.9	1.0	.8	.8	2.5	34.1	-13.2
Forge or mill.....	152,063	144,558	233,634	278,682	.4	.4	.6	.7	5.2	-38.1	-16.2
White, mottled, and miscellaneous.....	39,429	—	—	—	.1	—	—	—	—	—	—
Ferro-alloys <sup>1</sup> .....	648,132	481,141	409,783	549,952	1.5	1.3	1.1	1.4	42.9	17.4	-25.5
Direct castings.....	38,940	34,899	44,497	75,060	.1	.1	.1	.2	11.6	-21.6	-40.7

<sup>1</sup> Not including ferro-alloys made in electric furnaces. For total production of ferro-alloys by blast furnaces and electric furnaces, see Table 10, p. 947.



## CENSUS OF MANUFACTURES: 1929

TABLE 8.—PIG IRON—PRODUCTION, BY METHOD OF DELIVERY OR CASTING, FOR THE UNITED STATES AND FOR PENNSYLVANIA AND OHIO: 1929, 1927, 1925, AND 1923

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products. No data are included for ferro-alloys produced by the electric-furnace process]

METHOD AND STATE	NUMBER OF ESTABLISHMENTS				PRODUCTION (ton, 2,240 pounds)				PER CENT DISTRIBUTION			
	1929	1927	1925	1923	1929	1927	1925	1923	1929	1927	1925	1923
United States, total.....	105	116	122	109	42,486,758	36,230,420	36,495,562	40,162,855	100.0	100.0	100.0	100.0
Delivered molten.....	58	58	58	58	29,463,504	22,997,927	23,689,189	24,660,813	69.3	63.5	64.9	61.4
Machine-cast.....	88	90	90	101	11,332,479	11,200,501	10,476,720	11,625,650	26.7	31.2	28.7	28.9
Sand-cast.....	17	25	23	73	1,179,181	1,286,016	1,731,011	3,397,693	2.8	3.6	4.8	8.5
Chill-cast.....	11	12	15	15	472,354	620,477	554,145	403,639	1.1	1.7	1.5	1.0
Direct castings.....	35	33	32	42	38,940	34,899	44,497	75,060	.1	.1	.1	.2
Pennsylvania, total.....	30	33	36	53	14,535,823	11,787,957	12,450,103	14,739,162	100.0	100.0	100.0	100.0
Delivered molten.....	18	19	21	21	10,863,125	8,399,247	9,105,000	10,106,955	74.7	71.3	73.1	68.6
Machine-cast.....	28	31	31	41	3,190,235	3,122,549	3,010,506	4,008,225	22.0	26.5	24.2	27.2
Sand and chill cast and direct castings <sup>1</sup> .....	13	15	16	29	482,463	266,161	334,597	623,982	3.3	2.2	2.7	4.2
Ohio, total.....	26	28	27	38	9,797,488	8,502,249	8,866,066	9,370,186	100.0	100.0	100.0	100.0
Delivered molten.....	18	18	17	16	6,739,239	5,247,140	5,729,822	5,736,023	68.8	61.7	64.6	61.2
Machine-cast.....	26	26	25	27	3,027,277	3,145,509	3,029,482	3,123,017	30.9	37.0	34.2	33.3
Sand and chill cast and direct castings <sup>1</sup> .....	9	9	9	20	30,972	109,600	106,762	511,146	.3	1.3	1.2	5.5
Other States.....	49	55	59	78	18,153,447	15,940,214	15,179,393	16,053,507	100.0	100.0	100.0	100.0
Delivered molten.....	22	21	20	21	11,801,440	9,351,540	8,854,367	8,817,835	65.3	58.7	58.4	54.9
Machine-cast.....	34	33	34	33	5,114,967	5,022,443	4,436,732	4,494,408	28.2	31.5	20.2	28.0
Sand and chill cast and direct castings <sup>1</sup> .....	33	35	37	59	1,777,040	1,566,231	1,888,294	2,741,264	6.5	9.8	12.4	17.1

<sup>1</sup> Combined to avoid disclosing production of individual establishments.

TABLE 9.—PIG IRON—PRODUCTION, BY STATES: 1919 TO 1929

The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products. No data are included for ferro-alloys produced by the electric-furnace process]

STATE	Cen- sus year	Number of active fur- naces	PRODUCTION			Value	STATE	Cen- sus year	Number of active fur- naces	PRODUCTION			Value
			Tons (2,240 pounds)	Per cent of total	Rank <sup>1</sup>					Tons (2,240 pounds)	Per cent of total	Rank <sup>1</sup>	
United States.....	1929	244	42,486,758	100.0	-----	\$744,588,193	New York.....	1929	17	2,707,315	6.4	5	\$44,098,716
	1927	255	36,230,420	100.0	-----	688,641,808		1927	20	2,388,400	6.6	6	41,238,557
	1925	285	36,495,562	100.0	-----	744,733,899		1925	20	2,087,896	5.7	6	37,987,217
	1923	350	40,162,855	100.0	-----	984,983,493		1923	24	2,652,412	6.6	6	61,649,356
	1921	251	16,618,493	100.0	-----	408,581,533		1921	16	866,748	5.2	6	20,638,223
	1919	385	30,543,167	100.0	-----	785,960,412		1919	21	1,890,994	6.2	6	50,212,451
Pennsylvania.....	1929	86	14,535,823	84.2	1	274,984,467	Alabama.....	1929	21	2,705,923	6.4	6	34,562,105
	1927	84	11,787,957	32.5	1	230,415,692		1927	25	2,778,302	7.7	5	48,702,154
	1925	100	12,450,103	84.1	1	268,864,529		1925	29	2,830,016	7.8	5	53,545,229
	1923	127	14,739,162	36.7	1	367,539,202		1923	32	2,791,976	7.0	5	62,988,991
	1921	91	6,261,998	37.7	1	161,336,441		1921	23	1,210,590	7.3	5	28,482,715
	1919	140	12,014,112	39.3	1	314,253,542		1919	39	2,111,381	6.0	5	54,771,823
Ohio.....	1929	49	9,797,488	23.1	2	166,488,158	Michigan.....	1929	8	794,526	1.9	8	13,670,893
	1927	52	8,502,249	23.5	2	154,949,757		1927	10	751,518	2.1	8	14,075,847
	1925	67	8,866,066	24.3	2	174,153,680		1925	10	767,142	2.1	8	16,983,195
	1923	69	9,370,186	23.3	2	227,492,537		1923	13	794,050	2.0	7	20,608,124
	1921	53	3,799,643	22.9	2	90,983,785		1921	9	219,168	1.3	11	6,647,847
	1919	77	7,073,337	23.2	2	170,592,090		1919	12	420,301	1.4	7	13,512,966
Illinois.....	1929	21	4,357,905	10.2	3	70,191,226	Tennessee.....	1929	5	126,863	.3	15	3,099,453
	1927	21	3,588,813	9.9	3	68,457,394		1927	4	127,068	.3	12	3,536,051
	1925	23	3,604,255	9.9	3	74,135,025		1925	4	104,261	.2	15	2,646,409
	1923	23	3,830,055	9.6	3	97,714,396		1923	10	232,821	.6	14	6,647,530
	1921	17	1,612,620	9.7	4	38,572,937		1921	4	13,718	.1	17	569,050
	1919	24	2,528,888	8.3	3	61,734,928		1919	8	182,033	.6	14	6,150,705
Indiana.....	1929	16	4,277,759	10.0	4	71,381,263	Other States.....	1929	21	3,183,156	7.5	-----	56,511,942
	1927	17	3,451,003	9.5	4	65,649,319		1927	22	2,855,020	7.9	-----	51,717,087
	1925	17	3,353,217	9.2	4	64,716,341		1925	25	2,432,606	6.7	-----	51,702,274
	1923	16	3,022,227	7.5	4	70,736,528		1923	30	2,720,957	6.8	-----	69,609,529
	1921	13	1,650,733	9.9	3	30,100,354		1921	25	983,269	5.9	-----	25,258,183
	1919	16	2,292,562	7.5	4	51,591,467		1919	48	2,029,559	6.7	-----	57,139,838

<sup>1</sup> Statistics for Maryland, West Virginia, Colorado, Minnesota, Kentucky, Massachusetts, Utah, and Virginia, which ranked in tonnage seventh, ninth, tenth, eleventh, twelfth, thirteenth, fourteenth, and sixteenth, respectively, for 1929, can not be given without disclosing approximations of the production of individual establishments.<sup>2</sup> Colorado, 4 furnaces; Kentucky, 2; Maryland, 5; Massachusetts, 1; Minnesota, 3; Utah, 1; Virginia, 2; West Virginia, 3. (See footnote 1.)

BLAST FURNACES

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TABLE 10.—FERRO-ALLOYS—PRODUCTION IN BLAST FURNACES AND ELECTRIC FURNACES, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1929, 1927, AND 1925

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products. See "Ferro-alloys, p. 942]

KIND	NUMBER OF ESTABLISHMENTS			1929		1927		1925	
	1929	1927	1925	Tons	Value	Tons	Value	Tons	Value
				(2,240 pounds)		(2,240 pounds)		(2,240 pounds)	
Total.....	31	28	31	868,543	\$70,261,266	678,324	\$50,556,637	564,152	\$47,697,104
Produced for sale.....	30	28	31	745,653	60,245,126	583,197	41,645,742	445,500	35,149,715
Produced for consumption in other plants of same company (assigned value).....	5	4	5	122,890	10,016,140	95,127	8,910,895	118,652	12,547,449
Ferro-alloys made in blast furnaces.....	12	12	12	648,132	41,605,819	502,652	33,507,587	430,098	32,441,673
Ferro-alloys made in electric furnaces.....	19	16	19	220,411	28,655,447	176,272	17,049,050	134,054	15,255,491
Ferromanganese and spiegeleisen.....	9	9	10	477,854	56,978,426	394,566	24,860,223	325,538	29,103,999
Ferrosilicon.....	12	8	10	328,065	15,712,522	241,358	11,280,625	202,253	9,038,734
Ferrochrome, ferrotungsten, and ferrovanadium.....	11	10	(1)	44,540	15,335,182	22,512	7,065,440		
Ferrophosphorus.....	4	6	(1)	12,170	1,312,025			36,361	9,554,431
Other ferro-alloys.....	3	6	6	5,884	925,111	19,888	2,322,349		

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

TABLE 11.—PRINCIPAL MATERIALS CONSUMED IN THE INDUSTRY, BY KIND, QUANTITY, AND COST, BY STATES: 1929

[The difference between the sum of the costs of the several kinds of materials shown in this table and the total cost of materials consumed as given in Tables 1 and 2 is due to the fact that this table covers only certain specified materials, whereas Tables 1 and 2 cover all materials. Figures are given for each State which can be shown separately without disclosing data for individual establishments. In some cases, however, certain of the States for which statistics are given in combination with those for others reported larger quantities and costs of materials than some of the States shown separately.]

KIND AND STATE	Estab-lish-ments	Quantity, tons (2,240 lbs.)	Cost	KIND AND STATE	Estab-lish-ments	Quantity, tons (2,240 lbs.)	Cost
Iron ore, total.....	1 104	76,062,195	\$354,193,484	Limestone, total.....	98	14,439,331	\$21,799,283
Ohio.....	26	16,355,819	78,143,631	Ohio.....	26	3,397,731	4,940,676
Pennsylvania.....	29	25,043,006	146,630,976	Pennsylvania.....	30	5,455,989	9,768,779
Ill., Ind., Mich., and Minn.....	17	17,878,065	73,218,646	Ill., Ind., Mich., and Minn.....	17	3,385,428	3,908,080
Md., Mass., N. Y., Va., and W. Va.....	14	8,382,252	35,167,147	Md., Mass., N. Y., Va., and W. Va.....	14	1,765,796	2,500,620
Other States (Ala., Colo., Ky., Tenn., and Utah).....	18	8,403,053	21,083,084	Other States (Ala., Colo., Ky., Tenn., and Utah).....	11	494,387	683,187
Iron and steel scrap and scale, total.....	82	5,673,176	32,744,377	Dolomite, total.....	37	1,416,714	1,828,627
Ohio.....	22	1,582,228	9,904,600	Ohio.....	9	368,367	582,058
Pennsylvania.....	25	1,908,098	9,353,521	Pennsylvania.....	12	490,989	600,158
Ill., Ind., Mich., and Minn.....	13	1,545,238	8,322,198	Ill., and Ind.....	5	83,414	121,535
Md., Mass., N. Y., W. Va.....	10	221,687	2,321,198	Other States (Ala., Colo., N. Y., Tenn. and Va.).....	11	483,944	524,876
Other States (Ala., Colo., Ky., Tenn.).....	12	435,925	2,812,554				
Coke, total.....	101	Ton (2,000 lbs.) 42,725,961	189,133,785				
Ohio.....	26	9,635,573	40,126,983				
Pennsylvania.....	30	15,002,994	65,689,238				
Ill., Ind., Mich., and Minn.....	14	8,500,334	46,752,310				
Md., Mass., N. Y., Va., and W. Va.....	14	4,960,873	22,944,904				
Other States (Ala., Colo., Ky., Tenn., and Utah).....	17	4,626,187	13,620,360				

<sup>1</sup> The difference between this total and the total number of establishments in the industry, 105, is due to the fact that 1 of the establishments covered by the industry total used manganeseiferous zinc residuum instead of iron ore.

CENSUS OF MANUFACTURES: 1929

TABLE 12.—BLAST FURNACES, REPORTED BY ACTIVE ESTABLISHMENTS—NUMBER, BY TONNAGE-CAPACITY GROUPS, BY STATES: 1929, 1927, 1925, AND 1923

[This table covers all furnaces, both active and idle, in plants in which any furnaces were operated during any part of the year. See "Active and idle furnaces," p. 942. Statistics are presented separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups.]

	Census year	TOTAL		DAILY CAPACITY IN TONS (2,240 POUNDS) OF PIG IRON					
		Number	Daily capacity, tons (2,240 lbs.)	Less than 200	200 to 299	300 to 399	400 to 499	500 to 599	600 and over
NUMBER									
United States.....	1929	273		18	14	18	39	52	132
	1927	292		18	20	34	48	75	97
	1925	310		25	28	44	51	115	47
	1923	368		51	52	58	55	139	13
CAPACITY									
	1929		148,274	2,177	3,377	6,091	16,926	27,311	192,392
	1927		142,016	1,910	4,805	11,367	20,830	39,037	64,067
	1925		136,086	3,104	6,702	14,540	22,408	59,964	29,368
	1923		141,555	5,776	12,487	19,221	24,042	72,132	7,897
NUMBER									
Individual States:									
Alabama.....	1929	24	9,131	1	4	5	10	2	12
	1927	27	8,410	3	9	7	6	2	
	1925	31	9,370	4	12	8	2	5	
	1923	36	10,466	6	10	6	2	6	
Illinois.....	1929	25	15,777		1		4	4	16
	1927	25	14,697		1		5	4	15
	1925	25	13,700		1	1	5	5	13
	1923	26	13,205	1	1	2	3	15	4
Indiana.....	1929	18	13,973						18
	1927	18	11,845					1	17
	1925	17	10,320					3	14
	1923	16	8,680					15	1
Michigan.....	1929	8	2,170	4			2	2	
	1927	10	2,345	6		1	1	2	
	1925	10	2,262	6		2		2	
	1923	13	2,514	9		1	1	2	
New Jersey.....	1929								
	1927								
	1925								
	1923	3	1,150	1				2	
New York.....	1929	20	10,635		1	2	5	4	18
	1927	24	10,850		2	7	4	7	4
	1925	24	9,696		1	10	4	9	
	1923	25	9,990		3	10	2	10	
Ohio.....	1929	54	31,665	1	1	2	7	10	133
	1927	60	31,663	3	1	6	9	14	27
	1925	60	28,988	3	1	8	10	26	12
	1923	70	29,440	6	5	12	12	31	4
Pennsylvania.....	1929	95	52,935	7	2	5	3	29	149
	1927	98	51,265	2	3	6	13	42	32
	1925	108	50,027	5	6	9	18	63	7
	1923	132	53,903	12	16	17	28	50	3
Tennessee.....	1929	6	760	4	2				
	1927	5	650	3					
	1925	5	635	5					
	1923	11	1,235	8	3				
Groups of States:									
Colo., Minn., Utah.....	1929	9	3,825		1	2	6		
	1927	9	3,775		1	2	6		
	1925	9	3,775		1	2	6		
	1923	8	2,750		1	5	2		
Ky., Md., Mass.....	1929	8	4,903			2	1	1	14
	1927	9	3,751			2	4	3	
	1925	9	3,500		2	1	4	2	
	1923	10	3,485	1	2	1	4	2	
Va., W. Va., Wis. <sup>1</sup> .....	1929	6	2,500	1	2		1		12
	1927	7	2,765	1	1	3			2
	1925	12	3,513	2	4	3	2		1
	1923	18	4,728	7	5	4	1		1

<sup>1</sup> The "600 and over" group, as reported for 1929, comprises the following subgroups:  
 United States.—600 to 699 tons, 70 furnaces, 44,233 tons daily capacity; 700 to 799 tons, 41 furnaces, 29,669 tons daily capacity; 800 to 899 tons, 11 furnaces, 9,074 tons, daily capacity; 900 to 999 tons, 7 furnaces, 6,396 tons daily capacity; 1,000 tons, 3 furnaces, 3,000 tons daily capacity.  
 Alabama.—600 to 699 tons, 2 furnaces.  
 Illinois.—600 to 699 tons, 6 furnaces; 700 to 799 tons, 6 furnaces; 800 to 899 tons, 3 furnaces; 900 to 999 tons, 1 furnace.  
 Indiana.—600 to 699 tons, 2 furnaces; 700 to 799 tons, 12 furnaces; 800 to 899 tons, 1 furnace; 900 to 999 tons, 1 furnace; 1,000 tons, 2 furnaces.  
 New York.—600 to 699 tons, 4 furnaces; 700 to 799 tons, 1 furnace; 800 to 899 tons, 3 furnaces.  
 Ohio.—600 to 699 tons, 23 furnaces; 700 to 799 tons, 8 furnaces; 800 to 899 tons, 1 furnace; 900 to 999 tons, none; 1,000 tons, 1 furnace.  
 Pennsylvania.—600 to 699 tons, 32 furnaces; 700 to 799 tons, 12 furnaces; 800 to 899 tons, 2 furnaces; 900 to 999 tons, none; 1,000 tons, none; 900 to 999 tons, 3 furnaces.  
 Kentucky, Maryland, and Massachusetts.—600 to 699 tons, none; 700 to 799 tons, 2 furnaces; 800 to 899 tons, none; 900 to 999 tons, 2 furnaces.  
 Virginia and West Virginia.—600 to 699 tons, 1 furnace; 700 to 799 tons, none; 800 to 899 tons, 1 furnace.  
<sup>2</sup> No active establishments reported for Wisconsin for 1929.

# BLAST FURNACES

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**TABLE 13.—DETAILED STATISTICS OF EQUIPMENT, FOR SELECTED STATES: 1929**

(This table covers all furnaces, both active and idle, in plants in which any furnaces were operated during any part of the year. (See "Active and idle furnaces," p. 942))

FURNACES IN ACTIVE ESTABLISHMENTS	United States	Alabama	Illinois and Indiana	New York	Ohio	Pennsylvania	FURNACES IN ACTIVE ESTABLISHMENTS	United States	Alabama	Illinois and Indiana	New York	Ohio	Pennsylvania
Completed furnaces—end of year:							Banked or out for relining at end of year (all coke): <sup>1</sup>						
Total number.....	273	24	43	20	54	95		Number.....	36	3	1	1	7
Total daily capacity, tons (2,240 pounds).....	148,274	9,131	29,750	10,635	31,665	52,935	Daily capacity, tons.....	19,670	1,078	621	450	4,316	12,290
Active within the year—							In course of construction at end of year (coke): <sup>1</sup>						
Total number.....	244	21	37	17	49	86		Number.....	2		1		
Total daily capacity, tons.....	133,982	8,446	26,129	8,985	28,975	48,000	Daily capacity, tons.....	1,500		600			
Coke—							New furnaces completed since 1927 (all coke): <sup>1</sup>						
Number.....	239	21	37	17	40	86		Number.....	9	1	1		1
Daily capacity, tons.....	133,582	8,446	26,129	8,985	28,975	48,000	Daily capacity, tons.....	5,025	400	755		270	2,400
Charcoal—							Abandoned or dismantled since 1927: <sup>1</sup>						
Number.....	5							Number.....	9	3		2	1
Daily capacity, tons.....	400						Daily capacity, tons.....	3,181	665		700	400	950
Idle throughout the year <sup>1</sup> (all coke)—													
Number.....	29	3	9	3	5	9							
Daily capacity, tons.....	14,292	686	3,621	1,650	2,690	4,935							

<sup>1</sup> Not including data for furnaces in plants in which no furnaces were in operation at any time within the year. (See headnote.)  
<sup>2</sup> Includes data for 2 furnaces out for rebuilding.  
<sup>3</sup> Included in total of 273.  
<sup>4</sup> Not included in total of 273.

**TABLE 14.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929**

(This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Percent minimum is of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
<b>United States:</b>														
1929.....	24,960	<b>24,029</b>	24,697	24,649	24,823	25,304	25,327	25,300	25,415	25,104	25,910	24,785	<i>23,271</i>	89.8
1925.....	29,188	<b>31,932</b>	32,421	32,094	30,906	29,051	27,303	27,235	<i>26,844</i>	27,117	27,928	28,443	28,881	82.8
1919.....	41,680	<b>51,467</b>	47,415	44,889	40,899	37,939	37,533	40,412	42,394	42,897	<b>39,028</b>	39,022	41,975	65.3
1914.....	29,356	<b>31,898</b>	31,869	32,813	<b>32,851</b>	31,733	30,782	29,921	29,000	27,757	26,407	<b>23,829</b>	23,912	71.0
1909.....	33,429	<b>34,765</b>	34,369	34,156	<i>33,453</i>	34,537	36,537	37,429	38,182	41,998	43,841	45,092	46,727	71.6
Alabama.....	2,398	<b>2,779</b>	2,605	2,656	2,617	2,355	2,289	2,364	2,419	<i>2,117</i>	2,308	2,141	2,120	76.2
Illinois.....	2,547	<b>2,452</b>	2,472	2,471	2,542	2,546	2,549	2,462	2,531	2,544	<b>2,692</b>	2,671	2,636	91.1
Indiana.....	1,574	<b>1,637</b>	1,649	1,573	1,560	1,515	1,515	1,512	1,598	1,554	1,588	1,588	<i>1,407</i>	84.4
Michigan.....	857	<b>801</b>	801	839	806	843	891	891	902	879	<b>825</b>	899	866	88.8
New York.....	1,557	<b>1,406</b>	1,470	1,532	1,596	1,652	1,629	1,653	1,639	1,623	1,629	1,624	<i>1,227</i>	74.2
Ohio.....	5,880	<b>5,834</b>	5,921	5,838	5,787	5,922	5,956	5,936	6,139	6,045	6,040	5,843	<b>5,229</b>	85.2
Pennsylvania.....	8,186	<b>8,311</b>	8,063	7,889	7,992	8,264	8,371	8,425	8,346	8,397	8,498	7,878	<b>7,799</b>	91.8
Tennessee.....	450	<b>423</b>	406	418	429	529	494	504	491	434	469	413	393	74.3

## STEEL WORKS AND ROLLING MILLS

**Description of the industry.**—This industry consists in the conversion of pig iron and scrap into steel and the rolling of iron and steel. In many cases the processes of conversion and rolling are performed in the same plants, and in such cases the value of products represents only the finished products. Some rolling mills, however, produce crude steel or partly rolled steel, which is used as a material by other rolling mills, and this causes some degree of duplication in the figures for value of products and cost of materials.

The amount of duplication in the total value of products for the industry can not be accurately determined, but it is equal to the sum of the major part of the value (\$428,150,409) of the ingots and semifinished rolled products (except for forging) manufactured for sale and for transfer to other plants under the same ownership and a considerable but indeterminable part of the value (\$160,908,437) of the "interplant transfers" of finished rolled products, forgings, and direct steel castings manufactured in certain plants and transferred to other plants under the same ownership for use as materials in further manufacture. All but a small portion of the ingots and semifinished rolled products manufactured for sale and for "interplant transfer," and to a large extent the finished rolled products, forgings, and steel castings transferred to other plants, are used as materials within the industry, and therefore their values as finished products are again included in the total value of products. The tonnage produced and consumed in different departments of the same plant does not carry an assigned value, so no duplication arises from this source.

In many establishments the manufacturing processes are carried beyond the rolling stage. For example: Tin-dipping departments are operated by some of the black-plate rolling mills, wire-drawing departments by wire-rod mills, and pipe-and-tube departments by skelp mills. For this reason the industry overlaps a number of others, and the products include certain commodities identical in character with the primary products of other industries. (See table, p. 1009; Table 4, p. 1015; and Table 5, p. 956).

**Detailed statistics of products.**—Statistics relating to individual products or classes of products are given in Tables 4 to 12, inclusive, arranged, in Table 4, under eight general headings, namely: Unrolled steel; semifinished rolled products; finished rolled products and forgings; scrap iron and steel; cinder and scale; miscellaneous products other than iron or steel; custom work and repairing; and products further manufactured from finished rolling-mill and foundry products.

Table 4 has been prepared in such form as to show separately the tonnage produced and consumed in

the same works, the tonnage produced and transferred to other plants under the same ownership, and the tonnage produced for sale. The tonnage transferred to other plants under the same ownership carries an assigned value, but no value is assigned to the tonnage produced and consumed in different departments of the same works.

In many cases rolling mills operate departments for the conversion of rolling-mill products into pipes and tubes, bolts and nuts, cut nails and spikes, and other finished iron and steel products. These products when manufactured in plants other than departments of rolling mills are classified in other industries. The total output of these products, by kind, quantity, and value, as reported for all industries, is shown, so far as practicable, in Table 5, p. 956.

Tin plate and terneplate are manufactured almost exclusively and wire is made to a considerable extent in departments operated in connection with rolling mills. Statistics showing the total output of these commodities will be found in separate sections of this report. (See Tin plate and terneplate, p. 1009, and Wire, p. 1013.)

**Steel castings.**—Steel foundries are classified for census purposes in the "Steel works and rolling mills" and "Foundry and machine-shop products" industries, according to the character of their chief products. The data for wage earners, wages, and cost of materials, fuel, and purchased electric energy for the casting departments of steel works and of iron foundries and machine shops are included in the corresponding items for the establishments as a whole and can not be segregated. A special tabulation was made for 168 of these establishments which were engaged primarily in the production of steel castings, in order to show the relation of wages and of cost of materials, etc., to value of products. Table 13 is based on this special tabulation. Table 14 gives the production of steel castings by classes of establishments and by kind, and Table 15 shows the production by States. The figures for production and consumption in further manufacture in the same works are substantially complete for the classes of establishments covered by these tables, but do not include data for certain establishments in other industries—for example, those engaged in the manufacture of motor vehicles, engines, pumps, and agricultural implements—which are not required to report such production and consumption to the Bureau of the Census. The total production as given in this report does not, therefore, represent the entire production of steel castings in all industries, but it does cover with substantial completeness the production made for sale or interplant transfer.

# STEEL WORKS AND ROLLING MILLS

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TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1929

[For power-equipment statistics, see Table 4, p. 941]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy <sup>1</sup>	Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
1929	486	394,574	\$689,015,541	\$1,904,083,157	\$3,365,788,805	\$1,461,705,648
1927	486	361,312	601,275,499	1,689,655,295	2,779,840,238	1,090,184,943
1925	473	370,726	614,984,982	1,811,061,218	2,646,068,231	1,134,107,013
1923	489	388,201	637,825,137	2,044,398,238	3,154,324,671	1,109,626,433
1921	494	235,515	324,987,239	1,005,125,454	1,481,659,352	476,833,898
1919	500	375,088	637,637,430	1,680,575,758	2,828,902,376	1,148,326,618
1914	427	248,710	188,142,398	590,825,692	918,604,565	327,838,873
1909	446	240,076	103,200,758	657,500,850	985,722,534	328,221,678
1904	415	207,562	122,491,993	441,294,432	673,965,026	232,760,594
1899	445	183,249	102,335,876	590,895,277	597,211,716	206,316,439
PER CENT OF INCREASE OR DECREASE (—)						
1927-1929	2.7	-2.5	14.6	12.7	21.1	34.1
1925-1927	-3.3	-4.5	-2.2	-6.7	-5.6	-3.0
1923-1925	-1.0	64.8	-3.6	-11.4	-6.6	2.2
1921-1923	-1.2	-37.2	96.3	103.4	112.9	132.9
1919-1921	-2.8	5.2	-49.0	-40.2	-47.0	-58.5
1919-1929	12.1	56.2	8.1	13.3	19.0	27.3
1909-1919	0.2	31.0	200.7	155.6	187.0	219.0
1899-1909			59.5	68.2	65.1	59.1

<sup>1</sup> Includes cost of foundry supplies for 1927 and earlier years but not for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.  
<sup>2</sup> The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.  
<sup>3</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919

[This table presents statistics separately for each State for which figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Certain of the States for which statistics are given in combination with those for others reported larger values of products than some of the States shown separately. For power-equipment statistics, see Table 4, p. 941]

STATE	Census year	Number of establishments	Salaried officers and employees <sup>1</sup>	Wage earners (average for the year)	Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>2</sup>	Value added by manufacture <sup>3</sup>
							Total	Materials <sup>4</sup>	Fuel and purchased energy		
United States	1929	486	36,937	394,574	\$103,432,723	\$689,015,541	\$1,904,083,157	\$1,695,804,135	\$208,279,022	\$3,365,788,805	\$1,461,705,648
	1927	486	36,019	361,312	97,199,644	601,275,499	1,689,655,295	1,507,273,331	182,381,964	2,779,840,238	1,090,184,943
	1919	500	46,738	375,088	99,880,420	637,637,430	1,680,575,758	1,523,610,896	156,964,862	2,828,902,376	1,148,326,618
Individual States:											
Alabama	1929	9	1,361	9,263	2,927,402	12,199,977	39,446,476	34,742,414	4,704,062	74,172,710	34,726,234
	1927	(5)	(5)	(5)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
	1919	9	1,084	8,121	2,070,597	9,331,613	49,334,475	43,259,090	6,075,385	64,980,154	15,645,679
California	1929	19	589	6,616	1,961,307	10,837,585	16,048,065	13,615,088	2,432,977	34,846,395	18,798,330
	1927	14	468	4,715	1,461,360	7,678,377	12,721,609	10,827,988	1,863,641	24,527,582	11,805,943
	1919	8	282	3,476	744,506	6,358,704	9,508,535	8,145,662	1,362,873	18,161,959	8,863,454
Illinois	1929	36	3,771	30,416	10,840,015	55,359,031	144,661,202	127,888,721	16,772,481	268,077,085	123,415,883
	1927	34	3,024	24,601	8,579,462	41,902,441	113,647,937	96,807,734	16,840,203	208,563,956	94,916,019
	1919	32	3,306	20,177	7,711,251	34,963,671	100,319,478	89,840,859	10,478,619	173,344,650	73,025,172
Indiana	1929	20	2,520	29,169	6,697,540	52,844,790	191,158,215	169,407,524	21,750,691	334,127,379	142,969,161
	1927	24	2,466	30,098	6,436,960	50,832,415	172,620,833	151,351,703	21,275,130	288,719,078	116,092,245
	1919	23	2,626	22,362	6,039,638	41,293,699	113,194,279	99,222,709	13,971,510	109,273,518	86,079,289
Kentucky	1929	4	499	5,358	1,120,640	8,322,487	25,467,584	21,929,573	3,538,011	44,890,648	19,423,064
	1927	5	306	4,542	1,002,496	6,639,791	24,638,758	22,544,600	1,994,098	35,987,067	11,448,309
	1919	5	191	1,892	445,164	2,681,861	12,713,691	11,681,483	1,082,208	18,318,690	5,604,099
Louisiana	1929	3	24	282	82,296	408,236	161,487	111,071	50,416	768,094	506,607
Michigan	1929	14	332	4,724	1,559,239	9,111,336	27,348,828	23,180,060	4,168,768	56,183,680	28,834,852
	1927	11	273	4,299	967,121	8,205,876	12,327,830	10,704,500	1,623,330	24,647,098	12,319,268
	1919	7	220	1,455	580,301	2,471,088	2,901,803	2,393,307	508,496	8,344,643	5,442,840
Missouri	1929	7	438	3,406	1,306,273	5,149,556	10,201,532	8,331,688	1,869,844	20,769,646	10,568,114
	1927	7	290	3,093	843,043	3,907,512	6,722,490	5,678,989	1,048,501	13,953,455	7,230,965
	1919	5	275	2,647	562,412	3,044,616	5,060,622	5,101,207	559,415	12,537,067	6,870,445
New Jersey	1929	17	1,804	8,056	3,095,493	12,739,751	23,838,105	20,383,180	3,454,925	54,895,192	31,057,087
	1927	17	1,557	7,557	2,903,400	10,852,455	25,119,228	21,965,024	3,161,204	48,512,683	18,369,465
	1919	16	3,330	13,811	3,827,239	17,085,061	34,326,805	30,404,200	3,922,605	74,382,265	40,055,400
New York	1929	26	1,825	17,952	5,202,428	30,137,035	70,502,954	58,073,860	12,429,594	139,352,239	65,849,285
	1927	27	1,795	15,400	4,713,641	24,930,532	60,660,957	51,712,346	8,948,611	112,850,480	62,198,523
	1919	30	2,462	17,901	4,966,172	28,837,249	54,816,314	47,413,047	7,403,267	100,592,636	45,776,322
Ohio	1929	88	6,461	89,123	19,030,508	167,200,199	479,552,896	433,342,445	46,209,948	817,823,094	338,270,638
	1927	86	6,826	81,562	19,381,064	143,947,323	430,429,737	385,599,203	44,830,534	672,201,290	241,771,553
	1919	86	7,466	73,025	16,493,360	137,281,312	381,059,673	352,138,966	28,920,707	626,370,025	245,310,352
Oregon	1929	3	56	250	159,485	375,377	261,573	198,478	63,095	1,143,351	881,778
Pennsylvania	1929	158	13,937	145,084	38,685,010	248,018,590	709,847,585	639,713,769	70,133,816	1,212,576,856	503,029,271
	1927	165	14,594	137,568	38,890,797	223,629,312	631,897,390	576,617,098	65,280,232	1,012,297,366	380,399,976
	1919	168	21,710	171,715	46,869,378	298,725,262	777,472,690	708,566,395	68,906,235	1,266,412,070	518,939,830

See footnotes at end of table.

CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS, BY STATES: 1929, 1927, AND 1919—Continued

[See note at head of this table]

STATE	Census year	Number of establishments	Salaried officers and employees	Wage earners (average for the year)	Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products <sup>3</sup>	Value added by manufacture <sup>4</sup>
							Total	Materials <sup>2</sup>	Fuel and purchased energy		
<b>Individual States—Continued.</b>											
Washington.....	1929	6	110	724	\$436,527	\$1,364,842	\$2,232,353	\$1,835,256	\$397,097	\$5,653,096	\$3,421,343
West Virginia.....	1929	16	855	12,936	2,255,287	23,773,982	50,491,734	46,068,956	4,422,778	93,869,519	43,377,785
	1927	16	844	11,688	2,186,332	20,909,028	53,440,079	40,141,266	4,298,823	87,872,862	34,432,783
	1919	20	1,100	11,630	2,703,452	19,993,057	50,794,481	47,569,942	3,224,539	85,036,489	34,242,008
Wisconsin.....	1929	17	633	5,248	1,898,314	9,423,007	12,815,260	11,124,969	1,690,231	30,269,020	17,463,820
	1927	19	655	4,807	1,674,417	7,380,876	11,807,061	10,237,679	1,569,382	23,895,617	12,068,556
	1919	12	408	3,929	1,188,845	4,328,771	14,345,964	13,023,176	1,322,788	28,393,331	14,047,367
<b>Groups of States:</b>											
Colo., 3 est.; Iowa, 2; Minn., 5; Nebr., 1; Okla., 2; Tex., 2; Utah, 2.....	1929	17	581	7,228	1,662,249	11,065,029	28,730,691	24,013,952	4,716,739	49,937,938	21,207,247
Conn., 3 est.; Me., 1; Mass., 9; R. I., 1.....	1929	14	568	4,193	1,395,768	7,146,862	20,244,237	17,514,122	2,730,115	35,425,839	15,181,602
Del., 3 est.; Ga., 1; Md., 4; Tenn., 2; Va., 2.....	1929	12	1,073	13,956	3,116,942	22,432,869	51,072,940	44,329,500	6,743,434	90,706,487	39,633,547
States not shown separately.....	<sup>6</sup> 1927	61	3,257	31,846	8,169,521	50,459,561	133,715,366	114,097,171	19,618,215	230,802,744	97,087,358
	<sup>7</sup> 1919	49	2,278	22,947	5,688,105	31,241,466	74,126,948	64,850,793	9,276,155	122,724,909	48,597,961

<sup>1</sup> Not including proprietors and firm members, as follows: For 1929, 17; 1927, 16; 1919, 35. The total numbers of persons engaged—proprietors and firm members, salaried officers and employees, and wage earners—as reported for the industry, are as follows: For 1929, 431,525; 1927, 397,347; 1919, 421,861.

<sup>2</sup> Includes cost of foundry supplies for 1927 and 1919 but not for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.

<sup>3</sup> The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.

<sup>4</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

<sup>5</sup> Withheld from publication in order to avoid disclosing data for individual establishments.

<sup>6</sup> Alabama, 9 establishments; Colorado, 2; Connecticut, 3; Delaware, 3; Georgia, 1; Iowa, 2; Louisiana, 2; Maine, 1; Maryland, 4; Massachusetts, 11; Minnesota, 5; Oklahoma, 1; Oregon, 2; Rhode Island, 1; Tennessee, 2; Texas, 1; Utah, 2; Virginia, 2; and Washington, 7.

<sup>7</sup> Colorado, 1 establishment; Connecticut, 7; Delaware, 6; District of Columbia, 1; Georgia, 1; Iowa, 2; Maine, 1; Maryland, 5; Massachusetts, 11; Minnesota, 2; Oregon, 1; Rhode Island, 3; Tennessee, 1; Texas, 1; Utah, 1; Virginia, 2; and Washington, 3.

TABLE 3.—NUMBER OF ESTABLISHMENTS AND VALUE OF PRODUCTS, BY CLASS OF ESTABLISHMENTS FOR THE UNITED STATES, 1923 TO 1929, AND BY STATES, 1929

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

STATE AND CENSUS YEAR	Total	Establishments engaged both in producing steel and in rolling iron and steel	Establishments engaged in producing steel but not in rolling	Establishments engaged in rolling iron and steel but not in producing steel	PER CENT OF TOTAL		
					Steel works and rolling mills	Steel works only	Rolling mills only
<b>United States:</b>							
<b>Establishments—</b>							
1929.....	486	124	172	190	25.5	35.4	39.1
1927.....	486	134	158	194	27.6	32.5	39.9
1925.....	473	133	127	213	28.1	26.8	45.0
1923.....	489	137	115	237	28.0	23.5	48.5
<b>Value of products—</b>							
1929.....	\$3,365,788,805	\$2,302,211,836	\$217,343,402	\$846,233,567	68.4	6.5	25.1
1927.....	\$2,779,840,238	\$1,855,925,744	\$104,786,124	\$759,128,370	66.8	5.9	27.3
1925.....	\$2,946,068,231	\$1,983,484,867	\$136,419,971	\$820,163,393	67.3	4.6	28.1
1923.....	\$3,154,324,071	\$2,057,117,146	\$161,466,877	\$935,740,648	65.2	5.1	29.7
<b>Pennsylvania:</b>							
Establishments.....	158	40	40	72	29.1	25.3	45.6
Value of products.....	\$1,212,876,856	\$857,827,643	\$60,058,334	\$294,990,879	70.7	5.0	24.3
<b>Ohio:</b>							
Establishments.....	88	22	22	44	25.0	25.0	50.0
Value of products.....	\$817,823,034	\$524,967,218	\$28,119,644	\$264,736,172	64.2	3.4	32.4
<b>Indiana:</b>							
Establishments.....	20	5	5	10	25.0	25.0	50.0
Value of products.....	\$384,127,376	\$224,281,447	\$10,257,215	\$99,588,714	67.1	3.1	29.8
<b>Illinois:</b>							
Establishments.....	36	10	15	11	27.8	41.7	30.5
Value of products.....	\$268,077,085	\$169,593,481	\$45,506,146	\$52,977,458	63.3	17.0	19.7
<b>New York:</b>							
Establishments.....	26	9	8	9	34.6	30.8	34.6
Value of products.....	\$139,352,239	\$107,705,584	\$14,152,609	\$17,494,046	77.3	10.2	12.5
<b>Other States:</b>							
Establishments.....	158	32	32	44	20.3	51.9	27.8
Value of products.....	\$593,532,215	\$417,836,463	\$59,240,454	\$116,446,298	70.4	10.0	19.6

# STEEL WORKS AND ROLLING MILLS

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TABLE 4.—PRODUCTS, BY CLASS, KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1929, 1927, 1925 AND 1923

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

[Ton, 2,240 lbs.]

CLASS AND KIND	1929	1927	1925	1923
Total value.....	\$3,365,788,805	\$2,779,840,238	\$2,946,068,231	\$3,164,324,671
Unrolled steel, total tons.....	56,160,693	44,756,716	45,119,113	44,521,424
Ingots, total tons <sup>2</sup> .....	54,793,683	43,773,763	44,111,200	43,401,415
For sale—				
Tons.....	195,634	128,835	103,026	142,461
Value.....	\$6,239,183	\$4,110,340	\$3,593,447	\$5,775,888
Transferred for consumption in other plants of same company—				
Tons.....	465,309	308,052	432,113	408,430
Assigned value.....	\$10,910,385	\$8,668,902	\$12,766,582	\$13,109,030
Produced and consumed in same works, tons.....	54,132,740	43,336,876	43,670,061	42,860,624
Direct steel castings, total tons <sup>2</sup> .....	1,367,000	982,953	1,007,913	1,120,009
For sale—				
Tons.....	1,153,823	823,089	899,382	1,000,478
Value.....	\$183,480,786	\$136,350,291	\$138,048,935	\$154,599,454
Transferred for consumption in other plants of same company—				
Tons.....	52,952	65,150	44,330	53,238
Assigned value.....	\$7,916,915	\$8,784,901	\$6,365,618	\$8,011,272
Produced and consumed in same works, tons.....	155,225	94,714	70,201	66,293
Semifinished rolled products:				
For sale—				
Tons.....	6,714,525	5,217,381	5,760,512	5,997,078
Value.....	\$235,550,793	\$181,141,261	\$213,815,085	\$249,051,912
Transferred for consumption in other plants of same company—				
Tons.....	6,064,635	5,089,926	5,627,223	5,437,341
Assigned value.....	\$185,776,910	\$164,909,994	\$191,586,437	\$206,408,477
Produced and consumed in same works, tons.....	35,749,447	27,650,709	28,860,919	*30,487,060
Blooms, billets, and slabs, steel, except for forging, total tons <sup>1</sup> .....	38,819,107	30,491,273	32,394,913	*34,681,058
For sale—				
Tons.....	2,727,604	2,076,770	2,148,616	2,409,257
Value.....	\$100,373,379	\$73,653,962	\$83,893,643	\$105,111,200
Transferred for consumption in other plants of same company—				
Tons.....	4,633,624	4,085,101	4,081,777	4,668,254
Assigned value.....	\$144,418,740	\$132,254,237	\$159,711,552	\$175,952,232
Produced and consumed in same works, tons.....	31,457,879	24,329,402	26,564,620	*27,543,547
Rolled blooms and billets for forging, total tons.....	657,808	274,186	256,937	254,585
For sale and interplant transfer—				
Tons.....	269,675	112,790	153,071	134,748
Value.....	\$10,326,862	\$4,689,861	\$7,282,559	\$8,521,095
Produced and consumed in same works, tons.....	388,133	161,396	103,866	119,837
Sheet and tin-plate bars, total tons.....	8,710,921	7,120,666	7,135,999	6,333,068
For sale—				
Tons.....	3,751,311	3,036,261	3,440,521	3,351,558
Value.....	\$125,657,607	\$102,962,937	\$121,650,116	\$132,568,524
Transferred for consumption in other plants of same company—				
Tons.....	1,310,421	948,937	910,326	711,689
Assigned value.....	\$36,658,608	\$30,130,804	\$30,105,066	\$27,254,195
Produced and consumed in same works, tons.....	3,049,189	3,135,468	2,785,152	2,269,821
Muck and scrap bar, total tons.....	340,771	371,891	460,805	652,768
For sale and interplant transfer—				
Tons.....	86,525	47,448	53,424	98,913
Value.....	\$3,892,507	\$2,359,454	\$2,788,586	\$6,064,543
Produced and consumed in same works, tons.....	254,246	324,443	407,381	553,855
Finished rolled products and forgings, total tons.....	39,882,941	32,154,094	32,646,847	*34,451,787
For sale—				
Tons.....	27,261,988	21,388,659	22,379,394	23,065,884
Value.....	\$1,451,841,437	\$1,132,645,597	\$1,266,916,847	\$1,421,583,794
Transferred for consumption in other plants of same company—				
Tons.....	3,088,283	2,349,819	2,122,713	2,310,646
Assigned value.....	\$152,991,522	\$119,142,564	\$106,132,545	\$123,943,955
Produced and consumed in same works, tons.....	9,532,670	8,415,616	8,144,740	*9,075,257
Rails, total tons.....	2,692,016	2,715,792	2,703,520	2,747,605
Number of establishments.....	17	16	15	17
For sale and interplant transfer—				
Tons.....	2,666,208	2,703,144	2,693,360	2,727,615
Value.....	\$113,924,509	\$114,565,408	\$114,334,375	\$113,643,755
Produced and consumed in same works, tons.....	25,808	12,648	10,160	20,190
Rerolled or renewed rails (not including rails rerolled by makers of ingots from new seconds, defective new rails, etc.), total tons.....	72,087	90,966	70,980	112,643
Number of establishments.....	7	8	4	6
For sale and interplant transfer—				
Tons.....	56,830	88,457	70,280	112,643
Value.....	\$1,982,790	\$3,108,380	\$2,662,161	\$5,116,406
Produced and consumed in same works, tons.....	15,257	2,509	700	-----
Rail joints and fastenings, tie-plates, etc., total tons.....	877,066	893,342	818,096	771,794
Number of establishments.....	30	29	27	23
For sale and interplant transfer—				
Tons.....	872,349	892,903	814,708	768,431
Value.....	\$47,760,823	\$50,394,036	\$46,723,816	\$43,192,852
Produced and consumed in same works, tons.....	4,717	439	3,388	3,363

See footnotes at end of table.



TABLE 4.—PRODUCTS, BY CLASS, KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1920, 1927, 1925, AND 1923—Continued

[See note at head of this table]

CLASS AND KIND	1929	1927	1925	1923
Finished rolled products and forgings—Continued.				
Structural shapes (not assembled or fabricated), total tons.....	4,626,234	3,711,708	3,605,232	3,500,470
Number of establishments.....	42	42	38	36
Heavy (leg or web 3 inches and over), total tons.....	3,946,367	3,103,981	3,216,478	2,990,900
For sale—				
Tons.....	3,050,028	2,809,375	2,841,558	2,658,584
Value.....	\$152,547,908	\$116,694,833	\$120,253,506	\$128,471,232
Transferred for consumption in other plants of same company—				
Tons.....	211,809	152,530	154,873	130,383
Assigned value.....	\$9,013,734	\$6,272,331	\$6,463,116	\$6,018,570
Produced and consumed in same works, tons.....	81,530	142,076	220,047	201,833
Light (leg or web less than 3 inches), total tons.....	679,867	607,727	448,754	509,570
For sale—				
Tons.....	576,308	531,889	411,763	489,090
Value.....	\$26,124,071	\$25,031,707	\$21,852,887	\$20,723,300
Transferred for consumption in other plants of same company—				
Tons.....	31,817	8,426	4,901	12,676
Assigned value.....	\$1,211,978	\$339,738	\$214,819	\$536,168
Produced and consumed in same works, tons.....	71,742	67,412	32,090	7,913
Concrete-reinforcing bars (including twisted bars)—				
Number of establishments.....	57	53	40	43
For sale and interplant transfer—				
Tons.....	972,053	782,671	708,811	617,245
Value.....	\$42,416,829	\$35,409,930	\$35,077,964	\$32,446,455
Merchant bars, mill shafting, etc., total tons.....	6,874,440	4,847,463	5,463,743	6,064,384
Number of establishments.....	120	122	129	147
Steel bars, total tons.....	6,676,166	4,629,187	5,193,031	* 5,653,653
Open-hearth or Bessemer—				
For sale—				
Tons.....	5,082,380	3,835,265	4,731,260	4,903,146
Value.....	\$252,121,971	\$189,962,216	\$200,990,407	\$277,461,203
Transferred for consumption in other plants of same company—				
Tons.....	984,803	330,585	92,488	68,830
Assigned value.....	\$53,188,755	\$19,187,326	\$4,400,186	\$3,589,300
Electric-steel bars—				
For sale and interplant transfer—				
Tons.....	156,354	70,219	100,590	80,577
Value.....	\$51,075,895	\$27,905,901	\$31,719,551	\$24,172,267
Crucible-steel bars—				
For sale and interplant transfer—				
Tons.....	4,637	6,918	9,087	23,387
Value.....	\$2,214,192	\$3,413,182	\$4,493,837	\$11,294,665
Produced and consumed in same works (open-hearth, Bessemer, electric-steel, and crucible-steel bars), tons <sup>a</sup> .....	447,992	380,200	259,606	* 578,018
Iron bars (merchant, etc.), total tons.....	193,274	218,276	270,712	410,426
For sale—				
Tons.....	163,710	183,880	231,613	383,900
Value.....	\$12,235,809	\$12,899,455	\$15,308,075	\$28,716,084
Transferred for consumption in other plants of same company—				
Tons.....	23,366	12,698	23,297	15,761
Assigned value.....	\$1,018,044	\$682,854	\$1,587,879	\$703,434
Produced and consumed in same works, tons.....	11,198	16,698	15,802	10,756
Wire rods, total tons.....	3,151,858	2,859,223	2,999,551	3,090,924
Number of establishments.....	48	50	48	51
For sale—				
Tons.....	783,052	644,227	662,447	691,236
Value.....	\$33,045,170	\$28,888,668	\$34,525,194	\$35,582,791
Transferred for consumption in other plants of same company—				
Tons.....	372,130	379,961	412,810	544,700
Assigned value.....	\$15,996,928	\$17,170,111	\$20,188,372	\$26,420,258
Produced and consumed in same works, tons.....	1,996,676	1,835,035	1,894,294	1,854,988
Bolt and nut rods and spike and chain rods, total tons.....	433,283	348,042	380,302	490,420
Number of establishments.....	30	24	24	27
For sale and interplant transfer—				
Tons.....	120,980	94,803	63,330	61,990
Value.....	\$5,683,340	\$4,880,637	\$3,311,743	\$5,237,577
Produced and consumed in same works, tons.....	155,417	253,239	316,972	398,430
Spike and chain rods—				
Produced and consumed in same works, tons.....	156,886			
Plates (No. 12 and thicker), not coated, total tons.....	5,284,879	3,863,684	3,962,646	4,305,698
Number of establishments.....	60	66	66	71
Crucible plate steel and saw plates, for sale and interplant transfer—				
Tons.....	4,131	5,068	9,598	10,910
Value.....	\$1,654,927	\$1,762,837	\$3,143,817	\$3,013,268
Boiler and other plate, total tons.....	5,280,748	3,858,616	3,943,048	4,294,698
For sale—				
Tons.....	5,094,309	3,670,427	3,769,928	4,169,829
Value.....	\$221,592,771	\$168,366,727	\$173,998,319	\$215,370,636
Transferred for consumption in other plants of same company—				
Tons.....	120,309	105,971	82,915	42,427
Assigned value.....	\$4,988,482	\$4,883,633	\$3,526,667	\$2,071,048
Produced and consumed in same works, tons.....	66,930	82,218	90,205	82,442

See footnotes at end of table.

# STEEL WORKS AND ROLLING MILLS

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TABLE 4.—PRODUCTS, BY CLASS, KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1929, 1927, 1925, AND 1923—Continued

[See note at head of this table]

CLASS AND KIND	1929	1927	1925	1923
Finished rolled products and forgings—Continued.				
Sheets (No. 13 and thinner), not coated, total tons.....	7,284,905	5,759,949	5,607,791	5,038,494
Number of establishments.....	92	96	93	93
For sale—				
Automobile body—				
Tons.....	1,132,562	618,172		
Value.....	\$107,163,177	\$58,411,679		
Black, for tinning (tin-mill black plate)—				
Tons.....	135,287	59,313	2,741,424	2,485,931
Value.....	\$9,671,368	\$4,351,146	\$222,806,587	\$230,260,304
Plain—				
Tons.....	2,551,973	2,101,002		
Value.....	\$176,813,010	\$151,807,939		
Transferred for consumption in other plants of same company—				
Automobile body—				
Tons.....	31,210			
Assigned value.....	\$1,941,089			
Black, for tinning (tin-mill black plate)—				
Tons.....	7,913			128,420
Assigned value.....	\$507,787			\$10,896,878
Plain—				
Tons.....	182,104	203,090	178,040	111,364
Assigned value.....	\$10,839,880	\$13,081,908	\$11,631,059	\$8,452,571
Produced and consumed in same works—				
Black, for tinning (tin-mill black plate), tons.....	1,827,193	1,627,866	1,647,674	1,861,184
Plain, tons.....	1,416,693	1,149,906	1,045,643	951,595
Skelp, total tons.....	3,558,050	3,502,902	3,445,149	3,647,104
Number of establishments.....	39	40	44	37
For sale—				
Tons.....	654,721	541,753	499,657	566,952
Value.....	\$28,414,922	\$21,696,045	\$20,597,237	\$26,879,050
Transferred for consumption in other plants of same company—				
Tons.....	616,634	699,222	780,631	815,652
Assigned value.....	\$24,705,274	\$28,908,481	\$33,833,547	\$42,336,212
Produced and consumed in same works, tons.....	2,286,695	2,261,927	2,164,861	2,264,500
Cotton ties—				
Number of establishments.....	5	6	5	4
For sale—				
Tons.....	38,216	42,800	50,644	34,618
Value.....	\$1,542,250	\$2,230,148	\$2,780,206	\$2,767,816
Hoops, bands, and strips, total tons.....	2,726,171	1,685,836	1,082,399	1,370,607
Number of establishments.....	44	41	36	41
Hot-rolled strips for cold rolling <sup>1</sup> —				
For sale—				
Tons.....	381,859			
Value.....	\$16,687,505			
Transferred for consumption in other plants of same company—				
Tons.....	96,799			
Assigned value.....	\$4,659,018	1,222,364	1,384,645	1,280,297
Other hoops, bands, and strips—				
For sale—				
Tons.....	1,456,929			
Value.....	\$70,201,164	\$64,121,036	\$83,268,038	\$99,829,553
Transferred for consumption in other plants of same company—				
Tons.....	70,873			
Assigned value.....	\$3,583,073			
Hot-rolled strips for cold rolling <sup>1</sup> —				
Produced and consumed in same works, tons.....	563,502	463,472	297,754	90,310
Other hoops, bands, and strips <sup>1</sup> —				
Produced and consumed in same works, tons.....	136,209			
Nail and tack plate <sup>1</sup> —				
Produced and consumed in same works, tons.....	8,198	18,243	20,402	22,324
Axles, rolled or forged—				
Number of establishments.....	11	9	10	9
For sale and interplant transfer—				
Tons.....	150,448	119,203	184,717	196,942
Value.....	\$12,035,622	\$10,736,789	\$11,386,527	\$15,407,967
Car and locomotive wheels, rolled or forged—				
Number of establishments.....	8	8	8	9
For sale and interplant transfer—				
Tons.....	209,182	155,030	147,259	237,470
Value.....	\$19,362,111	\$15,196,895	\$15,944,886	\$28,345,170
Armor plate and ordnance—				
Number of establishments.....	6	6	4	5
For sale—				
Tons.....	9,939	7,746	1,071	8,844
Value.....	\$3,287,261	\$2,613,530	\$424,208	\$1,921,094
Assigned value.....	913,916	749,494	794,524	\$ 2,164,182
Rolled and forged iron and steel products, not elsewhere specified, total tons.....				
For sale <sup>1</sup> —				
Tons.....	534,419	407,134	422,090	723,926
Value.....	\$57,482,580	\$42,023,422	\$45,217,443	\$80,887,071
Transferred for consumption in other plants of same company <sup>1</sup> —				
Tons.....	141,440	240,632	247,292	242,945
Assigned value.....	\$8,862,992	\$15,764,333	\$14,903,383	\$13,283,809
Produced and consumed in same works, tons.....	238,057	101,728	126,142	\$ 1,227,311

See footnotes at end of table.

CENSUS OF MANUFACTURES: 1929

TABLE 4.—PRODUCTS, BY CLASS, KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1929, 1927, 1925, AND 1923—Continued

[See note at head of this table]

CLASS AND KIND	1929	1927	1925	1923
Scrap iron and steel, total tons.....	16,818,460	13,262,602	13,317,433	11,300,134
For sale—				
Tons.....	1,871,801	1,612,287	1,500,629	1,382,984
Value.....	\$28,894,147	\$23,961,710	\$26,307,876	\$25,297,333
Transferred for consumption in other plants of same company—				
Tons.....	958,170	835,037	718,081	835,351
Assigned value.....	\$13,207,281	\$11,787,893	\$11,319,450	\$11,802,632
Produced and consumed in same works, tons.....	13,988,390	10,814,378	11,098,723	9,081,799
Cinder and scale, total tons.....	3,340,568	2,411,486		
For sale—				
Tons.....	432,010	328,240		
Value.....	\$1,163,744	\$962,789		
Transferred for consumption in other plants of same company—			( <sup>5</sup> )	( <sup>5</sup> )
Tons.....	762,322	328,311		
Assigned value.....	\$1,697,313	\$900,458		
Produced and consumed in same works, tons.....	2,146,236	1,754,935	( <sup>5</sup> )	( <sup>5</sup> )
Miscellaneous products, other than iron and steel, value.....	\$3,131,999	\$1,550,573	<sup>10</sup> \$2,686,811	<sup>10</sup> \$7,314,325
Receipts for custom work and repairing.....	\$3,110,875	\$1,900,410	\$3,030,656	\$4,486,071
Value of further manufactured products made in departments operated in connection with steel works and rolling mills from finished rolling-mill and foundry products <sup>11</sup> .....	\$1,080,005,515	\$983,166,555	\$963,481,942	\$922,940,528

<sup>1</sup> In addition, 33,550 tons of steel castings, valued at \$6,635,760, were produced in 1929 for sale by establishments classified in other industries; and 53,960 tons were reported as produced and consumed in the same works in further manufacture by establishments in the "Foundry and machine-shop products, not elsewhere classified," industry. Steel castings are also produced and consumed in further manufacture to some extent in other industries, but no data in regard to such production are collected.

<sup>2</sup> See Tables 9 and 10, pp. 959 and 960, for distribution by process.

<sup>3</sup> Includes data for very small quantities (amounting to less than one-tenth of 1 per cent of the totals for 1927 and 1929) of hammered charcoal blooms, billets, etc., which can not be shown separately without disclosing data for individual establishments.

<sup>4</sup> Not strictly comparable with figures for 1925, 1927, and 1929, because of duplication in figures for some establishments which reported the same tonnage both as blooms and as billets or slabs.

<sup>5</sup> Not strictly comparable with figures for 1929, 1927, and 1925, because of duplication in figures for some establishments which reported the tonnage "Produced and consumed in works" in two forms—for example, as bars and as rail joints and fastenings—also because of the fact that the 1923 figures includes data for the tonnage of iron castings produced and consumed in works.

<sup>6</sup> The 1925 and 1923 figures for the items "For sale" and "Produced and consumed in same works" are not strictly comparable with those for 1929 and 1927, for the reason that the "For sale" figures for 1925 and 1923 include data for a considerable tonnage of cold-rolled steel, whereas the data for 1929 and 1927 for all the tonnage intended for cold-rolling are included in the "Produced and consumed in same works" item. See Table 5, p. 957, for figures for cold-rolled and cold-drawn steel.

<sup>7</sup> The "For sale" and "Transferred for consumption in other plants of same company" tonnages and values of nail and tack plate are included in the corresponding tonnages and values shown for "Rolled and forged iron and steel products, not elsewhere specified," in order to avoid disclosing the output of individual establishments.

<sup>8</sup> No comparable data. Included in item for "Miscellaneous products, other than iron and steel."

<sup>9</sup> No data.

<sup>10</sup> See footnote 8.

<sup>11</sup> Tin plate and terneplate (see table, p. 1009); wire and wire products (see Tables 4 and 5, pp. 1015 and 1016); pipes and tubes; bolts, nuts, washers, and rivets; cut nails and spikes; galvanized plates and sheets; corrugated sheets; cold-rolled strip steel, flat bright; cold-finished steel bars; horseshoes; railroad spikes; iron and steel rolls for rolling mills; and ball and roller bearings (see Table 5, below).

TABLE 5.—PRINCIPAL MANUFACTURES FROM ROLLING-MILL PRODUCTS—PRODUCTION, BY CLASS, KIND, QUANTITY, AND VALUE, AND NUMBER OF ESTABLISHMENTS REPORTING, FOR THE UNITED STATES: 1929, 1927, AND 1925

[This table presents statistics showing the total production, in all industries, of certain specified classes of finished products made to a considerable extent in departments operated in connection with steel works and rolling mills. The phrase "Made in rolling-mill industry," as here used, refers to products manufactured in such departments. The 1929 figures for products of the rolling-mill industry refer to production, while those for products of other industries refer to shipments or deliveries. See GENERAL EXPLANATIONS—Value of Products]

CLASS AND KIND	1929 <sup>1</sup>	1927	1925	CLASS AND KIND	1929 <sup>1</sup>	1927	1925
Railroad spikes: <sup>2</sup>				Cut and wrought nails, spikes, and tacks, all industries, total value <sup>4</sup> .....	\$7,503,760	\$7,897,873	\$7,404,006
Establishments.....	19	16	16	Made in rolling-mills industry (nails and spikes only)—			
Kegs (200 pounds).....	1,837,105	1,850,904	1,875,175	Establishments.....	4	6	7
Value.....	\$10,337,883	\$10,649,228	\$10,804,572	Kegs (100 pounds).....	421,320	447,941	532,891
Bolts, nuts, rivets, washers, etc., all industries, total value.....	\$126,507,797	\$95,893,944	\$100,182,403	Value.....	\$1,170,720	\$1,385,556	\$1,785,290
Made in rolling-mill industry—				Made in other industries—			
Establishments.....	27	27	28	Establishments.....	29	28	33
Value.....	\$18,890,021	\$17,000,407	\$23,320,025	Cut nails and spikes and cut tacks—			
Made in other industries—				Pounds.....	44,304,835	( <sup>5</sup> )	
Establishments.....	185	158	162	Value.....	\$5,200,198	\$4,615,707	
Value.....	\$107,617,776	\$78,893,537	\$76,862,378	Horseshoe nails—			
Railroad, boiler, bridge, and structural, bolts, nuts, rivets, washers, etc.—				Kegs (100 pounds).....	98,760	111,045	\$5,618,716
Quantity reported—				Value.....	\$1,182,842	\$1,596,610	
Kegs (200 pounds).....	2,722,569			Galvanized plates, sheets, and strips: <sup>7</sup>			
Value.....	\$27,392,037			Establishments.....	30	32	( <sup>5</sup> )
Quantity not reported, value.....	\$3,370,856			Plain—			
Other bolts, nuts, rivets, washers, etc.—		( <sup>5</sup> )	( <sup>5</sup> )	Tons (2,240 pounds).....	959,524	922,384	885,268
Quantity reported—				Value.....	\$77,566,887	\$80,812,593	\$81,655,778
Kegs (200 pounds).....	5,511,180			Corrugated or crimped—			
Value.....	\$74,094,110			Tons (2,240 pounds).....	306,423	235,652	
Quantity not reported, value.....	\$21,650,794			Value.....	\$26,362,771	\$21,655,659	
				Corrugated or crimped sheets, not galvanized, made in rolling-mill industry:			
				Tons (2,240 pounds).....	5,285	5,863	111,123
				Value.....	\$86,388	\$471,314	\$10,211,651

See footnotes at end of table.

# STEEL WORKS AND ROLLING MILLS

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TABLE 5.—PRINCIPAL MANUFACTURES FROM ROLLING-MILL PRODUCTS—PRODUCTION, BY CLASS, KIND, QUANTITY, AND VALUE, AND NUMBER OF ESTABLISHMENTS REPORTING, FOR THE UNITED STATES: 1929, 1927, AND 1925—Continued

[See note at head of this table]

CLASS AND KIND	1929 <sup>1</sup>	1927	1925	CLASS AND KIND	1929 <sup>1</sup>	1927	1925
Wrought pipes and tubes, all industries, total value <sup>4</sup> .....	\$455,270,528	\$397,753,830	\$350,054,254	Cold-rolled strip steel, flat bright, all industries, total <sup>7</sup> —			
Wrought welded—				Tons (2,240 pounds).....	952,812		
Roller tubes, all industries—				Value.....	\$83,647,021		
Establishments.....	7	8	8	Made in rolling-mill industry—			
Tons (2,240 pounds).....	40,028	45,119	62,750	Establishments.....	20		
Value.....	\$4,861,283	\$4,857,092	\$7,252,169	Tons (2,240 pounds).....	642,302		
Oil-country casing, tubing, and pipe, made in rolling-mill industry—				Value.....	\$50,931,506		
Establishments.....	5	11	9	Made in other industries—			
Tons (2,240 pounds).....	888,388	1,113,745	938,819	Establishments.....	25		
Value.....	\$61,707,710	\$88,463,823	\$82,444,399	Tons (2,240 pounds).....	310,510		
Other black pipe, made in rolling-mill industry—				Value.....	\$32,715,425		
Establishments.....	14	17	15	Widths 6 inches and narrower—			
Tons (2,240 pounds).....	936,532	945,623	968,049	Tons (2,240 pounds).....	348,480	( <sup>2</sup> )	( <sup>2</sup> )
Value.....	\$70,747,088	\$74,948,435	\$81,272,157	Value.....	\$39,536,721		
Galvanized pipe, made in rolling-mill industry—				Wider than 6 inches and under 12 inches—			
Establishments.....	10	11	11	Tons (2,240 pounds).....	220,729		
Tons (2,240 pounds).....	385,709	332,275	383,744	Value.....	\$18,335,481		
Value.....	\$30,608,201	\$33,694,735	\$39,182,283	Widths 12 inches and wider (not including motor-vehicle fender steel)—			
Oil-country casing, tubing, and pipe, not made in rolling-mill industry—				Tons (2,240 pounds).....	282,407		
Establishments.....	13	10		Value.....	\$18,807,612		
Tons (2,240 pounds).....	493,330	219,088		Fender steel (for motor-vehicle fenders)—			
Value.....	\$39,652,352	\$19,186,479		Tons (2,240 pounds).....	101,196		
Other black pipe, not made in rolling-mill industry—				Value.....	\$6,967,207		
Establishments.....	23	18		Cold-finished steel bars, all industries, total value.....	\$71,755,645		
Tons (2,240 pounds).....	531,289	433,706	\$60,972,473	Made in rolling-mill industry—			
Value.....	\$45,172,186	\$41,719,289		Establishments.....	12		
Mechanical tubing, not made in rolling-mill industry—				Tons (2,240 pounds).....	271,727		
Establishments.....	15	13		Value.....	\$22,782,963		
Quantity reported—				Made in other industries—			
Tons (2,240 pounds).....	77,178	39,398		Establishments.....	36		
Value.....	\$11,480,982	\$9,441,500		Value.....	\$48,972,682		
Quantity not reported, value.....	\$3,147,644			Rounds, 2 inches in diameter and smaller—			
Galvanized pipe, not made in rolling-mill industry—				Quantity reported—			
Establishments.....	8	10	5	Tons (2,240 pounds).....	371,854		
Tons (2,240 pounds).....	171,929	158,968	150,120	Value.....	\$31,170,912		
Value.....	\$19,239,584	\$18,620,417	\$15,157,716	Quantity not reported, value.....	\$4,742,755	( <sup>2</sup> )	( <sup>2</sup> )
Heavy-riveted and lock-joint, all industries, value.....	\$10,262,415	\$8,255,351	\$4,509,143	Rounds, more than 2 inches in diameter—			
Seamless, made in rolling-mill industry—				Quantity reported—			
Roller tubes—				Tons (2,240 pounds).....	119,579		
Establishments.....	9	8		Value.....	\$8,600,882		
Tons (2,240 pounds).....	185,369	152,104		Quantity not reported, value.....	\$2,378,063		
Value.....	\$21,723,457	\$17,237,816		Shapes (square, hexagon, and flat)—			
Oil-country casing, tubing, and pipe—				Quantity reported—			
Establishments.....	13	11		Tons (2,240 pounds).....	237,298		
Tons (2,240 pounds).....	882,732	500,379		Value.....	\$18,515,402		
Value.....	\$81,309,391	\$55,373,307		Quantity not reported, value.....	\$1,280,632		
Other black pipe and galvanized pipe—				Cold-finished steel bars (rounds) not distributed as to kind, value.....	\$5,071,699		
Establishments.....	6	7					
Tons (2,240 pounds).....	60,023	17,034		Bearings and parts, ball and roller, <sup>8</sup> total—			
Value.....	\$7,150,041	\$2,108,785		Establishments.....	70	73	51
Mechanical tubing—				Value.....	\$120,033,812	\$99,848,765	\$99,418,137
Establishments.....	12	11		Ball bearings and parts.....	\$66,880,624	( <sup>2</sup> )	( <sup>2</sup> )
Tons (2,240 pounds).....	229,035	143,327		Roller bearings and parts.....	\$53,153,188	( <sup>2</sup> )	( <sup>2</sup> )
Value.....	\$42,208,344	\$23,840,741		Rolls for rolling mills <sup>9</sup> —			
Horse and mule shoes <sup>10</sup> —				Establishments.....	42	( <sup>2</sup> )	( <sup>2</sup> )
Establishments.....	9	12	15	Steel—			
Kege (100 pounds).....	417,182	705,368	812,730	Tons (2,240 pounds).....	45,762	( <sup>2</sup> )	( <sup>2</sup> )
Value.....	\$2,668,713	\$4,811,937	\$4,217,604	Value.....	\$6,852,598	( <sup>2</sup> )	( <sup>2</sup> )
Horse and mule shoe calks: <sup>11</sup>				Iron—			
Establishments.....	10	11	11	Tons (2,240 pounds).....	126,074	( <sup>2</sup> )	( <sup>2</sup> )
Value.....	\$538,663	\$869,784	\$1,108,590	Value.....	\$14,533,031	( <sup>2</sup> )	( <sup>2</sup> )

<sup>1</sup> In addition to the products shown in this table, steel works and rolling mills reported the manufacture, for sale, of the following commodities: Fabricated structural steel, 272,116 tons (2,000 pounds), valued at \$17,020,628; switches, frogs, and crossings, 93,325 tons, \$14,542,811; grey-iron castings, 520,057 tons, \$14,267,832; malleable-iron castings, 29,068 tons, \$3,422,660; nonferrous-metal castings, 5,965 tons, \$3,839,087; pressed, stamped, and other shapes, not advanced beyond pressing, 67,720 tons, \$4,391,541; machinery, \$11,902,909; miscellaneous products, including steel springs, cast-iron car and locomotive wheels, chain, fence posts, stay bolts, fabricated sheet piling, etc., \$40,511,040. Figures on the total output of these products in all industries are given, so far as available, in the reports for the industries to which they normally belong. For figures showing the production of tin plate and terneplate and of wire and wire products, including those made in departments operated in connection with steel works and rolling mills, see table, p. 1009, and Tables 4 and 5, pp. 1015 and 1016.

<sup>2</sup> Production in rolling-mill industry not shown separately in order to avoid disclosing data for individual establishments.

<sup>3</sup> No comparable data.

<sup>4</sup> For production of wire nails, brads, and spikes, see Table 5, p. 1016.

<sup>5</sup> Revised.

<sup>6</sup> Not including couplings and nipples reported separately.

<sup>7</sup> Not including cold-rolled from drawn wire, which is shown in Table 4, p. 1015.

<sup>8</sup> Practically the entire production of this item was reported by the rolling-mill industry.

CENSUS OF MANUFACTURES: 1929

TABLE 6.—FINISHED ROLLED PRODUCTS AND FORGINGS—DISPOSITION (CONSUMPTION, TRANSFER, OR SALE), BY CLASS AND TONNAGE, FOR THE UNITED STATES: 1929

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

[Ton, 2,240 pounds]

CLASS	Total tonnage	PRODUCED AND CONSUMED IN SAME WORKS		FOR TRANSFER TO OTHER PLANTS OF SAME COMPANY		FOR SALE	
		Tonnage	Per cent of class total	Tonnage	Per cent of class total	Tonnage	Per cent of class total
All finished rolled products and forgings:							
1929.....	39,882,941	9,532,670	23.9	3,088,283	7.7	27,261,988	68.4
1927.....	32,154,094	8,415,616	26.2	2,349,819	7.3	21,388,659	66.5
1925.....	32,640,847	8,144,740	24.9	2,122,713	6.5	22,379,394	68.6
1923.....	34,451,787	9,075,257	26.3	2,310,646	6.7	23,065,884	67.0
Rails.....	2,692,016	25,808	.9	15,916	.6	2,650,292	98.5
Rerolled or renewed rails.....	72,087	15,267	21.1			56,820	78.9
Rail joints and fastenings, tie-plates, etc.....	877,066	4,717	.5	58,904	6.7	813,445	92.8
Structural shapes (not assembled or fabricated).....	4,626,234	156,272	3.4	243,626	5.3	4,226,336	91.3
Concrete-reinforcing bars (including twisted bars).....	972,923	870	.1	8,162	.8	963,891	99.1
Merchant bars, mill shafting, etc.....	6,874,440	459,190	6.7	1,021,713	14.9	5,393,537	78.4
Wire rods.....	3,151,858	1,996,676	63.4	372,130	11.8	783,052	24.8
Bolt and nut rods and spike and chain rods.....	433,283	312,363	72.1	77,242	17.8	43,738	10.1
Plates (No. 12 and thicker).....	5,284,879	65,930	1.3	122,584	2.3	5,096,365	96.4
Sheets, automobile-body.....	1,166,785	3,013	.3	31,210	2.7	1,132,562	97.0
Sheets, plain (No. 13 and thinner).....	4,147,727	1,413,650	34.1	182,104	4.4	2,551,973	61.5
Sheets, black, for tinning.....	1,070,393	1,827,193	92.7	7,013	.4	135,287	8.9
Skelp.....	3,558,050	2,236,695	64.3	616,634	17.3	664,721	18.4
Hot-rolled strips for cold rolling.....	1,062,160	553,502	54.9	96,799	9.1	381,859	38.0
Other hoops, bands, and strips.....	1,064,911	136,209	8.2	70,873	4.3	1,466,829	87.5
Cotton ties.....	38,216					38,216	100.0
Axles, rolled or forged.....	151,685	1,237	.8	8,188	5.4	142,260	93.8
Car and locomotive wheels, rolled or forged.....	209,781	599	.3	12,845	6.1	196,337	93.6
Armor plate and ordnance (gun forgings, shells, projectiles, etc.).....	9,954	15	.2			9,939	99.8
Other.....	919,393	243,534	26.5	141,440	15.4	534,419	58.1

1 Not strictly comparable with figures for 1923, 1927, and 1925 because of duplication in figures for certain establishments which reported tonnage "Produced and consumed in works" in two forms—for example, as bars and as rail joints and fastenings—also because 1923 figures include data for tonnage of iron castings produced and consumed in same works.

TABLE 7.—FINISHED ROLLED PRODUCTS AND FORGINGS—PRODUCTION, BY STATES: 1923 TO 1929

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments. Certain of the States, however, for which statistics are given in combination with those for others reported larger values of products than some of the States shown separately]

[Ton, 2,240 pounds]

STATE	1929	1927	1925	1923	PER CENT DISTRIBUTION			
					1929	1927	1925	1923
United States.....	39,882,941	32,154,094	32,640,847	34,451,787	100.0	100.0	100.0	100.0
Pennsylvania.....	14,355,150	11,567,968	12,146,669	14,881,089	36.0	36.9	37.2	43.2
Ohio.....	8,439,982	6,879,819	7,635,021	7,279,505	21.2	21.4	23.4	21.1
Indiana.....	5,064,438	4,203,508	4,067,053	3,829,694	12.7	13.1	12.5	11.1
Illinois.....	3,230,675	2,540,531	2,555,038	2,610,421	8.1	7.9	7.8	7.6
New York.....	1,805,176	1,498,913	1,322,194	1,584,366	4.5	4.6	4.1	4.6
West Virginia.....	1,286,013	923,498	960,837	900,714	3.2	2.9	2.9	2.6
Missouri.....	296,944				.8			
New Jersey.....	175,782				.4			
Ala., Del., Ga., Ky., Md., Tenn., and Va.....	2,938,332				7.5			
Calif., Colo., Utah, and Wash.....	1,056,852	4,239,677	3,959,985	3,366,008	2.7	13.2	12.1	9.8
Mich., Minn., Okla., Tex., and Wis.....	909,324				2.3			
Conn., Me., Mass., and N. H.....	267,278				.6			

1 Includes a small amount of duplication due to reporting some tonnage in two forms. (See footnote 1, Table 6.)

# STEEL WORKS AND ROLLING MILLS

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TABLE 8.—ESTABLISHMENTS MANUFACTURING SPECIFIED PRODUCTS—NUMBER, BY STATES: 1920

STATE	Total number of establishments	Products																					
		Rails	Rerolled or re-rerolled rails	Rail fastenings, tie-plates, etc.	Structural shapes	Merchant bars, etc.	Concrete-reinforcing bars	Bolt, nut, spike, and chain rods	Wire rods	Plates	Automobile sheets	Plain sheets	Black sheets for tinning	Shelvy	Hot-rolled strips for cold rolling	Other hoops, bands, strips, and cottonies	Axles	Nail and tack plate	Armor plate and ordnance	Muck and scrap bar	Steel	Steel ingots	Steel castings
UNITED STATES:																							
1920.....	486	17	7	30	42	120	57	30	48	60	16	72	29	39	25	29	11	5	6	40	296	125	208
1927.....	486	16	8	29	42	122	53	24	50	68	14	84	26	40	42	9	5	6	49	292	137	204	
1925.....	473	15	4	27	38	129	40	24	48	65	91	25	44	36	10	6	4	50	260	135	164		
1923.....	489	17	6	23	30	147	43	27	51	118		34	37	41	9	7	5	61	262	141	152		
NEW ENGLAND:																							
Maine.....	1					1	1	1															
Massachusetts.....	9								1					1							8	1	8
Rhode Island.....	1																				1	1	
Connecticut.....	3													1	1						3	1	2
MIDDLE ATLANTIC:																							
New York.....	26	1		2	2	10	4	2	7	3	1	3		1	3	2	1			3	17	9	11
New Jersey.....	17			1		6	3		3						1					2	8	2	5
Pennsylvania.....	158	4	2	6	12	46	12	7	11	24	1	20	9	17	7	7	7	3	4	19	86	48	54
EAST NORTH CENTRAL:																							
Ohio.....	88	1	1	3	5	16	6	4	10	14	10	26	8	13	6	9				4	44	22	25
Indiana.....	20	2		3	2	6	3	3	2	5		7	3	3	1	2	1			3	10	4	7
Illinois.....	36	2	1	4	5	10	6	1	5	3		1	1	2	3	2				1	25	10	17
Michigan.....	14																				11	1	10
Wisconsin.....	17	1		1	1	2						1									13		13
WEST NORTH CENTRAL:																							
Minnesota.....	5				1	1	1		1												5	1	5
Iowa.....	2																				1	1	2
Missouri.....	7			3	2	3	2	3	1	1		1								3	4	2	4
Nebraska.....	1																				1	1	1
SOUTH ATLANTIC:																							
Delaware.....	3									1											3	1	2
Maryland.....	4	1				1			1	2	1	1	2	1						1	1	1	1
Virginia.....	2			1		1		1												1	1	1	1
West Virginia.....	16	1	1	1		1	1		2	1	6	5	2	1						1	6	3	3
Georgia.....	1		1		1	1			1							1					1	1	
EAST SOUTH CENTRAL:																							
Kentucky.....	4					1				1	1	2									1	2	2
Tennessee.....	2					1															1	1	1
Alabama.....	9	3		2	4	4		5		2	3	1			2	1				4	3	3	
WEST SOUTH CENTRAL:																							
Louisiana.....	3																				3	1	3
Oklahoma.....	2																				2	1	1
Texas.....	2																				2	1	2
MOUNTAIN AND PACIFIC:																							
Colorado.....	3	1		1		1	1	1	1												3	1	3
Utah.....	2		1		1	1	1	1													2	1	1
Washington.....	6			1		2	2	2	1	1						1	1				6	3	4
Oregon.....	3																				3	1	3
California.....	19			1	3	4	4	3	1			3	1		2					18	6	17	

TABLE 9.—STEEL—PRODUCTION, BY QUANTITY AND BY PROCESS, FOR THE UNITED STATES: 1923 TO 1929

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

[Ton, 2,240 pounds]

PROCESS	1929	1927	1925	1923	PER CENT OF INCREASE OR DECREASE (—)			PER CENT DISTRIBUTION			
					1927-1929	1925-1927	1923-1925	1929	1927	1925	1923
Total ingots and castings.....	1 56,160,683	44,756,716	45,119,113	44,521,424	25.5	0.8	1.3	100.0	100.0	100.0	100.0
Open-hearth, total.....	48,237,387	38,005,244	37,909,746	36,124,153	26.9	.3	4.9	85.9	84.9	84.0	81.1
Basic.....	47,141,354	37,126,725	37,055,831	35,011,015	27.0	.2	5.8	82.9	83.0	82.1	78.0
Acid.....	1,096,033	878,519	853,915	1,113,138	24.8	2.9	-23.3	2.0	2.0	1.9	2.6
Bessemer.....	7,109,923	6,179,602	6,701,873	7,937,386	15.1	-7.8	-15.6	12.7	13.8	14.9	17.8
Electric or electrically refined.....	866,789	559,507	488,051	420,468	44.2	14.6	15.1	1.4	1.3	1.1	.9
Crucible.....	6,584	12,363	19,443	39,417	-46.7	-36.4	-50.7	(?)	(?)	(?)	.1
Ingots, total.....	54,793,683	43,773,763	44,111,200	43,401,415	25.2	-.8	1.6	100.0	100.0	100.0	100.0
Open-hearth, total.....	47,190,242	37,258,560	37,108,918	35,193,944	26.7	.4	5.4	85.1	85.1	84.1	81.1
Basic.....	46,017,671	36,777,647	36,642,832	34,565,192	26.8	.4	6.0	85.1	84.0	83.1	79.6
Acid.....	578,571	480,913	466,086	628,732	20.3	3.2	-25.9	1.0	1.1	1.1	1.4
Bessemer.....	7,096,275	6,153,703	6,670,127	7,899,795	15.3	-7.7	-15.6	13.0	14.1	15.1	18.2
Electric or electrically refined.....	495,339	350,287	313,584	269,176	41.4	11.7	16.5	.9	.8	.7	.6
Crucible.....	5,827	11,213	18,671	38,500	-48.0	-39.6	-51.8	(?)	(?)	.1	.1
Direct steel castings, total.....	1 1,367,000	982,953	1,007,913	1,120,009	39.1	-2.5	-10.0	100.0	100.0	100.0	100.0
Open-hearth, total.....	1,041,145	746,684	809,828	930,299	39.4	-6.8	-13.9	78.2	76.0	79.5	83.1
Basic.....	523,683	349,078	412,999	445,823	50.0	-15.5	-7.4	38.3	35.5	41.0	39.6
Acid.....	517,402	397,096	397,829	484,386	30.1	2.5	-19.9	37.9	40.5	38.5	43.2
Bessemer.....	13,648	25,899	31,746	37,591	-47.3	-18.4	-15.5	1.0	2.6	3.1	3.4
Electric or electrically refined.....	311,450	209,229	174,467	151,292	48.9	19.9	15.3	22.7	21.3	17.3	13.5
Crucible.....	757	1,150	872	917	-34.2	31.9	-4.9	.1	.1	(?)	.1

<sup>1</sup> Includes data for duplex steel (semifinished in Bessemer converters and finished in open-hearth electric furnaces), 2,861,823 tons, and alloy steel (Table 12), 3,243,347 tons. See footnote 1, Table 4, for production of steel castings in other industries.

<sup>2</sup> Less than one-tenth of 1 per cent.

CENSUS OF MANUFACTURES: 1929

TABLE 10.—STEEL—PRODUCTION, BY QUANTITY AND PROCESS, BY STATES: 1923 TO 1929

[The figures refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products. Figures are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups]

[Ton, 2,240 pounds]

STATE AND PROCESS	ALL PROCESSES, TONS				STATE AND PROCESS	ALL PROCESSES, TONS						
	1929	1927	1925	1923		1929	1927	1925	1923			
Total.....	56,160,683	44,756,716	45,119,113	44,521,424	Bessemer.....	7,109,923	6,179,602	6,701,873	7,937,386			
Illinois.....	4,763,789	3,654,829	3,620,761	3,568,864	Ohio.....	2,725,107	2,438,219	2,954,896	3,032,540			
Indiana.....	6,685,700	5,529,233	5,256,977	4,570,772	Pennsylvania.....	2,426,422	2,103,375	2,360,131	3,112,601			
New York.....	2,498,181	1,956,017	1,717,258	1,906,816	Del., Ill., Ind., La., Md., N. J., N. Y., W. Va.....	1,958,394	1,633,008	1,386,840	1,792,245			
Ohio.....	13,186,781	10,872,470	11,853,043	11,299,900	Electric and crucible.....	813,373	571,870	507,494	459,885			
Pennsylvania.....	20,098,047	15,931,022	16,481,017	17,716,499	California.....	33,433	25,112	17,820	20,454			
Wisconsin.....	76,709	60,703	45,906	47,261	Massachusetts.....	1,404	5,935	5,587	2,538			
Ala., Ga., Ky., Tenn.....	2,473,039	6,751,533	6,144,151	5,411,512	Michigan.....	20,598	22,496	8,547	1,241			
Calif., Colo., Ore., Utah, Wash.....	1,399,198				Minnesota.....	7,856	(?)	(?)	(?)	(?)		
Conn., Mass., R. I.....	328,773				New Jersey.....	29,521	(?)	(?)	(?)	(?)		
Del., N. J.....	412,233				Ohio.....	240,374	168,843	127,445	110,724			
Iowa, Mich., Minn., Mo., Nebr.....	1,170,298				Oregon.....	4,837	(?)	(?)	(?)			
La., Okla., Tex.....	16,488				Pennsylvania.....	187,530	110,535	129,989	115,079			
Md., Va., W. Va.....	3,071,447				Washington.....	16,498	(?)	(?)	(?)			
Open-hearth.....	48,237,387				38,005,244	37,909,746	36,124,153	Ala., La.....	1,853	238,949	218,106	203,854
Illinois.....	3,600,709				2,742,333	2,817,644	2,458,214	Colo., Nebr., Okla., Tex., Utah.....	11,417			
Indiana.....	6,246,340				5,122,940	4,983,294	4,328,490	Conn., Del., N. Y., Va., W. Va.....	96,821			
New York.....	2,396,413	1,895,961	1,608,583	1,771,476	Ill., Ind., Wis.....	149,835						
Ohio.....	10,221,300	8,265,417	8,770,702	8,156,636	Iowa, Mo.....	11,396						
Pennsylvania.....	17,484,095	13,712,112	13,990,897	14,488,819								
Ala., Ga., Ky., Tenn.....	2,472,796	6,260,475	5,738,626	4,920,518								
Calif., Colo., Okla., Tex., Utah, Wash.....	1,349,992											
Conn., Mass., R. I.....	326,174											
Del., Md., N. J., W. Va.....	2,983,038											
Mich., Minn., Mo., Wis.....	1,156,524											

1 See footnote 1, Table 9.

2 Not shown separately to avoid disclosing data for individual establishments; included in item for groups of States.

TABLE 11.—STEEL—PRODUCTION FOR CONSUMPTION AND FOR SALE, BY PROCESS, FOR THE UNITED STATES: 1923 TO 1929

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

[Ton, 2,240 pounds]

PROCESS	Census year	Total tons	FOR CONSUMPTION BY PRODUCING COMPANY—			For sale	PROCESS	Census year	Total tons	FOR CONSUMPTION BY PRODUCING COMPANY—			For sale
			Total	In works where produced	In other works of same company					Total	In works where produced	In other works of same company	
Total.....	1929	56,160,683	54,806,226	54,287,965	518,261	1,354,457	Bessemer.....	1929	7,109,923	7,091,023	6,978,817	114,208	18,900
	1927	44,756,716	43,804,792	43,481,590	373,202	951,924		1927	6,179,602	6,155,748	6,107,878	47,870	23,854
	1925	45,119,113	44,122,705	43,646,292	476,443	996,408		1925	6,701,873	6,670,607	6,605,800	64,807	31,266
	1923	44,521,424	43,378,485	42,916,817	461,668	1,142,930		1923	7,937,386	7,899,666	7,790,466	109,200	37,720
Open-hearth, total.....	1929	48,237,387	47,194,725	46,803,239	391,486	1,042,602	Electric or electrically refined.....	1929	806,789	514,651	502,441	12,210	292,138
	1927	38,005,244	37,256,206	36,959,056	297,150	749,038		1927	559,507	381,625	353,924	27,701	177,882
	1925	37,909,746	37,112,022	36,715,689	396,336	797,724		1925	488,051	321,011	307,573	14,338	168,140
	1923	36,124,153	35,164,982	34,817,779	347,203	959,171		1923	420,468	276,038	271,083	4,955	144,430
Basic.....	1929	47,141,354	46,476,907	46,128,814	348,093	664,447	Crucible.....	1929	6,584	5,827	5,468	359	757
	1927	37,120,725	36,688,376	36,429,735	258,641	438,349		1927	12,363	11,213	10,732	451	1,150
	1925	37,055,831	36,574,398	36,218,618	355,780	481,433		1925	19,443	18,165	17,203	962	1,278
	1923	35,011,015	34,468,701	34,174,704	293,997	542,314		1923	39,417	37,799	37,489	810	1,618
Acid.....	1929	1,096,033	717,518	674,425	43,893	378,215							
	1927	878,519	567,830	529,321	38,509	310,689							
	1925	853,915	537,624	497,068	40,556	316,291							
	1923	1,113,138	696,281	643,075	53,206	416,897							

1 Includes data for duplex steel (semifinished in Bessemer converters and finished in open-hearth electric furnaces), 2,801,823 tons, and alloy steel (Table 12), 3,243,347 tons. See footnote 1, Table 4, for production of steel castings in other industries.

# STEEL WORKS AND ROLLING MILLS

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**TABLE 12.—ALLOY STEEL—PRODUCTION, BY PROCESS, FOR THE UNITED STATES: 1923 TO 1929**

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

[Ton, 2,240 pounds]

PROCESS	1929	1927	1925	1923	PER CENT DISTRIBUTION			
					1929	1927	1925	1923
Number of establishments.....	133	128	98	71				
Production, tons.....	3,243,347	2,238,692	2,125,036	1,270,929	100.0	100.0	100.0	100.0
Open-hearth, total.....	2,763,449	1,928,069	1,837,371	1,129,781	85.2	86.1	86.5	88.9
Basic.....	2,647,194	1,828,666	1,753,102	1,011,221	81.6	81.7	82.5	79.6
Acid.....	116,255	99,403	84,269	118,560	3.6	4.4	4.0	9.3
Bessemer.....	27,906	45,298	35,297	28,256	.9	2.0	1.6	2.2
Crucible and electric.....	451,992	265,325	252,368	112,592	13.9	11.9	11.9	8.9
Ingots.....	3,085,305	2,123,340	2,038,538	1,187,989	95.1	94.8	95.9	98.5
Castings.....	188,042	115,352	86,438	82,940	4.9	5.2	4.1	6.5

**TABLE 13.—SUMMARY FOR INDEPENDENT STEEL FOUNDRIES (FOUNDRIES NOT OPERATED IN CONNECTION WITH ROLLING MILLS), FOR THE UNITED STATES: 1929**

[The figures refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

Number of establishments.....	168	Products, total value.....	\$205,350,134
Wage earners (average for the year).....	39,697	Steel castings.....	176,354,082
Wages.....	\$66,459,400	Other products <sup>1</sup> .....	28,996,052
Cost of materials, fuel, and purchased electric energy.....	\$83,062,944	Value added by manufacture <sup>2</sup> .....	142,287,190

<sup>1</sup> This item represents in part the value of 41,597 tons of steel castings which were further manufactured into products belonging to other classifications (steel rolls, machine parts, etc.) by the establishments which cast them, and in part the value of iron rolls, other iron castings, railway-track equipment, etc.

<sup>2</sup> Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.

**TABLE 14.—STEEL CASTINGS—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1929**

[The statistics in this table refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products. The figures for production and consumption in further manufacture in the same works are substantially complete for the classes of establishments covered by this table, but do not include data for certain establishments in other industries. (See "Steel castings," p. 950.)

[Ton, 2,240 pounds]

CLASS AND KIND	Aggregate for independent steel foundries and for casting departments of steel works and of iron foundries and machine shops		Independent steel foundries <sup>1</sup>		Casting departments of steel works and of iron foundries and machine shops	
	Tons	Value	Tons	Value	Tons	Value
Total tonnage.....	1,454,530		1,136,608		317,922	
For sale and for interplant transfer.....	1,245,325	\$198,033,461	1,095,011	\$176,354,082	150,314	\$21,679,379
Produced and consumed in same works.....	209,205		41,597		167,608	
Open-hearth:						
Basic—						
For sale and for interplant transfer.....	493,988	63,464,139	441,377	57,267,785	52,611	6,196,354
Produced and consumed in same works.....	50,114		4,186		45,923	
Acid—						
For sale and for interplant transfer.....	411,215	56,981,721	354,622	49,440,361	56,593	7,541,360
Produced and consumed in same works.....	116,588		28,582		87,906	
Bessemer:						
For sale and for interplant transfer.....	18,921	3,870,503	7,474	1,795,260	11,447	2,075,243
Produced and consumed in same works.....	7,958		750		7,208	
Electric or electrically refined and crucible:						
For sale and for interplant transfer.....	321,201	73,717,098	291,538	67,850,676	29,663	5,866,422
Produced and consumed in same works.....	34,545		7,979		26,566	

<sup>1</sup> For summary statistics for independent steel foundries, see Table 13.



TABLE 15.—STEEL CASTINGS—PRODUCTION, BY QUANTITY AND VALUE, BY STATES: 1929

[This table shows the aggregate production of steel castings in the industries covered by Table 14. Figures are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups. See headnote, Table 14]

(Ton, 2,240 pounds)

STATES	Total tons	PRO- DUCED AND CON- SUMED IN SAME WORKS	FOR SALE AND INTERPLANT TRANSFER			STATES	Total tons	PRO- DUCED AND CON- SUMED IN SAME WORKS	FOR SALE AND INTERPLANT TRANSFER		
			Tons	Tons	Value				Per cent distrib- ution (value)	Tons	Tons
United States.....	1,454,530	1,200,205	1,245,325	\$198,033,461	100.0	Ohio.....	247,908	30,974	216,034	\$31,440,798	15.9
California.....	43,094	2,388	40,696	8,596,735	4.3	Oregon.....	4,900	4,000	1,157,351	0.6	
Connecticut.....	(?)	(?)	2,896	717,172	1.4	Pennsylvania.....	420,262	113,396	306,866	44,315,093	22.4
Illinois.....	51,218	7,137	244,051	41,194,953	20.8	Texas.....	3,073	584	3,089	685,712	0.3
Indiana.....	78,626	9,289	69,337	10,257,215	5.2	Washington.....	(?)	(?)	5,691	1,161,240	0.6
Iowa.....	(?)	(?)	7,201	1,172,133	.6	Wisconsin.....	90,783	14,561	76,222	13,182,703	6.6
Louisiana.....	(?)	(?)	3,504	590,948	.3	Ala., Fla., and Tenn.....	12,166	1,431	10,735	1,473,773	0.7
Massachusetts.....	(?)	(?)	10,977	2,347,948	1.2	Ark., Kan., Nebr., and Okla.	9,334	—	9,334	1,744,187	0.9
Michigan.....	35,755	4,030	31,725	6,901,004	3.5	Ariz., Colo., Del., Me., Md., Utah, and W. Va.....	41,228	11,354	29,874	5,343,703	2.7
Minnesota.....	(?)	(?)	11,608	2,251,046	1.1						
Missouri.....	(?)	(?)	39,909	5,590,375	2.8						
New Jersey.....	13,708	—	13,708	3,877,634	2.0						
New York.....	117,954	11,922	106,032	14,027,667	7.1						

<sup>1</sup> Not including data for steel castings produced and consumed in same works by establishments engaged primarily in the manufacture of specified products; for example, motor vehicles, engines, pumps, and agricultural implements. Such establishments are not required to report their production and consumption of castings to the Bureau of the Census.

<sup>2</sup> Included in totals but not shown separately, in order to avoid disclosing production of individual establishments. The total tonnage produced and consumed in same works for Connecticut, Iowa, Louisiana, Massachusetts, Minnesota, Missouri, and Washington was 2,139 tons.

TABLE 16.—PRINCIPAL MATERIALS CONSUMED IN THE INDUSTRY, BY KIND, QUANTITY, AND COST, BY STATES: 1929

The sum of the costs of the several kinds of materials for which figures are given in this table differs from the "Cost of materials" as given in Tables 1 and 2, partly because of the fact that Tables 1 and 2 cover the cost of all materials whereas this table covers the principal materials only, and partly because this table covers also the assigned cost of scrap iron and steel produced and consumed in the same works, which cost is not covered by Tables 1 and 2]

KIND AND STATE	Estab- lish- ments	Quantity	Cost	KIND AND STATE	Estab- lish- ments	Quantity	Cost
Pig iron, total.....	252	Ton (2,240 lbs.) 34,687,157	\$547,280,159	Pig tin, total.....	66	Ton (2,000 lbs.) 31,638	\$30,298,673
Ohio.....	89	8,216,720	131,356,729	Ohio and Pennsylvania.....	36	18,389	17,570,954
Pennsylvania.....	94	12,725,787	216,776,391	Other States (Ala., Calif., Ill., Ind., Ky., Md., Mass., Minn., N. J., N. Y., W. Va., Wis.).....	30	13,240	12,727,719
Ala., Ga., Ky., La., Tenn.....	10	1,616,452	19,050,320	Ferro-alloys, total.....	255	Ton (2,240 lbs.) 733,414	79,037,618
Conn., Mass., N. J., N. Y.....	29	1,624,797	23,627,520	Ohio.....	43	160,666	17,122,499
Del., Md., Va., W. Va.....	10	1,993,362	28,813,077	Pennsylvania.....	80	254,891	29,029,546
Ill., Ind., Mich., Minn., Wis.....	48	7,926,118	117,796,734	Ala., Ga., Ky., La.....	8	24,005	1,878,063
Other States (Calif., Colo., Iowa, Mo., Nebr., Okla., Tex., Utah, Wash.).....	22	583,921	9,859,388	Calif., Colo., Oreg., Wash.....	19	30,823	1,903,096
Scrap iron and steel, total <sup>1</sup> .....	359	29,356,522	449,354,754	Conn., Mass., R. I.....	9	4,101	391,805
Ohio.....	50	6,597,822	103,308,805	Del., Md., Va., W. Va.....	11	30,089	2,888,199
Pennsylvania.....	109	10,348,725	160,424,851	Ill. and Ind.....	31	144,033	13,049,571
Ala., Ga., Ky., La., Tenn.....	16	1,246,808	15,550,259	Mich., Minn., Mo., Wis.....	28	28,928	3,791,455
Calif., Colo., Oreg., Utah, Wash.....	33	1,098,704	13,917,086	N. J. and N. Y.....	21	46,446	9,829,281
Conn., Me., Mass., R. I.....	14	254,166	3,646,044	Other States (Iowa, Nebr., Okla., Tex.).....	5	432	55,106
Del., Md., Va., W. Va.....	16	1,774,704	27,460,077	Nickel, total.....	111	Pounds 36,311,847	11,331,770
Ill. and Ind.....	45	5,613,833	82,143,950	Ohio.....	16	12,894,185	4,282,769
Mich., Minn., Wis.....	29	593,014	8,259,314	Pennsylvania.....	45	9,313,406	2,538,936
N. J., and N. Y.....	33	1,493,707	28,745,905	Calif., Oreg., Utah, Wash.....	11	189,642	65,362
Other States (Iowa, Mo., Nebr., Okla., Tex.).....	14	435,039	5,898,463	Ill., Ind., Mich., Minn., Wis.....	21	6,222,365	1,875,358
Steel ingots, blooms, billets, and slabs, total <sup>2</sup> .....	153	8,911,192	293,801,755	N. J. and N. Y.....	9	7,897,734	2,474,520
Ohio.....	33	3,163,468	100,510,219	Other States (Conn., Del., Mo., Nebr., R. I., Va., W. Va.).....	9	294,512	94,825
Pennsylvania.....	64	3,643,722	124,568,838	Brass, bronze, and copper, total.....	91	115,244,188	10,912,267
Ill., Ind., Mich., Minn.....	20	1,344,856	46,040,012	Ohio.....	19	5,575,689	853,950
N. J. and N. Y.....	15	190,638	7,429,753	Pennsylvania.....	33	18,460,081	3,105,016
Other States (Ala., Calif., Conn., Md., Mass., Mo., Tenn., Tex., Va., W. Va., Wis.).....	21	563,478	15,252,888	Ill., Ind., Mich., Minn., Wis.....	17	11,053,972	1,795,284
Zinc, total.....	57	Ton (2,000 lbs.) 129,138	17,550,540	Other States (Ala., Calif., Conn., Del., Ky., La., Md., Mass., Mo., N. J., N. Y., Va., W. Va.).....	22	80,148,443	14,128,017
Ohio.....	12	33,639	4,485,173				
Pennsylvania.....	16	20,162	2,863,971				
Ill. and Ind.....	8	24,148	3,129,667				
Other States (Ala., Calif., Ga., Ky., Md., Minn., Mo., N. J., N. Y., W. Va., Wis.).....	21	51,189	7,077,729				
Aluminum, total.....	177	9,830	3,920,569				
Ohio.....	35	2,581	950,342				
Pennsylvania.....	53	3,869	1,588,181				
Calif., Colo., Oreg., Utah, Wash.....	12	158	71,194				
Conn., Del., Mass., N. J., N. Y., R. I.....	20	545	222,045				
Ill., Ind., Mich., Minn., Wis.....	41	2,072	532,989				
Other States (Ala., Ga., Iowa, Ky., La., Md., Mo., Okla., W. Va.).....	16	605	249,518				

<sup>1</sup> Includes data for 13,938,399 tons produced and reworked in the same plants, for which an assigned cost has been included in this table, and 958,170 tons transferred from other plants in the same industry under the same ownership.

<sup>2</sup> Includes considerable quantities transferred from plants under the same ownership.

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**TABLE 17.—STEEL FURNACES (ACTIVE ESTABLISHMENTS)—CAPACITY AND OUTPUT, FOR THE UNITED STATES, 1923 TO 1929, AND BY STATES, 1929**

[Ton, 2,240 pounds]

STATE	Daily capacity (24 hours), tons	Production during year, tons	PER CENT DISTRIBUTION		STATE	Daily capacity (24 hours), tons	Production during year, tons	PER CENT DISTRIBUTION	
			Capacity	Production				Capacity	Production
United States:									
1929.....	222,205	56,160,693	100.0	100.0	New Jersey.....	1,304	(?)	0.6	.....
1927.....	211,078	44,756,716			New York.....	10,850	2,498,181	4.9	4.4
1925.....	212,034	45,119,113			Ohio.....	48,969	13,185,781	22.0	23.5
1923.....	193,247	44,521,424			Oregon.....	88	(?)	(?)	.....
Alabama.....	8,887	(?)	4.0	.....	Pennsylvania.....	79,591	20,008,047	36.0	35.8
California.....	2,262	(?)	1.0	.....	West Virginia.....	4,910	(?)	2.2	.....
Illinois.....	20,313	4,763,789	9.2	8.5	Wisconsin.....	722	76,709	.3	.1
Indiana.....	23,121	6,665,700	10.4	11.9	Colo., Utah, Wash. d.....	3,199	(?)	1.5	.....
Kentucky.....	2,850	(?)	1.3	.....	Conn., Del., Mass., R. I. d.....	2,663	569,190	1.2	.....
Michigan.....	2,460	(?)	1.1	.....	Ga., Md., Tenn., Va. d.....	5,949	(?)	2.7	.....
Missouri.....	1,592	(?)	.7	.....	Iowa, Minn., Nebr. d.....	1,832	(?)	.8	.....
					La., Okla., Tex. d.....	304	16,488	.1	.....

<sup>1</sup> Revised.  
<sup>2</sup> Included in total but not shown separately, in order to avoid disclosing production of individual establishments.  
<sup>3</sup> Less than one-tenth of 1 per cent.  
<sup>4</sup> Combined in order to avoid disclosing data for individual establishments.

**TABLE 18.—METAL MIXERS (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, BY STATES: 1923 TO 1929**

[Ton, 2,240 pounds]

STATE	1929		1927		1925		1923		STATE	1929		1927		1925		1923	
	Number	Capacity, tons	Number	Capacity, tons	Number	Capacity, tons	Number	Capacity, tons		Number	Capacity, tons	Number	Capacity, tons	Number	Capacity, tons	Number	Capacity, tons
Total.....	95	51,523	88	48,038	90	44,611	90	43,660	Maryland.....	4	3,200	4	3,200	3	2,550	3	2,550
Alabama.....	3	1,850	3	1,850	2	850	2	850	New York.....	4	1,750	4	1,750	5	2,150	5	2,450
Colorado.....	4	1,200	4	1,200	4	850	4	850	Ohio.....	23	11,855	19	10,020	19	7,875	18	7,450
Illinois.....	11	4,300	9	3,150	9	3,250	9	3,250	Pennsylvania.....	35	20,568	35	20,568	38	21,036	39	20,360
Indiana.....	7	4,000	7	3,900	7	3,900	7	3,950	Ky., Mich., Minn., W. Va.....	4	2,800	3	2,600	3	2,150	3	2,150

**TABLE 19.—CONVERTERS (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, FOR THE UNITED STATES, BY CLASS, 1929, 1927, AND 1925, AND BY STATES, 1929**

[Ton, 2,240 pounds]

CLASS AND CENSUS YEAR	Number of establishments	Number of converters	Daily capacity (24 hours), tons	STATE	Number of establishments	Number of converters	Daily capacity (24 hours), tons
United States, total:				<i>States, 1929</i>			
1929.....	34	76	43,007	Alabama.....	1	3	2,900
1927.....	45	95	46,417	California.....	1	2	80
1925.....	47	102	55,289	Delaware.....	1	2	10
Bessemer:				Illinois.....	3	8	6,760
1929.....	23	59	42,437	Indiana.....	2	4	3,000
1927.....	28	71	45,929	Louisiana.....	1	2	15
1925.....	34	81	54,950	Maryland.....	1	3	1,500
Tropenas:				Massachusetts.....	1	2	10
1929.....	7	11	220	Michigan.....	1	1	24
1927.....	9	15	212	New Jersey.....	1	1	60
1925.....	8	14	167	New York.....	1	4	2,500
Other:				Ohio.....	9	16	12,998
1929.....	4	6	350	Pennsylvania.....	10	26	12,210
1927.....	8	9	276	West Virginia.....	1	2	950
1925.....	5	7	172				

<sup>1</sup> Revised.  
<sup>2</sup> Bretand, 1; Stoughton, 1; unclassified, 4.

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TABLE 20.—STEEL FURNACES, OPEN-HEARTH (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, FOR THE UNITED STATES, BY PROCESS, 1929, 1927, AND 1925, AND BY STATES, 1929

[Ton, 2,240 pounds]

PROCESS, STATE, AND CENSUS YEAR	Number of establishments	Number of furnaces	Daily capacity (24 hours), tons	PROCESS, STATE, AND CENSUS YEAR	Number of establishments	Number of furnaces	Daily capacity (24 hours), tons
<b>United States:</b>				<i>States, 1929—Continued</i>			
1929.....	155	1,140	172,338	Iowa.....	1	1	75
1927.....	162	1,150	159,908	Kentucky.....	2	16	2,880
1925.....	158	1,141	151,894	Maryland.....	1	17	3,990
<b>Basic:</b>				Massachusetts.....	3	12	910
1929.....	110	988	163,513	Michigan.....	3	14	2,161
1927.....	112	982	151,020	Minnesota.....	2	12	1,604
1925.....	110	987	143,196	Missouri.....	2	15	1,504
<b>Acid:</b>				New Jersey.....	3	16	1,000
1929.....	62	152	8,825	New York.....	10	54	7,667
1927.....	68	168	8,888	Ohio.....	28	210	34,737
1925.....	63	154	8,698	Oklahoma.....	1	1	200
<i>States, 1929</i>				Pennsylvania.....	60	495	65,940
Alabama.....	3	23	5,975	Rhode Island.....	1	3	180
California.....	4	18	1,848	Tennessee.....	1	1	24
Colorado.....	1	16	2,450	Utah.....	1	1	90
Connecticut.....	1	3	450	Washington.....	1	4	450
Delaware.....	1	6	1,000	West Virginia.....	3	19	3,903
Georgia.....	1	3	400	Wisconsin.....	2	5	340
Illinois.....	12	84	12,575				
Indiana.....	7	91	19,985				

TABLE 21.—ELECTRIC-STEEL FURNACES (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, FOR THE UNITED STATES, 1929, 1927, AND 1925, AND BY STATES, 1929

[Ton, 2,240 pounds]

STATE	Number of establishments	Number of furnaces	Daily capacity (24 hours), tons	STATE	Number of establishments	Number of furnaces	Daily capacity (24 hours), tons
<b>United States:</b>				<i>States, 1929—Continued</i>			
1929.....	158	1,205	16,572	Minnesota.....	3	6	87
1927.....	137	210	5,357	Missouri.....	2	4	88
1925.....	111	178	4,401	Nebraska.....	1	1	16
<i>States, 1929</i>				New Jersey.....	4	10	231
Alabama.....	1	1	12	New York.....	11	27	654
California.....	14	21	334	Ohio.....	19	34	1,234
Colorado.....	2	3	70	Oklahoma.....	1	1	18
Connecticut.....	1	2	10	Oregon.....	3	5	88
Delaware.....	1	1	30	Pennsylvania.....	30	66	1,524
Illinois.....	13	25	973	Texas.....	2	4	55
Indiana.....	5	6	136	Utah.....	1	1	3
Iowa.....	2	2	50	Virginia.....	1	2	35
Louisiana.....	2	2	16	Washington.....	5	6	136
Massachusetts.....	2	3	54	West Virginia.....	2	3	57
Michigan.....	10	14	279	Wisconsin.....	11	15	382

<sup>1</sup> 114 Heroult furnaces, of 3,510 tons; 56 Moore, 1,291 tons; 18 Pittsburg, 434 tons; 14 Snyder, 236 tons; 7 Ludlum, 170 tons; 5 Swindell, 128 tons; 5 Greaves-Etchell, 114 tons; 8 Greene, 104 tons; 3 Rennerfelt, 48 tons; 3 Kay, 35 tons; 2 Webb, 35 tons; 1 Von Bauer, 30 tons; 2 Industrial, 24 tons; 1 Booth, 20 tons; 1 Cromwell-Dixon, 13 tons; 1 Newkirk, 10 tons; 1 Rockwell, 10 tons; 1 Ajax, 4 tons; 22 not specified by type, 356 tons.

TABLE 22.—CRUCIBLE-STEEL FURNACES (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, FOR THE UNITED STATES, 1929, 1927, AND 1925, AND BY STATES, 1929

[Ton, 2,240 pounds]

STATE	Number of establishments	Number of furnaces	Number of pots	Daily capacity (24 hours), tons	STATE	Number of establishments	Number of furnaces	Number of pots	Daily capacity (24 hours), tons
<b>United States:</b>					<i>States, 1929—Continued</i>				
1929.....	21	46	1,024	288	Massachusetts.....	3	5	28	7
1927.....	21	55	1,150	296	Michigan.....	1	3	18	5
1925.....	23	70	1,334	390	New Jersey.....	3	4	60	13
<i>States, 1929</i>					New York.....	1	4	96	29
Connecticut.....	1	2	10	2	Pennsylvania.....	11	26	752	217
Illinois.....	1	2	60	15					

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**TABLE 23.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 1914, AND 1909, AND BY STATES, 1929**

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum is of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
<b>United States:</b>															
1929.....	304,574	355,070	391,303	400,296	407,307	<b>413,918</b>	410,441	410,862	410,763	398,113	<b>391,183</b>	364,844	<i>350,189</i>	84.6	
1925.....	370,726	380,453	382,285	<b>385,354</b>	374,872	360,824	360,397	<i>354,053</i>	354,567	363,605	369,580	375,029	381,694	91.9	
1919.....	375,088	441,560	410,541	392,803	367,514	354,721	360,584	383,212	387,965	377,275	<i>292,469</i>	343,312	383,100	66.2	
1914.....	248,716	257,651	262,418	271,531	270,941	254,443	254,827	252,680	247,953	249,635	233,338	<i>210,279</i>	218,896	77.4	
1909.....	240,076	216,349	215,650	<i>215,076</i>	217,307	218,424	235,533	234,151	242,077	258,925	269,255	274,525	283,629	75.8	
Alabama.....	9,253	9,023	9,000	9,033	9,019	<i>8,960</i>	9,149	9,138	9,479	9,105	9,395	9,944	9,790	90.1	
California.....	6,616	6,702	6,840	<b>6,912</b>	6,810	6,652	6,633	6,691	6,749	6,436	6,505	6,332	<i>6,153</i>	88.7	
Illinois.....	30,416	27,802	29,768	30,835	31,859	<b>32,081</b>	31,853	31,938	31,675	30,712	29,734	29,112	<i>27,623</i>	86.1	
Indiana.....	20,169	28,627	28,656	30,079	30,363	<b>30,650</b>	30,549	30,160	30,330	29,779	29,827	26,281	<i>24,727</i>	80.7	
Kentucky.....	5,358	5,354	5,352	5,448	5,887	5,532	5,600	5,614	5,376	5,491	5,424	4,819	<i>4,597</i>	80.8	
Louisiana.....	282	228	223	194	238	292	307	346	389	340	352	289	230	55.1	
Michigan.....	4,724	4,502	4,496	4,803	4,852	5,043	5,199	5,135	4,984	4,935	4,523	4,139	<i>4,082</i>	78.5	
Missouri.....	3,400	3,310	3,498	3,403	3,554	3,628	<b>3,629</b>	3,515	3,437	3,274	3,261	3,179	<i>3,179</i>	87.6	
New Jersey.....	8,056	<b>7,878</b>	8,107	<b>8,252</b>	8,037	7,995	7,960	7,933	8,108	8,250	8,133	7,997	8,024	95.5	
New York.....	17,952	16,098	17,938	18,759	19,095	<b>19,304</b>	19,063	19,031	18,848	18,699	16,900	15,947	<i>16,116</i>	78.3	
Ohio.....	80,123	90,589	91,570	92,797	93,312	<b>95,772</b>	94,264	94,467	94,322	89,808	86,612	74,905	<i>70,871</i>	74.0	
Oregon.....	250	<i>213</i>	222	234	256	274	286	263	252	248	255	248	245	74.5	
Pennsylvania.....	145,084	141,368	141,332	144,753	148,756	<b>151,987</b>	150,651	151,249	151,342	146,419	146,012	139,332	<i>134,975</i>	88.8	
Washington.....	724	760	688	734	768	760	755	754	789	677	715	675	<i>630</i>	81.9	
West Virginia.....	12,686	13,084	13,491	13,572	13,451	13,308	13,269	13,271	13,349	12,766	12,636	11,995	<i>11,128</i>	82.0	
Wisconsin.....	5,248	4,985	5,208	5,320	5,305	5,420	5,528	5,273	5,345	5,557	5,298	4,942	4,694	89.4	