

IRON AND STEEL, PROCESSED

Description of the industry.—The establishments assigned to this industry are engaged primarily in the heat treating, hardening, tempering, annealing, rust-proofing, etc., of iron and steel, chiefly on a contract or custom basis. Work of this character is also done to a very large extent in the processes of manufacturing various commodities by establishments classified in

other industries, and therefore the statistics for this industry do not show the total numbers of persons engaged, the total salaries and wages paid, the total value of products, etc., for this line of industrial activity. (As explained above, all establishments classified in this industry are *engaged primarily* in the processing of iron and steel.)

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1925 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 ¹	Value added by manufacture ²	Horsepower
1929.....	46	511	\$878,459	\$1,088,672	\$9,865,480	\$2,776,808	2,210
1927.....	33	231	392,273	509,690	1,443,289	933,599	1,716
1925 ³	26	306	550,638	642,699	2,113,770	1,471,071	1,870
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	(4)	121.2	123.9	113.6	167.8	197.4	28.8
1925-1927.....	(4)	-24.6	-29.5	-20.7	-31.7	-36.5	-8.2

¹ Principally receipts for contract or custom work.

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

³ No comparable data available for years prior to 1925.

⁴ Per cent not computed where base is less than 100.

IRON AND STEEL, PROCESSED

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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. 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]

STATE	Census year	Number of establishments	Salaried officers and employ-ees ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States.....	1929	46	166	511	2,210	8	2,202	\$570,218	\$578,459	\$1,088,672	\$734,637	\$354,035	\$3,865,450	\$2,776,808
	1927	33	85	231	1,716	8	1,716	218,823	392,273	509,690	380,448	159,242	1,443,289	933,599
Individual States:														
California.....	1929	5	5	13	115	-----	115	13,944	27,086	40,295	31,843	8,452	144,373	104,078
Illinois.....	1929	6	27	90	202	-----	202	72,166	153,290	203,813	150,289	53,524	623,694	419,881
	1927	4	17	44	177	-----	177	51,825	62,956	77,585	45,848	31,737	222,770	145,185
Massachusetts.....	1929	3	9	25	88	-----	88	19,860	35,619	23,225	16,399	6,826	96,101	72,876
	1927	5	10	33	461	-----	461	21,473	49,158	82,158	68,644	13,514	192,889	110,731
Michigan.....	1929	11	30	90	223	-----	223	152,536	184,687	156,214	82,114	74,100	783,907	597,098
Ohio.....	1929	9	31	110	788	-----	788	114,001	186,545	173,047	76,831	96,216	734,540	581,498
	1927	8	20	42	465	-----	465	67,287	72,515	78,301	41,019	37,282	281,879	203,578
Groups of States:														
Conn., ² est.; R. I., 1.....	1929	3	9	17	26	-----	26	23,892	23,615	12,719	6,017	6,702	83,836	71,117
Other States (Minn., 1 est.; N. J., 2; N. Y., 3; Pa., 2; Wis., 1).....	1929	9	55	166	768	8	760	173,819	267,017	479,359	371,144	108,215	1,429,029	949,670
States not shown separately.....	1927	16	38	112	613	-----	613	78,238	207,614	271,646	194,937	76,709	745,751	474,105

¹ Not including proprietors and firm members, as follows: For 1929, 15; 1927, 15. 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, 692; 1927, 331.

² Principally receipts for contract and custom work.

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

⁴ California, 2 establishments; Connecticut, 2; Indiana, 1; Michigan, 2; Minnesota, 1; New Jersey, 2; New York, 2; Pennsylvania, 2; Rhode Island, 1; Wisconsin, 1.

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

TYPE	1929		1927		1925		Per cent distribution of rated horsepower capacity, 1929
	Number	Capacity	Number	Capacity	Number	Capacity	
Prime movers and electric motors driven by purchased energy, aggregate.....	401	<i>Horsepower</i> 2,210	220	<i>Horsepower</i> 1,716	213	<i>Horsepower</i> 1,870	100.0
Prime movers, total.....	1	8	-----	-----	2	35	.4
Steam engines.....	1	8	-----	-----	1	25	.4
Internal-combustion engines.....	-----	-----	-----	-----	1	10	-----
Electric motors driven by purchased energy.....	400	2,202	220	1,716	211	1,835	99.6
Electric energy purchased ¹	-----	<i>Kilowatt-hours</i> 4,142,787	-----	(²)	-----	(²)	-----

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

² Data incomplete.

TABLE 4.—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												Percent minimum is of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
United States:															
1929.....	511	468	505	541	559	531	535	530	538	513	492	475	447	50.0	
1925.....	306	274	298	293	282	313	373	343	330	291	298	291	288	73.5	
California.....	13	<i>12</i>	<i>12</i>	13	13	13	13	13	13	14	14	15	15	80.0	
Illinois.....	90	<i>71</i>	72	91	97	98	90	99	108	94	92	93	83	68.9	
Massachusetts.....	25	20	28	29	32	18	24	26	26	21	21	25	21	46.2	
Michigan.....	90	86	91	94	104	97	93	90	93	95	87	71	72	63.3	
Ohio.....	110	103	118	117	121	115	131	113	124	107	95	93	86	65.0	

NAILS, SPIKES, ETC., NOT MADE IN WIRE MILLS OR IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—The principal products of the establishments classified in this industry are wire nails, brads, and spikes, cut nails and spikes, horseshoe nails, tacks, staples, etc. Wire nails, brads, and spikes are made chiefly in wire mills and in wire-drawing departments of rolling mills. Detailed statistics covering the production of wire nails, brads, spikes, etc., in all industries have been assembled in Table 5 of the report for the "Wire, drawn from pur-

chased bars or rods," industry (p. 1016); and those for cut nails, spikes, tacks, and horseshoe nails are brought together in Table 5 of the report for the "Steel works and rolling mills" industry (p. 956).

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 ¹	Value added by manufacture ²	Horsepower
1929	55	2,027	\$2,553,417	\$5,955,661	\$12,864,745	\$6,899,084	9,006
1927	56	2,100	2,670,010	5,156,906	11,753,468	6,596,562	8,073
1925	58	2,227	2,609,773	5,645,620	12,318,494	6,672,868	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	5,306,282	(3)
1919	65	3,355	3,397,562	8,874,747	17,583,344	8,708,597	8,971
1914	64	2,044	1,507,089	3,594,319	7,198,600	3,604,281	8,135
1909	57	2,765	1,352,555	3,972,412	8,191,620	4,219,208	7,633
1904	76	3,081	1,684,077	4,686,349	8,922,896	4,236,547	10,201
1899	102	4,477	2,042,250	8,561,571	14,777,299	6,215,728	12,357
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	(4)	-3.5	-4.4	15.5	9.4	4.6	12.7
1925-1927	(4)	-5.7	2.3	-3.7	-4.6	-1.1	-0.4
1923-1925	(4)	-21.8	-19.3	-19.4	-7.4	6.0	-21.1
1921-1923	(4)	18.1	25.6	23.5	21.2	18.6	-----
1919-1921	(4)	-28.1	-24.2	-36.1	-37.6	-39.1	-----
1919-1929	(4)	-39.6	-24.8	-32.9	-26.9	-20.8	1.4
1909-1919	(4)	21.3	151.2	123.4	114.7	106.4	17.5
1899-1909	-44.1	-38.2	-33.8	-53.6	-44.6	-32.1	-38.2

¹ For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products. For total production of wire nails, spikes, etc., in 1929 and 1927, by all plants, including wire mills and wire-drawing departments of rolling mills, see Table 5 (p. 1016) of report for "Wire, drawn from purchased bars or rods," industry; for total production of cut and wrought nails, spikes, etc., in 1929, 1927, and 1925, by all plants, see Table 5 (p. 956) of report for "Steel works and rolling mills" industry.

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

³ Not called for on schedule.

⁴ Per cent not computed where base is less than 100.

NAILS, SPIKES, ETC.

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 of subsequent years. See GENERAL EXPLANATIONS—Establishments Covered—Size]

STATE	Census year	Number of establishments	Salaried officers and employees ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	55	376	2,027	9,096	2,283	6,813	\$1,045,014	\$2,553,417	\$5,955,661	\$5,661,619	\$294,042	\$12,854,745	\$6,899,084
	1927	56	358	2,100	8,073	2,343	5,730	989,111	2,670,016	5,156,906	4,846,651	310,255	11,753,468	6,596,662
	1919	65	554	3,355	8,971	4,488	4,483	1,177,235	3,397,562	8,874,747	8,545,006	329,741	17,583,344	8,708,597
Individual States:														
Illinois	1929	6	25	54	283	70	213	70,362	84,485	245,500	237,446	8,354	530,988	285,188
	1927	6	11	44	147	70	77	33,006	63,749	221,454	215,518	5,936	425,904	204,450
	1919	7	51	163	428	140	288	94,929	174,633	865,188	846,843	18,345	1,414,908	540,720
Indiana	1929	4	17	153	533	200	333	32,037	141,011	556,453	537,887	18,566	923,367	366,914
	1927	4	19	121	498	200	298	31,704	96,701	317,298	303,110	14,158	573,562	256,294
	1919	3	25	258	1,100	415	685	41,611	254,167	1,060,622	1,038,105	22,517	1,524,046	463,424
Massachusetts	1929	20	159	780	2,849	445	2,404	330,988	976,601	1,991,387	1,885,569	105,818	4,105,863	2,114,476
	1927	22	150	849	2,832	527	2,305	428,342	1,094,020	1,969,823	1,841,053	128,770	4,444,419	2,474,596
	1919	25	169	1,537	3,380	1,922	1,458	368,985	1,519,986	3,540,505	3,697,393	143,412	7,852,504	4,011,699
Ohio	1929	3	15	127	502	118	384	64,063	165,117	478,911	456,763	22,148	920,767	450,856
	1927	3	18	118	439	181	308	49,360	124,585	398,476	377,655	20,821	812,563	414,087
Pennsylvania	1929	6	29	216	1,314	125	1,189	96,454	262,346	655,631	616,834	38,797	1,185,235	629,604
	1927	5	15	152	894	200	694	53,237	185,610	383,195	353,953	29,242	779,178	395,983
	1919	8	40	218	943	315	628	131,699	238,838	618,196	577,289	40,907	1,270,819	652,623
Groups of States:														
Conn., 4 est., N. H., 1	1929	5	46	289	1,520	1,100	420	162,833	408,642	846,273	793,280	52,993	2,071,813	1,225,540
N. J., 1 est.; N. Y., 4	1929	5	53	275	1,033	-----	1,033	208,881	365,209	879,795	851,836	27,959	2,004,058	1,124,263
Other States (Md., 3 est.; Mo. 1; Wis., 2)	1929	6	32	133	1,062	225	837	79,396	150,006	301,411	282,004	19,407	1,103,654	802,243
States not shown separately	1927	16	145	816	3,263	1,215	2,048	395,462	1,105,351	1,866,690	1,755,362	111,328	4,717,842	2,861,152
	1919	22	209	1,179	3,123	1,696	1,427	540,011	1,209,938	2,489,936	2,385,376	104,560	5,521,067	3,031,131

¹ Not including proprietors and firm members, as follows: For 1929, 10; 1927, 25; 1919, 32. 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, 2,413; 1927, 2,483; 1919, 3,941.
² See footnote 1, Table 1.
³ Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
⁴ 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.
⁵ California, 2 establishments; Connecticut, 3; Maryland, 2; Missouri, 1; New Hampshire, 1; New Jersey, 1; New York, 4; Rhode Island, 1; and Wisconsin, 1.
⁶ Connecticut, 3 establishments; District of Columbia, 1; Kentucky, 1; Maryland, 1; New Hampshire, 1; New Jersey, 3; New York, 8; Ohio, 3; Oregon, 1; Rhode Island, 1; and Wisconsin, 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, 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
Prime movers and electric motors driven by purchased energy, aggregate.....	526	Horse-power 9,096	401	Horse-power 8,073	467	Horse-power 8,102	315	Horse-power 8,971	150	Horse-power 8,135	100.0	100.0
Prime movers, total.....	14	2,283	21	2,343	17	2,090	46	4,488	81	6,907	25.1	50.0
Steam, total.....	9	1,993	14	2,088	10	1,810	21	3,495	39	4,419	21.9	39.0
Engines.....	8	1,875	13	1,970	10	1,810	21	3,495	(1)	(1)	20.6	39.0
Turbines.....	1	118	1	118					(1)	(1)	1.3	
Internal-combustion engines.....	1	70	3	88	3	105	8	297	22	1,508	0.8	3.3
Water wheels and water turbines.....	4	220	4	167	4	175	10	696	20	980	2.4	7.3
Electric motors driven by purchased energy.....	512	6,813	380	5,730	450	6,012	270	4,483	69	1,228	74.9	50.0
Electric motors, total.....	526	7,020	428	5,976	451	6,017	302	5,320	121	2,575	100.0	100.0
Driven by purchased energy.....	512	6,813	380	5,730	450	6,012	270	4,483	69	1,228	97.1	84.3
Driven by energy generated in establishments reporting.....	14	207	46	246	1	5	32	837	52	1,347	2.9	15.7
Electric generators.....	3	Kilo-watts 127	2	Kilo-watts 76	2	Kilo-watts 63	(?)	(?)	(?)	(?)		
Electric energy purchased ¹		Kilowatt-hours 8,155,500		(¹)		(¹)		(²)		(²)		

¹ Not called for separately on schedule.
² Not called for on schedule.
³ This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.
⁴ 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 amount 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.....	2,027	1,999	2,010	2,023	2,008	2,028	2,041	<i>1,959</i>	2,073	2,068	2,086	2,053	1,998	93.0
1925.....	2,227	2,317	2,400	2,375	2,288	2,162	2,112	<i>1,961</i>	2,100	2,160	2,253	2,293	2,307	81.3
1919.....	3,355	3,610	3,546	3,515	3,437	3,312	3,316	<i>3,311</i>	<i>2,860</i>	2,887	3,305	3,555	3,606	79.2
1914.....	2,644	2,775	2,743	2,786	2,721	2,612	2,502	<i>2,560</i>	2,551	2,565	2,594	2,625	2,644	91.5
1909.....	2,765	<i>2,780</i>	2,745	2,761	2,752	2,760	2,748	2,760	2,775	2,743	2,762	2,820	2,834	96.0
Illinois.....	54	<i>53</i>	53	54	55	55	54	54	54	54	54	54	54	96.4
Indiana.....	153	<i>157</i>	140	158	154	152	150	160	163	168	161	145	142	81.5
Massachusetts.....	780	768	769	757	<i>742</i>	751	772	785	807	793	812	811	793	91.4
Ohio.....	127	111	119	122	123	151	138	141	142	131	131	112	105	69.5
Pennsylvania.....	216	221	227	239	239	220	215	212	209	203	211	206	186	77.8

PLUMBERS' SUPPLIES, NOT INCLUDING PIPE OR VITREOUS-CHINA SANITARY WARE

Description of the industry.—This industry embraces establishments whose principal products are porcelain-enameled (enameled-iron) sanitary ware (bathtubs, laundry tubs, lavatories, and sinks), plumbers' brass goods, plumbers' woodwork, galvanized-iron and copper range boilers, and miscellaneous bathroom and other fixtures closely related to plumbing work. It does not, however, include the manufacture of vitreous-china and semivitreous or porcelain (all-clay) sanitary ware, which is treated as a product of the pottery industry.

Detailed statistics of products.—Tables 3 and 4 present detailed statistics showing the total output, in all industries, of plumbers' supplies of the classes listed in the preceding paragraph as normally belonging to this industry; and Table 5 shows the total output, regardless of the industry classification of the establishments reporting it, of sanitary ware of all kinds—enameled-iron, vitreous-china, semivitreous or porcelain (all-clay), and concrete.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1923 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 ¹	Value added by manufacture ²	Horsepower
1929.....	255	27,960	\$37,065,967	\$49,032,599	\$129,673,784	\$80,641,185	100,821
1927.....	231	29,245	40,212,198	53,633,327	³ 145,262,911	³ 89,628,984	90,263
1925.....	239	33,280	46,953,808	63,610,253	167,878,434	104,268,161	84,534
1923 ⁴	234	27,201	38,046,537	51,469,378	132,664,774	81,195,396	59,073
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	10.4	-4.4	-7.8	-11.9	-10.7	-10.0	11.7
1925-1927.....	-3.3	-12.1	-14.4	-12.5	-13.5	-14.0	6.8
1923-1925.....	2.1	22.3	23.4	23.6	26.5	28.4	41.0

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

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

³ Revised.

⁴ No comparable data for years prior to 1923.

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]

STATE	Cen- sus year	Num- ber of estab- lish- ments	Sala- ried officers and em- ploy- ees ¹	Wage earn- ers (aver- age for the year)	HORSEPOWER (RATED CAPACITY) OF EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products ²	Value added by manufac- ture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	255	3,343	27,980	100,821	24,298	76,523	\$9,300,680	\$37,066,997	\$49,032,599	\$44,711,246	\$4,321,353	\$129,673,784	\$80,641,185
	1927	231	3,769	29,245	90,293	25,009	65,284	9,300,875	40,212,198	55,633,327	51,605,819	4,027,508	145,262,311	89,628,984
Individual States:														
California	1929	13	174	1,282	5,699		5,699	368,991	1,894,129	2,074,558	1,879,541	195,017	6,119,779	4,045,221
	1927	11	146	1,335	5,826		5,826	354,302	2,077,411	2,798,790	2,590,272	208,518	6,535,721	3,736,921
Connecticut	1929	10	155	824	2,251	1,433	818	460,737	1,079,618	1,777,500	1,683,505	93,995	4,265,634	2,488,134
	1927	8	140	926	1,888	1,160	728	365,979	1,201,375	1,963,844	1,900,205	63,639	4,453,061	2,489,817
Illinois	1929	29	523	3,574	8,417	1,915	6,502	1,550,643	4,638,549	5,079,406	4,710,202	360,204	15,911,126	10,831,720
	1927	28	711	3,810	9,716	1,475	8,241	1,851,397	4,752,715	6,050,304	5,676,273	374,031	16,996,889	10,946,585
Indiana	1929	8	64	586	1,402	766	636	200,969	621,058	937,705	840,194	97,511	2,083,472	1,145,767
	1927	7	59	602	2,173	941	1,232	170,770	746,090	1,403,837	1,306,332	97,505	2,880,420	1,476,588
Maryland	1929	6	95	1,138	9,446		9,446	203,062	1,337,912	1,443,979	1,216,419	227,560	4,812,014	3,368,086
	1927	6	96	1,085	6,803		6,803	228,321	1,438,633	2,073,423	1,946,452	126,971	5,046,447	2,973,024
Massachusetts	1929	21	121	629	1,806	619	1,187	351,022	841,999	2,269,012	2,191,988	77,024	4,618,009	2,348,967
	1927	16	103	563	1,502	473	1,029	275,385	740,903	1,964,392	1,914,245	50,147	4,099,085	2,186,298
Michigan	1929	12	162	1,126	3,246	590	2,656	481,258	1,369,215	2,553,911	2,303,027	159,884	6,004,251	3,450,340
	1927	13	195	1,165	3,068	640	3,028	489,646	1,606,126	2,667,376	2,535,606	131,680	6,490,017	3,522,641
Missouri	1929	5	33	205	562	135	427	84,098	273,608	212,282	193,139	19,143	754,555	542,273
	1927	4	31	202	671	100	571	71,821	266,168	243,431	222,611	20,820	668,970	426,539
New Jersey	1929	11	149	1,034	3,039	1,400	2,539	500,317	1,484,440	3,269,684	3,084,178	185,506	5,109,714	1,840,680
	1927	13	215	1,658	4,740	3,072	1,668	732,140	2,001,667	2,834,917	2,627,463	207,454	6,576,808	3,740,891
New York	1929	32	187	834	6,145	4,305	1,840	563,970	1,130,210	2,830,872	2,727,988	102,884	6,064,098	3,233,226
	1927	30	152	822	6,167	4,345	1,822	417,593	1,121,868	2,579,332	2,484,668	94,664	5,360,933	2,781,601
Ohio	1929	45	438	2,983	8,451	385	8,066	1,335,893	4,042,546	5,575,544	5,121,566	453,978	14,397,853	8,822,369
	1927	43	404	2,839	6,271	450	5,821	1,161,342	3,895,537	5,252,921	4,940,115	312,806	13,272,395	8,019,474
Pennsylvania	1929	29	616	4,817	23,816	5,505	18,311	1,609,250	6,386,346	8,508,501	7,576,923	931,578	22,541,465	14,032,964
	1927	24	563	5,584	19,730	5,284	14,446	1,468,848	8,510,414	11,176,553	10,135,694	1,040,859	20,582,576	18,406,023
Wisconsin	1929	12	212	3,524	7,841	5,150	2,691	596,813	5,717,554	5,479,787	4,914,740	565,041	14,673,795	9,194,006
Groups of States:														
Ala., 1 est.; Ky., 2; La., 1; Minn., 1; Tenn., 1; Wash., 2	1929	8	286	4,724	15,479	1,542	13,937	620,011	5,381,409	5,771,316	5,010,893	760,423	18,633,484	12,862,168
Del., 2 est.; R. I., 2; Vt., 1	1929	5	72	355	950		950	201,263	496,294	708,833	670,816	38,017	2,370,027	1,661,194
Iowa, 2 est.; Kans., 1	1929	3	26	171	444		444	75,145	175,300	306,640	273,707	32,939	691,899	385,253
Me., 2 est.; N. H., 1	1929	3	9	38	159		159	28,240	43,894	51,222	46,389	4,833	132,864	81,642
Va., 1 est.; W. Va., 2	1929	3	21	116	768		768	68,989	152,016	181,841	166,125	15,716	499,745	307,904
States not shown sepa- rately	1927	28	948	8,664	21,138	7,069	14,069	1,778,331	11,853,291	14,624,207	13,325,793	1,298,414	43,298,789	28,674,582

¹ Not including proprietors and firm members, as follows: For 1929, 50; 1927, 111. 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, 31,353; 1927, 33,125.

² For 1929, manufacturers' sales (shipments or deliveries); for 1927, production. See GENERAL EXPLANATIONS—Value of Products.

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

⁴ Revised.

⁵ Delaware, 2 establishments; Iowa, 1; Kansas, 2; Kentucky, 2; Maine, 1; North Carolina, 1; Rhode Island, 1; Tennessee, 1; Vermont, 1; Virginia, 1; Washington, 1; West Virginia, 1; Wisconsin, 13.

PLUMBERS' SUPPLIES

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

(This table shows the total output, in all industries, of plumbers' supplies of the classes normally belonging to this industry (see "Description of the industry," p. 971). For the total output of sanitary ware—enameled-iron, vitreous-china, and semivitreous or porcelain (all-clay), and concrete—in all industries, see Table 5. 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	
	Number	Value	Number	Value
1. "Plumbers' supplies, not including pipe or vitreous-china sanitary ware" industry, all products, total value.....		\$129,673,784		\$145,262,311
2. Plumbers' supplies, not including pipe, vitreous-china, and semivitreous or porcelain (all-clay) sanitary ware.....		114,829,771		133,483,850
3. Other products (not normally belonging to the industry).....		14,844,013		11,778,431
4. Plumbers' supplies made as secondary products in other industries.....		22,633,643		17,614,575
Plumbers' supplies, not including pipe, vitreous-china, and semivitreous or porcelain (all-clay) sanitary ware, all industries: Aggregate value (sum of 2 and 4).....		137,463,414		151,098,455
Enameled-iron sanitary ware, total value.....		45,288,155		63,841,819
Bathtubs.....	943,905	21,355,379	1,163,001	31,105,370
Laundry tubs.....	175,319	3,010,594	175,268	3,613,630
Lavatories.....	1,116,847	8,050,040	1,322,425	11,241,987
Sinks.....	1,210,615	12,872,142	1,402,269	17,880,832
Bathtubs and sinks made of sheet metal and black iron, value.....		218,941		1,282,794
Range boilers, galvanized ¹	783,044	4,616,180	866,161	5,593,607
Range boilers, copper ²	35,193	1,293,941	26,029	882,273
Plumbers' brass goods, total value.....		65,606,374		55,760,529
Valves, faucets, and spigots reported separately.....		32,834,213		26,567,957
Other plumbers' brass goods, including valves, faucets, and spigots not reported separately.....		32,772,161		29,192,542
Other plumbers' supplies, value.....		20,439,823		23,782,433

¹ Revised.

² For figures for water heaters, see report on "Stoves and ranges, heating apparatus, and steam fittings," p. 991.

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

(This table presents statistics for all States for which separate figures can be given without disclosing data for individual establishments, and for the remaining States in groups. Certain of the States shown in groups reported larger numbers and values of the specified products, however, than some of those for which separate figures are given. See headnote, Table 3)

KIND	Number	Value	KIND	Number	Value
Plumbers' supplies, not including pipe, vitreous-china, and semivitreous or porcelain (all-clay) sanitary ware, all industries: Aggregate value.....		\$137,463,414	Plumbers' supplies, etc.—Continued. Plumbers' brass goods—Continued. Valves, faucets, and spigots, etc.—Continued.		
Enameled-iron sanitary ware, total value.....		45,288,155	Indiana.....		\$831,281
Bathtubs, total.....	943,905	21,355,379	Massachusetts.....		506,217
California.....	81,438	2,272,733	Michigan.....		2,700,342
Ohio.....	43,486	1,029,282	Missouri.....		163,181
Pennsylvania.....	243,430	5,470,566	New Jersey.....		838,180
Ill., Ind., Wis.....	273,824	5,631,153	New York.....		537,068
Other States (Ky., Md., N. J., Tenn., W. Va.).....	301,727	6,951,645	Ohio.....		9,282,941
Laundry tubs, total.....	175,319	3,010,594	Pennsylvania.....		846,970
California.....	43,505	389,238	Washington.....		35,509
Other States (Ind., Ky., Md., Tenn., Pa., Wis.).....	131,814	2,621,356	Wisconsin.....		2,187,667
Lavatories, total.....	1,116,847	8,050,040	Other States (Ala., Calif., Iowa, Ky., La., Md., Minn.).....		6,861,422
California.....	111,754	831,159	Other plumbers' brass goods, including valves, faucets, and spigots not reported separately, total value.....		32,772,161
Ohio.....	59,745	749,594	California.....		545,817
Pennsylvania.....	275,735	1,832,295	Colorado.....		42,813
Ill., Ind., Wis.....	326,732	2,156,085	Connecticut.....		5,813,500
Other States (Ky., Md., N. J., Tenn., W. Va.).....	342,881	2,480,937	Illinois.....		8,547,700
Sinks, total.....	1,210,615	12,872,142	Massachusetts.....		441,287
California.....	119,708	649,366	Michigan.....		4,188,818
Ohio.....	94,971	909,401	New Jersey.....		942,431
Pennsylvania.....	268,868	2,785,614	New York.....		2,949,429
Other States (Ill., Ind., Ky., Md., N. J., Tenn., W. Va., Wis.).....	727,078	8,527,761	Ohio.....		2,689,477
Bathtubs and sinks made of sheet metal and black iron (Ill., N. Y., Pa., Wis.), total value.....		218,941	Pennsylvania.....		2,587,593
Range boilers, galvanized, total ¹	783,044	4,616,180	Wisconsin.....		1,330,812
Pennsylvania.....	315,625	2,047,894	Ind., Iowa, Minn., Mo.....		938,843
Other States (Calif., Mass., Mich., N. J., Ohio, Tenn., Wash.).....	467,419	2,568,376	Other States (Ala., Del., Me., Md., N. H., Tex., Wash., W. Va.).....		1,753,641
Range boilers, copper, total ¹	35,193	1,293,941	Other plumbers' supplies, total value.....		20,439,823
Massachusetts.....	26,968	938,957	California.....		79,726
Conn., N. J., N. Y.....	8,225	354,984	Connecticut.....		503,598
Plumbers' brass goods, total value.....		65,606,374	Illinois.....		1,476,873
Valves, faucets, and spigots reported separately, total value.....		32,834,213	Indiana.....		1,088,729
Connecticut.....		1,987,458	Maryland.....		148,861
Illinois.....		6,005,977	Michigan.....		2,376,892
			New Jersey.....		1,789,069
			New York.....		3,108,418
			Ohio.....		1,833,563
			Pennsylvania.....		1,942,540
			Wisconsin.....		431,026
			Iowa, Minn., Mo.....		644,129
			Me., Mass., R. I., Vt.....		2,948,008
			Other States (Del., Kans., Ky., La., Va., Wash., W. Va.).....		2,308,431

¹ For figures for water heaters, see report on "Stoves and ranges, heating apparatus, and steam fittings," Table 3, p. 991.

CENSUS OF MANUFACTURES: 1929

TABLE 5.—SANITARY WARE—ENAMELED-IRON, VITREOUS-CHINA, SEMIVITREOUS OR PORCELAIN (ALL-CLAY), AND CONCRETE—OUTPUT IN ALL INDUSTRIES, BY KIND, QUANTITY, AND VALUE: 1929 AND 1927

CLASS AND KIND	1929		1927		CLASS AND KIND	1929		1927	
	Quantity	Value	Quantity	Value		Quantity	Value	Quantity	Value
Aggregate value.....	Number	\$81,476,522	Number	\$101,848,837					
Enameled-iron sanitary ware: Total value.....		45,238,155		63,841,819	Vitreous-china sanitary ware—Con. Bathroom and toilet—Con. Closet bowls—Con. Reverse traps.....	Number 207,221	\$1,005,491	Number 197,510	\$1,017,347
Bathtubs.....	943,905	21,355,379	1,163,001	31,105,370	Flush tanks, lowdown (large and small).....	1,202,396	6,476,911	1,312,739	6,802,887
Laundry tubs.....	175,319	3,010,594	175,258	3,013,630	Other.....	19,776	137,840	49,890	408,192
Lavatories.....	1,116,847	8,050,040	1,322,425	11,241,887	Lavatories.....	347,809	4,779,710	346,117	4,498,048
Sinks.....	1,210,615	12,872,142	1,402,269	17,880,832	Other bathroom and toilet equipment.....		3,393,279		2,237,124
Bathtubs and sinks made of sheet metal and black iron.....		218,941		1,282,794	Other, including laundry tubs and kitchen sinks.....		1,452,049		600,906
Range boilers, total ¹	818,237	5,910,121	892,190	6,430,880	Semivitreous or porcelain (all-clay) sanitary ware: Total value.....		3,965,429		5,465,066
Galvanized iron.....	783,044	4,616,180	866,161	5,598,607	Closet bowls and flush tanks.....		389,141		(2)
Copper.....	35,193	1,293,941	26,029	832,273	Lavatories and bathtubs.....		231,600		(2)
Vitreous-china sanitary ware: Total value.....		24,092,047		23,627,594	Laundry tubs and kitchen sinks.....		529,032		(2)
Bathroom and toilet— Closet bowls— Siphon jets.....	317,672	2,095,647	225,465	2,076,743	Other.....		2,815,656		(2)
Washdowns.....	1,364,804	5,651,120	1,539,863	5,806,347	Concrete laundry trays.....	Tons 36,430	1,101,829	Tons 36,382	1,199,784

¹ For figures for water heaters, see report on "Stoves and ranges, heating apparatus and steam fittings," p. 991.

² Not reported separately.

TABLE 6.—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 199 of the 255 establishments in this industry. The combined value of products reported by these 199 establishments amounted to \$121,371,725, or 93.8 per cent of the aggregate value of products of all establishments in 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 certain specified materials, whereas the others cover all materials.

KIND AND STATE	Quantity	Value	KIND AND STATE	Quantity	Value
Fig iron, total.....	Tons (2,240 lbs.) 235,711	\$4,445,167	Copper, brass, and bronze, total.....	Pounds 72,763,205	\$12,655,583
California.....	16,601	350,627	California.....	2,141,368	424,283
Illinois.....	6,613	126,103	Connecticut.....	6,228,459	1,310,728
Maryland.....	20,066	408,988	Illinois.....	12,120,810	2,002,497
Missouri.....	960	21,111	Indiana.....	1,206,406	161,550
Ohio.....	13,416	254,755	Massachusetts.....	3,137,122	551,637
Pennsylvania.....	60,377	1,131,110	Michigan.....	6,066,155	1,000,440
Wisconsin.....	61,457	1,042,759	Missouri.....	545,082	99,610
Other States (Ind., Kans., Ky., N. J., N. Y., Tenn., Vt., W. Va.) ¹	56,221	1,059,714	New Jersey.....	3,259,318	524,259
Scrap iron and steel, purchased as such, total.....	36,280	516,516	New York.....	5,068,909	1,007,274
California.....	2,176	33,278	Ohio.....	12,030,186	1,979,394
Illinois.....	5,364	77,374	Pennsylvania.....	3,797,912	532,435
Maryland.....	1,151	15,039	Wisconsin.....	4,395,061	978,687
Missouri.....	1,235	17,875	Other States (Ala., Del., Iowa, Kans., Ky., Md., Minn., N. H., R. I., Va., W. Va.) ¹	12,766,357	2,023,009
Ohio.....	2,019	32,731	Lead, total.....	5,622,831	344,805
Pennsylvania.....	6,182	90,621	Michigan.....	20,901	1,517
Wisconsin.....	16,031	219,617	New Jersey.....	48,722	3,782
Other States (Kans., Ky., N. J., Vt., W. Va.) ¹	2,112	28,981	Ohio.....	415,340	33,688
Other iron and steel, all forms.....		2,326,891	Other States (Ala., Calif., Conn., Ill., Iowa, Ky., Mass., Minn., Mo., N. H., N. Y., Pa., R. I., Va., Wash., W. Va., Wis.) ¹	5,137,859	305,818
Illinois.....		78,493	Zinc, total.....	5,553,832	370,462
Ohio.....		75,895	Ohio.....		166,605
Pennsylvania.....		1,285,178	Pennsylvania.....		1,743,922
Other States (Calif., Del., Ind., Md., Mass., Mich., N. J., N. Y., Wis.) ¹		887,325	Other States (Ala., Calif., Conn., Ill., Ind., Iowa, Ky., Mass., Mich., Mo., N. H., N. J., Va., Wash., W. Va., Wis.) ¹		3,643,305
Castings, ferrous and nonferrous, purchased as such, total.....		987,041			
California.....		5,445			
Illinois.....		265,074			
Massachusetts.....		55,678			
Ohio.....		44,479			
Pennsylvania.....		289,732			
Other States (Conn., Del., Mich., Mo., N. J., N. Y., R. I.) ¹		323,633			

¹ Combined to avoid disclosing data for individual establishments.

PLUMBERS' SUPPLIES

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TABLE 7.—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 horsepower capacity, 1929
	Number	Capacity	Number	Capacity	Number	Capacity	
		<i>Horsepower</i>		<i>Horsepower</i>		<i>Horsepower</i>	
Prime movers and electric motors driven by purchased energy, aggregate.....	7,694	100,821	6,388	90,293	5,057	84,534	100.0
Prime movers, total.....	95	24,298	100	25,009	107	28,434	24.1
Steam, total.....	78	21,070	82	21,750	87	24,773	20.9
Engines.....	75	18,900	79	19,580	84	22,103	18.7
Turbines.....	3	2,170	3	2,170	3	2,670	2.2
Internal-combustion engines.....	11	933	10	739	15	1,386	0.9
Water wheels and water turbines.....	6	2,295	8	2,520	5	2,275	2.3
Electric motors driven by purchased energy.....	7,599	76,523	6,288	65,284	4,950	56,100	75.9
Electric motors, total.....	9,501	91,116	8,176	80,255	6,434	68,801	100.0
Driven by purchased energy.....	7,599	76,523	6,288	65,284	4,950	56,100	84.0
Driven by energy generated in establishments reporting.....	1,902	14,593	1,888	14,971	1,484	12,701	16.0
Electric generators.....	39	10,230 <i>Kilowatt-hours</i>	44	12,101 <i>Kilowatts</i>	55	14,248 <i>Kilowatts</i>	-----
Electric energy purchased ¹		131,735,853		(?)		(?)	-----

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

TABLE 8.—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												Percent minimum is of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
United States:															
1929.....	27,960	20,255	28,610	20,593	29,516	29,281	28,694	28,046	28,124	27,661	26,915	25,622	23,205	78.4	
1925.....	33,280	<i>31,613</i>	32,574	33,150	33,201	33,021	32,730	33,052	33,327	33,897	34,093	34,354	34,245	91.7	
California.....	1,282	1,332	1,361	1,357	1,347	1,338	1,326	1,275	1,237	1,221	1,225	1,243	1,184	82.6	
Connecticut.....	324	906	948	940	914	861	844	802	779	754	736	716	665	72.3	
Illinois.....	3,574	3,334	3,368	3,304	3,343	3,696	3,628	3,417	3,472	3,349	3,366	3,285	3,238	82.7	
Indiana.....	586	618	613	602	605	599	600	591	575	589	564	551	531	84.6	
Maryland.....	1,138	1,192	1,191	1,172	1,189	1,177	1,130	1,107	1,113	1,118	1,109	1,081	1,068	89.1	
Massachusetts.....	629	643	641	640	636	642	633	622	613	612	645	621	603	98.5	
Michigan.....	1,120	1,150	1,155	1,137	1,209	1,199	1,158	1,108	1,123	1,117	1,093	1,010	991	82.0	
Missouri.....	205	209	207	206	205	206	207	201	189	203	205	205	200	95.2	
New Jersey.....	1,034	927	1,072	1,091	1,149	1,076	1,070	1,012	1,028	1,034	997	998	968	80.7	
New York.....	334	353	330	337	344	330	330	311	311	329	359	350	323	94.4	
Ohio.....	2,683	2,972	3,067	3,065	3,179	3,265	3,206	3,188	3,159	3,078	2,788	2,478	2,348	71.9	
Pennsylvania.....	4,317	5,248	5,250	5,251	5,253	5,231	5,977	4,979	5,008	4,700	4,341	4,055	3,469	64.9	
Wisconsin.....	3,524	3,574	3,621	3,650	3,603	3,866	3,611	3,561	3,551	3,478	3,441	3,350	3,179	86.7	

SAFES AND VAULTS

Description of the industry.—The principal products of the establishments classified in this industry are fire-proof and burglar-proof safes and vaults for banks, offices, and residences; money chests; safe-deposit boxes; vault doors; and safe locks.

Change in classification.—At the censuses for 1925 and earlier years establishments engaged primarily in

the manufacture of metal burial vaults were classified in this industry, but at the censuses for 1927 and 1929 such establishments were assigned to the "Caskets, coffins, burial cases, and other morticians' goods" industry. No comparable figures for years prior to 1927 are, therefore, available.

TABLE 1.—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. Certain of the "Other States," however, reported larger values of products than some of the States shown separately. No comparable figures are available for years prior to 1927. See "Change in classification," above]

STATE	Census year	Number of establishments	Salaried officers and employees ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials ⁴	Fuel and purchased energy		
United States.....	1929	27	740	3,033	10,806	2,065	8,741	\$2,003,041	\$4,438,698	\$6,392,461	\$0,175,047	\$217,414	\$10,362,192	\$12,969,731
	1927	25	550	3,386	9,688	1,965	7,723	1,801,864	4,494,497	7,226,295	7,005,699	220,596	18,439,650	11,213,256
Per cent of increase or decrease(—)	1927 to 1929		36.2	-10.4	11.5	5.1	13.2	53.9	-1.2	-11.5	-11.9	-1.4	5.0	15.7
Missouri.....	1929	3	7	19	100		100	6,210	21,477	28,368	27,213	1,155	64,617	36,249
New York.....	1929	3	36	163	365		365	82,865	208,351	258,897	248,320	5,577	733,587	479,690
	1927	3	51	145	350		350	100,499	170,129	353,690	346,147	7,542	748,452	394,763
Ohio.....	1929	11	418	1,826	7,074	2,065	5,009	1,078,070	2,753,907	4,010,531	3,870,198	140,333	12,018,295	8,007,704
	1927	11	331	2,102	6,419	1,965	4,454	771,008	2,780,038	4,404,424	4,260,817	143,607	12,096,941	7,692,704
Other States.....	1929	10	288	1,025	3,267		3,267	835,887	1,454,963	2,099,665	2,029,316	70,349	6,545,693	4,448,028
	1927	11	168	1,189	2,910		2,910	430,357	1,543,430	2,468,182	2,308,785	60,447	5,594,157	3,125,975

¹ Not including proprietors and firm members, as follows: For 1929, 7; 1927, 9. 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, 3,789; 1927, 3,945.

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

³ For 1929, manufacturers' sales (shipments or deliveries); for 1927, production. See GENERAL EXPLANATIONS—Value of Products.

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

⁵ California, 1 establishment; Indiana, 1; Kentucky, 1; Maryland, 1; Pennsylvania, 4; Texas, 1; Wisconsin, 1.

⁶ California, 1 establishment; Indiana, 1; Kentucky, 1; Maryland, 1; Missouri, 2; Pennsylvania, 3; Texas, 1; Wisconsin, 1.

TABLE 2.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS, ELECTRIC MOTORS, AND GENERATORS, 1929 AND 1927; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927 ¹		Per cent distribution of rated horsepower capacity, 1929	TYPE	1929		1927 ¹		Per cent distribution of rated horsepower capacity, 1929
	Number	Capacity	Number	Capacity			Number	Capacity	Number	Capacity	
Prime movers and electric motors driven by purchased energy, total.....	864	Horse-power 10,806	775	Horse-power 9,688	100.0	Electric motors—Continued. Driven by energy generated in establishments reporting.....	404	Horse-power 3,092	268	Horse-power 2,821	26.1
Prime movers (steam engines).....	8	2,065	5	1,965	19.1	Electric generators.....	5	Kilowatts 2,105	7	Kilowatts 1,630	
Electric motors driven by purchased energy.....	856	8,741	770	7,723	80.9	Electric energy purchased ²		Kilowatt-hours 6,635,136		(?)	
Electric motors, total.....	1,200	11,833	1,038	10,544	100.0						
Driven by purchased energy.....	856	8,741	770	7,723	73.9						

¹ No comparable statistics are available for earlier years. See "Change in classification," above.

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

³ Data incomplete.

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 of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
United States.....	3,033	3,074	3,069	3,052	3,006	2,995	2,990	3,002	2,987	3,040	3,050	3,064	3,092	96.0
Missouri.....	19	<i>16</i>	<i>19</i>	21	20	20	<i>16</i>	<i>16</i>	18	19	20	22	22	72.7
New York.....	163	179	181	181	184	179	180	176	168	159	145	122	119	64.7
Ohio.....	1,826	1,831	1,855	1,862	1,827	1,822	1,808	1,808	1,808	1,815	1,825	1,814	1,842	96.8

SAWS

Description of the Industry.—The establishments in this industry are engaged primarily in manufacturing saws. Their products comprise both woodworking and metal-working saws of all types, such as carpenters' and butchers' saws, pruning saws, and buck-

saws, and saw blades for all types of hand and power saws, such as hack saws, band saws, circular saws, and drag saws. The industry does not include the manufacture of saw frames, saw tables, and sawing machines.

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 ¹	Value of products ²	Value added by manufacture ³	Horsepower
1929.....	81	4,137	\$5,727,416	\$6,484,331	\$22,614,968	\$15,730,627	11,894
1927.....	77	4,182	5,753,856	7,674,394	22,627,990	14,963,596	14,526
1925.....	71	4,710	5,873,393	8,224,443	24,709,211	16,454,768	14,287
1923.....	80	5,420	6,730,442	9,739,996	30,786,858	21,046,862	13,298
1921.....	79	3,788	4,086,840	6,479,913	18,185,297	11,705,884	(4)
1919.....	112	5,510	6,290,807	11,792,224	31,460,557	19,668,533	15,046
1914.....	100	4,560	3,019,497	4,714,186	12,517,165	7,802,679	11,744
1909.....	96	4,832	2,856,291	4,911,766	11,535,631	6,623,665	11,751
1904.....	83	4,650	2,707,423	4,685,530	9,619,787	5,754,267	7,284
1899.....	96	3,215	1,692,757	2,600,217	6,443,748	3,543,531	5,254
• PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	(5)	-1.1	-0.5	-10.3	-0.1	5.2	-18.1
1925-1927.....	(5)	-11.2	-2.0	-6.7	-8.4	-9.3	1.7
1923-1925.....	(5)	-13.1	-12.7	-15.6	-19.7	-21.7	7.4
1921-1923.....	(5)	43.1	64.7	50.3	69.3	79.8	-----
1919-1921.....	-29.5	-31.3	-34.9	-45.0	-42.2	-40.5	-----
1919-1929.....	-27.7	-24.9	-8.8	-41.6	-28.1	-20.0	-20.9
1909-1919.....	(5)	14.0	119.9	140.1	172.7	196.9	28.0
1899-1909.....	-----	30.3	63.7	88.9	79.0	72.3	123.7

¹ 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.

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

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

⁴ Not called for on schedule.

⁵ 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 of- ficers and em- ploy- ees ¹	Wage earn- ers (aver- age for the year)	HORSEPOWER (RATED CAPACITY) OF EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products ²	Value added by manufac- ture ³
					Total	Prime movers	Motors run by pur- chased energy			Total	Materials ⁴	Fuel and pur- chased energy		
United States.....	1929	81	940	4,137	11,894	2,798	9,096	\$2,274,313	\$5,727,416	\$6,894,331	\$6,288,743	\$595,588	\$22,614,958	\$15,730,027
	1927	77	952	4,182	14,526	2,400	12,126	2,118,981	5,753,856	7,674,394	7,229,715	444,679	22,627,990	14,953,596
	1919	112	1,111	5,510	16,046	4,035	11,011	2,390,725	6,280,307	11,792,224	11,232,010	500,214	31,460,557	10,668,333
Individual States:														
Connecticut.....	1929	5	44	223	417		417	127,008	265,418	740,067	710,143	29,924	1,326,540	586,473
Massachusetts.....	1929	9	105	627	3,272	25	3,247	230,338	920,193	1,098,034	994,235	103,799	3,828,328	2,730,292
	1927	11	113	593	3,092	25	3,067	197,252	803,514	1,178,000	1,100,153	78,447	3,144,490	1,965,880
	1919	15	251	753	2,012	15	1,997	460,684	910,168	1,733,657	1,632,163	101,495	4,188,590	2,454,933
Michigan.....	1929	7	18	56	250	100	150	51,673	93,409	154,638	145,023	9,615	501,690	347,052
	1927	6	14	32	105		105	41,833	56,996	98,833	95,333	3,500	307,747	208,914
	1919	9	31	70	195	130	65	59,395	87,133	180,176	174,737	5,439	466,106	285,930
New York.....	1929	12	53	228	790		796	184,393	280,308	424,415	395,525	28,890	1,558,060	1,133,645
	1927	11	54	209	792		792	180,988	276,287	443,328	411,632	31,696	1,450,003	1,006,675
	1919	17	64	316	1,070	478	592	224,878	325,880	825,285	792,521	32,764	2,501,476	1,786,191
Ohio.....	1929	7	49	145	633	8	625	118,841	223,950	183,882	160,009	23,373	555,407	371,525
	1927	8	50	101	628		628	103,007	153,973	171,515	154,340	17,166	414,375	242,860
	1919	9	33	144	562	50	482	38,984	161,033	311,505	302,858	8,647	639,934	328,129
Groups of States:														
Ala., 1 est.; N. C., 1; S. C., 1.....	1929	3	7	12	70		70	15,321	19,223	45,243	44,381	862	70,287	34,044
Calif., 2 est.; Oreg., 2; Wash., 1.....	1929	5	28	97	715		715	74,374	162,123	156,699	147,954	8,745	635,455	478,756
Ga., 1 est.; La., 1; Miss., 2; Tenn., 1.....	1929	5	16	35	377	65	312	36,844	43,997	114,790	111,621	3,169	250,512	135,722
Ill., 8 est.; Ind., 3; Wis., 1.....	1929	12	170	1,232	3,432	1,750	1,632	376,515	1,602,461	2,295,922	2,069,377	196,545	7,703,263	5,407,341
Me., 1 est.; Md., 1; N. H., 1; N. J., 1; Pa., 10; R. I., 2.....	1929	16	450	1,482	1,926	850	1,076	1,059,006	2,026,320	1,670,641	1,480,475	190,166	6,176,418	4,508,777
States not shown separately.....	1927	41	721	3,242	9,909	2,375	7,534	1,595,901	4,403,086	5,782,118	5,468,248	313,870	17,311,375	11,526,287
	1919	62	732	4,227	11,259	3,332	7,927	1,606,784	4,796,593	8,741,601	8,329,732	411,869	23,604,751	14,893,160

¹ Not including proprietors and firm members, as follows: For 1929, 40; 1927, 45; 1919, 83. 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, 5,117; 1927, 5,179; 1919, 6,704.

² 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.

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

⁴ Value of products less cost of materials, 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 Alabama, 1 establishment; California, 2; Connecticut, 4; Georgia, 1; Illinois, 9; Indiana, 2; Louisiana, 1; Maryland, 1; Mississippi, 1; New Hampshire, 1; New Jersey, 1; Oregon, 2; Pennsylvania, 3; Rhode Island, 1; South Carolina, 1; Tennessee, 2; Washington, 1; Wisconsin, 2.

⁷ Arkansas, 1 establishment; California, 2; Connecticut, 3; Georgia, 3; Illinois, 13; Indiana, 2; Iowa, 1; Kentucky, 1; Maine, 1; Maryland, 2; Mississippi, 1; Missouri, 1; New Hampshire, 2; New Jersey, 2; Oregon, 4; Pennsylvania, 12; Rhode Island, 2; Tennessee, 2; Texas, 1; Washington, 4; West Virginia, 1; Wisconsin, 1.

SAWS

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TABLE 3.—PRODUCTS, BY KIND AND VALUE, BY 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. 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	1929	1927	KIND	1929	1927
1. Saws industry, all products, value.....	\$22,614,958	\$22,627,900	Saws, all industries—Continued.		
2. Saws.....	18,233,237	18,332,850	Woodworking saws—Continued.		
3. Other products (not normally belonging to the industry) and receipts for repair work.....	4,381,721	4,235,140	Hand saws, total.....	\$5,342,334	\$6,870,300
4. Saws made as secondary products in other industries, value.....	2,164,729	1,145,599	N. Y., Ohio, and Pa.....	2,517,289	2,412,938
Saws, all industries:			Ill., Ind., and Mich.....	3,714,971	4,457,362
Total value (sum of 2 and 4).....	20,397,966	19,538,449	Me., N. H., and Mass.....	110,124	
Woodworking saws—			Metal-working saws—		
Power-saw blades—			Power-saw blades, total.....	1,706,468	1,459,858
Circular, total.....	3,714,411	4,014,495	Massachusetts.....	619,880	334,066
Illinois.....	48,259	222,296	Conn., N. H., and R. I.....	256,565	394,735
Ohio.....	205,689	139,725	Ill., Ind., and Mich.....	331,950	210,737
Pennsylvania.....	976,065	692,872	N. Y., Ohio, and Pa.....	498,073	520,300
Conn., Mass., and N. Y.....	1,443,117	1,004,071	Hand-hack-saw blades, total.....	3,593,961	2,812,116
Ala., Ga., and S. C.....	44,784		Massachusetts.....	858,926	562,573
Other States (Calif., Ind., La., Md., Mich., Miss., N. J., Penn., Wash., and Wis.).....	937,497	1,355,561	New York.....	728,013	866,292
Other power-saw blades, total.....	2,961,514	3,629,006	Connecticut.....	817,756	1,383,251
Massachusetts.....	252,093	291,663	Other States (Calif., Ind., Mich., and N. H.).....	1,189,266	
Ohio.....	62,206	99,478	Other types, and undistributed as to kind, total.....	3,079,228	752,674
Maryland and Pennsylvania.....	688,247	639,522	Connecticut.....	313,467	
Illinois.....	913,128		Illinois.....	51,851	
New York.....	55,166		Michigan.....	180,549	
Other States (Ind., Mo., N. J., Oreg., and Wash.).....	990,674	2,598,343	New York.....	751,351	
			Pennsylvania.....	341,217	
			Mass. and R. I.....	702,597	
			Other States (Ind., Mo., N. C., Ohio, Oreg., and Wash.).....	708,226	

† No comparable data.

TABLE 4.—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 48 of the 81 establishments in this industry. The combined value of products reported by these 48 establishments amounted to \$16,843,259, or 74.5 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 certain specified materials, whereas the others cover all materials]

KIND	Unit of measure	Quantity	Cost	KIND	Unit of measure	Quantity	Cost
Rolled steel, total.....			\$3,539,744	Rolled steel—Continued.			
Quantity reported.....	Ton.....	6,711	2,040,280	Ohio, total.....			\$149,181
Quantity not reported.....			1,499,464	Quantity reported.....	Ton.....	890	139,062
Connecticut.....	Ton.....	1,683	421,468	Quantity not reported.....			1,119
Massachusetts, total.....			326,680	Other States (Ala., Ga., Ill., Ind., Me., Md., N. H., N. J., Oreg., Pa., R. I., Wash., Wis.), total.....			2,187,647
Quantity reported.....	Ton.....	95	63,330	Quantity reported.....	Ton.....	3,775	1,074,000
Quantity not reported.....			263,350	Quantity not reported.....			1,113,647
Michigan, total.....			136,968	Steel forgings, total.....			38,030
Quantity reported.....	Ton.....	30	21,620	Massachusetts.....			11,000
Quantity not reported.....			115,348	Other States (Ga. and R. I.).....			27,030
New York, total.....			329,800	Nickel and nickel alloys, total.....	Pound.....	23,949	5,083
Quantity reported.....	Ton.....	838	320,800	Michigan.....		15,949	3,243
Quantity not reported.....			6,000	New York.....		8,000	1,840

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
Prime movers and electric motors driven by purchased energy, aggregate.....	1,321	Horse-power 11,894	1,279	Horse-power 14,526	974	Horse-power 14,287	1,019	Horse-power 15,046	500	Horse-power 11,744	100.0	100.0
Prime movers, total.....	11	2,798	8	2,400	22	3,470	31	4,035	53	5,874	23.5	26.8
Steam engines.....	9	2,765	7	2,375	20	3,365	17	3,655	34	5,412	23.2	24.3
Internal-combustion engines.....	2	33	1	25	2	105	12	335	16	371	0.3	2.2
Water wheels and water turbines.....							2	45	3	91		0.3
Electric motors driven by purchased energy.....	1,310	9,096	1,271	12,126	952	10,817	988	11,011	447	5,870	76.5	73.2
Electric motors, total.....	1,410	10,346	1,371	13,376	1,012	12,417	1,045	11,651	523	7,439	100.0	100.0
Driven by purchased energy.....	1,310	9,096	1,271	12,126	952	10,817	988	11,011	447	5,870	87.9	94.5
Driven by energy generated in establishments reporting.....	100	1,250	100	1,250	60	1,600	57	640	76	1,569	12.1	5.5
Electric generators.....	2	Kilowatts 775 Kilowatt-hours 10,042,203	2	Kilowatts 775	15	Kilowatts 1,125	(1)	(1)	(1)	(1)		
Electric energy purchased ¹				(1)		(1)		(1)		(1)		

¹ Not called for on schedule.
² This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.
³ 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.....	4,157	4,229	4,193	4,189	4,097	4,101	4,132	3,952	4,114	4,152	4,146	4,183	4,153	93.4
1925.....	4,710	4,860	4,885	4,865	4,835	4,735	4,649	4,557	4,543	4,511	4,593	4,654	4,787	92.8
1919.....	5,510	5,527	5,484	5,400	5,417	5,555	5,370	5,386	5,464	5,566	5,592	5,715	5,854	91.5
1914.....	4,560	4,755	4,735	4,784	4,755	4,710	4,662	4,584	4,494	4,382	4,299	4,294	4,293	89.2
1909.....	4,832	4,706	4,777	4,799	4,758	4,707	4,719	4,810	4,795	4,848	4,881	5,062	5,119	91.9
Connecticut.....	223	220	231	233	226	231	231	235	221	218	215	218	<i>199</i>	85.4
Massachusetts.....	627	604	603	606	604	602	617	639	637	668	657	643	644	90.4
Michigan.....	56	54	51	56	57	59	60	58	57	56	54	54	55	90.0
New York.....	228	229	232	232	228	228	226	226	226	228	231	229	214	92.2
Ohio.....	145	155	146	<i>129</i>	<i>129</i>	136	131	133	139	157	156	164	166	77.7

SCREW-MACHINE PRODUCTS AND WOOD SCREWS

Description of the industry.—This classification embraces (1) establishments engaged primarily in the manufacture of machine screws and other screw-machine products (a great variety of special parts, many of which are threaded) and (2) those whose principal products are screws for use in wood. At former censuses these two lines of manufacture were

classified separately under the industry titles (1) "Screw-machine products" and (2) "Screws, wood"; but, because of the considerable amount of overlapping between them (i. e., the manufacture of wood screws and of screw-machine products as secondary products in the first and second of these industries, respectively), they have been combined.

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 ¹	Value added by manufacture ²	Horsepower
1929.....	273	19,881	\$28,986,604	\$39,462,568	\$105,974,662	\$66,512,094	64,840
1927.....	218	13,890	18,055,095	25,910,223	60,020,261	34,110,038	43,468
1925.....	205	14,071	18,193,660	25,076,378	59,614,894	34,538,516	42,454
1923.....	190	13,234	16,943,362	21,564,854	52,945,878	31,381,024	37,504
1921.....	168	8,653	9,344,553	10,038,988	25,783,731	15,744,743	(*)
1919.....	154	15,151	16,969,393	20,535,431	55,475,042	34,939,611	31,281
1914.....	78	8,089	4,260,132	5,468,124	13,464,442	8,056,318	15,892
1909.....	54	5,131	2,424,020	3,469,004	9,213,067	5,744,063	8,788
1904.....	33	3,453	1,498,189	1,682,169	4,845,444	3,163,275	6,890
1899.....	33	3,527	1,423,838	1,720,455	4,658,467	2,938,012	4,725
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929.....	25.2	45.2	60.5	52.3	76.6	95.0	49.2
1925-1927.....	6.3	-2.7	-0.8	3.3	0.7	-1.2	2.3
1923-1925.....	7.9	6.3	7.4	16.3	12.6	10.1	13.3
1921-1923.....	13.1	52.9	81.3	114.8	105.3	92.3	-----
1919-1921.....	9.1	-42.9	-41.9	-51.1	-53.5	-54.9	-----
1910-1929.....	77.3	31.2	70.8	92.2	91.0	90.4	107.3
1909-1919.....	(4)	195.3	600.1	492.0	502.1	502.3	256.0
1899-1909.....	(4)	45.5	70.2	101.6	97.8	95.5	85.9

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

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

³ Not called for on schedule.

⁴ 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	Census year	Number of establishments	Salaried officers and employees ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	273	2,467	19,881	64,840	8,733	50,107	\$8,065,349	\$28,989,604	\$39,462,568	\$37,437,759	\$2,024,809	\$105,974,662	\$66,512,094
	1927	218	1,803	13,690	43,468	7,984	35,514	4,824,921	18,055,095	25,910,223	24,011,443	1,288,780	60,020,261	34,110,038
	1919	164	1,838	15,151	31,281	6,958	24,323	3,887,889	16,909,893	20,535,431	19,509,950	1,026,481	55,475,042	34,939,611
Individual States:														
California	1929	9	7	61	331		331	12,760	84,024	127,860	123,010	4,850	323,332	105,472
	1927	7	11	70	237		237	22,971	92,330	79,650	76,526	4,134	277,293	197,603
	1919	4	2	22	55		55	1,040	19,850	29,393	27,708	1,685	66,527	37,134
Connecticut	1929	25	373	3,366	8,943	3,145	5,798	897,996	4,346,434	6,277,304	5,968,808	308,496	14,679,415	8,402,111
	1927	19	292	2,488	6,045	2,550	3,495	606,646	2,616,858	3,547,102	3,408,036	139,066	8,307,000	4,759,898
	1919	17	275	3,295	4,314	325	3,989	628,520	3,208,906	3,468,852	3,216,419	253,433	6,661,520	6,192,068
Illinois	1929	44	406	2,707	6,132	875	5,257	1,426,035	4,010,989	6,269,212	6,027,309	241,903	16,866,667	10,597,465
	1927	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
	1919	24	260	1,811	3,128	912	2,216	592,201	2,085,322	2,598,151	2,492,460	106,601	6,016,907	4,018,768
Indiana	1929	11	28	351	868		868	65,623	416,700	508,608	461,084	47,524	1,441,643	933,035
	1927	6	13	200	576		576	39,276	309,152	295,505	276,527	18,978	742,386	446,881
	1919	3	4	32	95		18	2,488	32,980	41,519	38,794	2,725	90,556	58,036
Massachusetts	1929	27	333	1,768	5,812	38	5,774	824,189	2,457,177	2,951,423	2,748,138	203,285	8,215,706	5,264,283
	1927	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
	1919	26	293	1,441	3,334	175	3,159	394,050	1,504,943	2,104,360	1,990,057	114,303	5,704,671	3,600,311
Michigan	1929	39	305	3,418	14,543		14,543	1,469,596	5,902,443	8,682,412	8,280,001	402,411	22,031,065	13,348,653
	1927	38	233	2,063	7,777		7,777	786,603	3,470,748	5,935,703	5,059,424	276,279	12,436,948	6,501,245
	1919	20	219	1,624	4,337	500	3,837	525,777	2,114,463	3,022,775	3,502,023	120,752	7,935,902	4,313,127
Missouri	1929	5	30	144	415		415	54,102	159,011	156,795	149,027	13,708	515,532	358,737
New Jersey	1929	6	48	230	138	25	113	126,289	393,953	466,900	451,100	15,800	1,252,968	786,068
	1927	7	32	172	446	197	249	72,194	340,449	423,063	408,992	14,071	907,119	484,056
	1919	6	16	81	146	72	74	45,258	80,506	104,216	58,890	5,326	199,320	135,104
New York	1929	21	82	529	1,513		1,513	325,768	801,970	1,061,231	994,884	66,347	3,540,065	2,487,834
	1927	16	61	356	1,166	50	1,116	162,465	489,792	525,161	488,338	36,823	1,994,083	1,468,922
	1919	8	30	144	283	160	133	75,244	148,165	173,824	193,262	10,502	467,317	293,493
Ohio	1929	42	529	5,248	17,850	1,895	15,955	1,795,408	7,715,839	9,660,789	9,181,476	470,313	27,210,394	17,549,005
Pennsylvania	1929	24	131	916	3,271	680	2,591	542,497	1,177,553	1,394,154	1,278,064	116,090	4,449,646	3,055,492
Wisconsin	1929	6	26	122	712	25	687	65,087	226,564	320,080	296,847	23,233	835,579	515,499
	1927	4	14	125	491	25	466	45,229	177,929	288,976	271,280	17,696	627,787	338,811
	1919	7	13	81	272	25	247	45,272	93,513	202,301	191,347	10,964	356,349	154,048
Groups of States:														
N. H., 2 est.; R. I., 8	1929	10	158	953	4,062	2,050	2,012	428,064	1,221,143	1,482,907	1,387,976	94,931	4,294,710	2,811,809
Md., 2 est.; Minn., 2	1929	4	11	68	250		250	28,035	72,754	102,893	96,035	6,858	308,934	206,041
States not shown separately.	1927	121	1,147	7,616	26,730	5,132	21,598	3,089,537	10,557,837	14,815,053	14,023,320	791,733	34,727,675	19,912,622
	1919	39	720	6,620	15,340	4,781	10,559	1,577,439	7,674,736	8,230,040	7,829,990	400,050	24,369,974	10,138,934

¹ Not including proprietors and firm members, as follows: For 1929, 106; 1927, 82; 1919, 71. 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, 22,454; 1927, 15,675; 1919, 17,060.
² The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.
³ Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
⁴ 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.
⁵ Withheld from publication in order to avoid disclosing data for individual establishments.
⁶ Illinois, 34 establishments; Maryland, 1; Massachusetts, 26; Minnesota, 2; Missouri, 3; New Hampshire, 1; Ohio, 34; Pennsylvania, 17; and Rhode Island, 3.
⁷ Maryland, 1 establishment; Missouri, 1; Ohio, 20; Pennsylvania, 12; Rhode Island, 4; and Washington, 1.

SCREW-MACHINE PRODUCTS AND WOOD SCREWS

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TABLE 3.—PRODUCTS, BY CLASS AND BY 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. Figures 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	1929	1927	CLASS AND STATE	1929	1927
1. Screw-machine products and wood screws industry, all products, total.....	\$105,974,662	\$60,020,261	Screw-machine products and wood screws—Continued.		
2. Screw-machine products and wood screws.....	87,080,909	52,547,750	Screw-machine products—Con.		
3. Other products (not normally belonging to the industry).....	18,693,753	7,472,511	Michigan.....	\$22,738,898	\$12,166,519
4. Screw-machine products and wood screws made as secondary products in other industries.....	17,377,446	7,378,213	New York.....	3,601,231	2,079,723
Screw-machine products and wood screws, aggregate (sum of 2 and 4).....	104,458,355	59,920,963	Ohio.....	22,211,519	12,752,683
Screw-machine products, total.....	91,468,367	51,046,465	Pennsylvania.....	4,236,800	2,265,629
California.....	521,657	251,577	Rhode Island.....	2,420,538	728,117
Connecticut.....	12,513,294	6,952,267	Wisconsin.....	2,813,799	647,787
Illinois.....	13,891,750	7,613,777	Maryland and New Jersey.....	1,462,921	1,183,725
Indiana.....	1,613,441	723,247	Minnesota and Missouri.....	1,204,199	870,451
Massachusetts.....	4,107,318	2,810,063	Other States (Ala., Colo., La., N. H., and W. Va.).....	81,242	
			Wood screws, total ¹	12,989,988	8,874,498
			Connecticut.....	3,777,314	2,325,499
			Illinois.....	1,616,593	
			Massachusetts, New Hampshire, and Rhode Island.....	5,297,556	6,548,999
			Michigan and Ohio.....	1,704,557	
			New Jersey, New York, and Pennsylvania.....	594,058	

¹ Reported by quantity, 53,605,939 gross, valued at \$10,725,174; not reported by quantity, \$2,264,814.

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

[Quantities and costs of the principal materials consumed were reported by only 244 of the 273 establishments in this industry. The combined value of products reported by these 244 establishments amounted to \$100,703,521, or 95 per cent of the aggregate value of products of 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 certain specified materials, whereas the others cover all materials. Figures are given for each State which can be shown without disclosing data for individual establishments. Certain of the "Other States," however, reported larger costs of some of the classes of materials than some of the States shown separately]

KIND AND STATE	Pounds	Cost	KIND AND STATE	Pounds	Cost	KIND AND STATE	Pounds	Cost
Iron and steel rods and bars, total.....	555,605,772	\$15,495,831	Iron and steel, all other forms, total.....	39,100,050	\$1,409,853	Brass and bronze purchased as such—Continued.		
California.....	883,910	32,381	Connecticut.....	3,509,533	134,141	Indiana.....	358,483	\$71,929
Connecticut.....	18,712,181	660,264	Illinois.....	12,191,601	481,496	Massachusetts.....	4,812,992	983,482
Illinois.....	33,261,018	1,084,465	Massachusetts.....	2,613,184	128,245	Michigan.....	8,292,435	1,407,694
Indiana.....	3,980,100	147,151	Michigan.....	1,215,906	80,316	New York.....	1,476,469	304,658
Massachusetts.....	37,934,053	946,789	New York.....	517,435	23,425	Ohio.....	9,660,340	1,834,512
Michigan.....	243,501,994	5,846,322	Ohio.....	12,595,748	345,450	Pennsylvania.....	920,494	183,017
New York.....	5,970,715	222,728	Other States (Calif., Ind., Mo., Pa., R. I., Wis.).....	6,456,673	215,790	Wisconsin.....	108,698	21,862
Ohio.....	158,944,975	4,917,218	Copper, total.....	1,576,730	268,242	Other States (Md., Minn., Mo., N. H., N. J., R. I.).....	3,010,380	661,912
Pennsylvania.....	18,415,620	788,511	Massachusetts.....	198,104	38,567	Aluminum, total.....		424,233
Other States (Md., Minn., Mo., N. H., N. J., R. I., Wis.).....	33,995,206	850,002	New York.....	9,660	2,068	Connecticut.....		41,126
Iron and steel wire, total.....	122,804,393	4,012,677	Other States (Conn., Ill., Mich., N. J., Ohio, Pa., R. I., Wis.).....	1,368,966	227,607	Illinois.....		24,215
Connecticut.....	34,433,318	1,081,894	Brass and bronze purchased as such, total.....	55,335,405	10,720,245	Massachusetts.....		12,809
Illinois.....	34,711,539	1,020,751	California.....	240,840	50,127	New York.....		5,475
Ohio.....	27,298,968	1,091,130	Connecticut.....	16,056,012	3,106,231	Ohio.....		9,524
Other States (Ind., Mass., Mich., Mo., N. H., N. J., N. Y., Pa., R. I.).....	26,360,568	819,402	Illinois.....	10,397,962	2,095,321	Other States (Calif., Ind., Md., Mich., Minn., N. J., Pa., R. I.).....		331,084

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
Prime movers and electric motors driven by purchased energy, aggregate.....	7,313	Horse-power 64,840	4,521	Horse-power 43,468	3,865	Horse-power 42,484	2,827	Horse-power 31,281	454	Horse-power 15,892	100.0	100.0
Prime movers, total.....	38	8,733	35	7,954	41	8,930	41	6,958	47	9,215	13.5	22.2
Steam, total.....	23	7,828	25	7,532	29	8,433	26	6,430	34	8,634	12.1	20.6
Engines.....	21	7,175	21	6,857	26	7,783	26	6,430	(1)	(1)	11.1	20.0
Turbines.....	2	663	4	675	3	650			(1)	(1)	1.0	
Internal-combustion engines.....	13	755	7	352	11	407	15	510	13	581	1.2	1.6
Water wheels and water turbines.....	2	150	3	70	1	90					.2	
Electric motors driven by purchased energy.....	7,275	56,107	4,486	35,514	3,824	33,554	2,786	24,323	407	6,677	86.5	77.8
Electric motors, total.....	7,524	59,586	4,760	40,699	4,077	37,278	2,926	27,174	440	7,763	100.0	100.0
Driven by purchased energy.....	7,275	56,107	4,486	35,514	3,824	33,554	2,786	24,323	407	6,677	94.2	89.5
Driven by energy generated in establishments reporting.....	249	3,479	274	5,185	253	3,724	140	2,851	39	1,086	5.8	10.5
Electric generators.....	27	Kilowatts 3,772 Kilowatt-hours	23	Kilowatts 3,345	27	Kilowatts 3,506	(2)	(2)	(2)	(2)		
Electric energy purchased ³		71,340,585		(4)		(4)		(2)		(2)		

¹ Not called for separately on schedule.
² Not called for on schedule.
³ This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.
⁴ 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.....	19,881	19,689	20,346	21,098	21,139	21,203	21,538	21,489	20,925	19,691	18,725	16,723	15,915	73.9		
1925.....	14,071	<i>13,283</i>	13,503	13,479	13,598	13,969	14,032	13,921	13,959	14,421	14,845	14,920	14,823	89.0		
1919.....	15,151	14,697	<i>14,377</i>	14,523	14,422	14,421	14,590	14,896	15,428	15,088	15,933	16,242	16,545	86.9		
1914.....	8,089	8,979	8,850	8,761	8,601	8,408	8,200	8,053	7,809	7,608	7,239	7,268	7,352	80.3		
1909.....	5,131	<i>4,610</i>	4,744	4,859	4,831	4,901	5,013	5,156	5,221	5,350	5,440	5,628	5,817	79.3		
California.....	61	68	62	65	63	64	70	63	60	55	56	56	65	75.7		
Connecticut.....	3,366	3,295	3,314	3,413	3,346	3,383	3,420	3,555	3,602	3,483	3,394	3,186	3,005	83.4		
Illinois.....	2,707	2,464	2,526	2,676	2,729	2,764	2,816	2,882	2,991	2,931	2,830	2,539	2,331	77.9		
Indiana.....	351	344	359	383	381	401	383	367	372	344	319	277	276	68.8		
Massachusetts.....	1,768	1,713	1,730	1,739	1,745	1,775	1,819	1,817	1,793	1,794	1,821	1,783	1,690	92.8		
Michigan.....	3,418	3,470	3,601	3,785	3,790	3,852	3,880	3,819	3,698	3,514	2,948	2,414	2,237	57.5		
Missouri.....	144	<i>124</i>	134	132	144	150	155	153	153	151	146	143	143	80.0		
New Jersey.....	230	<i>188</i>	194	211	223	241	238	268	290	251	231	221	210	67.1		
New York.....	529	517	531	560	569	562	571	676	553	531	494	440	459	76.2		
Ohio.....	5,248	5,529	5,862	6,016	5,965	5,929	5,994	5,855	5,290	4,624	4,488	3,731	3,695	61.4		
Pennsylvania.....	916	822	805	942	1,004	997	1,027	975	989	898	875	821	747	72.7		
Wisconsin.....	122	122	128	144	139	138	120	128	127	112	106	93	96	64.6		

SPRINGS, STEEL, EXCEPT WIRE, NOT MADE IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—The establishments classified in this industry are engaged primarily in the manufacture of leaf springs—railway, motor-vehicle, carriage, wagon, etc.—and of hot-wound springs, railway and other. The figures for years prior to 1927 include data for the production of motor-vehicle spring bumpers, but at the census for 1927 these were assigned to the "Motor-vehicle bodies and motor-vehicle parts" industry. Wire springs are products of the "Wire-work, not elsewhere classified," industry.

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.

The total production of steel springs in all industries, including those made in plants operated in connection with rolling mills, is shown 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 ¹	Value added by manufacture ²	Horsepower
1929	86	5,842	\$9,313,927	\$25,372,478	\$46,672,319	\$21,299,841	24,318
1927	94	5,753	8,912,961	24,598,568	43,820,633	19,222,095	22,263
1925	98	5,897	8,988,669	23,609,007	44,469,221	20,860,214	22,492
1923	114	8,694	12,782,130	31,748,019	59,892,180	27,644,161	25,393
1921	126	5,358	6,779,358	16,007,255	31,750,873	15,743,118	(³)
1919	112	8,981	11,157,874	28,019,180	51,479,535	23,460,355	18,560
1914	84	3,703	2,601,848	6,142,927	11,594,992	5,452,065	8,025
1914	64	3,196	1,852,917	4,727,270	9,005,362	4,278,092	7,314
1909	62	2,476	1,242,553	2,741,764	5,740,886	2,999,072	5,461
1904	48	2,102	1,061,066	3,024,656	5,690,499	2,665,843	3,114
1899							
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	(⁴)	1.5	4.5	3.1	6.5	10.8	9.2
1925-1927	(⁴)	-2.4	-0.8	4.2	-1.5	-7.9	-1.0
1923-1925	-14.0	-31.7	-29.7	-25.6	-25.1	-24.5	-11.4
1921-1923	-9.5	61.1	88.5	98.3	87.1	75.6	
1919-1921	12.6	-40.3	-39.2	-42.9	-38.3	-32.9	
1919-1929	-23.2	-35.0	-16.5	-9.4	-9.3	-9.2	46.8
1909-1919	(⁴)	181.0	502.2	492.7	471.7	448.4	128.4
1899-1909	(⁴)	62.0	74.6	56.3	58.3	60.5	134.9

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

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

³ Not called for on schedule.

⁴ 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. 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 employees ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States.....	1929	86	821	5,842	24,318	3,251	21,067	\$2,654,594	\$9,313,927	\$25,372,478	\$23,901,943	\$1,470,535	\$46,672,319	\$21,290,841
	1927	94	938	5,753	22,263	4,578	17,685	2,903,528	8,912,961	24,508,568	23,591,229	1,207,339	43,820,633	19,222,065
	1919	112	1,365	8,981	16,550	4,711	11,849	3,544,680	11,187,874	28,019,180	26,255,302	1,763,878	51,479,535	23,460,355
Individual States:														
California.....	1929	8	38	162	857	-----	857	97,187	238,973	319,482	293,516	25,966	948,544	629,062
	1927	13	67	169	395	-----	395	175,096	282,234	544,725	513,472	31,253	1,220,794	676,099
	1919	10	50	151	262	-----	262	101,949	230,066	404,468	381,407	23,061	921,576	517,108
Illinois.....	1929	11	84	369	1,786	-----	830	282,294	555,849	1,316,711	1,220,768	95,943	2,812,937	1,406,226
	1927	10	168	591	2,367	-----	1,355	519,572	971,100	1,446,140	1,306,688	139,458	4,000,206	2,554,060
	1919	12	217	1,104	1,797	-----	1,050	657,886	1,133,757	3,725,176	3,610,632	108,544	6,937,499	3,212,323
Indiana.....	1929	5	52	222	1,565	-----	1,565	128,164	286,495	690,653	627,473	63,180	1,556,722	886,069
	1927	4	51	207	1,106	-----	150	112,761	269,012	687,270	652,512	34,758	1,412,501	725,231
Massachusetts.....	1929	3	4	21	39	-----	39	12,974	33,855	19,917	16,023	3,894	104,779	84,862
	1927	4	8	25	57	-----	57	16,351	44,146	67,034	61,956	5,078	183,068	116,684
	1919	7	18	51	156	-----	156	30,513	60,058	84,295	77,408	6,887	216,569	132,274
Michigan.....	1929	4	39	644	1,844	-----	1,844	145,296	1,192,610	6,423,451	6,236,636	186,815	9,324,608	2,901,217
	1927	5	67	871	3,636	-----	3,636	215,010	1,538,937	7,005,842	6,923,235	82,607	9,561,073	2,556,131
	1919	6	102	1,870	1,780	-----	1,780	300,190	2,242,320	5,425,890	5,133,000	292,800	8,471,558	3,045,668
Missouri.....	1929	6	28	107	325	-----	325	90,655	184,209	486,939	462,814	24,125	915,419	428,480
	1927	4	44	108	250	-----	250	67,616	133,627	325,635	300,329	19,200	812,218	486,683
New York.....	1929	8	37	173	817	-----	245	136,027	280,583	508,008	462,633	45,375	1,178,564	670,556
	1927	10	43	261	1,017	-----	295	190,304	300,821	685,476	615,719	69,757	1,560,727	875,251
	1919	20	113	743	1,242	-----	479	412,730	709,332	1,452,797	1,360,848	91,949	3,402,797	1,950,000
Pennsylvania.....	1929	14	236	1,871	8,599	-----	2,101	751,554	3,079,253	8,312,901	7,756,776	556,125	15,187,227	6,874,326
	1927	17	218	1,590	6,986	-----	2,687	681,761	2,395,028	6,440,770	5,984,854	461,916	11,303,098	4,856,328
	1919	18	245	1,618	4,725	-----	2,377	713,578	2,162,356	6,477,989	6,106,853	371,136	11,038,921	5,160,932
Groups of States:														
Conn., 5 est.; R. I., 1 Kans., 1 est.; Okla., 2; Tex., 1.....	1929	6	176	1,185	4,371	-----	4,371	528,039	1,834,103	2,207,134	2,010,314	196,820	5,968,450	3,761,316
Min., 1 est.; Oreg., 1; Wash., 2.....	1929	4	7	29	68	-----	68	24,785	46,240	53,873	49,830	4,043	156,188	102,315
N. H., 1 est.; N. J., 3; Ohio, 6 est.; Wis., 3.....	1929	4	8	24	76	-----	76	29,659	35,984	65,307	58,762	6,545	184,979	119,672
	1929	4	10	56	83	-----	75	27,345	87,443	117,214	102,501	14,653	304,099	186,885
	1929	9	102	979	3,888	-----	3,888	400,615	1,458,330	4,850,888	4,603,837	247,051	8,020,743	3,178,855
States not shown separately.....	1927	27	272	1,928	6,443	-----	91	924,997	2,885,056	7,389,770	7,026,464	363,306	13,705,448	6,375,678
	1919	39	620	3,444	6,617	-----	805	1,268,334	4,530,045	10,448,565	9,579,064	869,501	19,890,615	9,442,060

¹ Not including proprietors and firm members, as follows: For 1929, 12; 1927, 20; 1919, 55. 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, 6,675; 1927, 6,711; 1919, 10,401.

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

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

⁴ 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.

⁵ Connecticut, 5 establishments; Florida, 1; Kentucky, 1; Minnesota, 2; New Jersey, 2; Ohio, 4; Oklahoma, 1; Oregon, 2; Rhode Island, 1; Texas, 1; Utah, 1; Washington, 3; Wisconsin, 3.

⁶ Connecticut, 5 establishments; Indiana, 3; Kansas, 1; Maine, 1; Maryland, 2; Minnesota, 2; Missouri, 3; Montana, 2; New Jersey, 4; Ohio, 7; Oregon, 1; Rhode Island, 1; Vermont, 1; Washington, 3; Wisconsin, 3.

SPRINGS, STEEL, ETC.

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

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

CLASS AND STATE	1929	1927
1. "Springs, steel, except wire, not made in plants operated in connection with rolling mills" industry, all products, value.....	\$46,672,319	\$43,820,633
2. Steel springs, except wire, made in the industry.....	35,848,287	36,915,181
3. Other products, not normally belonging to the industry.....	10,824,032	6,905,452
4. Steel springs, except wire, made as secondary products in other industries (including those made in plants operated in connection with rolling mills).....	14,450,588	8,061,951
Steel springs, except wire, made in all industries, total (sum of 2 and 4).....	50,298,875	44,977,132

1929

	Quantity	Value
Steel springs, except wire:	<i>Ton, 2,000 lbs.</i>	
Total value.....		\$50,298,875
Leaf springs for railroad equipment, motor vehicles, carriages, wagons, etc.....		43,898,745
Quantity reported.....	301,308	33,788,915
Quantity not reported.....		10,159,830
California.....		756,452
Connecticut and New Jersey.....		889,770
Illinois.....		2,876,604
Indiana.....		1,830,083
Iowa, Kansas, Minnesota, Oklahoma, and Texas.....		245,687
Massachusetts.....		55,358
Michigan, Ohio, and Wisconsin.....		20,332,084
Missouri.....		889,681
New Hampshire and Rhode Island.....		27,911
New York and Pennsylvania.....		15,896,222
Oregon and Washington.....		98,980
Hot-wound springs (railroad).....		6,400,130
Quantity reported.....	72,939	6,276,641
Quantity not reported.....		123,489
California, Illinois, Indiana, and Massachusetts.....		1,824,827
Pennsylvania.....		4,465,363

TABLE 4.—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 76 of the 86 establishments in this industry. The combined value of products reported by these 76 establishments amounted to \$48,316,703, or 99.2 per cent of the aggregate value of products of the 86 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
	<i>Ton, 2,000 lbs.</i>			<i>Ton, 2,000 lbs.</i>	
Carbon steel, total.....	146,467	\$6,653,113	Alloy steel, total.....	203,423	\$13,884,172
California.....	2,802	139,078	California.....	1,415	103,106
Illinois.....	14,507	676,520	Illinois.....	4,465	273,963
Indiana.....	8,472	396,583	Indiana.....	420	28,068
Missouri.....	7,291	358,924	Other States (Conn., Mass., Mich., Minn., Mo., N. J., N. Y., Ohio, Oreg., Pa., R. I., Wash., and Wis.) ¹	197,123	13,479,035
Pennsylvania.....	84,134	3,710,060		<i>Pounds</i>	
Other States (Mass., Mich., Minn., N. J., N. Y., Ohio, Oreg., and Wis.) ¹	29,261	1,371,348	Steel wire, total (Calif., Conn., Ill., Ind., and Pa.) ¹	2,407,162	262,178

¹ Combined to avoid disclosing data for individual establishments.

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.....	2,554	24,318	2,250	22,263	2,002	22,492	1,345	16,560	415	8,025	100.0	100.0
Prime movers, total.....	18	3,251	30	4,578	32	4,860	54	4,711	58	5,125	13.4	28.4
Steam, total.....	12	2,680	18	3,710	23	3,740	32	3,417	36	4,137	11.0	20.6
Engines.....	12	2,080	18	3,710	22	3,665	32	3,417	(1)	(1)	11.0	20.6
Turbines.....					1	75			(1)	(1)		
Internal-combustion engines.....	4	451	6	682	6	830	16	1,079	19	798	1.9	6.5
Water wheels and water turbines.....	2	120	6	186	3	290	6	215	3	190	0.5	1.3
Electric motors driven by purchased energy.....	2,536	21,067	2,220	17,685	1,970	17,632	1,291	11,849	357	2,900	86.6	71.6
Electric motors, total.....	2,684	23,066	2,392	20,578	2,138	20,313	1,373	13,247	449	4,317	100.0	100.0
Driven by purchased energy.....	2,536	21,067	2,220	17,685	1,970	17,632	1,291	11,849	357	2,900	89.0	89.4
Driven by energy generated in establishments reporting..	148	2,599	172	2,893	168	2,681	82	1,398	92	1,417	11.0	10.6
Electric generators.....	12	Kilo-watts 1,985 Kilowatt-hours	16	Kilo-watts 2,380	16	Kilo-watts 2,395	(?)	(?)	(?)	(?)		
Electric energy purchased ¹		23,564,847		(4)		(4)		(?)		(?)		

¹ Not called for separately on schedule.
² Not called for on schedule.
³ This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.
⁴ 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.....	5,842	5,791	5,973	6,051	6,503	6,382	6,153	5,996	5,808	5,778	5,447	5,117	<i>5,107</i>	78.5
1925.....	5,897	<i>5,485</i>	5,607	5,843	5,952	6,032	5,878	5,879	5,934	5,997	5,898	6,157	6,103	89.1
1919.....	8,981	8,527	8,637	8,757	8,591	8,504	9,046	9,224	9,389	9,239	9,295	9,295	9,511	89.4
1914.....	3,703	3,584	3,566	3,790	3,818	3,806	3,682	3,528	3,597	3,862	3,639	3,715	3,849	91.4
1909.....	3,196	<i>2,861</i>	3,170	3,156	2,987	3,010	3,025	3,200	3,199	3,075	3,343	3,507	3,704	79.9
California.....	162	157	178	182	187	171	159	163	158	186	144	135	<i>130</i>	64.2
Illinois.....	359	353	362	370	395	383	380	381	371	380	368	347	<i>331</i>	83.8
Indiana.....	222	267	283	258	258	236	224	194	191	199	196	185	<i>178</i>	60.8
Massachusetts.....	21	<i>20</i>	<i>20</i>	<i>20</i>	<i>20</i>	21	22	21	21	<i>20</i>	22	21	21	96.1
Michigan.....	644	630	684	730	798	680	643	677	660	655	550	492	<i>478</i>	59.0
Missouri.....	107	99	97	98	<i>95</i>	<i>95</i>	105	111	114	120	117	115	114	79.2
New York.....	173	164	174	171	214	183	184	189	185	179	149	141	144	65.9
Pennsylvania.....	1,871	1,742	1,791	1,880	1,938	1,956	2,032	1,972	1,914	1,822	1,812	1,723	1,874	84.8

STEEL BARRELS, KEGS, AND DRUMS

Description of the industry.—The establishments manufacture of steel barrels, kegs, and drums for use classified in this industry are engaged primarily in the as shipping containers.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 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 ¹	Value added by manufacture ²	Horsepower
1929.....	53	4,110	\$5,769,097	\$21,946,559	\$37,825,027	\$15,878,468	15,289
1927.....	39	2,853	3,985,629	14,735,518	24,104,669	9,366,151	11,229
1925.....	23	2,021	2,914,381	12,743,280	19,928,094	7,184,814	7,789
1923.....	29	2,068	3,363,374	14,818,038	23,248,707	8,430,669	7,907
1921.....	81	2,013	2,322,503	9,296,744	14,525,010	5,258,266	(*)
1919 ⁴	33	3,322	4,435,444	15,151,210	24,942,650	9,791,440	10,554
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	(°)	44.1	44.7	48.9	56.9	69.5	36.2
1925-1927.....	(°)	41.2	36.8	15.6	21.0	30.4	45.1
1923-1925.....	(°)	-24.3	-13.3	-14.0	-14.3	-14.8	-2.1
1921-1923.....	(°)	32.5	44.8	59.9	60.1	60.3	-----
1919-1921.....	(°)	-39.4	-47.6	-38.8	-41.8	-46.3	-----
1919-1929.....	(°)	23.7	30.1	44.9	51.6	62.2	44.9

¹ For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.
² Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
³ Not called for on schedule.
⁴ Manufactures of steel barrels, kegs, and drums, formerly assigned to the "Foundry and machine-shop products, not elsewhere classified" industry were first given a separate industry classification at the census for 1919. No statistics for earlier years are, therefore, available.
⁵ 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 figures are given in combination with those for others, however, reported larger values of products than some of the States shown separately.]

STATE	Census year	Number of establishments	Salaried officers and employes ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States.....	1929	53	566	4,110	15,289	1,800	13,489	\$1,596,232	\$5,769,097	\$21,946,559	\$21,506,424	\$440,135	\$37,825,027	\$15,878,468
	1927	39	491	2,853	11,229	3,080	8,149	1,404,524	3,985,629	14,735,518	14,465,484	270,034	24,104,669	9,366,151
	1919	33	634	3,322	10,554	2,305	8,249	1,463,977	4,435,444	15,151,210	14,913,978	237,232	24,942,650	9,791,440
Individual States:														
California.....	1929	5	103	698	2,292	-----	2,292	242,165	872,834	3,549,066	3,519,361	29,685	5,520,997	1,971,931
	1927	5	64	428	1,532	-----	1,532	150,042	617,952	1,798,964	1,776,671	22,293	3,256,987	1,458,023
Minnesota.....	1929	5	50	247	337	-----	337	141,990	312,476	885,688	808,001	17,687	1,923,636	1,037,948
New Jersey.....	1929	4	33	375	1,059	-----	1,059	96,630	635,785	2,041,073	1,987,817	53,256	3,498,715	1,457,642
Ohio.....	1929	13	112	1,044	4,439	900	3,539	536,669	1,569,020	7,015,054	6,914,807	100,247	11,012,254	3,997,200
	1927	13	121	951	3,829	1,055	2,774	424,593	1,846,132	6,018,770	5,935,408	83,362	8,928,339	2,969,569
	1919	13	224	1,681	6,624	1,500	5,124	623,835	2,481,895	9,702,288	9,560,773	141,515	14,552,704	4,850,416
Pennsylvania.....	1929	6	26	286	725	-----	725	135,641	422,297	1,970,761	1,931,112	39,649	2,959,060	988,299
	1927	5	20	177	805	-----	805	64,261	240,648	1,061,154	1,042,147	19,007	1,559,483	498,329
	1919	5	39	222	623	130	493	169,269	310,455	937,133	921,884	15,249	1,633,062	695,929
Texas.....	1929	4	37	254	841	325	516	127,452	342,105	1,832,438	1,822,440	9,998	2,733,805	901,867
Groups of States:														
Ala., 2 est.; La., 1; Okla., 1.....	1929	4	9	47	112	-----	112	14,132	43,441	180,873	178,369	2,504	304,219	123,346
Ill., 3 est.; Ind., 2; Wis., 1.....	1929	6	115	808	3,986	575	3,411	359,364	1,041,311	2,488,099	2,326,245	161,854	6,651,105	4,163,006
N. Y., 3 est.; Mo., 3.....	1929	6	71	351	1,498	-----	1,498	242,186	529,828	1,983,507	1,958,252	25,255	3,221,236	1,237,729
States not shown separately.....	* 1927	16	286	1,297	5,063	2,025	3,038	765,658	1,780,897	5,856,630	5,711,268	145,372	10,359,860	4,503,230
	* 1919	15	371	1,519	3,307	675	2,632	665,873	1,643,094	4,511,789	4,431,321	80,498	8,756,884	4,245,985

¹ Not including proprietors and firm members, as follows: For 1929, 8; 1927, 9; 1919, 11. 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, 4,674; 1927, 3,353; 1919, 3,967.
² For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.
³ Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
⁴ Illinois, 3 establishments; Indiana, 1; Louisiana, 1; Minnesota, 3; Missouri, 2; New Jersey, 1; New York, 2; Texas, 2; Wisconsin, 1.
⁵ California, 1 establishment; Colorado, 1; Illinois, 4; Indiana, 2; Michigan, 1; Minnesota, 2; Missouri, 2; New Jersey, 1; New York, 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, AND 1919, AND OF GENERATORS, 1929, 1927, AND 1925; QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

TYPE	1929		1927		1925		1919		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.....	1,764	<i>Horse-power</i> 15,289	1,031	<i>Horse-power</i> 11,229	544	<i>Horse-power</i> 7,739	715	<i>Horse-power</i> 10,554	100.0	100.0
Prime movers, total.....	8	1,800	21	3,080	19	3,050	23	2,305	11.8	21.8
Steam engines.....	8	1,800	19	3,025	19	3,050	17	1,805	11.8	17.7
Internal-combustion engines.....			2	55			6	440		4.2
Electric motors driven by purchased energy.....	1,756	13,489	1,010	8,149	525	4,689	692	8,249	88.2	78.2
Electric motors, total.....	1,844	14,219	1,139	9,399	648	5,829	847	8,650	100.0	100.0
Driven by purchased energy.....	1,756	13,489	1,010	8,149	525	4,689	692	8,249	94.9	96.4
Driven by energy generated in establishments reporting.....	88	730	129	1,250	123	1,140	155	401	5.1	4.6
Electric generators.....	5	<i>Kilowatts</i> 980 <i>Kilowatt-hours</i>	5	<i>Kilowatts</i> 980	5	<i>Kilowatts</i> 980	(1)	(1)		
Electric energy purchased ¹		10,329,603		(²)		(²)		(1)		

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

TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, AND 1919, 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.....	4,110	5,657	3,540	3,712	4,045	4,293	4,341	4,364	4,439	4,403	4,371	4,188	4,088	79.7
1925.....	2,021	1,995	1,904	1,993	2,209	2,193	2,007	1,989	1,906	2,032	2,059	2,133	1,941	86.1
1919.....	3,322	3,279	3,055	<i>2,787</i>	2,798	2,788	3,050	3,411	3,622	3,768	3,592	3,738	4,048	67.4
California.....	698	664	<i>653</i>	708	705	684	670	718	707	690	737	705	735	88.6
Minnesota.....	247	207	215	229	267	272	279	278	278	209	228	228	211	74.2
New Jersey.....	375	295	300	<i>293</i>	296	339	344	430	450	448	448	436	420	65.1
Ohio.....	1,044	854	967	1,007	1,072	1,173	1,130	1,102	1,063	1,047	1,023	987	999	81.3
Pennsylvania.....	286	261	<i>248</i>	259	280	281	297	312	303	303	298	290	300	79.5
Texas.....	254	167	<i>151</i>	156	274	294	293	284	284	276	282	295	285	51.2

STOVES AND RANGES, HEATING APPARATUS, AND STEAM FITTINGS

Description of the industries.—This report covers two industries—namely, "Steam fittings and steam and hot-water heating apparatus" and "Stoves and ranges (other than electric) and warm-air furnaces." The products of the first industry are steam and hot-water heating boilers, radiators, safety valves, vacuum gauges, heat regulators, coils, unions, flanges, and similar fittings, and other classes of steam specialties. The products of the second are stoves, ranges, heaters, and burners of all kinds (except those made for industrial use), designed to consume coal, wood, gas, oil, alcohol, acetylene, and gasoline; flatirons heated with alcohol or other fuel burned internally; gas and oil appliances for heating water for kitchen or household use, and other gas-burning heating and cooking appliances; warm-air furnaces, auxiliary and ventilating heaters, and stove and furnace parts. The manufacture of electric stoves, ranges, and heating appliances is included in the "Electrical machinery, apparatus, and supplies" industry.

trial use), designed to consume coal, wood, gas, oil, alcohol, acetylene, and gasoline; flatirons heated with alcohol or other fuel burned internally; gas and oil appliances for heating water for kitchen or household use, and other gas-burning heating and cooking appliances; warm-air furnaces, auxiliary and ventilating heaters, and stove and furnace parts. The manufacture of electric stoves, ranges, and heating appliances is included in the "Electrical machinery, apparatus, and supplies" industry.

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, fuel, and purchased electric energy ¹	Value of products ²	Value added by manufacture ³	Horsepower
THE GROUP AS A WHOLE							
1929.....	849	86,237	\$124,121,363	\$173,455,317	\$500,057,263	\$326,601,946	250,439
1927.....	796	88,073	129,178,554	169,931,238	483,444,219	313,512,981	232,732
1925.....	789	89,774	130,278,639	173,229,684	493,232,937	320,093,253	263,439
1923.....	824	93,953	133,138,023	185,865,213	490,216,026	304,359,813	178,749
1921.....	786	63,269	78,904,276	112,430,530	271,652,356	159,221,826	(⁴)
1919.....	849	80,119	99,042,488	151,291,679	361,795,480	210,593,801	128,192
1914.....	846	63,713	42,603,367	60,876,072	153,312,472	92,436,400	87,417
1909.....	864	60,508	36,834,978	51,872,469	132,936,823	81,064,359	78,286
1904 ⁵	670	45,094	26,351,501	32,695,960	87,043,662	54,347,702	41,958
Per cent of increase or decrease (—):							
1927-1929.....	6.7	-2.1	-3.9	2.1	3.4	4.2	7.6
1925-1927.....	0.9	-1.9	-0.8	-1.9	-2.0	-2.0	14.4
1923-1925.....	-4.2	-4.4	-2.1	-6.8	0.6	5.1	13.8
1921-1923.....	4.8	48.5	68.7	65.3	80.5	91.1	-----
1919-1921.....	-7.4	-21.0	-20.8	-25.7	-24.9	-24.4	-----
1919-1929.....	-----	7.6	24.6	14.6	38.2	55.2	95.4
1909-1919.....	-1.7	32.4	170.5	191.7	172.2	159.7	63.7
STEAM FITTINGS AND STEAM AND HOT-WATER HEATING APPARATUS							
1929.....	240	39,621	\$58,974,874	\$72,708,268	\$228,310,254	\$155,601,956	137,339
1927.....	232	42,893	64,851,149	76,835,267	225,158,390	148,323,123	132,723
1925.....	225	43,260	63,979,276	77,356,905	228,929,985	151,573,080	109,313
1923.....	236	44,141	64,806,855	83,297,279	221,954,313	138,637,034	91,085
1921.....	274	30,806	39,590,053	50,213,402	127,306,887	77,183,485	(⁴)
1919.....	261	26,686	45,742,525	72,016,393	160,285,488	88,269,095	67,494
1914.....	295	26,388	16,737,879	26,921,102	63,922,434	37,001,332	38,362
1909.....	288	23,378	13,890,699	22,534,208	54,083,505	31,549,237	33,008
1904.....	176	11,690	6,581,578	10,425,332	24,910,857	14,485,526	10,318
1899.....	227	9,252	4,982,857	10,219,566	22,064,860	11,865,354	6,300
Per cent of increase or decrease (—):							
1927-1929.....	3.4	-7.6	-9.1	-5.4	1.4	4.9	3.5
1925-1927.....	3.1	-0.8	1.4	-0.7	-1.6	-2.1	21.4
1923-1925.....	-4.7	-2.0	-1.3	-7.1	3.1	9.8	20.0
1921-1923.....	-13.9	43.3	63.7	65.9	74.3	79.7	-----
1919-1921.....	5.0	-16.0	-13.4	-30.3	-20.5	-12.6	-----
1919-1929.....	-8.0	8.0	28.9	1.0	42.4	76.3	163.5
1909-1919.....	-9.4	56.9	229.3	219.6	196.4	179.8	104.5
1899-1909.....	26.9	152.7	178.8	120.5	144.9	165.9	423.9
STOVES AND RANGES (OTHER THAN ELECTRIC) AND WARM-AIR FURNACES							
1929.....	609	46,616	\$65,146,509	\$100,747,049	\$271,747,009	\$170,999,960	118,100
1927.....	564	45,180	64,327,405	93,095,971	258,285,829	165,189,858	100,009
1925.....	564	46,514	66,299,363	95,872,770	264,302,952	168,430,173	94,126
1923.....	688	49,812	68,331,168	102,567,934	268,261,713	165,693,779	87,664
1921.....	512	32,451	39,308,223	62,217,128	144,285,469	82,068,341	(⁴)
1919.....	588	43,433	53,899,963	79,275,286	201,609,992	122,234,706	60,698
1914.....	551	37,325	25,865,488	33,954,970	89,890,038	55,435,068	40,055
1909.....	576	37,130	22,944,279	29,338,261	78,853,323	49,515,062	45,278
1904 ⁵	494	33,404	19,769,923	22,270,628	62,182,805	39,862,177	31,640
Per cent of increase or decrease (—):							
1927-1929.....	8.0	3.2	1.3	8.2	5.2	3.5	13.1
1925-1927.....	-----	-2.9	-3.0	-2.9	-1.9	-1.9	6.3
1923-1925.....	-4.1	-6.6	-3.0	-6.5	-1.5	1.7	7.4
1921-1923.....	14.8	53.5	73.8	64.9	85.9	101.9	-----
1919-1921.....	-12.9	-25.3	-27.1	-21.5	-28.4	-32.9	-----
1919-1929.....	4.1	7.3	20.9	27.1	84.9	39.9	86.3
1909-1919.....	2.1	17.0	134.9	170.2	155.6	146.9	34.1

¹ 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.
² For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.
³ Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
⁴ Not called for on schedule.
⁵ No comparable data prior to 1904.

CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS FOR THE INDUSTRIES, 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, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products ¹	Value added by manufacture ¹
					Total	Prime movers	Motors run by purchased energy			Total	Materials ¹	Fuel and purchased energy		
STEAM FITTINGS AND STEAM AND HOT-WATER HEATING APPARATUS														
United States	1929	240	6,299	39,621	137,339	23,498	113,841	\$16,527,334	\$58,974,874	\$72,708,268	\$67,247,365	\$5,460,883	\$228,310,254	\$155,601,986
	1927	232	6,668	42,898	182,723	26,885	106,838	17,012,494	64,851,149	76,835,267	72,893,788	3,941,529	225,158,390	148,823,123
	1919	261	7,105	36,680	67,494	22,307	45,187	12,461,708	45,742,525	72,010,393	68,019,320	3,997,073	160,285,488	88,269,095
Individual States:														
Connecticut	1929	10	591	2,828	10,087	150	9,937	1,231,905	4,289,045	5,246,268	4,899,789	346,479	14,934,763	9,688,495
	1927	9	388	2,513	8,629	395	8,234	941,690	3,539,371	2,960,299	2,683,191	217,108	10,432,237	7,531,938
	1919	11	737	4,260	6,833	4,673	2,210	1,434,541	6,103,657	6,487,519	5,948,899	538,620	17,401,135	10,913,616
Illinois	1929	31	1,468	10,331	41,861	10,163	31,698	3,955,176	17,318,440	20,374,156	18,778,834	1,595,322	65,498,354	45,124,198
	1927	27	2,007	11,164	44,511	13,318	31,193	5,677,282	17,630,011	21,009,858	19,784,959	1,224,899	57,608,342	30,598,484
	1919	28	1,656	9,028	22,577	7,355	15,222	3,309,198	12,097,080	23,460,238	22,413,820	1,046,418	43,940,561	20,480,323
Indiana	1929	10	309	1,580	3,948	50	3,898	798,330	2,113,086	2,680,932	2,485,953	203,979	8,240,797	5,550,865
	1927	9	207	1,203	2,825	---	2,825	511,165	1,642,788	2,187,975	2,060,559	127,416	6,587,360	4,399,385
	1919	9	80	541	750	369	381	131,746	659,278	1,193,683	1,105,328	88,355	2,329,847	1,135,864
Massachusetts	1929	26	688	2,879	8,016	940	7,076	1,511,416	4,116,419	3,662,249	3,286,240	376,009	15,811,608	11,049,359
	1927	24	580	3,320	6,992	977	6,015	1,247,331	4,905,332	4,530,779	4,165,258	127,416	14,809,729	10,275,950
	1919	23	1,352	8,521	4,795	1,255	3,540	1,242,089	3,967,954	5,444,115	5,136,372	307,743	13,472,559	8,028,444
Michigan	1929	15	260	1,099	4,294	2,188	2,106	741,457	2,547,611	2,721,402	2,454,356	267,046	9,272,340	6,550,947
	1927	9	188	1,575	3,656	2,021	1,635	433,111	2,276,017	2,422,220	2,270,657	142,563	8,612,275	6,190,055
	1919	15	101	762	1,606	1,165	441	215,940	1,572,833	1,572,833	1,431,679	141,154	3,062,750	1,859,917
New Jersey	1929	13	269	1,899	6,247	2,975	3,272	653,940	2,986,200	5,350,494	5,000,630	349,864	13,310,225	7,959,781
	1927	12	258	2,183	5,309	2,853	2,456	637,291	3,548,834	5,891,520	5,714,830	176,690	15,047,761	9,156,231
	1919	12	206	1,397	2,154	851	1,303	389,373	1,741,084	2,452,589	2,452,589	156,832	6,305,848	3,852,764
New York	1929	34	550	4,286	21,889	810	21,079	1,430,963	6,646,199	7,498,448	6,973,898	524,550	22,033,198	14,534,750
	1927	39	704	7,091	24,407	934	23,473	1,837,215	12,074,735	14,404,028	13,818,178	585,850	41,164,062	26,760,034
	1919	36	584	5,114	9,927	595	9,332	1,137,758	6,376,371	8,890,241	8,195,447	694,794	19,930,669	11,040,428
Ohio	1929	23	583	3,916	9,633	1,740	7,893	1,905,960	5,369,896	6,392,048	5,842,463	549,585	20,810,280	14,427,241
	1927	22	490	3,350	9,363	1,740	7,623	1,179,978	4,644,893	5,499,185	5,232,577	260,608	15,607,596	10,008,411
	1919	29	573	2,723	5,206	1,981	3,225	1,119,672	3,228,981	3,949,097	3,714,281	234,816	11,852,034	7,902,907
Pennsylvania	1929	39	961	6,070	19,281	4,332	14,949	2,373,066	8,577,631	10,128,989	9,353,992	774,997	32,379,203	22,250,214
	1927	41	1,062	6,716	16,623	4,237	12,391	2,555,265	9,463,600	9,713,776	9,203,416	510,360	30,850,463	21,110,657
	1919	52	1,353	5,919	9,748	3,807	5,941	2,674,065	7,653,781	13,218,016	12,079,408	538,608	30,724,958	17,506,042
Rhode Island	1929	4	37	163	296	---	296	118,811	201,851	637,372	625,101	12,271	1,475,682	837,710
	1927	4	31	145	296	---	296	108,832	182,593	570,601	559,167	11,494	1,438,771	868,170
	1919	5	33	158	309	---	309	82,273	149,649	636,463	625,048	10,805	1,124,874	488,421
Wisconsin	1929	4	143	567	1,063	---	1,063	439,828	739,148	1,430,353	1,389,137	41,216	4,423,150	2,992,865
	1927	4	160	496	988	---	988	361,018	661,666	1,118,877	1,079,152	39,725	3,087,126	1,968,249
	1919	6	73	589	356	10	346	181,410	481,886	528,163	508,341	19,812	1,632,512	1,104,359
Groups of States:														
Ala., 2 est.; Fla., 2; La., 1	1929	5	54	344	1,282	---	1,282	129,520	350,287	375,596	351,642	24,054	1,249,010	873,414
Calif., 4 est.; Oreg., 2; Wash., 1	1929	7	45	238	966	---	966	166,539	305,334	420,788	404,426	16,362	1,258,324	837,336
Iowa, 2 est.; Minn., 7	1929	9	159	1,435	2,867	100	2,767	444,658	1,560,827	3,344,146	3,216,316	127,830	10,504,100	7,159,954
Ky., 1 est.; Md., 2; N. H., 1; Va., 1	1929	5	27	258	432	50	382	86,273	400,410	546,339	493,481	62,858	1,407,597	861,268
Mo., 4 est.; Tenn., 1	1929	5	146	1,128	5,177	---	5,177	538,652	1,446,540	1,889,688	1,691,227	198,461	6,193,196	4,303,598
States not shown separately	1927	32	527	3,137	9,119	410	8,709	1,521,716	4,284,249	6,586,149	6,312,790	273,350	20,035,678	13,449,529
	1919	35	357	1,774	3,193	246	2,947	643,743	2,144,833	4,183,456	3,964,340	219,116	8,508,546	4,325,090

See footnotes at end of table.

CENSUS OF MANUFACTURES: 1929

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

[See note at head of this table]

STATE	Cen- sus year	Num- ber of estab- lish- ments	Sala- ried officers and emp- loy- ees	Wage earn- ers (aver- age for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products ¹	Value added by manufac- ture ²
					Total	Prime movers	Motors run by pur- chased energy			Total	Materials ³	Fuel and pur- chased energy		
STOVES AND RANGES, ETC.—continued														
Individual States— Continued.														
Washington.....	1929	17	73	329	469	.....	469	\$158,583	\$426,484	\$526,445	\$507,698	\$18,747	\$1,494,417	\$607,972
	1927	13	50	288	436	.....	436	103,404	354,707	435,822	425,289	10,533	1,232,685	736,863
West Virginia.....	1929	4	15	129	206	60	146	53,931	145,523	169,477	162,069	7,408	443,007	273,530
	1927	6	14	133	155	60	95	55,295	153,213	176,615	167,901	8,714	478,046	301,431
Wisconsin.....	1929	16	477	2,449	6,154	1,515	4,039	1,210,559	2,935,578	4,954,203	4,685,983	268,220	13,877,713	8,923,510
	1927	13	329	1,919	4,733	1,540	3,193	834,708	2,374,560	3,248,707	3,058,331	190,376	10,552,392	7,303,685
Groups of States:														
Ark., 1 est.; La., 1; Utah, 1.....	1929	3	10	14	41	.....	41	13,929	22,679	36,014	34,407	1,607	88,437	52,423
Kans., 4 est.; N. H., 1; N. C., 1; Vt., 1.....	1929	7	123	626	792	120	672	365,968	807,486	916,220	867,218	49,002	2,241,327	1,325,107
States not shown sep- arately.....	1927	21	130	572	861	90	771	314,928	826,640	977,838	944,288	33,550	2,000,133	1,082,295
	1919	134	1,760	8,530	12,364	5,147	7,217	4,066,615	10,247,786	17,434,899	16,888,738	546,161	43,219,381	25,784,482

¹ Includes cost of shop supplies for 1927 and 1919 but not for 1929. See GENERAL EXPLANATIONS—Comparableness with Preceding Years—Schedule Changes—Mill or Shop Supplies.

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

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

⁴ Not including proprietors and firm members, as follows: For 1929, 25; 1927, 38; 1919, 73. 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, 45,945; 1927, 49,599; 1919, 43,864.

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 Alabama, 2 establishments; California, 7; Delaware, 1; Iowa, 2; Maryland, 2; Minnesota, 5; Missouri, 7; New Hampshire, 1; Tennessee, 1; Vermont, 1; Virginia, 1; Washington, 2.

⁷ Alabama, 2 establishments; California, 7; Delaware, 1; Iowa, 5; Louisiana, 1; Maryland, 2; Minnesota, 6; Missouri, 6; Tennessee, 1; Vermont, 1; Virginia, 2; Washington, 1.

⁸ Not including proprietors and firm members, as follows: For 1929, 166; 1927, 171; 1919, 233. 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, 54,813; 1927, 53,459; 1919, 51,931.

⁹ Arkansas, 1 establishment; Colorado, 3; Connecticut, 2; Kansas, 1; Louisiana, 1; Nebraska, 1; New Hampshire, 1; North Carolina, 1; Oklahoma, 3; Rhode Island, 3; Texas, 4.

¹⁰ Arkansas, 1 establishment; Colorado, 1; Connecticut, 4; Idaho, 1; Indiana, 27; Iowa, 11; Kansas, 2; Maryland, 8; Minnesota, 15; Missouri, 23; Nebraska, 2; North Carolina, 1; Oklahoma, 3; Rhode Island, 2; Texas, 2; Vermont, 2; Washington, 9; West Virginia, 6; Wisconsin, 14.

TABLE 3.—PRODUCTS, BY KIND, NUMBER, 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. For statistics on electric stoves and ranges, see report for "Electrical machinery, apparatus, and supplies" industry]

KIND	1929		1927		KIND	1929		1927	
	Number	Value	Number	Value		Number	Value	Number	Value
1. "Steam fittings and steam and hot-water heating apparatus" and "Stoves and ranges (other than electric) and warm-air furnaces" industries, total.....		\$500,057,263		\$453,444,219	Stoves, ranges, heating apparatus, etc.—Continued. Steam and hot-water heating apparatus—Continued. Unit heaters, total.....		\$9,238,556	(?)	(?)
2. Stoves, ranges, heating apparatus (other than electric), and parts (including fittings and valves).....		467,087,332		462,710,851	Number reported.....	48,491	7,701,791		
3. Other products (not normally belonging to the industries) and receipts for repair work.....		32,969,931		120,733,338	Number not reported.....		1,476,765		
4. Stoves, ranges, heating apparatus (other than electric), and steam fittings made as secondary products in other industries.....		23,894,667		118,375,148	Warm-air furnaces, parts, and registers.....		49,311,273		\$50,636,190
Stoves, ranges, heating apparatus (other than electric), and parts (including fittings, valves, and specialties), all industries: Aggregate value (sum of 2 and 4).....		490,981,999		479,086,029	Warm-air furnaces.....	378,546	32,579,551	470,252	43,189,821
Steam and hot-water heating apparatus, total.....		90,679,061		118,778,178	Parts and registers.....		10,731,722		7,448,869
Heating boilers and parts.....		40,324,406		61,508,239	Stoves, ranges, water heaters, and parts, total.....		181,437,004		176,843,704
Cast-iron steam and hot-water heating boilers.....		33,152,631		46,071,714	Coal and wood, total.....		66,593,923		67,818,025
Steel steam and hot-water heating boilers.....		5,332,172		6,813,095	Coal and wood cooking stoves and ranges, total.....		739,523	32,068,463	853,801
Parts for heating boilers.....		1,839,603		8,623,430	Porcelain-enameled.....	353,741	21,375,485	335,258	21,834,010
Radiators.....		41,116,099		57,269,939	Other than porcelain-enameled Not reported separately as to kind.....	324,296	8,762,852	618,543	10,180,457
Cast-iron.....		37,919,080	(?)	(?)	Coal and wood heating stoves, total.....	61,483	1,900,126		
Copper.....		2,757,207	(?)	(?)	Porcelain-enameled.....	886,721	23,621,431	1,273,909	24,337,076
Other.....		439,812	(?)	(?)	Other than porcelain-enameled.....	425,506	18,014,935	324,910	13,767,645
					Not separately reported as to kind.....	415,455	4,878,038	948,999	10,508,431
					Coal and wood water heaters (domestic).....	45,760	728,458	(?)	
								(?)	1,708,809

See footnotes at end of table.

STOVES AND RANGES, HEATING APPARATUS, AND STEAM FITTINGS 995

TABLE 3.—PRODUCTS, BY KIND, NUMBER, AND VALUE: 1929 AND 1927—Continued

[See note at head of this table]

KIND	1929		1927		KIND	1929		1927	
	Number	Value	Number	Value		Number	Value	Number	Value
Stoves, ranges, heating apparatus, etc.—Continued.					Stoves, ranges, heating apparatus, etc.—Continued.				
Stoves, ranges, water heaters, and parts—Continued.					Stoves, ranges, water heaters, and parts—Continued.				
Coal and wood—Continued.					Gasoline—Continued.				
Coal and wood stoves, ranges, and water heaters, not separately reported as to kind, total.....		\$5,784,105			Gasoline cooking stoves (except camp stoves) and ranges, total.....		\$2,181,760		\$4,056,498
Number reported.....	210,506	3,193,891			Porcelain-enameled.....		1,918,094	127,571	3,235,032
Number not reported.....		2,590,214			Other.....	16,462	268,666	60,878	821,466
Parts for coal and wood stoves, ranges, and water heaters.....		3,646,027		\$3,757,013	Gasoline water heaters (domestic).....	2,137	42,338		(?)
Gas, total.....		93,772,195		84,178,409	Gasoline camp stoves.....	130,501	538,618		(?)
Gas cooking stoves and ranges, total.....	1,602,427	57,354,006	1,559,918	56,760,064	Parts for gasoline cooking stoves, ranges, and heaters.....		1,087,817		278,561
Porcelain-enameled:					Other stoves, ranges, and heaters ¹		3,130,313		3,120,180
With insulated ovens.....	155,934	7,000,985			Fuel-oil burners (residence type), total.....		21,354,818		11,501,819
With uninsulated ovens.....	957,199	35,940,896	998,136	41,621,176	For furnaces.....	101,550	19,693,666	55,243	11,295,398
Not separately reported as to insulation.....	191,339	6,809,371			For stoves and ranges.....	(?)	1,661,152	(?)	206,421
Other:					Stokers, mechanical (domestic).....	7,031	1,115,637	(?)	(?)
With insulated ovens.....	12,541	280,650			Incinerators (household type), total.....		908,391		(?)
With uninsulated ovens.....	250,762	6,803,973	561,782	15,138,888	Gas-operated.....		128,764		(?)
Not separately reported as to insulation.....	28,052	440,131			Other.....		779,627		(?)
Gas room heaters, total.....		11,569,718		8,550,305	Portable ovens (detachable ovens for use on oil, gasoline, and other stoves).....	734,850	2,882,153	717,082	1,910,613
Number reported.....	997,422	10,274,592	851,977	8,550,305	Steam tables.....		1,321,897		1,279,926
Number not reported.....		1,295,126			Other heating and cooking apparatus and supplies, total.....		7,241,420		1,14,017,489
Gas water heaters (domestic supply).....	894,785	18,208,497	860,522	16,844,311	Coal and wood-burning.....		234,942		
Gas stoves, ranges, and heaters, not reported separately as to kind.....		3,627,477			Gas-burning.....		1,698,579		14,617,489
Parts for gas stoves, ranges, and heaters.....		3,017,497		2,623,729	Kerosene and gasoline-burning.....		104,682		
Kerosene, total.....	981,172	14,090,040	1,133,725	17,392,031	Other.....		5,203,217		
Kerosene cooking stoves and ranges, total.....	758,530	11,352,202	886,576	13,406,256	Fittings, valves, and specialties, total.....		140,730,375		\$104,118,110
Porcelain-enameled.....	262,152	5,793,806	155,062	3,785,267	Fittings and valves, total.....		96,180,053		(?)
Other.....	496,378	5,558,396	731,524	9,620,989	Brass.....		21,459,655		(?)
Kerosene room heaters, total.....	196,000	1,112,400	210,007	1,173,825	Cast-iron (except bell and spigot).....		30,212,504		(?)
Porcelain-enameled.....	45,071	359,048			Malleable-iron.....		24,120,220		(?)
Other.....	150,989	753,352	210,007	1,173,825	Steel, cast and forged.....		10,782,058		(?)
Kerosene water heaters (domestic supply).....	26,582	447,903	37,142	690,621	Other, and not separately reported.....		3,605,610		
Parts for kerosene cooking stoves, ranges, and heaters.....		1,177,535		2,121,329	Specialties (gauges, steam traps, reducing valves, thermostats, etc.).....		50,550,322		(?)
Gasoline, total.....		\$3,850,533		\$4,335,059					

¹ Revised on account of change in classification.

² Not called for on schedule.

³ Data incomplete.

⁴ Included in "Other heating and cooking apparatus and supplies" to avoid disclosing data for individual establishments.

⁵ Combined stoves and ranges (coal, wood, and gas), laundry stoves, caboose stoves, hotel ranges, fruit driers, etc.

⁶ Includes data for gasoline water heaters and camp stoves and household type incinerators (see above).

⁷ Orchard heaters, gas burners, direct and indirect water heaters (heated by exhaust steam), charcoal burners, sun heaters, etc.

⁸ Includes value of an indeterminate quantity of fittings other than steam fittings.

CENSUS OF MANUFACTURES: 1929

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. Statistics are given for each State which can be shown separately without disclosing data for individual establishments. Certain of the "Other States," however, reported larger production than some of the States shown separately.)

KIND AND STATE	Value	KIND AND STATE	Value	KIND AND STATE	Value
Stoves, ranges, heating apparatus (other than electric), and parts (including valves and fittings), all industries.....	\$490,981,909	Stoves, ranges, heating apparatus, etc.—Continued.		Stoves, ranges, heating apparatus, etc.—Continued.	
Steam and hot-water heating apparatus, total.....	90,679,061	Stoves, ranges, water heaters, etc.—Con. Coal and wood—Continued.		Stoves, ranges, water heaters, etc.—Con. Gas, total.....	\$83,772,195
Cast-iron steam and hot-water heating boilers, total.....	33,152,631	Coal and wood cooking stoves and ranges—Continued.		Gas cooking stoves and ranges, total.....	87,354,006
Indiana.....	2,181,416	Other than porcelain-enameled, total.....	\$8,762,852	Porcelain-enameled, total.....	49,820,252
Michigan.....	4,719,900	Alabama.....	846,997	With insulated ovens, total.....	7,069,985
New Jersey.....	2,233,678	California.....	106,522	Michigan.....	1,073,166
New York.....	11,689,537	Illinois.....	415,045	New York.....	155,190
Pennsylvania.....	5,129,765	Indiana.....	241,419	Ohio.....	1,622,639
Conn. and Mass.....	3,089,435	Kentucky.....	199,139	Pennsylvania.....	218,783
Illinois and Missouri.....	1,422,164	Maine.....	182,840	Me., Mass., and R. I.....	1,043,636
Other States (Ala., Calif., Minn., Ohio, Utah, Wash., and Wis.).....	2,686,746	Massachusetts.....	1,757,971	Other States (Ala., Calif., Md., N. J., Tenn., Va., W. Va., and Wis.).....	1,636,343
Steel steam and hot-water heating boilers, total.....	5,332,172	Missouri.....	390,488	With uninsulated ovens, total.....	35,940,896
Illinois.....	2,292,803	New York.....	378,959	California.....	1,147,682
Pennsylvania.....	2,010,634	Ohio.....	443,262	Illinois.....	9,184,449
Other States (Calif., Mich., Minn., Ohio, and Wash.).....	1,028,735	Pennsylvania.....	318,529	Indiana.....	674,249
Parts for cast-iron and steel steam and hot-water heating boilers.....	1,839,603	Tennessee.....	2,353,343	Maryland.....	1,458,133
Radiators, cast-iron, total.....	37,919,080	Washington.....	239,455	New York.....	1,502,283
Illinois.....	4,656,919	Wisconsin.....	47,698	Ohio.....	7,163,893
New Jersey.....	6,465,293	Conn., N. J., and R. I.....	368,200	Pennsylvania.....	6,039,253
New York.....	6,002,370	Other States (Ga., Mich., Minn., N. C., Ore., Va., and W. Va.).....	482,966	Ala. and Tenn.....	417,622
Ohio.....	3,160,592	Coal and wood cooking stoves and ranges not separately reported as to kind (Calif., Ga., Ill., N. Y., Tenn., and Wis.).....	1,960,126	Me., Mass., R. I., and N. J.....	1,082,506
Pennsylvania.....	9,926,876	Coal and wood heating stoves, total.....	23,621,431	Mich., Minn., Mo., and Wis.....	7,291,335
Ind. and Mich.....	2,071,418	Porcelain-enameled, total.....	18,014,935	Not separately reported as to insulation, total.....	6,800,371
Other States (Ala., Calif., Conn., Md., Mass., Minn., Mo., and Ore.).....	5,635,612	Illinois.....	4,447,263	Illinois.....	1,140,860
Radiators, copper (Ill., Minn., N. J., N. Y., Pa., and Wis.).....	2,757,207	Indiana.....	1,890,061	New York.....	81,185
Radiators, other than cast-iron and copper (Calif., Ill., Md., Minn., and N. Y.).....	439,812	Massachusetts.....	179,124	Ohio.....	1,310,841
Unit heaters, total.....	9,238,556	Missouri.....	1,048,274	Ind., Mich., Mo., and Wis.....	2,486,930
California.....	122,259	New York.....	69,623	Other States (Calif., Mass., Pa., and Tenn.).....	1,777,555
Illinois.....	1,196,445	Pennsylvania.....	128,950	Gas cooking stoves and ranges other than porcelain-enameled, total.....	7,533,754
Conn., N. J., N. Y., and Pa.....	2,624,745	Tennessee.....	2,470,650	With insulated ovens, total.....	280,650
Ky., Mo., and Ohio.....	2,807,233	Ky., Md., Ohio, and Va.....	5,379,732	Ohio, Pa., and W. Va.....	137,627
Other States (Calif., Mich., Minn., Ore., and Wis.).....	2,587,868	Calif., Ore., and Wash.....	211,486	Other States (Ill., Mass., and Tenn.).....	143,023
Warm-air furnaces, total.....	32,579,551	Other States (Ala., Ga., Mich., Minn., and Wis.).....	2,189,772	With uninsulated ovens, total.....	6,803,973
California.....	1,110,865	Other than porcelain-enameled, total.....	4,878,038	Illinois.....	278,983
Colorado.....	23,827	Alabama.....	504,535	Ind., Mich., Ohio, and Wis.....	4,837,436
Illinois.....	2,567,473	Illinois.....	738,171	Mass., N. J., N. Y., and Pa.....	1,207,039
Indiana.....	423,489	Indiana.....	165,342	Other States (Calif., Me., Md., Mo., Tenn., and W. Va.).....	480,475
Iowa.....	2,823,841	Kentucky.....	157,770	Not separately reported as to insulation, total.....	449,131
Maine.....	46,330	Maine.....	43,916	Ohio.....	274,662
Michigan.....	6,281,917	Massachusetts.....	79,656	Ill., Ind., and Mo.....	87,244
Minnesota.....	496,265	Michigan.....	23,846	Other States (Calif., Mass., N. Y., Ore., and Tenn.).....	87,235
Missouri.....	1,030,294	Missouri.....	285,940	Gas room heaters, total.....	11,560,718
New York.....	2,849,258	New York.....	128,321	California.....	1,851,837
Ohio.....	9,632,676	Ohio.....	339,965	Illinois.....	422,629
Oregon.....	336,452	Pennsylvania.....	167,983	Missouri.....	335,120
Pennsylvania.....	1,859,879	Tennessee.....	1,089,326	New York.....	66,648
Washington.....	724,979	Calif., Ore., and Wash.....	206,011	Ohio.....	3,538,878
Wisconsin.....	408,875	Md., Va., and W. Va.....	236,228	Pennsylvania.....	1,801,248
Ala., Ky., and Tenn.....	1,013,942	Ga., and N. C.....	76,943	West Virginia.....	276,712
Other States (Conn., Md., Mass., N. J., R. I., and Va.).....	849,423	Other States (Conn., Minn., N. J., R. I., and Wis.).....	140,479	Ark., Okla., and Texas.....	334,127
Parts and registers for warm-air furnaces.....	10,731,722	Coal and wood heating stoves not separately reported as to kind (Calif., Ga., Ill., and Tenn.).....	728,458	Ga., Ky., and Tenn.....	605,557
Stoves, ranges, water heaters, and parts, total.....	181,437,004	Coal and wood water heaters (domestic), total.....	1,443,897	Other States (Ind., Kans., Md., Mass., Mich., N. J., Ore., and Wis.).....	2,336,762
Coal and wood, total.....	66,563,923	New York.....	235,650	Gas water heaters (domestic), total.....	18,263,497
Coal and wood cooking stoves and ranges, total.....	32,008,463	Tennessee.....	124,750	California.....	1,071,458
Porcelain-enameled, total.....	21,875,485	Ala., Ga., N. C., and Va.....	83,968	Illinois.....	459,330
California.....	176,342	Ill., Ind., and Mich.....	294,919	Michigan.....	2,251,273
Illinois.....	2,633,969	N. J., Ohio, and Pa.....	240,347	Ohio.....	3,436,317
Indiana.....	1,231,208	Other States (Calif., Mo., and R. I.).....	404,263	Pennsylvania.....	7,263,716
Massachusetts.....	1,768,641	Coal and wood stoves, ranges, and water heaters, not separately reported as to kind, total.....	5,784,105	Texas.....	29,065
Missouri.....	6,041,063	Ga., Tenn., and Va.....	1,152,331	Minn., Mo., and Wis.....	267,940
New York.....	1,028,134	Ill., Kans., and Mo.....	2,214,173	Other States (Ind., Ky., La., Md., Mass., N. J., and N. Y.).....	2,824,398
Pennsylvania.....	1,150,196	Md., Ohio, and Pa.....	1,252,123		
Tennessee.....	1,240,714	Other States (Calif., N. H., N. J., N. Y., and Vt.).....	1,165,478		
Wisconsin.....	164,885	Parts for coal and wood stoves, ranges, and water heaters.....	3,640,027		
Ala., Ga., N. C., and Va.....	687,279				
Conn., Me., N. J., and R. I.....	426,641				
Mich., Minn., and Ohio.....	4,445,076				
Oregon and Wash.....	381,307				

See footnotes at end of table.

STOVES AND RANGES, HEATING APPARATUS, AND STEAM FITTINGS 997

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
Stoves, ranges, heating apparatus, etc.—Continued.		Stoves, ranges, heating apparatus, etc.—Continued.		Stoves, ranges, heating apparatus, etc.—Continued.	
Stoves, ranges, water heaters, etc.—Con. Gas—Continued.		Fuel-oil burners—Continued.		Other heating and cooking apparatus and supplies—Continued.	
Gas stoves, ranges, and heaters, not separately reported as to kind (Ala., Calif., Ga., Ill., Kans., Mo., and N. Y.)	\$3,627,477	For furnaces—Continued.		Other, total ¹	\$5,203,217
Parts for gas stoves, ranges, and heaters	3,017,497	Iowa	\$410,076	California	300,428
Kerosene, total	14,090,040	Minnesota	735,705	Massachusetts	190,312
Kerosene cooking stoves and ranges, total	11,352,202	Oregon	58,499	New York	1,500,917
Porcelain-enameled (Ill., Mass., Mich., Mo., N. Y., Ohio, and Wis.)	5,793,806	Pennsylvania	212,276	Ohio	267,826
Other than porcelain-enameled (Mass., Mich., Mo., Ohio, and Wis.)	5,558,396	Washington	191,111	Pennsylvania	1,351,399
Kerosene room heaters, total	1,112,400	Conn., Mass., R. I., and Vt.	1,948,520	Washington	33,337
Porcelain-enameled (Calif., Ill., Mass., Ohio, and Wis.)	359,048	Ind., Mich., Mo., Ohio, and Wis.	6,534,590	Ill. and Wis.	1,064,289
Other (Ill., Mich., Mo., Ohio, Pa., and Wis.)	753,352	Md., N. J., N. Y.	2,318,518	Other States (Colo., Fla., Ind., Iowa, Minn., N. J., and Oreg.)	394,719
Kerosene water heaters (domestic) (Calif., Ill., Mass., Mich., Mo., Ohio, and Wis.)	447,903	Other States (Ariz., Colo., Kans., and Va.)	38,467	Fittings and valves, total	90,180,053
Parts for kerosene cooking stoves, ranges, and heaters	1,177,535	For stoves and ranges, total	1,661,152	Brass, total	21,459,655
Gasoline, total	3,850,533	Calif., Oreg., and Wash.	5,808	New York	726,881
Gasoline cooking stoves (except camp stoves) and ranges, total	2,181,700	Other States (Colo., Conn., Ill., Iowa, Mass., and Mo.)	1,655,344	Ohio	4,480,694
Porcelain-enameled (Ill., Kans., Minn., Ohio, and Wis.)	1,013,094	Stokers, mechanical (domestic), total	1,115,637	Pennsylvania	1,406,788
Other than porcelain-enameled (Minn., Mo., Ohio, and Wis.)	268,606	Ill., Ind., Mo., and Ohio	190,672	Other States (Calif., Conn., Ill., Iowa, Mass., N. J., Tenn., and Wis.)	14,785,292
Gasoline water heaters (Ill., Kans., Minn., Mo., and Wis.)	42,338	Other States (Md., Minn., N. Y., Oreg., Pa., Utah, and W. Va.)	934,965	Cast-iron (except bell and spigot), total	30,212,504
Gasoline camp stoves (Kans., Minn., Ohio, and Wis.)	538,618	Incinerators (household type), total	908,391	Massachusetts	2,009,023
Parts for gasoline cooking stoves, ranges, and heaters	1,087,817	Gas-operated (Ill., Mich., N. Y., and Ohio)	128,764	New York	2,104,947
Other stoves, ranges, and heating apparatus, total ¹	3,130,313	Other (Calif., Ill., N. J., and Wis.)	779,627	Ohio	5,555,657
Illinois	687,032	Portable ovens (detachable ovens for use on oil, gasoline, and other stoves), total	2,682,153	Pennsylvania	2,519,729
Pennsylvania	339,333	Ohio	1,590,579	Other States (Ala., Conn., Ill., La., Mich., and N. J.)	18,023,148
Ind., Ky., and Ohio	523,725	Ill. and Wis.	658,095	Malleable-iron, total	24,120,220
Other States (Mo., Md., Mass., Minn., Mo., N. J., N. Y., and Wis.)	1,600,223	Other States (Calif., Mass., Minn., Pa., and W. Va.)	633,479	Conn., Mass., and R. I.	2,768,325
Fuel-oil burners (residence type)	21,354,819	Steam tables, total	1,321,867	Other States (Ill., N. J., N. Y., Ohio, and Pa.)	21,351,895
For furnaces, total	10,693,666	California	21,602	Steel, cast and forged (Conn., Ill., Ind., Mass., Ohio, and Pa.)	10,782,058
California	1,107,189	N. Y., Ohio, and Pa.	949,612	Other and not separately reported, total	3,606,616
Illinois	6,138,715	Other States (Ill., Mass., Minn., and Mo.)	350,653	Massachusetts	1,257,787
		Other heating and cooking apparatus and supplies, total	7,241,420	Ind., Mich., and Ohio	83,216
		Coal and wood-burning (Calif., Ill., Ind., Md., Mich., Mo., N. Y., Tenn., and Wash.)	234,942	Other States (Conn., La., Mo., Pa., Va., and Wash.)	2,264,613
		Gas-burning, total	1,698,579	Specialties (gauges, steam traps, reducing valves, thermostats, etc.), total	50,550,322
		California	61,984	Illinois	5,642,760
		Illinois	131,494	Indiana	3,547,245
		Ohio	353,251	Massachusetts	3,947,824
		Oklahoma	52,693	Michigan	2,078,423
		Pennsylvania	240,824	Missouri	393,601
		Kans., Ky., and Mo.	612,396	New York	996,951
		Other States (Mass., Mich., N. Y., Wash., and Wis.)	245,937	Ohio	4,281,229
		Kerosene and gasoline-burning (Conn., Ill., Wash., and Wis.)	104,682	Pennsylvania	6,200,582
				Wisconsin	2,906,171
				Calif., Oreg., and Wash.	318,597
				Iowa and Minn.	8,462,958
				Other States (Conn., Ky., Md., N. H., N. J., R. I., Tenn., and Va.)	11,773,681

¹ Combined stoves and ranges (coal, wood, and gas), laundry stoves, caboose stoves, hotel ranges, fruit driers, etc.
² Orchard heaters, gas burners, direct and indirect water heaters (heated by exhaust steam), charcoal burners, sun heaters, etc.

TABLE 5.—PRINCIPAL MATERIALS CONSUMED IN THE "STEAM FITTINGS AND STEAM AND HOT-WATER HEATING APPARATUS" AND "STOVES AND RANGES (OTHER THAN ELECTRIC) AND WARM-AIR FURNACES" INDUSTRIES, BY KIND, QUANTITY, AND COST, BY STATES: 1929

[Quantities and costs of the principal materials were reported by only 646 of the 849 establishments in these two industries. The combined value of products reported by these establishments amounted to \$464,190,734, or 92.8 per cent of the aggregate value of products for the industries. 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 certain 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	
Pig iron, total	\$17,143,718	Tons, 2,000 lbs.	874,159	\$17,143,718	Pig iron—Continued.		Tons, 2,000 lbs.		
Alabama	387,803	22,797	387,803		Minnesota	\$199,292	9,077	\$199,292	
California	154,257	6,271	154,257		Missouri	485,445	23,395	485,445	
Connecticut	422,354	21,779	422,354		New Jersey	1,430,597	71,432	1,430,597	
Georgia	59,051	3,701	59,051		New York	2,515,776	130,839	2,515,776	
Illinois	2,384,863	116,124	2,384,863		North Carolina	9,999	526	9,999	
Indiana	715,736	34,379	715,736		Ohio	1,803,857	95,172	1,803,857	
Iowa	156,758	7,085	156,758		Pennsylvania	2,577,905	135,011	2,577,905	
Kansas	21,158	1,064	21,158		Tennessee	685,001	42,508	685,001	
Kentucky	47,804	2,586	47,804		Utah	1,043	40	1,043	
Maine	28,822	1,408	28,822		Virginia	54,541	2,599	54,541	
Maryland	391,852	18,811	391,852		Washington	42,350	1,666	42,350	
Massachusetts	680,249	31,879	680,249		West Virginia	9,060	500	9,060	
Michigan	1,646,226	81,819	1,646,226		Wisconsin	230,414	11,293	230,414	

CENSUS OF MANUFACTURES: 1929

TABLE 5.—PRINCIPAL MATERIALS CONSUMED IN THE "STEAM FITTINGS AND STEAM AND HOT-WATER HEATING APPARATUS" AND "STOVES AND RANGES (OTHER THAN ELECTRIC) AND WARM-AIR FURNACES" INDUSTRIES, BY KIND, QUANTITY, AND COST, BY STATES: 1929—Continued

[See note at head of this table]

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	
Iron and steel scrap purchased as such, total	\$5,459,227	Tons, 2,000 lbs. 369,872	\$5,459,227		Steel—Continued.		Tons, 2,000 lbs.		
Alabama	144,556	11,092	144,556		Connecticut	\$66,797	260	\$66,797	
California	20,450	1,560	20,450		Georgia	2,400	30	2,400	
Connecticut	214,594	17,512	214,594		Illinois	3,230,940	40,402	2,691,441	\$539,605
Illinois	1,562,124	96,125	1,562,124		Indiana	530,951	5,383	508,140	22,606
Indiana	216,402	14,791	216,402		Iowa	386,025	3,030	262,775	123,250
Iowa	98,687	7,077	98,687		Kansas	26,105			26,105
Kentucky	19,249	1,447	19,249		Kentucky	208,949	901	58,949	150,000
Maine	3,530	277	3,530		Maine	15,315	210	15,315	
Maryland	10,295	705	10,295		Maryland	170,012	2,177	170,012	
Massachusetts	128,678	9,177	128,678		Massachusetts	291,280	1,721	165,634	125,646
Michigan	483,502	31,294	483,502		Michigan	2,759,776	45,664	2,443,885	315,891
Minnesota	132,641	8,402	132,641		Minnesota	346,236	3,073	190,721	155,515
Missouri	164,874	12,501	164,874		Missouri	1,027,760	16,326	906,367	121,393
New Jersey	469,869	34,113	469,869		New Jersey	148,529	400	38,450	110,079
New York	688,942	47,496	688,942		New York	438,149	5,737	438,149	
North Carolina	2,300	230	2,300		North Carolina	2,150	27	2,150	
Ohio	408,824	27,268	408,824		Ohio	3,636,412	45,498	2,059,566	676,846
Pennsylvania	502,832	32,359	502,832		Oklahoma	20,774	164	20,774	
Tennessee	56,950	4,705	56,950		Oregon	71,817	403	55,107	16,650
Washington	21,943	1,525	21,943		Pennsylvania	2,206,933	34,003	2,156,083	50,850
West Virginia	20,640	1,450	20,640		Rhode Island	2,256	1	2,256	
Wisconsin	87,345	5,766	87,345		Tennessee	374,441	2,524	100,593	213,848
					Virginia	24,917	304	24,917	
					Washington	53,234	500	40,000	13,234
					West Virginia	43,793	5	358	43,435
					Wisconsin	635,276	7,991	635,276	
Iron and steel castings purchased as such, total	13,728,067	332,160	10,404,495	\$3,233,572	Nickel and nickel alloys, total	801,091	Pounds 2,004,752	649,672	151,419
Alabama	5,684	42	5,684		Alabama	450	1,000	450	
California	340,664	1,086	218,466	122,198	California	62,564	4,000	2,427	60,137
Colorado	8,424	258	8,424		Connecticut	8,741	26,155	8,741	
Connecticut	419,620	3,515	419,620		Georgia	347	3,645	347	
Georgia	1,229	7	1,229		Illinois	74,459	188,601	74,459	
Illinois	2,353,432	22,819	1,814,449	538,983	Indiana	37,847	171,330	37,847	
Indiana	639,766	13,922	501,762	78,004	Iowa	39,715			39,715
Iowa	236,240	3,046	221,356	14,884	Kentucky	985	2,494	985	
Kansas	463,713	3,932	463,713		Maine	102	228	102	
Kentucky	40,000			40,000	Massachusetts	39,459	77,672	39,459	
Louisiana	225	7	225		Michigan	17,132	50,185	17,132	
Maryland	100,631	1,005	100,631		Minnesota	823	1,172	823	
Massachusetts	541,506	229,608	274,789	266,717	Missouri	26,124	16,253	26,124	
Michigan	1,043,201	5,074	631,572	416,629	New Hampshire	183	363	183	
Minnesota	216,056	804	75,256	140,800	New Jersey	16,000	46,250	16,000	
Missouri	1,688,470	13,600	1,493,626	94,844	New York	13,270	32,178	13,270	
New Hampshire	7,531	47	7,531		Ohio	247,615	539,463	247,615	
New Jersey	392,247	1,049	138,891	253,356	Oklahoma	71,954	107,444	52,334	19,620
New York	156,619	1,472	156,619		Tennessee	6,736	18,704	6,736	
Ohio	2,697,021	19,294	1,860,914	706,107	Virginia	252	1,116	252	
Oklahoma	4,000	33	4,000		Washington	198	439	198	
Oregon	2,590	23	2,590		West Virginia	33,844	680,351	33,844	
Pennsylvania	1,895,081	8,705	1,244,031	591,050	Wisconsin	102,065	35,888	70,118	31,947
Rhode Island	442,237	2,909	442,237						
Washington	5,467	92	5,467						
Wisconsin	341,443	2,718	341,443						
Iron and steel pipe, total	3,119,636	35,181	2,521,855	597,781	Copper, brass, and bronze, total	15,298,952	78,830,762	13,550,666	1,742,286
Alabama	101,542	1,103	101,542		Alabama	1,472	4,600	1,472	
California	52,637	136	13,380	39,257	Arkansas	2,500	13,888	2,500	
Connecticut	130,887	1,298	130,887		California	148,571	296,823	92,441	56,130
Florida	4,400	61	4,400		Colorado	600	2,434	600	
Georgia	12,038	128	12,038		Connecticut	1,124,679	7,226,349	1,124,679	
Illinois	1,380,669	14,762	1,324,427	56,242	Florida	4,000	19,666	4,000	
Indiana	41,141	298	41,141		Illinois	4,337,055	25,806,480	4,201,873	135,182
Iowa	3,799	45	3,799		Indiana	209,456	856,859	209,456	
Kansas	1,542	22	1,542		Iowa	696,689	3,075,443	696,689	
Kentucky	2,218			2,218	Kansas	178,885	596,215	178,885	
Maryland	8,935	75	8,935		Kentucky	89,949	333,643	89,949	
Massachusetts	24,608	128	7,840	16,768	Louisiana	1,404	7,800	1,404	
Michigan	112,326	815	112,326		Maine	575	1,500	575	
Minnesota	15,033	189	15,033		Maryland	25,104	150,000	25,104	
Missouri	119,512	1,407	119,512		Massachusetts	1,073,679	4,928,020	960,883	103,816
New Jersey	8,335	87	8,335		Michigan	466,095	1,004,361	391,503	74,592
New York	152,219	1,501	152,219		Minnesota	512,623	1,050,870	226,812	235,811
Ohio	107,067	1,085	107,067		Missouri	333,589	293,323	274,626	58,963
Oregon	200	3	200		New Hampshire	2,635	7,545	2,635	
Pennsylvania	829,238	11,884	345,942	483,296	New Jersey	840,939	3,105,250	678,323	162,616
Tennessee	3,000	30	3,000		New York	335,994	1,619,535	335,994	
Washington	2,040	29	2,040		Ohio	2,036,618	15,047,021	1,768,506	268,112
Wisconsin	6,250	125	6,250		Oklahoma	10,973	13,538	10,973	
					Oregon	2,020	5,105	2,020	
					Pennsylvania	1,812,413	5,880,987	1,239,599	572,814
					Rhode Island	179,346	674,140	179,346	
					Tennessee	383,944	2,384,850	383,944	
					Virginia	960	4,107	960	
					Washington	3,040	16,888	3,040	
					West Virginia	8,490	28,052	8,490	
					Wisconsin	474,655	2,376,465	450,405	24,250
Steel (sheets, plates, strips, etc.), total	18,326,429	234,790	15,453,302	2,873,127					
Alabama	213,122	2,853	213,122						
Arkansas	5,500	45	5,500						
California	1,384,556	15,122	1,216,493	168,063					
Colorado	2,000	30	2,000						

STOVES AND RANGES, HEATING APPARATUS, AND STEAM FITTINGS 993

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; FOR THE INDUSTRIES

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
STEAM FITTINGS AND STEAM AND HOT-WATER HEATING APPARATUS												
Prime movers and electric motors driven by purchased energy, aggregate.....	11,801	<i>Horsepower</i> 137,339	9,881	<i>Horsepower</i> 132,723	7,252	<i>Horsepower</i> 109,313	4,289	<i>Horsepower</i> 67,494	1,662	<i>Horsepower</i> 38,362	100.0	100.0
Prime movers, total.....	91	23,498	122	26,885	125	26,835	135	22,307	217	21,526	17.1	33.1
Steam, total.....	81	22,893	111	26,417	119	26,535	113	21,956	167	19,350	16.7	32.6
Engines.....	75	16,843	102	18,292	111	20,408	92	14,148	(¹)	(¹)	12.3	21.0
Turbines.....	6	6,650	9	8,125	8	6,127	21	7,808	(¹)	(¹)	4.4	11.6
Internal-combustion engines.....	10	605	11	468	5	260	21	291	48	2,116	0.4	0.4
Water wheels and water turbines.....					1	40	1	60	2	60		0.1
Electric motors driven by purchased energy.....	11,210	113,841	9,759	105,838	7,127	82,478	4,154	45,187	1,445	16,836	82.9	66.9
Electric motors, total.....	12,888	130,689	11,517	125,046	8,714	100,330	4,953	58,232	2,531	29,659	100.0	100.0
Driven by purchased energy.....	11,210	113,841	9,759	105,838	7,127	82,478	4,154	45,187	1,445	16,836	87.1	77.6
Driven by energy generated in establishments reporting.....	1,678	16,848	1,758	19,208	1,587	17,852	799	13,045	1,086	12,823	12.9	22.4
Electric generators.....	53	<i>Kilowatts</i> 11,572 <i>Kilowatt-hours</i>	86	<i>Kilowatts</i> 12,854	92	<i>Kilowatts</i> 10,875	(²)	(²)	(²)	(²)		
Electric energy purchased ³		132,113,814		(⁴)		(⁴)		(²)		(²)		
STOVES AND RANGES (OTHER THAN ELECTRIC) AND WARM-AIR FURNACES												
Prime movers and electric motors driven by purchased energy, aggregate.....	12,680	<i>Horsepower</i> 118,100	9,876	<i>Horsepower</i> 100,009	8,340	<i>Horsepower</i> 94,128	3,932	<i>Horsepower</i> 60,698	2,330	<i>Horsepower</i> 49,055	100.0	100.0
Prime movers, total.....	134	21,159	145	21,841	165	23,635	255	27,196	335	30,549	18.7	44.8
Steam, total.....	103	17,494	116	18,383	138	20,337	188	24,800	244	27,007	15.5	40.8
Engines.....	99	14,909	113	16,818	136	19,025	185	23,620	(¹)	(¹)	13.2	38.9
Turbines.....	4	2,585	3	1,565	2	1,312	3	1,180	(¹)	(¹)	2.3	1.9
Internal-combustion engines.....	31	3,665	28	3,440	25	3,213	62	2,292	84	3,418	3.2	3.8
Water wheels and water turbines.....			1	18	2	85	5	104	7	124		0.2
Electric motors driven by purchased energy.....	12,556	91,941	9,731	78,168	8,175	70,491	3,677	33,502	1,995	18,506	81.3	55.2
Electric motors, total.....	14,358	104,102	11,216	91,569	9,653	84,278	4,950	45,270	3,054	30,843	100.0	100.0
Driven by purchased energy.....	12,556	91,941	9,731	78,168	8,175	70,491	3,677	33,502	1,995	18,506	88.3	74.0
Driven by energy generated in establishments reporting.....	1,802	12,161	1,485	13,401	1,478	13,787	1,273	11,768	1,059	12,337	11.7	26.0
Electric generators.....	57	<i>Kilowatts</i> 9,758 <i>Kilowatt-hours</i>	72	<i>Kilowatts</i> 10,859	98	<i>Kilowatts</i> 13,454	(²)	(²)	(²)	(²)		
Electric energy purchased ³		102,716,098		(⁴)		(⁴)		(²)		(²)		

¹ Not called for separately on schedule.

² Not called for on schedule.

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

⁴ Data incomplete.

CENSUS OF MANUFACTURES: 1929

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	
STEAM FITTINGS AND STEAM AND HOT-WATER HEATING APPARATUS														
United States:														
1929	39,621	39,728	40,865	40,403	39,177	38,429	38,400	38,496	38,867	40,351	41,442	40,913	38,400	92.7
1925	43,260	42,069	43,301	42,966	<i>41,691</i>	41,616	41,740	42,084	42,736	43,874	45,333	45,880	45,312	90.0
1919	36,686	35,881	35,522	35,224	34,119	33,446	32,022	31,315	34,041	39,505	41,728	43,102	44,287	70.7
1914	26,388	26,358	27,001	27,388	26,767	26,483	26,071	26,041	27,178	26,480	25,913	<i>25,032</i>	26,384	91.4
Connecticut	2,828	2,715	2,808	2,928	2,873	2,819	2,822	2,795	<i>2,653</i>	2,732	2,924	2,954	2,920	89.8
Illinois	10,331	<i>9,984</i>	10,209	10,378	10,645	10,431	10,325	10,170	10,120	10,464	10,443	10,423	10,371	93.8
Indiana	1,680	1,419	1,434	1,420	<i>1,569</i>	1,501	1,550	1,721	1,741	1,841	1,803	1,603	1,515	76.0
Massachusetts	2,879	2,801	<i>2,693</i>	2,778	2,851	2,903	2,877	2,823	2,938	3,026	3,056	3,089	2,713	87.4
Michigan	1,699	1,884	1,937	1,478	1,456	1,456	1,536	1,578	1,766	1,801	1,943	1,855	1,785	73.0
New Jersey	1,899	2,230	2,443	2,445	1,809	1,693	1,608	1,621	1,704	1,741	1,858	1,850	1,783	65.8
New York	4,286	4,885	5,175	4,551	4,029	3,833	3,043	3,794	<i>3,726</i>	4,211	4,501	4,631	4,074	72.0
Ohio	3,016	3,735	3,905	4,208	4,100	3,879	3,806	3,807	3,942	3,981	4,065	3,904	3,668	87.2
Pennsylvania	6,070	6,217	6,250	6,202	6,143	6,135	6,025	6,043	5,970	6,050	6,071	6,061	5,769	92.2
Rhode Island	163	164	178	181	166	165	162	163	164	164	157	141	151	77.9
Wisconsin	567	538	526	<i>523</i>	<i>523</i>	530	545	580	585	604	626	637	587	82.1
STOVES AND RANGES (OTHER THAN ELECTRIC) AND WARM-AIR FURNACES														
United States:														
1929	46,616	<i>42,637</i>	44,668	45,503	46,114	46,612	46,579	46,336	47,823	49,728	51,301	47,687	44,406	83.1
1925	46,514	42,903	46,443	47,328	46,398	45,089	45,652	<i>41,710</i>	45,222	47,818	50,444	50,611	47,032	82.4
1919	43,433	<i>37,113</i>	39,577	39,903	40,111	41,679	42,687	42,754	44,983	45,956	47,902	49,266	49,175	75.3
1914	37,325	34,734	38,955	40,023	40,108	39,527	39,233	34,579	35,903	36,903	37,853	36,026	<i>34,108</i>	85.2
1909	37,130	<i>29,106</i>	35,121	37,037	37,790	37,788	37,422	35,784	37,741	38,834	40,106	39,900	38,595	72.6
Alabama	1,056	1,020	1,054	1,009	1,057	1,029	<i>890</i>	1,003	1,048	1,068	1,146	1,150	1,055	86.1
California	1,661	1,605	1,576	<i>1,586</i>	1,574	1,574	1,607	1,674	1,668	1,776	1,830	1,788	1,723	85.6
Colorado	6	5	5	5	4	4	6	7	7	9	7	7	5	44.4
Connecticut	302	243	252	268	290	290	521	331	379	386	362	293	298	53.9
Georgia	556	521	510	<i>509</i>	511	510	512	532	550	562	578	571	570	88.1
Illinois	6,734	5,769	<i>6,208</i>	6,391	6,045	6,768	6,767	7,047	7,142	7,381	7,583	6,888	6,216	81.9
Indiana	1,422	1,434	1,454	1,478	1,433	1,377	1,463	1,425	1,440	1,508	1,522	1,348	1,179	77.5
Iowa	526	<i>459</i>	473	484	477	482	509	525	580	620	624	501	524	73.6
Kentucky	458	454	461	471	490	497	478	<i>408</i>	440	404	403	432	426	81.1
Maine	161	176	159	149	148	151	154	152	151	171	175	174	170	84.6
Maryland	564	<i>440</i>	482	516	536	576	652	575	589	598	670	575	563	65.7
Massachusetts	2,033	1,817	2,027	2,133	2,079	2,057	1,943	1,874	1,999	2,102	2,170	2,111	2,102	83.7
Michigan	4,432	4,136	4,210	4,260	4,505	4,469	4,443	4,426	4,665	4,923	5,010	4,089	4,037	80.8
Minnesota	713	712	682	686	709	778	765	748	725	703	700	688	669	85.1
Missouri	2,332	<i>2,094</i>	2,303	2,318	2,159	2,128	2,241	2,152	2,422	2,645	2,717	2,633	2,169	77.1
New Jersey	1,144	1,223	1,182	1,180	1,110	1,123	<i>1,072</i>	1,023	1,095	1,145	1,157	1,203	1,152	87.7
New York	1,994	<i>1,601</i>	1,935	2,128	2,065	2,067	2,021	1,731	1,970	2,088	2,201	2,085	2,009	72.7
Ohio	9,776	9,015	9,254	9,314	9,725	10,017	9,966	9,948	10,115	10,380	10,902	9,831	<i>8,840</i>	81.1
Oklahoma	53	36	38	49	51	49	61	58	74	73	46	60	55	47.3
Oregon	185	<i>108</i>	180	181	181	178	189	188	202	213	216	205	182	50.0
Pennsylvania	3,907	<i>3,585</i>	3,720	3,765	3,823	3,970	3,885	3,855	3,872	4,141	4,217	4,148	3,948	83.8
Rhode Island	102	114	115	108	96	101	101	102	105	110	117	80	63	53.8
Tennessee	2,771	<i>2,609</i>	2,704	2,771	2,695	2,669	2,654	2,721	2,737	2,886	2,983	2,948	2,800	87.2
Texas	7	7	7	7	7	7	7	7	7	7	7	7	7	-----
Virginia	194	184	215	213	189	218	182	175	<i>131</i>	223	232	205	165	56.5
Washington	329	278	284	258	270	298	319	324	360	400	436	382	349	59.2
West Virginia	129	112	110	118	128	169	149	140	131	134	144	149	134	73.2
Wisconsin	2,449	<i>2,274</i>	2,393	2,429	2,471	2,525	2,524	2,509	2,578	2,369	2,420	2,456	2,427	88.2

1 No comparable figures available for 1909.

STRUCTURAL AND ORNAMENTAL IRON AND STEEL WORK, NOT MADE IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—This industry embraces establishments engaged primarily in assembling and fabricating structural steel for buildings and bridges, ornamental iron and steel work, balconies, bank fixtures, coal chutes, elevator inclosures, expanded metal for plaster and concrete work, iron fences, fire escapes, fireproof moving-picture booths, gratings, portable steel buildings, etc. The figures presented in the following tables cover *shop work only*.

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 ¹	Value added by manufacture ²	Horsepower
1929	1,482	54,947	\$87,785,606	\$244,696,254	\$477,036,827	\$232,340,573	266,175
1927	1,284	52,392	84,575,048	243,446,072	440,378,360	196,930,288	251,070
1925	1,136	48,341	77,411,409	237,652,611	420,967,579	183,344,968	211,732
1923	1,059	51,591	80,832,875	225,487,217	406,117,279	180,630,062	206,518
1921	1,021	32,897	47,455,082	151,610,906	250,085,446	99,074,540	(³)
1919	1,146	43,962	59,920,132	198,800,715	294,962,419	126,161,704	165,179
1914	1,235	47,167	33,428,913	87,621,537	159,377,857	71,756,320	109,058
1909	1,089	40,234	26,422,372	76,659,426	133,241,379	56,581,953	(⁴)
1904	775	34,276	19,760,210	47,452,069	90,944,697	43,492,628	55,880
1899	697	24,903	13,598,779	38,053,135	66,927,305	28,874,170	(⁴)
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	15.4	4.0	3.8	0.5	8.3	18.0	5.8
1925-1927	13.0	8.4	9.3	2.4	4.6	7.4	18.0
1923-1925	7.6	-6.3	-4.2	5.4	3.7	1.5	3.0
1921-1923	3.4	56.8	70.3	49.3	62.4	82.3	-----
1919-1921	-10.9	-25.2	-20.8	-10.5	-15.2	-21.5	-----
1910-1929	29.3	25.0	46.5	45.0	61.7	84.2	61.1
1904-1919	5.2	9.3	126.8	120.2	121.4	123.0	-----
1899-1909	69.3	61.6	91.4	101.5	99.1	96.0	-----

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

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

³ Not called for on schedule.

⁴ No comparable data are available.

STRUCTURAL AND ORNAMENTAL IRON AND STEEL WORK 1003

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

[See note at head of this table]

STATE	Cen- sus year	Num- ber of estab- lish- ments	Sala- ried officers and em- ploy- ees ¹	Wage earners (aver- age for the year)	HORSEPOWER (RATED CA- PACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products ²	Value ad- ded by manu- facture ³
					Total	Prime movers	Motors run by pur- chased energy			Total	Materials	Fuel and pur- chased energy		
Individual States—Continued.														
New York	1929	314	1,803	6,854	23,053	3,054	20,029	\$5,495,012	\$12,768,051	\$26,003,127	\$25,526,458	\$476,669	\$55,981,010	\$29,977,883
	1927	270	1,400	5,646	17,239	2,716	14,523	4,411,736	11,555,131	26,182,622	25,786,010	366,612	54,129,221	27,940,599
	1919	301	1,189	4,872	10,721	4,400	6,321	2,369,500	5,831,763	13,547,891	13,275,751	272,140	27,425,034	13,877,143
North Carolina	1929	8	110	318	1,125	-----	1,125	227,658	412,387	1,324,851	1,301,716	23,135	2,207,563	882,712
	1927	7	90	268	811	-----	811	170,089	401,562	1,283,690	1,271,755	11,925	2,321,222	1,037,532
Ohio	1929	105	2,493	7,464	37,249	3,272	33,977	7,381,642	12,449,145	32,434,175	31,766,613	667,562	74,245,979	41,811,804
	1927	96	2,139	7,904	30,846	3,350	36,496	5,377,661	12,666,274	35,007,260	34,326,058	681,202	62,918,317	27,911,057
	1919	93	1,408	5,231	21,998	5,721	16,277	3,440,306	7,491,621	24,770,632	24,369,218	401,714	41,792,720	17,021,758
Oklahoma	1929	12	161	697	1,663	-----	1,663	402,546	905,465	3,544,198	3,502,497	41,701	5,729,185	2,184,987
	1927	7	117	471	785	-----	785	223,812	607,082	2,664,131	2,541,287	22,844	3,988,461	1,424,330
Oregon	1929	10	37	179	1,079	-----	1,079	73,482	230,995	453,174	437,395	15,779	922,324	469,150
	1927	6	28	224	1,064	-----	1,064	61,708	294,290	719,288	704,755	14,533	1,282,256	562,068
	1919	6	132	1,111	4,618	-----	4,618	141,941	1,704,796	3,848,126	3,814,836	33,290	6,392,273	2,544,147
Pennsylvania	1929	146	2,508	11,421	62,550	18,009	44,541	6,845,282	17,509,778	59,550,646	58,462,943	1,096,703	102,230,002	42,670,366
	1927	127	2,512	10,987	71,892	26,138	45,754	7,240,442	16,357,499	54,305,434	53,105,475	1,109,959	90,711,633	36,406,199
	1919	146	2,988	10,722	47,980	21,036	26,944	6,059,546	15,381,261	45,482,395	44,402,717	1,079,678	78,305,995	32,823,600
Tennessee	1929	12	145	920	3,289	-----	3,289	452,441	1,115,637	4,050,204	3,992,435	57,769	6,720,941	2,679,737
	1927	10	84	446	1,987	-----	1,987	198,150	594,204	1,903,556	1,873,349	32,267	3,374,233	1,468,677
	1919	6	37	296	740	465	275	83,730	344,559	923,847	903,422	20,425	1,773,408	849,561
Texas	1929	32	411	1,460	6,426	851	5,575	885,484	1,969,016	6,135,793	6,031,231	101,562	11,309,178	5,173,385
	1927	24	311	1,456	4,222	125	4,097	732,682	1,887,178	5,939,426	5,939,426	70,797	9,877,073	3,846,850
	1919	14	119	460	532	85	447	193,367	506,459	2,100,021	2,073,927	26,094	3,245,942	1,145,921
Utah	1929	7	25	97	510	-----	510	97,921	141,393	264,443	250,759	13,684	630,874	366,431
	1927	3	17	40	426	-----	426	43,976	57,645	234,877	230,277	4,600	476,408	241,531
Virginia	1929	13	114	907	6,035	-----	6,035	265,885	1,354,436	4,094,335	3,998,262	96,573	7,602,713	3,507,878
	1927	11	116	754	4,024	-----	4,024	310,846	1,217,466	4,070,128	4,006,691	63,437	6,397,647	2,327,619
	1919	7	184	791	3,037	45	2,992	373,708	1,119,140	1,610,095	1,526,966	83,139	3,806,887	2,196,792
Washington	1929	18	78	429	5,165	60	5,105	236,944	653,625	994,434	990,656	33,778	2,393,946	1,399,512
	1927	16	102	546	5,169	10	5,149	299,208	845,348	1,944,052	1,888,411	55,641	3,407,399	1,463,347
	1919	8	24	179	300	-----	300	67,261	252,555	448,691	436,530	12,161	880,811	432,120
West Virginia	1929	8	106	267	2,136	-----	2,136	276,880	350,673	1,597,314	1,582,501	14,813	3,610,044	2,012,730
	1927	7	76	222	1,696	-----	1,696	295,290	324,950	1,828,382	1,813,083	15,299	2,767,371	938,989
Wisconsin	1929	30	383	1,570	4,423	1,355	3,068	1,129,905	2,359,136	5,463,440	5,325,731	137,709	11,530,495	6,067,055
	1927	30	365	1,470	4,017	1,895	2,122	1,079,415	2,391,496	6,686,597	6,537,334	149,263	11,673,315	4,986,718
	1919	21	373	1,308	3,681	1,740	1,941	771,473	1,825,437	4,545,631	4,428,649	116,882	8,546,874	4,001,343
Groups of States:														
Ark., 1 est.; La., 9; Miss., 1	1929	11	52	196	845	142	703	86,606	284,325	700,876	681,352	19,524	1,351,407	650,531
Mont., 1 est.; S. C., 3; S. Dak., 1	1929	5	17	51	320	-----	320	41,307	54,612	307,290	304,094	3,196	506,315	199,025
R. I., 5 est.; Vt., 1	1929	6	41	192	735	-----	735	145,943	313,333	703,308	691,466	11,842	1,353,324	650,016
States not shown separately														
	1927	29	158	571	2,113	80	2,033	445,861	785,350	2,381,371	2,345,299	36,072	4,337,617	1,956,246
	1919	35	165	620	2,046	926	1,720	352,369	779,564	2,253,738	2,195,418	58,320	3,958,675	1,704,937

¹ Not including proprietors and firm members, as follows: For 1929, 732; 1927, 778; 1919, 721. 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, 69,337; 1927, 65,902; 1919, 56,205.

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

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

⁴ 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.

⁵ Arizona, 2 establishments; Arkansas, 1; Louisiana, 7; Maine, 4; Montana, 1; New Hampshire, 3; Rhode Island, 6; South Carolina, 2; South Dakota, 1; Vermont, 1; Wyoming, 1.

⁶ Delaware, 4 establishments; Florida, 1; Louisiana, 10; Maine, 2; Montana, 1; New Hampshire, 2; North Carolina, 1; Oklahoma, 2; Rhode Island, 5; South Carolina, 1; South Dakota, 1; Utah, 3; and West Virginia, 2.

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, 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	23,063	Horse-power 266,175	20,053	Horse-power 251,670	16,069	Horse-power 211,732	10,121	Horse-power 165,179	5,520	Horse-power 100,058	100.0	100.0
Prime movers, total	329	36,358	256	45,803	387	43,813	521	50,768	730	54,809	13.7	30.7
Steam, total	232	28,224	154	32,384	218	37,078	282	39,790	395	41,467	10.6	24.1
Engines	229	24,474	152	29,384	204	31,233	276	37,795	(1)	(1)	9.2	22.9
Turbines	3	3,750	2	3,000	14	5,845	6	1,995	(1)	(1)	1.4	1.2
Internal-combustion engines	92	7,919	102	13,419	157	6,708	236	10,768	330	13,086	3.0	6.5
Water wheels and water turbines	5	215			12	27	3	210	5	256	0.1	0.1
Electric motors driven by purchased energy	23,334	229,817	19,797	205,867	15,682	167,919	9,600	114,411	4,790	54,249	86.3	68.3
Electric motors, total	20,788	269,779	24,748	257,466	19,881	213,472	14,218	166,460	9,864	111,648	100.0	100.0
Driven by purchased energy	23,334	229,817	19,797	205,867	15,682	167,919	9,600	114,411	4,790	54,249	85.2	68.7
Driven by energy generated in establishments reporting	3,454	39,962	4,951	51,599	4,199	45,553	4,618	52,049	5,074	57,399	14.8	31.3
Electric generators	77	Kilowatts 10,055 Kilowatt-hours	101	Kilowatts 15,257	111	Kilowatts 16,483	(?)	(?)	(?)	(?)		
Electric energy purchased ¹		133,332,803		(?)		(?)		(?)		(?)		

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

TABLE 4.—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	54,947	51,952	<i>51,891</i>	52,323	53,074	54,738	55,055	56,000	57,929	57,764	57,371	56,070	54,026	89.5
1925	48,341	<i>44,204</i>	44,618	55,200	46,366	47,757	48,712	50,470	50,569	50,734	51,066	50,053	50,347	86.6
1919	43,962	45,471	43,046	42,231	41,138	<i>40,614</i>	40,947	42,094	44,156	44,909	47,011	47,680	47,047	85.2
1914	47,167	46,876	45,859	45,744	46,508	45,270	49,880	50,214	50,184	48,912	44,202	<i>48,523</i>	48,523	84.7
Alabama	1,079	1,010	1,031	1,039	1,031	1,094	1,194	1,206	1,146	1,061	1,082	1,059	<i>991</i>	82.2
Arizona	91	<i>91</i>	<i>91</i>	<i>91</i>	<i>91</i>	<i>91</i>	<i>91</i>	<i>91</i>	<i>91</i>	<i>91</i>	<i>91</i>	<i>91</i>	<i>91</i>	98.9
California	1,973	1,794	1,762	1,853	1,940	2,037	2,002	2,050	2,175	2,119	2,026	1,997	1,925	81.0
Colorado	254	227	223	<i>216</i>	249	260	280	278	298	302	261	235	223	71.5
Connecticut	446	405	418	435	461	489	447	437	457	466	467	452	438	88.4
Delaware	14	<i>9</i>	<i>9</i>	10	15	15	15	15	15	15	16	16	14	56.3
District of Columbia	181	195	184	184	171	174	181	189	181	178	184	179	173	87.7
Florida	137	141	136	133	135	130	<i>129</i>	138	135	139	134	152	141	84.9
Georgia	180	151	152	<i>150</i>	170	178	197	214	196	198	202	187	162	70.1
Illinois	4,543	4,915	4,755	4,858	4,962	4,748	4,676	4,770	5,005	5,018	5,012	4,798	<i>4,005</i>	91.8
Indiana	2,136	2,043	<i>1,915</i>	1,994	2,069	2,257	2,342	2,312	2,195	2,242	2,187	2,102	1,973	81.8
Iowa	650	<i>522</i>	546	587	622	688	703	710	725	730	722	622	628	71.5
Kansas	774	<i>581</i>	639	710	770	851	893	904	917	835	803	712	671	68.4
Kentucky	342	<i>324</i>	332	333	350	346	320	331	351	374	342	340	349	86.6
Maine	71	<i>56</i>	53	<i>50</i>	62	72	81	87	96	104	61	73	63	48.1
Maryland	627	<i>657</i>	632	626	604	<i>601</i>	617	628	637	632	618	635	643	91.5
Massachusetts	1,377	1,320	1,298	<i>1,237</i>	1,330	1,368	1,431	1,455	1,440	1,425	1,452	1,425	1,366	85.0
Michigan	1,701	1,540	<i>1,532</i>	1,541	1,683	1,737	1,840	1,815	1,803	1,791	1,690	1,877	1,573	81.6
Minnesota	693	<i>593</i>	622	613	607	630	635	707	763	796	787	776	708	74.5
Missouri	1,083	1,083	1,039	1,078	1,131	1,110	1,133	1,164	1,142	1,095	1,090	1,016	<i>633</i>	80.2
Nebraska	455	394	390	389	394	427	463	477	527	543	537	491	426	71.6
New Hampshire	54	<i>58</i>	56	56	56	56	56	54	53	53	55	55	53	94.6
New Jersey	2,763	2,716	2,737	2,704	2,708	2,787	2,767	2,793	2,861	2,809	2,813	2,761	<i>2,609</i>	94.3
New York	6,854	6,475	6,495	6,611	6,813	6,691	6,677	6,756	7,244	7,323	7,393	7,294	7,101	82.2
North Carolina	318	320	318	318	313	313	343	343	344	318	320	295	<i>248</i>	72.1
Ohio	7,464	7,024	7,135	<i>6,918</i>	7,313	7,349	7,595	7,905	8,093	7,937	7,749	7,459	7,091	85.5
Oklahoma	697	651	<i>514</i>	583	646	690	726	778	796	788	781	771	753	64.6
Oregon	179	169	<i>156</i>	177	180	170	171	167	163	180	204	201	914	72.2
Pennsylvania	11,421	10,838	<i>10,789</i>	10,894	10,923	11,231	11,352	11,517	11,822	12,037	11,915	11,932	11,800	89.6
Tennessee	920	911	915	888	<i>867</i>	906	885	942	928	956	967	962	915	89.7
Texas	1,400	<i>1,396</i>	1,416	1,418	1,492	1,464	1,477	1,522	1,478	1,441	1,476	1,456	1,466	91.7
Utah	97	<i>77</i>	88	94	86	96	100	124	115	100	94	90	101	62.1
Virginia	907	<i>824</i>	929	930	897	862	937	911	906	859	899	956	976	84.4
Washington	429	309	383	352	<i>299</i>	452	514	525	506	503	552	406	350	53.6
West Virginia	267	<i>249</i>	249	252	271	296	282	282	272	252	280	274	270	84.1
Wisconsin	1,570	1,544	1,539	1,546	1,583	1,595	1,623	1,567	1,585	1,602	1,690	1,518	<i>1,448</i>	85.7

TIN CANS AND OTHER TINWARE, NOT ELSEWHERE CLASSIFIED

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture, from purchased tin plate, of hole-top, sanitary, and general-line cans and packages, ice-cream and milk cans, pails, boxes, household and cooking utensils, and cabinet and other tinware, except stamped ware. Tin-can departments operated by establishments which

manufacture tin cans for use as containers for their own products are also included. (Establishments whose principal product is stamped tinware are classified in the "Stamped ware, enameled ware, and metal stamping, enameling, japanning, and lacquering" 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, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²	Horsepower
1929.....	232	31,497	\$33,173,246	\$194,986,803	\$296,901,426	\$101,914,623	77,332
1927.....	236	29,721	35,000,822	169,421,840	253,478,691	84,057,351	64,005
1925.....	221	29,961	34,391,598	175,778,593	260,359,661	84,581,368	48,728
1923.....	241	30,511	32,816,010	135,980,053	215,971,256	79,991,308	41,252
1921.....	244	22,711	24,595,432	108,747,954	168,304,813	59,556,859	(³)
1919.....	301	34,386	34,493,399	165,170,736	233,964,000	68,793,264	30,234
1914.....	294	22,584	12,217,359	53,840,817	81,930,880	28,090,063	17,863
1909.....	313	19,754	8,675,257	39,272,571	58,814,323	19,541,752	15,690
1904.....	377	16,919	6,842,491	26,248,253	41,892,809	15,644,556	8,465
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929.....	-1.7	6.0	9.1	15.1	17.1	21.2	20.8
1925-1927.....	6.8	-0.6	1.8	-3.6	-2.6	-0.6	31.4
1923-1925.....	-8.3	-2.0	4.8	29.3	20.6	5.7	18.1
1921-1923.....	-1.2	34.3	33.4	25.0	28.3	34.3	.....
1919-1921.....	-18.9	-34.0	-28.7	-34.2	-28.1	-13.4	.....
1919-1929.....	-22.9	-8.4	10.7	18.1	26.9	48.1	155.8
1909-1919.....	-5.3	74.1	297.6	320.6	297.8	252.0	92.7

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

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

³ Not called for on schedule.

⁴ No comparable data for years prior to 1904.

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. Certain of the States shown in combination, however, reported larger values of products than some of those 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 ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	232	3,757	31,497	77,332	14,620	62,712	\$8,288,015	\$38,173,246	\$194,986,803	\$192,511,654	\$2,475,149	\$296,901,426	\$101,914,623
	1927	236	3,335	29,721	64,005	14,133	49,872	7,399,133	35,000,822	169,421,340	167,028,113	2,393,227	263,478,691	84,057,851
	1919	301	4,395	34,386	430,234	12,540	417,694	8,209,888	34,493,399	165,170,736	163,671,935	1,498,801	233,964,000	68,793,264
Individual States:														
Illinois	1929	32	758	6,085	17,845	1,210	16,635	1,733,777	7,968,814	42,504,143	41,875,830	628,313	65,091,674	22,587,531
	1927	32	626	5,192	12,104	1,216	10,888	1,353,686	6,578,787	32,682,311	32,179,055	503,256	49,416,023	16,733,712
	1919	28	728	5,927	6,754	3,147	3,607	1,409,146	6,528,028	29,161,429	28,820,696	340,833	42,832,770	13,671,341
Maryland	1929	22	504	4,555	7,710	1,106	6,604	1,148,273	4,611,223	25,784,875	25,487,336	247,539	38,402,438	12,667,663
	1927	20	486	4,319	6,986	892	6,094	1,163,692	4,265,855	21,784,791	21,534,699	250,092	33,195,975	11,411,184
	1919	28	418	4,233	3,503	703	2,803	810,926	3,602,561	18,799,945	18,636,952	162,993	25,453,533	6,663,688
Massachusetts	1929	10	105	605	1,054	120	934	211,061	734,011	2,029,522	1,991,180	38,392	3,771,371	1,741,349
	1927	8	104	581	535	120	415	225,494	734,324	1,640,623	1,605,765	34,858	3,211,972	1,571,349
	1919	16	123	915	434	126	308	188,220	908,389	2,566,621	2,539,106	27,425	2,539,106	2,023,260
Michigan	1929	4	94	605	1,165	110	1,055	192,662	839,985	1,355,095	1,336,451	48,644	3,015,533	1,630,438
	1927	3	86	468	1,156	150	1,006	222,577	610,546	1,348,338	1,292,699	55,739	2,516,284	1,167,896
	1919	6	104	918	1,062	472	590	206,661	1,099,987	2,064,872	2,018,062	46,810	4,639,693	1,965,821
Missouri	1929	7	149	1,090	1,976	929	1,047	308,941	1,148,945	3,764,677	3,687,397	77,280	6,834,788	3,070,111
	1927	9	98	1,233	4,416	979	3,437	233,860	1,288,642	3,560,999	3,471,132	89,867	6,045,444	2,494,445
	1919	10	148	1,516	918	411	507	299,576	1,238,674	3,697,943	3,640,286	57,657	6,124,186	2,426,243
New Jersey	1929	8	287	2,539	4,991	1,465	3,526	607,639	3,519,599	9,684,881	9,522,759	162,122	16,134,952	6,460,071
	1927	10	245	2,060	3,467	1,575	1,892	601,230	2,624,366	8,963,669	8,817,854	146,815	14,163,040	5,199,371
	1919	9	333	1,990	1,807	780	1,027	655,968	2,167,318	7,842,587	7,762,313	80,274	13,078,571	3,235,984
New York	1929	43	495	4,113	9,470	3,606	5,864	1,169,071	5,209,650	17,898,432	17,536,844	361,588	30,129,396	12,220,964
	1927	49	583	4,635	9,467	4,105	5,352	1,239,958	6,034,943	19,553,005	19,101,768	451,237	31,795,258	12,242,283
	1919	75	752	6,839	5,292	2,817	2,475	1,553,665	7,269,767	29,704,910	29,403,448	301,462	43,312,551	13,607,671
Ohio	1929	19	284	2,551	6,460	2,212	4,248	675,209	2,957,553	12,054,751	11,887,206	167,545	19,165,927	7,111,175
	1927	17	253	2,520	5,461	1,795	3,666	662,179	2,927,454	12,316,583	12,144,848	172,256	18,714,492	6,397,909
	1919	14	507	2,608	2,682	1,598	1,084	758,295	2,469,035	10,687,527	10,593,994	93,533	16,980,629	6,293,102
Pennsylvania	1929	24	244	1,793	2,880	753	2,127	578,032	1,939,405	10,207,624	10,090,113	117,511	14,284,121	4,076,497
	1927	26	222	1,626	2,389	1,036	1,353	465,253	1,754,022	8,875,942	8,770,997	104,945	12,660,639	3,984,697
	1919	33	240	1,301	1,317	654	693	439,498	1,277,663	4,913,203	4,800,461	52,742	7,459,033	2,576,880
Washington	1929	6	60	453	1,984	-----	1,984	93,077	549,497	6,073,540	6,013,540	59,991	8,213,590	2,140,050
	1927	7	47	417	1,572	-----	1,572	90,884	457,927	5,116,610	5,064,677	51,933	6,727,078	1,610,488
	1919	6	82	610	850	-----	850	160,263	644,471	5,502,205	5,407,337	34,868	6,684,165	1,181,960
Groups of States:														
Ga., 2 est.; Mc., 3; R. I., 1; Vt., 2; Va., 4; W. Va., 4; Ind., 3 est.; Ky., 1; Tenn., 1; Wis., 3.	1929	16	213	1,782	3,658	1,306	2,352	401,467	1,936,527	10,116,686	9,981,209	135,477	15,107,663	4,990,977
Other States (Calif., 18 est.; Colo., 1; La., 4; Minn., 2; Nebr., 1; Oreg., 2; Tex., 4; Utah, 1).	1929	33	530	4,736	16,830	1,633	15,197	1,030,034	6,099,390	45,066,408	44,697,226	369,182	66,357,068	21,290,690
States not shown separately	1927	55	585	6,670	16,462	2,265	14,197	1,140,320	7,693,956	53,578,469	53,045,219	533,250	75,132,536	21,554,067
	1919	76	960	7,479	5,877	1,832	4,045	1,717,670	7,246,501	47,629,404	47,320,290	300,204	62,787,908	15,158,414

¹ Not including proprietors and firm members, as follows: For 1929, 58; 1927, 62; 1919, 177. 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, 35,312; 1927, 33,118; 1919, 38,958.

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

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

⁴ 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.

⁵ California, 17 establishments; Connecticut, 1; Georgia, 2; Indiana, 2; Kentucky, 1; Louisiana, 4; Maine, 3; Minnesota, 2; Nebraska, 1; Oregon, 2; Rhode Island, 1; Tennessee, 2; Texas, 2; Utah, 1; Vermont, 2; Virginia, 4; West Virginia, 4; and Wisconsin, 4.

⁶ Arkansas, 1 establishment; California, 16; Colorado, 1; Connecticut, 3; Georgia, 2; Indiana, 2; Kansas, 1; Kentucky, 1; Louisiana, 3; Maine, 3; Minnesota, 7; Nebraska, 1; Oregon, 3; Rhode Island, 3; South Carolina, 1; Tennessee, 4; Texas, 1; Utah, 1; Vermont, 2; Virginia, 8; West Virginia, 3; and Wisconsin, 4.

TIN CANS AND OTHER TINWARE, NOT ELSEWHERE CLASSIFIED 1007

TABLE 3.—PRODUCTS, BY KIND, NUMBER, 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. No comparable statistics are available for years prior to 1927]

KIND	1929		1927	
	Number	Value	Number	Value
1. "Tin cans and other tinware, not elsewhere classified" industry, all products, total value.....		\$296,901,426		\$253,478,691
2. Tin cans, utensils, etc.....		279,962,658		243,020,625
3. Other products (not normally belonging to the industry).....		16,938,768		10,458,066
4. Tin cans, utensils, etc., made as secondary products in other industries, value.....		3,847,105		4,651,683
Tin cans, utensils, etc., all industries: Total value (sum of 2 and 4).....		283,809,763		247,672,308
Hole-top cans, chiefly for evaporated milk.....	1,711,691,917	20,734,311	1,180,693,414	17,751,566
Sanitary cans.....	5,526,838,732	122,020,557	4,286,711,908	97,742,906
General-line cans and packages— Number reported.....	2,908,271,900	120,965,466	2,594,688,869	95,588,448
Number not reported.....		8,563,409		23,163,681
Ice-cream cans.....	1,097,826	1,819,905	694,244	1,265,522
Milk cans (dairy cans).....	1,704,307	3,979,393	1,175,433	4,251,153
Other tinware, except stamped ¹		5,726,722		7,869,032

¹ Revised on account of a change in classification.

² Stamped tinware is classified in the "Stamped ware, enameled ware, and metal stamping, enameling, japanning, and lacquering" industry.

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. Statistics are given for each State which can be shown separately without disclosing the output of individual establishments, and for the remaining States in groups]

KIND AND STATE	Value	KIND AND STATE	Value	KIND AND STATE	Value
Tin cans and other tinware, not elsewhere classified, all industries, aggregate value.....	\$283,809,763	Tin cans and other tinware—Continued. Tin cans, other than ice-cream cans, etc.—Continued.		Tin cans and other tinware—Continued. Ice-cream cans (Ill., Mich., Minn., and N. Y.).....	\$1,819,905
Tin cans, other than ice-cream cans and dairy milk cans, total.....	272,283,743	New York.....	\$25,737,859	Milk cans (dairy cans) (Calif., Ill., Ind., Mich., Minn., N. Y., and Wis.).....	3,979,393
Illinois.....	57,476,200	Ohio.....	15,290,952	Other tinware (Calif., Ill., Kans., Md., Mass., Minn., Mo., N. Y., Ohio, Pa., and Tex.).....	5,726,722
Maryland.....	37,773,906	Pennsylvania.....	10,444,512		
Massachusetts.....	3,278,524	Washington.....	8,065,043		
Missouri.....	5,709,618	Other States (Calif., Colo., Ga., Ind., Ky., La., Me., Mich., Minn., Nebr., Oreg., R. I., Tenn., Tex., Utah, Vt., Va., W. Va., and Wis.).....	93,227,560		
New Jersey.....	15,279,539				

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

[Quantities and costs of the principal materials consumed were reported by 196 of the 214 establishments in this industry. The combined value of products reported by these 196 establishments amounted to \$290,591,769, or 97.9 per cent of the aggregate value of products for 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
Tin plate, total.....	<i>Tons, 2,000 lbs.</i> 1,440,007	\$162,253,967	Lead (Calif., Ill., Ky., La., Me., Md., Mass., N. J., N. Y., Ohio, Oreg., Pa., Tex., Utah, Vt., Wash., W. Va., and Wis.).....	<i>Pounds</i> 6,628,075	\$477,502
Illinois.....	299,706	34,076,342	Solder, total ¹	11,217,833	2,794,268
Maryland.....	204,248	22,615,665	Illinois.....	2,241,589	550,627
Massachusetts.....	14,799	1,606,524	Maryland.....	458,672	125,063
Missouri.....	21,686	2,492,246	Massachusetts.....	147,430	38,310
New Jersey.....	79,610	8,211,908	Missouri.....	478,533	128,708
New York.....	123,167	13,432,462	New Jersey.....	1,485,127	269,722
Ohio.....	84,773	8,982,920	New York.....	1,114,626	302,244
Pennsylvania.....	81,612	8,427,607	Ohio.....	838,365	214,068
Washington.....	43,069	5,263,488	Pennsylvania.....	450,001	117,017
Other States (Calif., Colo., Ga., Ind., Ky., La., Me., Mich., Minn., Nebr., Oreg., R. I., Tex., Utah, Vt., Va., W. Va., and Wis.).....	496,337	57,144,805	Washington.....	87,780	22,637
Terneplate, (Calif., Ill., Ind., Md., Mass., Mich., Mo., N. J., N. Y., Ohio, Pa., and Wis.).....	3,206	309,210	Other States (Calif., Colo., Ga., Ind., Ky., La., Me., Mich., Minn., Nebr., Oreg., R. I., Tex., Vt., Va., W. Va., and Wis.).....	3,915,410	1,000,872

¹ Not including solder made in the same plants in which it was used as a material.

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	15,751	Horse-power 77,332	10,950	Horse-power 64,005	6,753	Horse-power 48,728	3,141	Horse-power 30,234	1,283	Horse-power 17,863	100.0	100.0
Prime movers, total	103	14,620	101	14,133	111	16,544	139	12,540	163	11,305	18.9	41.5
Steam, total	90	14,082	87	13,711	97	16,141	107	11,550	104	10,143	18.2	38.2
Engines	83	11,834	84	12,586	89	13,770	105	11,275	(1)	(1)	15.3	67.3
Turbines	7	2,248	3	1,125	8	2,371	2	275	(1)	(1)	2.9	0.9
Internal-combustion engines	13	538	14	422	14	403	30	978	57	1,150	0.7	3.2
Water wheels and water turbines							2	12	2	12		0.1
Electric motors driven by purchased energy	15,648	62,712	10,849	49,872	6,642	32,184	3,002	17,684	1,120	6,558	81.1	58.5
Electric motors, total	18,092	74,156	14,323	62,215	10,080	46,588	5,390	26,770	2,556	13,394	100.0	100.0
Driven by purchased energy	15,648	62,712	10,849	49,872	6,642	32,184	3,002	17,684	1,120	6,558	84.6	66.1
Driven by energy generated in establishments reporting	3,044	11,444	3,474	12,343	3,438	14,404	2,388	9,076	1,436	6,836	15.4	33.9
Electric generators	53	Kilowatts 10,135	65	Kilowatts 8,833	70	Kilowatts 10,422	(2)	(2)	(2)	(2)		
Electric energy purchased ¹		Kilowatt-hours 56,045,223		(1)		(1)		(2)		(2)		

¹ Not called for separately on schedule.

² Not called for on schedule.

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

⁴ Data incomplete.

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	31,497	28,868	29,410	30,409	31,447	31,438	32,083	34,067	34,436	33,858	32,190	30,588	28,271	27,838	28,271	82.1
1925	29,901	<i>26,624</i>	27,900	29,240	29,620	30,083	30,665	31,990	32,426	33,244	30,215	29,071	27,838	27,838	27,838	79.8
1919	34,386	32,644	32,644	32,201	31,855	32,878	34,513	37,312	38,385	36,825	35,234	34,104	34,037	34,037	34,037	83.0
1914	22,584	20,485	21,422	22,137	23,204	23,505	24,078	24,134	24,627	24,940	22,799	20,189	18,698	18,698	18,698	73.3
Illinois	6,085	<i>5,058</i>	5,418	5,511	5,857	6,007	6,856	7,370	7,257	6,088	5,905	5,732	5,364	5,364	5,364	68.6
Maryland	4,555	4,160	<i>4,160</i>	4,396	4,579	4,526	4,556	4,711	4,868	5,291	4,745	4,404	4,254	4,254	4,254	73.7
Massachusetts	695	614	612	613	632	618	613	612	600	606	591	600	548	548	548	86.7
Michigan	695	587	693	736	819	781	710	631	602	526	522	454	502	502	502	86.9
Missouri	1,090	1,041	<i>1,018</i>	1,055	1,102	1,089	1,122	1,116	1,122	1,150	1,173	1,074	1,074	1,074	1,074	86.8
New Jersey	2,539	<i>2,083</i>	2,184	2,169	2,515	2,684	2,703	2,723	2,889	2,734	2,800	2,614	2,277	2,277	2,277	72.1
New York	4,113	4,358	4,227	4,280	4,213	3,951	3,618	4,199	4,290	4,146	4,061	4,007	3,703	3,703	3,703	85.0
Ohio	2,551	2,480	2,528	2,496	2,476	2,505	2,703	2,734	2,728	2,741	2,615	2,423	2,180	2,180	2,180	79.5
Pennsylvania	1,793	1,763	1,756	1,776	1,772	1,791	1,875	1,948	1,898	1,785	1,784	1,731	1,635	1,635	1,635	83.8
Washington	453	323	457	509	507	547	556	620	561	398	337	325	300	300	300	48.4

TIN PLATE AND TERNEPLATE

Description of the industry.—This industry, as defined for census purposes, consists in the coating of black plates with tin or terne mixture (an alloy of tin and lead, in varying proportions). The manufacture of black plates is a rolling-mill operation, and 29 of the 31 tin plate and terneplate establishments which reported for 1929 were operated as dipping departments of the mills which rolled the plates. The other two establishments were operated by tin-can

manufacturers, who did no rolling but purchased black plates for coating.

No attempt has been made since 1919 to prepare separate statistics for number of employees, salaries and wages, cost of materials, horsepower, etc., for the dipping departments of rolling mills or other establishments. The data for these items are therefore included in the statistics for the "Steel works and rolling mills" and the "Tin cans and other tinware" industries.

TIN PLATE AND TERNEPLATE—PRODUCTS, BY CLASS, KIND, QUANTITY, VALUE, AND EQUIPMENT, BY NUMBER OF SETS AND CAPACITY, FOR THE UNITED STATES: 1919 TO 1929

[The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

	1929	1927	1925	1923	1921	1919
Number of establishments.....	31	30	25	28	(1)	(1)
PRODUCTS						
Total value.....	\$213,084,656	\$193,894,382	\$190,917,778	\$165,587,376	\$99,128,817	\$180,325,368
Tin plate and terneplate:						
Total pounds.....	4,377,448,538	3,753,474,411	3,661,837,667	3,296,551,763	1,725,781,116	2,539,224,664
Total value.....	\$209,675,157	\$190,426,776	\$188,610,949	\$162,476,076	\$96,181,449	\$175,776,283
Other products, including tin dross, scruff, scrap, etc., value.....	\$3,409,469	\$3,467,606	\$2,306,929	\$3,111,300	\$2,947,368	\$4,549,085
Tin plate—						
Total pounds.....	4,031,856,278	3,560,417,694	3,480,401,286	3,159,250,830	1,638,373,059	2,373,253,628
Total value.....	\$194,107,222	\$180,410,038	\$179,381,673	\$154,636,231	\$90,530,976	\$164,958,677
Coke plate—						
Pounds.....	3,058,323,114	2,499,540,357	2,424,407,663	2,083,383,143	1,605,957,939	2,336,703,947
Value.....	\$189,050,613	\$176,432,417	\$175,626,381	\$149,769,050	\$88,263,204	\$161,874,608
Charcoal plate—						
Pounds.....	73,533,164	60,877,337	55,993,623	75,867,687	32,415,120	36,549,681
Value.....	\$5,056,609	\$3,977,621	\$3,755,292	\$4,867,181	\$2,267,772	\$3,083,979
Terneplate, including long terne—						
Pounds.....	345,592,260	193,056,717	181,436,381	137,300,933	87,408,037	165,971,036
Value.....	\$15,567,965	\$10,016,738	\$9,229,176	\$7,839,845	\$5,650,473	\$10,817,606
EQUIPMENT						
Number of dipping sets at end of year, total.....	509	517	568	813	903	916
Tin plate—						
Mechanical.....	370	356	525	765	852	868
Hand-fed.....	94	119	43	48	51	48
Terneplate.....	45	42	43	48	51	48
Daily capacity, total pounds.....	* 20,846,020	* 19,225,305	* 6,933,568	* 6,188,700	* 6,085,469	* 6,382,288
Tin plate.....	19,314,120	17,857,789	6,544,700	5,851,500	5,542,799	5,820,945
Terneplate.....	1,531,900	1,367,516	388,868	337,200	542,660	511,340
Number of sets building.....	2	9	9	9	9	60

¹ Not recorded.

* 24-hour basis.

* Single-turn basis.

TOOLS, NOT INCLUDING EDGE TOOLS, MACHINE TOOLS, FILES, OR SAWS

Description of the industry.—The principal products covered by this industry classification are (1) plumbers' and tanners' tools, stonecutters' tools, wrenches, punches, pliers, calking tools, nail pullers, and other mechanical hand tools except edge tools, files, and saws; (2) other hand tools and implements, such as shovels, scoops, hoes, rakes, forks, etc.

The statistics heretofore published for this industry are not comparable with the 1929 figures given in the

present report because of the fact that more than 200 establishments have been transferred from this industry to the newly established "Machine-tool accessories and small metal-working tools, not elsewhere classified" industry. For this reason two sets of United States totals for 1927 are given in Tables 1 and 2, one comparable with the figures for years prior to 1927 and the other adjusted for comparison with those for 1929.

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 ¹	Value added by manufacture ²	Horsepower
1929.....	534	19,305	\$25,808,259	\$32,110,507	\$99,462,032	\$67,351,525	65,965
1927 (adjusted for comparison with 1929) ³	405	16,447	20,911,445	28,067,881	76,607,237	48,649,553	57,024
1927.....	657	25,232	34,464,064	37,056,684	117,430,624	80,373,940	85,963
1925.....	663	25,340	34,294,113	39,023,373	121,263,093	82,230,720	78,686
1923.....	700	29,100	37,168,834	43,205,844	123,158,303	79,952,459	75,248
1921.....	714	19,453	22,648,499	25,550,113	70,523,416	44,973,303	(4)
1919.....	1,125	35,585	43,836,069	45,796,967	144,201,668	98,404,701	67,730
1914.....	661	16,886	10,216,885	12,235,209	33,892,511	21,657,242	37,248
1909.....	678	15,999	9,325,353	11,048,693	30,380,843	19,332,150	36,966
1904.....	584	11,643	6,048,587	7,249,567	20,407,372	13,157,805	21,109
1899.....	446	7,614	3,781,607	4,656,558	13,358,300	8,701,742	11,808
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	31.9	17.4	23.2	14.4	29.8	38.7	15.7
1925-1927.....	-0.9	-0.4	0.5	-5.0	-3.2	-2.3	9.2
1923-1925.....	-5.3	-12.9	-7.7	-9.7	-1.5	2.9	4.6
1921-1923.....	-2.0	49.6	64.1	69.1	74.6	77.8	-----
1919-1921.....	-36.5	-45.3	-48.3	-44.2	-51.1	-54.3	-----
1919-1929.....	-52.5	-45.8	-41.1	-29.9	-31.0	-31.6	-2.6
1909-1919.....	65.9	122.4	385.7	314.5	374.6	409.0	87.8
1899-1909.....	52.0	110.1	138.7	137.3	127.4	122.2	205.4

¹ For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.
² Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
³ See "Description of the industry," second paragraph.
⁴ Not called for on schedule.

TOOLS, NOT ELSEWHERE CLASSIFIED

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TABLE 2.—GENERAL STATISTICS FOR THE UNITED STATES, 1929, 1927, AND 1919, AND 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. 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]

INDUSTRY	Number of establishments	Salaried officers and employees ¹	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 ²	Value added by manufacture ³
				Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States:													
1929	534	3,518	19,305	65,965	14,541	51,424	\$9,744,359	\$25,806,289	\$32,110,507	\$29,578,831	\$2,531,676	\$99,462,032	\$87,351,525
1927 ⁴	405	2,880	16,447	67,024	14,711	42,313	6,822,965	20,941,445	28,057,884	26,117,893	1,939,891	76,607,227	48,549,553
1927	657	4,044	25,232	85,963	17,165	68,798	11,641,300	34,464,964	37,056,684	34,245,859	2,810,825	117,430,624	80,373,940
1919	1,125	7,701	35,685	67,730	25,510	42,220	12,608,796	43,836,069	45,796,967	43,112,384	2,684,583	144,201,668	95,404,701
Individual States, 1929:													
California	20	22	171	614		614	74,662	266,755	199,675	182,396	17,279	991,370	791,695
Connecticut	35	569	2,024	8,301	2,333	5,968	1,276,666	3,788,965	3,731,674	3,415,957	315,687	11,373,973	7,642,304
Illinois	65	271	1,354	4,077	36	4,041	989,842	1,865,554	2,890,992	2,190,783	200,209	7,817,159	5,426,167
Indiana	23	93	647	2,172	165	2,007	186,898	740,192	1,119,630	1,036,685	82,945	2,567,580	1,447,950
Iowa	9	37	188	884		884	109,471	208,344	456,575	431,396	25,179	1,149,148	692,573
Massachusetts	54	540	2,860	9,513	2,160	7,353	1,333,463	3,687,152	3,678,727	3,374,680	304,147	13,260,184	9,581,457
Michigan	32	260	1,709	4,039	1,823	2,216	1,276,666	2,404,588	1,945,416	1,809,098	136,318	8,066,542	6,121,126
Minnesota	14	56	305	1,514		1,514	160,114	363,164	372,243	318,785	53,458	1,793,141	1,420,898
Missouri	11	111	251	692	239	453	233,373	278,382	742,486	721,188	21,298	2,061,682	1,338,596
New Jersey	25	106	644	1,770	397	1,373	260,893	943,643	923,157	836,141	87,016	3,316,203	2,393,046
New York	84	371	2,669	8,762	1,273	7,489	1,101,977	4,112,059	4,590,857	4,107,833	483,024	15,312,659	10,721,802
Ohio	40	314	1,933	9,180	2,930	6,250	973,434	2,521,284	4,243,635	3,950,714	292,921	11,544,992	7,101,327
Pennsylvania	49	410	2,173	8,138	1,864	6,299	1,144,686	2,563,398	4,816,819	3,985,316	331,284	10,595,719	6,279,109
Rhode Island	16	11	108	130		130	26,960	141,942	65,969	60,829	5,080	355,585	289,058
Tennessee	4	23	165	947	500	447	72,892	151,460	609,628	593,629	15,999	1,002,275	392,647
Vermont	5	51	312	2,023	665	1,358	114,962	308,839	625,631	582,060	43,571	1,442,497	816,866
Washington	6	28	39	98		98	67,005	38,520	62,983	60,693	2,290	255,686	192,703
Wisconsin	11	151	638	928		928	536,554	752,469	1,071,289	1,020,505	41,784	4,162,031	3,090,742
Groups of States, 1929:													
Colo., 2 est.; Kans., 1; N. Dak., 1; Oreg., 5; Tex., 2	11	12	56	128	6	122	24,405	66,890	40,341	35,739	4,602	201,883	161,542
Del., 3 est.; Md., 5	8	21	122	372	60	312	47,557	167,463	174,711	159,340	15,265	609,608	424,897
Ky., 1 est.; Miss., 1; N. C., 1; W. Va., 3	6	36	362	1,560	555	1,005	102,397	351,870	644,203	597,671	46,532	1,368,258	719,055
Mo., 2 est.; N. H., 4	6	21	75	130	35	95	46,007	85,366	104,135	98,457	5,678	399,202	295,067

¹ Not including proprietors and firm members, as follows: For 1929, 279; 1927, adjusted, 227; 1927, unadjusted, 370; 1919, 856. 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, 23,102; 1927, adjusted, 19,504; 1927, unadjusted, 30,246; 1919, 44,142.

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

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

⁴ Adjusted for comparison with 1929. See "Description of the industry," second paragraph.

CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS, ELECTRIC MOTORS, AND GENERATORS, AND QUANTITY OF ELECTRIC ENERGY PURCHASED: 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	7,833	65,965	100.0	Electric motors, total	8,800	Horsepower 58,601	100.0
Prime movers, total	105	14,541	22.0	Driven by purchased energy	7,733	51,424	87.7
Steam, total	60	11,540	17.5	Driven by energy generated in establishments reporting	1,073	7,237	12.3
Engines	49	9,140	13.9	Electric generators	47	Kilowatts 7,432	
Turbines	11	2,400	3.6	Electric energy purchased ¹		Kilowatt-hours 40,068,154	
Internal-combustion engines	30	1,626	2.5				
Water wheels and water turbines	15	1,375	2.1				
Electric motors driven by purchased energy	7,733	51,424	78.0				

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

TABLE 4.—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	19,305	18,752	19,522	19,857	19,993	20,125	19,805	19,242	19,170	19,073	19,120	18,764	18,237	90.6
California	171	172	169	167	168	173	175	178	176	176	169	166	163	91.6
Connecticut	2,624	2,614	2,702	2,740	2,696	2,707	2,676	2,602	2,641	2,592	2,538	2,519	2,462	89.9
Illinois	1,354	1,248	1,339	1,421	1,488	1,522	1,443	1,366	1,315	1,318	1,322	1,254	1,210	79.5
Indiana	647	603	645	679	655	697	645	629	637	633	650	649	637	86.5
Iowa	188	206	207	203	186	184	175	162	167	171	195	195	201	78.3
Massachusetts	2,860	2,760	2,828	2,918	2,984	3,041	2,963	2,869	2,838	2,834	2,779	2,776	2,750	89.8
Michigan	1,709	1,698	1,729	1,744	1,742	1,734	1,710	1,630	1,731	1,734	1,768	1,683	1,594	90.2
Minnesota	305	286	242	277	294	315	291	327	322	344	349	353	326	61.5
Missouri	251	271	230	248	253	258	266	267	270	256	259	258	241	78.1
New Jersey	644	654	720	720	720	658	632	635	672	623	611	602	588	81.7
New York	2,669	2,598	2,722	2,754	2,759	2,798	2,837	2,710	2,689	2,612	2,565	2,488	2,482	87.5
Ohio	1,933	1,912	2,008	2,009	1,995	1,996	1,960	1,866	1,868	1,856	1,937	1,924	1,871	82.4
Pennsylvania	2,173	2,115	2,224	2,259	2,231	2,198	2,195	2,189	2,157	2,142	2,151	2,137	2,075	91.9
Rhode Island	108	95	95	102	100	114	124	120	115	113	118	103	80	71.8
Tennessee	165	174	188	162	173	155	151	158	152	168	177	169	172	73.4
Vermont	312	313	317	327	320	313	313	282	308	320	334	302	305	90.4
Washington	39	30	37	42	48	61	48	41	41	39	34	28	25	49.0
Wisconsin	538	441	503	526	555	603	615	618	566	542	533	509	443	71.4

WIRE, DRAWN FROM PURCHASED BARS OR RODS

Description of the industry.—The wire industry, as defined for census purposes, consists in the drawing of wire from purchased bars or rods of iron, steel, copper, or other metals, and does not, therefore, include production by the wire-drawing departments of iron, steel, copper, and other rolling mills. The statistics in Tables 1, 2, 7, 10, and 11 relate only to the wire industry proper, but the detailed figures given in Tables 3-6, 8, and 9 refer to all establishments reporting the production of wire, regardless of the industries in which classified. As will be seen by reference to Table 3, the output of wire and wire products by the wire departments of steel works and rolling mills exceeds that reported for mills in the wire industry proper. Some of the establishments in this industry manufacture various fabricated wire products of the same classes as those made by establishments in other industries. (See "Fabricated-wire products, all industries," below.)

Comparison with earlier years.—The figures for 1927 and earlier years, as given in Tables 1, 2, 10, and 11, are not strictly comparable with those for

1929, for the reason that at the census for 1929 certain large establishments engaged primarily in rolling non-ferrous metals and manufacturing nonferrous wire were transferred from the wire industry to the non-ferrous-metals industry, and also because a somewhat different method of handling data on the custom drawing of nonferrous wire was adopted.

Wire production, all industries.—Tables 3 and 4 show the production of wire by all establishments reporting it, regardless of industry classification.

Fabricated-wire products, all industries.—In many cases establishments engaged in drawing wire also operate fabricating departments in which they manufacture nails, woven-wire fencing, insulated wire, and other fabricated-wire products. When these products are manufactured by establishments which do not draw their own wire, they are normally classified in other industries, particularly "Wirework, not elsewhere classified," and "Electrical machinery, apparatus, and supplies." (See Tables 4 and 5.)

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

[See "Comparison with earlier years," above]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²	Horsepower
1929	81	22,467	\$35,110,335	\$126,182,429	\$213,997,410	\$87,514,981	150,620
1927	73	19,866	30,038,299	128,092,414	190,709,790	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	(3) 119,301
1919	66	19,741	29,289,667	102,813,591	162,151,236	59,337,645	83,600
1914	54	17,600	11,020,729	56,424,494	81,841,012	25,416,518	71,054
1909	56	18,084	10,315,722	60,542,931	84,486,518	23,943,587	25,856
1904	25	4,737	2,858,743	30,062,487	37,914,419	7,851,932	9,934
1899	20	1,603	859,645	7,014,319	9,421,238	2,406,919	
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	(4)	13.1	16.9	-1.5	12.2	40.2	-1.3
1925-1927	(4)	7.1	11.6	0.7	3.4	9.4	10.5
1923-1925	(4)	-13.0	-9.8	-5.0	-6.1	-8.4	11.5
1921-1923	(4)	43.7	67.7	113.5	96.5	67.8	-----
1919-1921	(4)	-24.9	-39.2	-39.0	-38.4	-37.2	-----
1910-1929	(4)	13.8	19.9	22.7	32.0	48.0	29.3
1909-1919	(4)	9.2	183.9	69.8	91.9	147.8	65.8
1899-1909	(4)	1,028.1	1,100.0	763.1	796.8	894.8	624.3

¹ The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.

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

³ Not called for on schedule.

⁴ 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. See "Comparison with earlier years," p. 1013]

STATE	Census year	Number of establishments	Salaried officers and employees ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	81	2,554	22,467	150,620	31,070	118,950	\$6,979,078	\$35,110,335	\$126,182,429	\$120,606,188	\$5,486,241	\$213,097,410	\$87,814,981
	1927	73	2,347	19,866	152,574	49,322	103,252	6,201,089	30,638,269	128,092,414	122,763,816	5,328,598	190,709,790	62,617,378
	1919	66	2,482	19,741	119,301	64,271	55,030	5,454,406	20,283,667	102,813,591	98,578,068	4,235,523	162,151,236	59,587,645
Individual States:														
Connecticut	1929	5	126	901	8,890	6,140	2,750	407,758	1,521,598	3,188,846	2,921,765	267,081	7,660,107	4,471,261
	1927	5	120	894	7,555	4,900	2,655	375,881	1,395,091	3,590,960	3,390,262	209,698	7,289,823	3,689,863
	1919	7	174	1,378	6,354	4,761	1,603	430,782	2,063,474	4,602,673	4,346,532	256,141	9,083,050	4,480,377
Illinois	1929	11	490	3,822	33,882	11,268	22,614	1,229,109	5,896,932	46,571,918	45,430,324	1,141,594	63,882,641	17,310,723
	1927	11	506	3,758	20,671	10,990	9,675	1,328,750	5,639,963	27,013,058	26,073,065	934,993	38,011,648	10,998,590
	1919	10	507	2,775	19,554	15,080	4,474	1,136,763	4,605,270	18,446,905	17,763,910	682,995	29,856,393	11,408,488
Indiana	1929	4	357	4,881	12,413	1,974	10,439	467,523	6,796,010	10,073,513	15,392,427	681,036	31,037,566	14,964,053
Massachusetts	1929	13	451	4,173	35,248	2,109	33,139	1,205,204	7,265,844	10,212,044	8,835,453	1,376,591	25,987,900	15,778,856
	1927	15	464	3,895	29,787	2,232	27,555	1,083,517	6,241,921	11,291,550	10,017,569	1,273,981	22,881,881	11,560,331
	1919	9	508	5,203	24,799	9,987	14,812	1,140,407	7,353,067	11,873,619	10,774,689	1,098,930	24,552,410	12,678,791
New Jersey	1929	12	249	1,988	15,800	3,074	12,722	734,659	3,067,774	7,080,230	6,506,099	574,131	15,794,950	8,714,720
	1927	10	216	2,823	29,425	9,850	19,575	490,886	3,958,621	20,256,295	28,446,788	809,507	30,156,228	9,880,933
	1919	7	257	1,923	13,332	6,041	7,291	546,660	2,851,848	14,690,174	14,149,600	649,574	19,878,310	5,179,142
New York	1929	5	96	1,048	5,125	2,475	2,650	336,200	1,992,646	7,424,108	7,151,473	272,635	11,920,755	4,496,647
	1927	6	295	2,398	13,881	2,050	11,831	820,761	3,648,900	20,103,114	19,524,653	578,461	27,883,539	7,780,425
Ohio	1929	8	147	1,811	7,454	7,454	490,886	2,970,539	8,325,446	7,982,596	7,982,596	342,850	15,094,526	6,769,080
	1927	6	146	1,820	9,096	4,710	4,386	418,127	2,922,792	7,585,767	7,152,265	433,502	11,329,064	3,748,897
Pennsylvania	1929	11	898	2,384	17,795	3,305	14,490	1,487,387	3,469,236	11,848,035	11,352,699	495,336	20,339,687	8,491,652
	1927	11	384	2,010	18,060	7,094	10,966	891,447	2,940,873	10,397,166	9,889,483	507,683	15,787,174	5,390,008
	1919	11	267	2,263	25,761	16,880	8,881	569,485	3,850,369	14,210,405	13,865,972	350,433	19,595,888	5,379,483
Groups of States:														
Nich., 3 est.; Wis., 3	1929	6	153	1,034	10,150	175	9,975	389,601	1,553,604	13,349,659	13,100,555	249,104	18,372,849	5,023,190
Other States (Ala., 1 est.; Calif., 2; Me., 1; Mo., 1; Tex., 1)	1929	6	82	420	3,582	875	2,707	230,751	576,122	2,108,630	2,022,797	85,833	3,906,420	1,797,799
States not shown separately	1927	9	216	2,358	24,090	7,460	16,639	579,672	3,290,048	18,845,504	18,264,731	580,773	28,369,833	9,524,829
	1919	22	769	6,259	29,651	11,532	18,119	1,624,399	8,565,614	38,974,815	37,677,365	1,297,450	59,186,179	20,211,864

¹ Not including proprietors and firm members, as follows: For 1929, 3; 1927, 9; 1919, 13. 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, 25,024; 1927, 22,222; 1919, 22,236.

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

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

⁴ 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.

⁵ Indiana, 2 establishments; Michigan, 1; Missouri, 1; Rhode Island, 2; and Wisconsin, 3.

⁶ Indiana, 2 establishments; Michigan, 1; Missouri, 1; New York, 8; Ohio, 5; Rhode Island, 2; and Wisconsin, 3.

TABLE 3.—WIRE-DRAWING PLANTS, ALL INDUSTRIES—NUMBER OF ESTABLISHMENTS AND VALUE OF PRODUCTS, 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]

	NUMBER OF ESTABLISHMENTS				VALUE OF PRODUCTS				Per cent of increase or decrease (—)		
	1929	1927	1925	1923	1929	1927	1925	1923	1927-1929	1925-1927	1923-1925
	Total	147	132	124	126	\$585,203,016	\$478,638,020	\$456,306,074	\$486,654,126	22.3	4.9	-6.2
Wire and wire products, total value					553,500,538	462,142,821	441,908,472	473,857,015	19.8	4.0	-6.7
Wire industry (from purchased rods and bars)	81	73	68	64	192,430,764	183,781,487	176,017,862	190,568,171	4.7	3.9	-7.2
Wire departments of steel works and rolling mills	42	38	35	32	200,197,286	181,515,604	201,469,482	217,844,264	8.5	-8.4	-7.5
Wire departments of brass and copper rolling mills and other establishments	24	21	21	30	160,872,488	93,895,730	63,531,128	65,444,580	71.3	47.8	-2.9
Products other than wire and wire products, value, and receipts for custom drawing					31,693,478	16,495,199	14,487,602	12,797,111	92.1	13.9	13.2

¹ Not including fabricated-wire products of establishments which use purchased wire as material. (See Table 5, p. 1013.)

WIRE, DRAWN FROM PURCHASED BARS OR RODS

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TABLE 4.—WIRE AND WIRE PRODUCTS—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, ALL WIRE-DRAWING PLANTS, 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. For total output of wire products, all industries, see Table 5]

[Ton 2,000 pounds]

CLASS	1929			1927	1925	1923
	Total	Products of wire industry (from purchased bars and rods)	Products of wire-drawing departments of iron and steel and non-ferrous rolling mills			
Total value.....	\$585,203,016	\$213,997,410	\$371,205,606	\$478,638,020	\$456,396,074	\$486,654,126
Wire and wire products.....	\$553,609,638	\$192,439,764	\$361,069,774	\$462,142,821	\$441,908,472	\$473,857,015
Other products, value, and receipts for custom and repair work.....	\$31,693,478	\$21,557,646	\$10,135,832	\$16,495,199	\$14,487,602	\$12,797,111
Iron and steel wire:						
Plain wire (all iron and steel wire, including that subsequently galvanized, otherwise coated, and cold-rolled), total tons.....	3,097,239	870,291	2,226,948	2,865,223	2,963,236	3,124,649
For sale—						
Tons.....	1,074,076	305,426	768,650	801,045	794,476	837,003
Value.....	\$78,992,298	\$26,827,640	\$52,164,658	\$59,553,429	\$61,435,981	\$67,323,062
Transferred for consumption in other plants of same company—						
Tons.....	129,667	48,872	80,795	106,044	111,767	75,111
Assigned value.....	\$9,463,755	\$4,480,382	\$4,983,373	\$8,065,414	\$10,406,233	\$6,075,060
Produced and consumed in same works, tons.....	1,891,268	513,665	1,377,603	1,958,134	2,056,993	2,212,535
Drawn on contract or custom basis from rods owned by others, tons.....	2,328	2,328	—	(1)	(1)	(1)
Galvanized wire, production, total tons.....	843,195	228,516	614,679	827,249	803,728	952,498
For sale—						
Tons.....	233,260	72,694	160,566	211,158	194,295	273,884
Value.....	\$16,993,593	\$6,767,346	\$10,226,247	\$14,284,326	\$13,158,402	\$18,811,473
Transferred for consumption in other plants of same company—						
Tons.....	35,633	14,192	21,341	38,513	54,837	57,017
Assigned value.....	\$2,662,787	\$1,322,351	\$1,340,436	\$2,750,624	\$4,087,769	\$4,200,015
Produced and consumed in same works, tons.....	674,402	141,630	432,772	577,578	654,596	621,597
Other coated wire, production, total tons.....	57,047	38,027	19,020	46,753	43,130	95,932
For sale and interplant transfer—						
Tons.....	52,242	35,971	16,271	44,024	41,875	53,980
Value.....	\$8,143,031	\$5,456,704	\$2,682,327	\$6,368,147	\$5,198,271	\$6,383,077
Produced and consumed in same works, tons.....	4,805	2,036	2,769	1,829	1,255	41,943
Cold-rolled from drawn wire, production, total tons ¹	43,028	35,787	7,241	182,077	155,378	141,799
For sale and interplant transfer—						
Tons.....	28,757	21,516	7,241	149,803	150,932	140,023
Value.....	\$4,256,839	\$3,355,783	\$900,050	\$18,543,650	\$18,858,028	\$19,693,702
Produced and consumed in same works, tons.....	14,271	14,271	2,274	2,274	4,440	1,776
Copper wire, total production, pounds.....	1,104,497,194	355,303,189	749,194,005	786,563,663	(2)	(2)
For sale and interplant transfer—						
Pounds.....	544,740,180	197,495,729	347,244,460	401,818,866	504,429,078	457,400,000
Value.....	\$118,627,983	\$41,826,472	\$76,801,511	\$77,069,340	\$85,507,400	\$54,786,309
Produced and consumed in same works, pounds.....	407,066,224	135,636,347	272,459,877	294,744,787	(2)	(2)
Drawn on contract or custom basis from rods or bars owned by others, pounds.....	151,760,781	22,271,113	129,489,668	(2)	(2)	(2)
Brass wire, total production, pounds.....	87,789,832	(2)	(2)	63,929,247	(2)	(2)
For sale—						
Pounds.....	79,777,764	(2)	(2)	56,534,689	63,897,360	67,788,684
Value.....	\$18,334,479	(2)	(2)	\$10,907,363	\$12,187,994	\$16,416,811
Transferred for consumption in other plants of same company—						
Pounds.....	6,322,571	(2)	(2)	4,308,879	241,471	249,289
Assigned value.....	\$1,240,719	(2)	(2)	\$785,762	\$39,782	\$42,759
Produced and consumed in same works, pounds.....	2,689,497	(2)	(2)	3,085,679	(2)	(2)
Other metal wire, total production, pounds ²	53,104,341	6,664,555	47,039,786	41,325,539	(2)	(2)
For sale and interplant transfer—						
Pounds.....	50,192,239	4,400,249	45,791,990	34,116,973	45,589,088	29,460,647
Value.....	\$24,347,010	\$4,786,098	\$19,560,912	\$12,009,276	\$13,682,389	\$9,903,209
Produced and consumed in same works, pounds.....	2,912,102	1,664,306	1,247,796	7,208,566	(2)	(2)
Value of further-manufactured wire products made in wire-drawing plants (for total output of these products in all industries, see Table 5).....	\$270,448,044	\$97,313,199	\$173,134,845	\$251,784,490	\$217,345,623	\$239,620,932

¹ No data.
² For 1929, wire cold-rolled from drawn wire only; for earlier years, wire cold-rolled from drawn wire and from material direct from hot-rolling mills. For production of cold-rolled strip steel, see Table 5 (p. 10) of the "Steel works and rolling mills" report.
³ Data incomplete.
⁴ Included in totals but not shown separately, in order to avoid disclosing output of individual establishments.
⁵ Aluminium, bronze, nickel-silver, zinc, and alloys.

CENSUS OF MANUFACTURES: 1929

TABLE 5.—WIRE AND WIRE PRODUCTS—PRODUCTION IN ALL INDUSTRIES: 1929 AND 1927

[This table shows the production of wire and wire products in all industries except "Needles, pins, hooks and eyes, and snap fasteners." The figures for both census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

[Ton, 2,000 pounds]

CLASS	1929						1927	
	Total		Products of wire industry (from purchased bars and rods)		Wire products of all other industries		Quantity	Value
	Quantity	Value	Quantity	Value	Quantity	Value		
Wire and wire products, aggregate value ¹		\$919,988,031		\$192,439,704		\$727,548,267		\$607,684,133
Products of wire-drawing establishments.....		553,509,538		192,439,704		361,069,774		462,142,821
Products of establishments using purchased wire as material.....		366,478,493				366,478,493		235,541,312
Bare wire, for sale and for interplant transfer, value (for detail see Table 4).....		283,061,494		95,126,565		187,934,929		210,388,831
Wire products, total value.....		636,926,537		97,313,199		539,613,338		487,325,802
Iron and steel wire products, total value.....		288,451,853		47,483,539		240,968,314		252,221,556
Nails, brads, and spikes, kegs (100 pounds), total ²	13,600,673	44,934,890	1,962,201	6,046,357	11,638,382	38,288,533	14,819,159	48,002,203
Bright, not including galvanized or other coated, kegs (100 pounds).....	10,302,272	31,738,404	1,478,179	4,060,601	8,824,098	27,071,803	(³)	(³)
Galvanized, kegs (100 pounds).....	1,098,176	5,385,058	150,512	850,879	857,664	4,534,179	(³)	(³)
Cement coated, kegs (100 pounds).....	2,290,225	7,811,428	383,600	1,128,877	1,956,625	6,082,551	(³)	(³)
Tacks, wire, pounds ⁴	6,540,281	640,072			6,540,281	640,072	7,184,501	690,796
Staples, wire, pounds.....	58,878,705	2,342,378	8,841,629	269,860	60,037,076	2,072,518	49,879,225	1,506,000
Barbed wire, plain and coated, tons.....	221,809	13,824,143	39,277	2,646,905	182,532	11,177,238	201,708	12,973,239
Rope or cable, not insulated—quantity reported, tons.....	153,304	46,876,871	66,619	17,533,471	86,685	29,343,400	160,783	43,642,992
Strand, galvanized—quantity reported, tons.....	48,565	5,617,900	21,634	2,297,523	26,931	3,320,377		
Rope or cable, not insulated, and strand—quantity not reported.....								3,273,240
Poultry netting—quantity reported, tons.....	46,733	7,536,147	25,956	4,092,205	20,777	3,443,852		4,378,989,164
Woven-wire fence, except poultry netting—quantity reported, tons.....	365,505	31,041,001	63,574	4,745,558	301,931	26,293,533	4,441,513	2,021,450
Poultry netting and woven-wire fence—quantity not reported.....								10,752,009
Fly screening—quantity reported, pounds.....	64,728,176	9,942,027	9,346,012	1,451,670	55,382,164	8,480,357	68,754,115	3,472,684
Other wire cloth—quantity reported, pounds.....	31,106,928	4,995,659	7,735,170	1,115,559	23,371,758	3,880,100		4,580,426
Flyscreening and other wire cloth—quantity not reported.....		1,559,316				1,559,316		
Other woven wire, except wire cloth: Quantity reported, tons.....	138,830	11,786,472	5,875	510,132	132,955	11,270,340	4,86,288	1,764,050
Quantity not reported.....								4,580,426
Bale ties, pounds.....	148,474,426	5,088,035	17,723,878	536,608	130,750,548	4,551,427	129,828,911	32,186,970
Wire springs, total value.....	(⁵)	47,903,132	(⁵)	2,206,689	(⁵)	45,696,443	(⁵)	(⁵)
Furniture and other upholstery (including mattress) springs.....	(⁵)	25,344,315	(⁵)	35,057	(⁵)	25,309,258		
Valve springs for internal-combustion engines.....	(⁵)	3,314,728	(⁵)	9,375	(⁵)	3,305,353		
Miscellaneous spiral springs.....	(⁵)	10,954,730	(⁵)	1,366,434	(⁵)	9,588,296	(⁵)	(⁵)
Other wire springs.....	(⁵)	5,181,930	(⁵)	101,875	(⁵)	5,080,055		
Flat springs (wire and strip steel), coiled.....	(⁵)	3,107,429	(⁵)	753,948	(⁵)	2,353,481		
Automobile skid chains— Quantity reported, tons.....	31,445	\$3,987,494			31,445	\$3,987,494		41,808,597
Quantity not reported.....		2,503,907				2,503,907		
Other fabricated iron and steel wire products ⁷		42,872,310		3,334,912		39,537,407		
Nonferrous wire products:								
Fly screening—								
Copper, pounds.....	4,993,338	1,768,291	851,350	266,633	4,141,988	1,501,658		
Other metals, pounds.....	10,210,589	3,336,196	1,586,013	510,032	8,624,576	2,826,161		
Fourdrinier and cylinder wire cloth, pounds.....	3,107,604	4,704,950			3,107,604	4,704,950	(⁸)	8,796,077
Other wire cloth—								
Copper, pounds.....	1,168,029	587,986			1,168,029	587,986		
Other metals, pounds.....	1,450,097	683,489			1,450,097	683,489		
Copper strand, not insulated, pounds.....	92,395,338	18,610,600	22,118,871	4,518,128	70,276,467	14,098,472		5,908,075
Other fabricated nonferrous wire products, except insulated wire—								
Copper.....		1,905,640		4,351		1,901,280		5,082,300
Brass.....		2,471,938				2,471,938		3,853,362
Other metals.....		1,747,501				1,747,501		1,435,832
Fabricated wire products not distributed above.....								
Insulated wire and cable, total value.....		312,592,003		44,530,516		268,061,577		210,047,947
Reported by kind of insulation:								
Rubber-insulated—								
Lighting and power circuit—								
Braided.....		51,130,555		4,785,218		46,345,337		46,638,829
Leaded.....		23,037,318		3,434,284		19,603,034		13,103,230
Telephone.....		11,742,261		264,807		11,477,454		8,863,029
Flexible cords (rubber-insulated, cotton and silk covered).....		20,180,102		1,026,245		19,162,857		11,461,221
Rubber-insulated, not distributed above.....								3,956,362
Cotton-insulated—								
Weatherproof.....		42,011,680		8,669,021		33,342,659		25,803,928
Slow-burning.....		4,296,141		(⁹)		(⁹)		2,494,479
Paper-insulated—								
Lighting and power circuit and telephone and telegraph cable (including submarine).....		96,227,728				96,227,728		59,624,158
Varnished-cambrie-insulated.....		7,209,890		(⁹)		(⁹)		9,373,242
Magnet—								
Cotton and silk covered.....		18,777,088		9,220,958		9,556,130		14,093,786
Enameled.....		30,641,417		17,066,855		13,574,562		6,132,833
Other insulated wire and cable including asbestos insulated, and that not distributed by kind of insulation.....		7,328,013		12,474		7,315,439		8,602,845

¹ Includes a considerable but indeterminate amount of duplication because of the use of plain wire made in wire-drawing plants as material by plants engaged in making fabricated wire products and in insulating wire.

² For cut nails and spikes and cut tacks, see Table 5 (p. 956) of the "Steel works and rolling mills" report.

³ No data.

⁴ Revised.

⁵ "Other wire cloth" only.

⁶ Data incomplete.

⁷ Some of the more important miscellaneous fabricated-wire products included in this item are wire guards, garment hangers, partitions and grilles, lamp-shade frames, kitchen wire goods, baskets, cages, belt lacing, florists' designs, bathroom fixtures, and chain other than automobile skid chains.

⁸ So far as separately reported; not called for specifically on schedule for 1927.

⁹ Included in total for insulated wire and cable but not shown separately, in order to avoid disclosing output of individual establishments.

WIRE, DRAWN FROM PURCHASED BARS OR RODS

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TABLE 6.—ESTABLISHMENTS MANUFACTURING WIRE AND SPECIFIED FABRICATED-WIRE PRODUCTS, ALL INDUSTRIES—NUMBER, BY STATES: 1929

STATE	IRON AND STEEL WIRE			IRON AND STEEL WIRE PRODUCTS											NONFERROUS WIRE			NONFERROUS WIRE PRODUCTS					
	Plain wire	Galvanized wire	Other coated wire	Bale ties	Barbed wire	Rope or cable, not insulated	Strand, galvanized	Nails, brads, and spikes	Wire tacks and staples	Fly screening, except nonferrous	Other wire cloth	Poultry netting	Woven wire fence (except poultry netting)	Wire springs	Automobile skid chains	Copper wire, plain	Brass wire	Wire of other metals and alloys	Fly screening (non-ferrous)	Foundry and cylinder wire, cloth	Other wire cloth (non-ferrous)	Copper strand, not insulated	Insulated wire
United States, total.....	97	52	30	33	41	25	23	61	66	22	31	22	65	99	20	39	16	27	23	21	21	20	98
Wire mills.....	57	23	20	4	8	8	8	13	9	2	4	7	6	4	19	5	13	3				3	9
Wire departments of iron and steel rolling mills.....	40	20	10	15	26	6	10	20	26	1	1	9	20	3	5	1	1	1			1	2	4
Wire departments of nonferrous rolling mills and other establishments.....															15	10	10					11	11
Establishments manufacturing from purchased wire.....				14	8	11	5	19	31	19	26	6	39	92				3	19	21	20	4	74
Alabama.....	2	2		2	2		1	2	2			1	2		1								1
California.....	2	1		2	1	4	2	1	1	3	5	3	3	5				2			2		4
Colorado.....	1	1	1	1	1	1	1	1	1			1	2										
Connecticut.....	5	2	2	1	1	1	1	1	2	1	3	1		6	6	8	6	2	2	4	2		16
Georgia.....	1	1		1	1			1	1				1										
Illinois.....	12	7	4	5	10	2	3	11	10	2	2	5	10	18	2	5		1	1			3	9
Indiana.....	4	4	2	2	5		1	5	8	1		2	7	5	1	2						1	6
Iowa.....				3	1					1	1		1					1					
Kansas.....														1									
Maine.....																		1					
Maryland.....	1	1		1	1			2	3		1		2		1						1	1	1
Massachusetts.....	14	6	9	1	2	3	6	8	1	2	5	2	3	3	2	2	1	1	1	6	1	1	12
Michigan.....					1				2				3	3	4	1	1	1	1	1	2	1	4
Minnesota.....	1	1	1	1	1		1	1	1	1	1	1	2	1	1						1		
Missouri.....	2	1		3	2	3	1	2	3	1	1		1		1			1		1	1		3
Montana.....															1							1	
Nebraska.....													2										
New Hampshire.....						3	1	1	1	1	2	1	2	5	1	6	3	3	2	2	3	1	2
New Jersey.....	8	3	1																				13
New York.....	8	2	1					3	3	2	3	1	3	14	2	5	1	3	2	1	2	5	13
Ohio.....	13	8	8	5	4	2	1	7	7		2		8	14	3			1		3	3		1
Oklahoma.....													1										
Oregon.....													1										
Pennsylvania.....	19	10	1	5	9	3	5	13	11	7	1	2	8	11	4	2		4	8				6
Rhode Island.....	1			1											2						1	2	7
Tennessee.....													1										
Texas.....	1	1			1		1	1	1														
Virginia.....														1									
Washington.....						2					1								1				
West Virginia.....					1						1	1											1
Wisconsin.....	2	1			1	1	1	3	3					2					6			1	

TABLE 7.—PRINCIPAL MATERIALS CONSUMED IN THE INDUSTRY, BY KIND, QUANTITY, AND COST, BY STATES: 1929

[Quantities and costs of the principal materials consumed were reported by 72 of the 81 establishments in this industry. The combined value of products reported by these 72 establishments amounted to \$209,994,593, or 93 per cent of the aggregate value of products of the 81 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	Value	KIND AND STATE	Quantity	Value
Wire rods, iron and steel, total.....	Ton (\$,000 lbs.) 955,861	\$39,980,106	Lead (Ind., Mass., N. J., N. Y., Ohio, and Pa.) ¹	Ton (\$,000 lbs.) 6,454	\$908,570
Connecticut.....	46,194	1,969,866	Brass, bronze, and other nonferrous metals, total.....		2,139,778
Illinois.....	262,002	9,849,226	Connecticut.....		158,885
Massachusetts.....	171,749	7,718,324	Illinois.....		849,365
New Jersey.....	44,391	2,069,166	Other States (Mass., N. J., N. Y., and Ohio) ¹		1,131,638
Ohio.....	165,243	6,459,638	Rubber (N. J. and Pa.) ¹		438,779
Pennsylvania.....	137,773	6,276,502	Cotton and silk (Ala., Ill., Ind., and N. J.) ¹		2,100,978
Other States (Calif., Ind., Mo., N. Y., Tex., and Wis.) ¹	128,509	5,646,064			
Copper (Ala., Conn., Ill., Ind., Mass., Mich., N. J., N. Y., Ohio, Pa., and Wis.) ¹	Pounds 353,767,941	61,942,945			

¹ Combined in order to avoid disclosing data for individual establishments.

TABLE 8.—WIRE-DRAWING EQUIPMENT, BY NUMBER AND CAPACITY, BY STATES, ALL INDUSTRIES: 1929

[Ton, 2,000 pounds]

KIND AND STATE	TOTAL		WIRE INDUSTRY (WIRE DRAWN FROM PURCHASED BARS OR RODS)		WIRE DEPARTMENTS OF IRON AND STEEL ROLLING MILLS		WIRE DEPARTMENTS OF NONFERROUS METAL ROLLING MILLS	
	Number	Annual capacity (24-hour basis), tons	Number	Annual capacity (24-hour basis), tons	Number	Annual capacity (24-hour basis), tons	Number	Annual capacity (24-hour basis), tons
Wire-drawing blocks:								
Rod, total.....	9,918	5,940,118	3,413	1,832,630	6,153	3,526,108	352	587,380
Alabama.....	443	247,400	2	5,400	441	242,000		
California.....	81	48,100	12	8,500	69	39,600		
Colorado.....	280	100,000			200	100,000		
Connecticut.....	415	197,340	326	88,000			89	108,440
Georgia.....	66	46,000			66	46,000		
Illinois.....	1,281	1,004,732	711	541,232	560	428,500	10	35,000
Indiana.....	430	314,000	185	119,000	251	195,000		
Maryland.....	152	105,000			132	75,000	20	30,000
Massachusetts.....	1,222	426,289	827	289,289	395	137,000		
Michigan.....	19	23,765	11	10,165			8	4,600
Minnesota.....	171	97,600			171	97,600		
Missouri.....	76	46,500	17	6,600	52	30,000	7	4,000
Montana.....	15	36,000					15	30,000
New Jersey.....	882	325,927	387	66,427	425	122,500	70	137,000
New York.....	466	318,698	103	35,330	294	136,022	69	147,340
Ohio.....	1,184	735,671	301	231,035	883	504,636		
Pennsylvania.....	2,573	1,681,646	418	330,096	2,145	1,350,250	10	1,300
Rhode Island.....	59	95,600			9	16,000	50	82,600
Texas.....	45	31,200	45	31,200				
Wisconsin.....	72	61,650	68	60,550			4	1,100
Redrawing, total.....	13,950		7,739		5,625		586	
Alabama.....	180				180			
California.....	131		92		39			
Colorado.....	90				90			
Connecticut.....	1,272		917				355	
Georgia.....	48				48			
Illinois.....	1,286		652		634			
Indiana.....	226		100		66			
Maryland.....	25				20		5	
Massachusetts.....	4,060		3,613		547			
Michigan.....	66		25				41	
Minnesota.....	54				54			
Missouri.....	63		59				4	
New Jersey.....	2,803		691		2,148		64	
New York.....	1,126		299		741		86	
Ohio.....	1,449		757		692			
Pennsylvania.....	894		582		300		12	
Rhode Island.....	77				66		11	
Texas.....	15		15					
Wisconsin.....	85		77				8	
Fine wire (below No. 20), total.....	20,846		13,220		6,251		1,375	
California.....	28		16		12			
Colorado.....	38				38			
Connecticut.....	1,076		400				676	
Illinois.....	1,350		634		716			
Indiana.....	850		850					
Maryland.....	23						23	
Massachusetts.....	7,789		7,083		656			
Michigan.....	85		53				32	
Missouri.....	39		32				7	
New Jersey.....	1,066		466		882		258	
New York.....	3,354		711		2,320		323	
Ohio.....	4,038		2,574		1,464			
Pennsylvania.....	471		284		163		24	
Rhode Island.....	32						32	
Texas.....	12		12					
Wisconsin.....	105		105					

WIRE, DRAWN FROM PURCHASED BARS OR RODS

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TABLE 9.—EQUIPMENT FOR MANUFACTURING FABRICATED-WIRE PRODUCTS, ALL INDUSTRIES—SELECTED CLASSES, BY NUMBER AND CAPACITY: 1929

CLASS	Total	"Wire, drawn from purchased bars or rods" industry	Wire departments of iron and steel rolling mills	"Wire-work not elsewhere classified" industry	"Nails, spikes, etc., not made in rolling mills or wire mills" industry	CLASS	Total	"Wire, drawn from purchased bars or rods" industry	Wire departments of iron and steel rolling mills	"Wire-work not elsewhere classified" industry	"Nails, spikes, etc., not made in rolling mills or wire mills" industry
Wire-nail machines:						Poultry-netting machines:					
Number.....	6,708	967	5,023	-----	718	Number.....	206	129	82	-----	85
Annual capacity (24-hour basis) kegs, 100 pounds.....	28,118,212	3,534,750	23,050,300	-----	1,533,162	Annual capacity (24-hour basis) tons, 2,000 pounds.....	115,497	62,239	18,860	-----	34,398
Barbed-wire machines:						Stands for cold-rolling machines:					
Number.....	1,338	222	1,083	-----	33	Number.....	1,184	841	1,343	-----	
Annual capacity (24-hour basis) tons, 2,000 pounds.....	685,535	130,050	541,903	-----	13,582	Annual capacity (24-hour basis) tons, 2,000 pounds.....	267,537	125,547	141,990	-----	
Woven-wire-fence machines:											
Number.....	840	119	398	-----	323						
Annual capacity (24-hour basis) tons, 2,000 pounds.....	1,160,947	162,145	654,500	-----	354,302						

1 Includes data for the equipment of 1 nonferrous rolling mill.

TABLE 10.—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 "Comparison with earlier years," p. 1013]

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
		Horsepower		Horsepower		Horsepower		Horsepower		Horsepower		
Prime movers and electric motors driven by purchased energy, aggregate.....	12,825	150,620	6,934	152,574	4,569	138,115	2,295	119,301	919	83,900	100.0	100.0
Prime movers, total.....	89	31,670	93	49,322	117	50,194	147	64,271	255	67,437	21.0	53.9
Steam, total.....	66	29,332	76	46,760	102	54,648	129	61,666	218	63,015	19.5	61.7
Engines.....	58	20,437	59	27,415	83	38,601	101	36,021	(1)	(1)	13.6	30.2
Turbines.....	8	8,895	17	19,345	19	16,042	28	25,645	(1)	(1)	5.9	21.5
Internal-combustion engines.....	11	1,283	4	1,622	3	405	8	1,066	22	3,429	0.8	1.7
Water wheels and water turbines.....	12	1,053	13	940	12	1,146	10	639	15	993	0.7	0.5
Electric motors driven by purchased energy.....	12,736	118,950	6,841	103,252	4,452	81,921	2,148	55,030	664	16,463	79.0	46.1
Electric motors, total.....	14,603	145,569	9,389	141,111	6,623	117,152	3,329	86,646	1,636	39,468	100.0	100.0
Driven by purchased energy.....	12,736	118,950	6,841	103,252	4,452	81,921	2,148	55,030	664	16,463	81.5	63.5
Driven by energy generated in establishments reporting.....	2,067	26,619	2,548	37,859	2,171	35,231	1,181	31,616	972	22,995	18.5	36.5
Electric generators.....	46	Kilowatts 13,310 Kilowatt-hours	48	Kilowatts 21,662	59	Kilowatts 20,022	(2)	(2)	(2)	(2)		
Electric energy purchased 1.....		202,082,602		(4)		(4)		(2)		(2)		

1 Not called for separately on schedule.

2 Not called for on schedule.

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

4 Data incomplete.

TABLE 11.—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. See "Comparison with earlier years," p. 1013]

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.....	22,467	21,326	21,587	21,731	22,117	22,641	23,011	23,483	23,933	24,439	24,764	21,354	<i>10,194</i>	18,891	18,891	77.5
1925.....	18,544	19,478	19,568	19,362	18,679	17,947	17,875	<i>17,514</i>	17,788	18,125	18,576	18,724	18,796	20,039	18,796	89.5
1919.....	19,741	21,043	20,868	19,993	19,038	18,958	18,656	19,538	21,016	21,282	<i>17,535</i>	18,796	18,796	20,039	18,796	81.5
1914.....	17,600	18,483	18,733	18,816	18,363	17,864	17,575	17,200	17,006	17,329	17,207	16,369	<i>16,255</i>	16,369	16,255	86.4
1909.....	18,084	17,763	18,147	17,604	<i>17,131</i>	17,432	17,862	17,864	17,673	18,206	18,580	19,091	19,611	19,611	19,611	87.2
Connecticut.....	901	873	867	878	858	850	832	889	919	964	980	975	920	920	920	84.9
Illinois.....	3,822	3,579	3,926	3,851	3,804	5,664	3,700	3,782	3,798	3,947	3,875	3,865	3,666	3,666	3,666	92.2
Indiana.....	4,881	4,342	4,387	4,303	4,566	5,003	5,321	5,540	5,886	6,208	6,375	3,904	2,787	2,787	2,787	42.9
Massachusetts.....	4,178	<i>3,951</i>	4,022	4,142	4,242	4,265	4,235	4,261	4,231	4,278	4,272	4,186	4,048	4,048	4,048	92.4
New Jersey.....	1,968	<i>1,601</i>	1,652	1,680	1,751	1,973	2,127	2,366	2,405	2,234	2,390	1,965	1,668	1,668	1,668	66.7
New York.....	1,048	1,074	1,056	1,050	1,044	1,034	1,038	1,096	1,061	1,065	1,049	1,029	<i>1,021</i>	1,021	1,021	95.1
Ohio.....	1,811	2,042	2,005	1,918	1,903	1,911	1,851	1,822	1,763	1,714	1,684	1,632	<i>1,487</i>	1,487	1,487	72.8
Pennsylvania.....	2,384	2,334	2,415	2,519	2,501	2,423	2,418	<i>2,215</i>	2,260	2,404	2,385	2,378	2,349	2,349	2,349	87.9

WIREWORK, NOT ELSEWHERE CLASSIFIED

Description of the industry.—This classification embraces establishments engaged in the manufacture, from purchased wire, of commodities such as woven-wire fencing, fly screening, wire cloth and netting, Fourdrinier and cylinder wire cloth, wire rope and cable, barbed wire, tire chains, bale ties, wire guards, partitions and grille work, wire trays and baskets, kitchen wire goods, and wire springs. It does not cover plants which manufacture insulated wire from purchased plain wire, such plants being classified in

the "Electrical machinery, apparatus, and supplies" industry.

Detailed statistics of products.—Fabricated-wire products are manufactured to a considerable extent in departments of wire-drawing plants. The total output of such products, as reported by all classes of establishments in which they are manufactured, is shown in detail in Table 5 of the report for the "Wire, drawn from purchased bars or rods" industry (p. 1013).

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 ¹	Value added by manufacture ²	Horsepower
1929.....	547	22,388	\$27,912,231	\$68,144,047	\$146,805,049	\$78,661,002	48,864
1927.....	512	21,697	26,439,144	63,093,221	128,535,783	65,442,562	45,858
1925.....	462	19,268	23,834,812	59,604,126	115,428,872	55,824,746	35,943
1923.....	443	16,783	19,340,549	52,279,608	100,248,108	47,908,500	31,617
1921.....	413	11,485	13,314,017	37,039,301	66,384,507	29,345,206	(³)
1919.....	558	15,224	15,505,092	50,754,070	90,549,245	39,795,175	29,036
1914.....	552	12,126	6,719,222	24,113,708	41,789,394	17,675,686	21,495
1909.....	611	12,348	6,331,158	24,393,914	41,937,952	17,544,038	19,617
1904.....	649	13,379	6,099,869	17,856,211	33,038,495	15,182,284	17,654
1899.....	596	9,142	3,894,001	10,813,342	19,840,382	9,027,040	12,772
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	6.8	3.2	5.6	8.0	14.2	20.2	6.6
1925-1927.....	10.8	12.6	10.9	5.9	11.4	17.2	27.6
1923-1925.....	4.3	14.8	23.2	14.0	15.1	16.4	13.7
1921-1923.....	7.3	46.1	45.3	41.1	51.0	63.5	.....
1919-1921.....	-26.0	-24.6	-14.1	-27.0	-26.7	-26.3	.....
1919-1929.....	-2.0	47.1	80.0	34.3	62.1	97.7	68.3
1909-1919.....	-8.7	23.3	144.9	108.1	115.9	126.8	48.0
1899-1909.....	2.5	35.1	62.6	125.6	111.4	94.3	53.6

¹ The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products. For detailed statistics covering production of fabricated wire products in all industries in which such products are manufactured, see Table 5 of report for "Wire, drawn from purchased bars or rods" industry (p. 1013).

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

³ Not called for on schedule.

CENSUS OF MANUFACTURES: 1929

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 408 of the 547 establishments in this industry. The combined value of products reported by these 408 establishments amounted to \$129,216,651, or 88 per cent of the aggregate value of products of the 547 establishments in 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 certain specified materials, whereas the others cover all materials]

KIND AND STATE	Quantity	Cost	KIND AND STATE	Quantity	Cost	KIND AND STATE	Quantity	Cost
	(Tons 2,000 pounds)			(Tons 2,000 pounds)			(Tons 2,000 pounds)	
Steel wire, total.....	441,987	\$39,248,843	Illinois.....	24	\$9,186	Steel bars and rods, total.....	29,111	\$1,740,518
California.....	23,416	2,384,110	Michigan.....	80	41,316	California.....	493	36,026
Connecticut.....	4,100	385,445	New York.....	277	90,304	Illinois.....	3,895	210,737
Illinois.....	36,768	2,677,335	Pennsylvania.....	1,232	552,912	Massachusetts.....	71	5,294
Indiana.....	23,393	1,832,870	Other States (Ind., Iowa, Md., Mass., Minn., Mo., N. J., Ohio, Oreg., R. I., Wash., Wis.).....	996	422,499	Michigan.....	420	49,534
Iowa.....	4,570	674,621	Brass and bronze wire, total.....	7,164	3,909,837	Missouri.....	122	11,570
Maryland.....	7,524	486,861	California.....	250	141,126	New Jersey.....	724	53,184
Massachusetts.....	19,610	1,785,747	Connecticut.....	552	279,870	New York.....	3,939	234,600
Michigan.....	120,752	9,783,698	Illinois.....	153	78,095	Ohio.....	1,516	102,816
Minnesota.....	2,921	170,391	Massachusetts.....	509	240,317	Pennsylvania.....	3,510	223,578
Missouri.....	25,371	3,936,687	Michigan.....	521	217,322	Wisconsin.....	113	6,215
New Jersey.....	20,087	1,815,424	New Jersey.....	399	259,618	Other States (Conn., Ind., Iowa, Kans., Ky., Md., Minn., Oreg., R. I., Tenn., Tex., Wash.).....	14,368	800,964
New York.....	17,388	1,364,171	New York.....	508	253,401	Zinc (slab), total.....	7,700	1,100,104
Ohio.....	37,595	3,403,334	Ohio.....	434	304,466	New York.....	94	14,443
Pennsylvania.....	79,698	7,103,990	Pennsylvania.....	3,374	1,871,568	Ohio.....	810	112,779
Texas.....	1,092	70,376	Wisconsin.....	253	161,034	Pennsylvania.....	684	101,565
Wisconsin.....	5,195	301,471	Other States (Iowa, Md., Minn., Mo., Nebr., Okla., Oreg., R. I.).....	211	102,970	Other States (Calif., Conn., Ill., Ind., Iowa., Md., Mass., Mich., Mo., N. J., Wash., W. Va.).....	6,115	871,317
Other States (Ala., Colo., Kans., Ky., Nebr., Okla., Oreg., R. I., S. C., Tenn., Wash., W. Va.).....	13,107	1,116,362						
Copper wire, total.....	2,750	1,181,861						
California.....	14	6,759						
Connecticut.....	127	58,855						

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.....	7,134	Horsepower 48,864	6,073	Horsepower 45,858	4,811	Horsepower 35,943	2,509	Horsepower 20,036	1,503	Horsepower 21,405	100.0	100.0
Prime movers, total.....	61	5,559	65	6,143	60	5,335	145	12,331	207	11,014	11.4	42.5
Steam, total.....	48	5,168	41	5,559	33	4,075	63	10,570	93	9,075	10.6	38.4
Engines.....	48	5,168	37	5,249	33	4,675	62	10,370	(1)	(1)	10.6	35.7
Turbines.....			4	340			1	200	(1)	(1)		0.7
Internal-combustion engines.....	10	191	19	334	23	509	77	1,266	104	1,540	0.4	4.4
Water wheels and water turbines.....	3	200	5	220	4	151	5	495	10	393	0.4	1.7
Electric motors driven by purchased energy.....	7,073	43,305	6,008	39,715	4,751	30,608	2,364	16,705	1,296	10,391	88.6	57.5
Electric motors, total.....	7,563	45,168	6,715	43,205	5,248	33,594	3,581	22,917	1,775	14,305	100.0	100.0
Driven by purchased energy.....	7,073	43,305	6,008	39,715	4,751	30,608	2,364	16,705	1,296	10,391	95.9	72.9
Driven by energy generated in establishments reporting.....	490	1,863	707	3,490	497	2,986	1,217	6,212	479	3,914	4.1	27.1
Electric generators.....	25	Kilowatts 2,267 Kilowatt-hours	26	Kilowatts 2,877	27	Kilowatts 2,803	(2)	(2)	(2)	(2)		
Electric energy purchased ¹		58,253,835		(4)		(4)		(2)		(2)		

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

WIREWORLD, NOT ELSEWHERE CLASSIFIED

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.....	22,388	21,051	22,967	23,023	22,768	22,167	22,192	22,589	22,640	23,697	22,853	21,301	20,479	86.4	
1925.....	19,268	18,650	18,929	19,280	19,336	19,194	18,645	18,718	18,920	19,385	20,348	19,776	19,776	92.1	
1919.....	15,224	14,996	14,964	15,048	14,826	14,903	15,108	15,408	15,045	15,435	15,331	15,623	15,941	93.0	
1914.....	12,126	12,544	12,648	12,766	12,744	12,558	12,106	11,698	11,650	11,707	11,825	11,756	11,610	91.0	
1909.....	12,348	11,871	11,979	12,153	12,251	12,257	12,218	11,911	12,163	12,488	12,871	13,095	13,229	87.5	
California.....	571	575	556	586	556	548	533	575	580	587	589	586	580	90.5	
Connecticut.....	864	836	785	806	821	839	859	830	904	891	902	907	885	84.4	
Illinois.....	1,989	1,599	1,942	1,901	1,827	1,730	1,720	2,200	2,245	2,322	2,347	2,221	1,823	67.9	
Indiana.....	868	892	892	938	930	871	873	866	856	848	856	762	746	78.7	
Iowa.....	212	225	218	226	230	213	190	187	193	206	230	227	202	81.3	
Kansas.....	34	32	33	38	33	32	34	31	36	34	34	35	35	81.6	
Louisiana.....	9	10	10	7	7	8	8	10	10	10	10	10	10	70.0	
Maryland.....	378	328	362	370	368	365	388	382	370	406	467	355	375	70.2	
Massachusetts.....	1,627	1,556	1,562	1,612	1,630	1,645	1,631	1,594	1,627	1,644	1,713	1,720	1,594	90.4	
Michigan.....	6,162	6,489	6,981	6,959	6,758	6,396	6,452	6,379	6,247	6,848	5,599	4,377	4,450	62.9	
Minnesota.....	132	133	135	130	120	123	118	125	101	139	158	152	154	63.9	
Missouri.....	740	718	730	738	749	745	743	728	743	737	766	741	721	93.7	
Nebraska.....	19	20	20	20	19	18	18	18	18	18	18	18	18	90.0	
New Jersey.....	1,329	1,252	1,272	1,281	1,301	1,300	1,315	1,328	1,328	1,356	1,418	1,421	1,372	88.1	
New York.....	2,118	2,044	2,048	2,078	2,032	2,058	2,043	2,105	2,101	2,178	2,277	2,299	2,157	88.4	
Ohio.....	1,462	1,415	1,497	1,538	1,608	1,587	1,517	1,479	1,469	1,416	1,439	1,357	1,257	78.4	
Oklahoma.....	25	15	15	17	17	27	28	34	35	29	29	26	26	42.9	
Pennsylvania.....	2,060	2,888	2,876	2,810	2,768	2,814	2,876	2,947	3,019	3,060	3,134	3,197	3,180	84.7	
Rhode Island.....	49	52	50	50	50	49	50	50	52	51	41	48	38	73.1	
Texas.....	35	30	30	30	32	34	37	35	39	37	36	37	37	76.9	
Wisconsin.....	391	420	423	427	484	423	403	377	365	356	361	356	342	84.2	

WROUGHT PIPE, WELDED AND HEAVY RIVETED, NOT MADE IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of boiler tubes, oil-country casing, tubing, and pipe, other black and galvanized wrought pipe, electrical conduit, and heavy-riveted pipe. The production of wrought pipe in rolling mills, however, greatly exceeds that in the wrought-pipe industry. The production of seamless tubes from pierced billets is classified in the

rolling-mill industry. Detailed statistics covering the total production of wrought pipe in all industries are given 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

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²	Horsepower
1929	50	11,417	\$18,762,303	\$70,120,041	\$124,658,966	\$54,538,025	68,630
1927	44	11,083	16,066,001	55,778,864	98,186,841	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	17,704,699	57,965,845	90,823,189	32,867,247	40,912
1921	57	8,728	11,234,413	37,093,041	56,602,278	19,509,234	(4)
1919	50	10,426	14,919,676	51,155,653	81,809,115	30,713,402	23,625
1914	36	8,845	5,750,360	26,295,788	37,655,229	11,350,441	17,532
1909	28	6,817	3,963,075	22,941,909	30,886,270	7,944,381	20,656
1904	27	5,410	2,472,721	12,740,619	17,400,912	4,654,293	15,094
1899	19	5,536	2,495,898	15,623,858	21,292,043	5,768,185	11,717
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	(4)	3.0	16.8	25.7	27.0	28.6	27.2
1925-1927	(4)	2.0	-0.4	-5.7	3.7	19.3	30.6
1923-1925	(4)	2.2	-3.1	2.0	4.3	8.2	0.9
1921-1923	(4)	21.8	57.6	56.3	60.3	67.9	-----
1919-1921	(4)	-16.3	-24.7	-27.5	-30.8	-36.3	-----
1919-1929	-----	9.5	25.8	37.1	52.3	77.0	186.9
1909-1919	(4)	52.9	270.5	123.0	165.1	286.6	15.8
1899-1909	(4)	23.1	58.8	47.8	45.1	37.7	76.3

¹ For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products. For total production of wrought pipe in 1929, 1927, and 1925 by all plants, including rolling mills, see Table 5, p. 956, of report for "Steel works and rolling mills" industry.

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

³ Not called for on schedule.

⁴ 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.]

STATE	Census year	Number of establishments	Salaried officers and employees ¹	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 ²	Value added by manufacture ³	
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy			
United States	1929	50	1,419	11,417	68,630	14,710	53,920	\$4,395,003	\$18,762,303	\$70,120,041	\$67,539,403	\$2,581,478	\$124,658,966	\$54,538,025	
	1927	44	1,111	11,083	53,938	20,266	33,672	3,514,435	10,066,001	55,778,864	53,220,057	2,549,807	98,186,841	42,407,477	
	1919	50	1,344	10,426	23,925	13,456	10,469	2,854,926	14,919,676	51,155,653	49,307,757	1,847,896	81,869,115	30,713,402	
Individual States:															
	California	1929	11	120	574	4,133	-----	4,133	478,152	848,228	2,961,866	2,910,142	51,724	5,801,546	2,839,680
		1927	12	208	1,622	10,970	-----	10,970	672,242	1,961,156	7,012,357	6,902,003	110,294	13,638,980	6,626,543
1919		16	107	687	1,360	-----	1,360	260,771	935,868	2,013,180	1,988,227	24,953	5,024,137	3,010,957	
New Jersey	1929	3	21	67	688	270	418	49,318	109,104	255,096	238,080	17,016	631,934	376,638	
	1927	3	12	90	977	450	627	33,100	144,258	298,347	277,515	18,832	525,450	229,103	
	1919	5	191	739	2,473	1,005	1,468	475,895	1,140,657	2,891,075	2,736,427	154,048	5,390,702	2,499,027	
Pennsylvania	1929	9	455	5,346	23,665	11,820	11,845	1,496,012	8,009,269	29,815,075	28,525,238	1,289,837	49,154,190	19,336,115	
	1927	9	439	5,128	22,776	11,560	11,230	1,560,292	7,270,005	27,290,250	25,835,674	1,463,576	44,564,127	17,204,877	
	1919	10	331	3,467	8,039	0,516	1,573	694,901	4,297,063	17,611,003	16,818,662	792,341	25,478,563	7,867,500	
Groups of States:															
	Ariz., 2 est.; Colo., 1; Oreg., 1; Wash., 1; Ill., 3 est.; Ind., 1; Ohio, 7; Wis., 1; Other States (Mich., 6 est.; N. Y., 4)	1929	5	42	125	1,999	-----	1,999	105,418	171,458	607,428	587,996	19,432	1,128,909	521,481
		1929	12	647	4,376	32,391	2,470	20,921	1,857,794	8,137,388	33,001,057	31,945,194	1,055,863	60,306,505	27,305,448
1929		10	134	929	5,754	150	5,604	408,309	1,486,856	3,480,419	3,332,813	147,600	7,635,882	4,155,463	
States not shown separately.	1927	20	452	4,243	19,215	8,266	10,949	1,248,801	6,689,982	21,170,910	20,213,805	957,105	39,457,864	18,286,954	
	1919	19	715	5,533	12,003	5,935	6,068	1,417,359	8,537,088	28,040,395	27,764,441	875,954	45,975,713	17,335,318	

¹ Not including proprietors and firm members, as follows: For 1929, 3; 1927, 6; 1919, 13. 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, 12,839; 1927, 12,200; 1919, 11,783.

² See footnote 1, Table 1.

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

⁴ Arizona, 2 establishments; Colorado, 1; Illinois, 4; Indiana, 1; Michigan, 3; New York, 3; Ohio, 5; and Washington, 1.

⁵ Connecticut, 1 establishment; Illinois, 2; Indiana, 2; Kentucky, 1; New York, 4; Ohio, 8; and Washington, 1.

WROUGHT PIPE, WELDED AND HEAVY RIVETED

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		PERCENT 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.....	4,363	<i>Horse-power</i> 68,630	2,814	<i>Horse-power</i> 53,938	1,412	<i>Horse-power</i> 41,306	1,019	<i>Horse-power</i> 23,925	367	<i>Horse-power</i> 17,532	100.0	100.0
Prime movers, total.....	31	14,710	42	20,266	60	22,735	64	13,456	109	14,545	21.4	56.2
Steam, total.....	28	14,620	42	20,266	57	22,585	61	13,366	107	14,490	21.3	55.6
Engines.....	25	7,780	37	9,526	47	12,700	59	12,266	(1)	(1)	11.3	51.0
Turbines.....	3	6,890	5	10,740	10	9,825	2	1,100	(1)	(1)	10.0	4.6
Internal-combustion engines.....	3	90			3	150	3	150	2	55	0.1	0.6
Electric motors driven by purchased energy.....	4,332	53,920	2,772	33,672	1,352	18,571	955	10,469	258	2,987	78.6	43.8
Electric motors, total.....	5,850	78,785	5,339	70,699	3,470	34,824	2,402	29,187	2,035	25,664	100.0	100.0
Driven by purchased energy.....	4,332	53,920	2,772	33,672	1,352	18,571	955	10,469	258	2,987	68.4	35.9
Driven by energy generated in establishments reporting.....	1,518	24,865	2,567	37,027	2,118	16,253	1,447	18,718	1,777	22,677	31.6	64.1
Electric generators.....	17	<i>Kilowatts</i> 8,875 <i>Kilowatt-hours</i> 62,025,262	19	<i>Kilowatts</i> 12,556	30	<i>Kilowatts</i> 13,461	(2)	(2)	(2)	(2)		
Electric energy purchased ¹				(1)		(1)		(1)		(1)		

¹ Not called for separately on schedule.
² Not called for on schedule.
³ This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.
⁴ 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.....	11,417	11,524	11,281	10,455	<i>10,036</i>	12,199	12,088	12,428	11,331	10,648	11,249	11,601	12,172	80.8
1925.....	10,871	10,638	<i>10,632</i>	11,053	10,727	10,704	10,968	10,773	11,028	11,034	11,191	10,878	10,821	95.0
1919.....	10,426	10,222	9,981	9,884	9,688	<i>9,352</i>	10,139	10,837	11,309	11,805	9,775	10,491	11,629	79.2
1914.....	8,845	9,834	9,794	9,836	10,784	9,947	8,804	9,766	8,481	7,436	7,008	<i>6,796</i>	7,674	63.1
1909.....	6,817	5,769	6,109	<i>5,780</i>	5,834	6,110	6,455	6,821	7,416	7,618	7,833	8,044	8,084	71.1
California.....	574	550	<i>510</i>	546	545	592	647	629	580	519	503	579	591	79.8
New Jersey.....	67	70	72	71	72	67	65	67	69	64	64	<i>61</i>	65	84.7
Pennsylvania.....	5,346	5,816	5,653	5,233	<i>4,686</i>	5,417	5,368	5,608	5,570	5,130	5,182	5,022	5,168	85.7

Group 12.—NONFERROUS METALS AND THEIR PRODUCTS

THE GROUP AS A WHOLE

This group comprises industries engaged in the production of nonferrous metals from the ores or from scrap metals; in the refining or alloying of such metals; and in the manufacture, from these metals or alloys as basic materials, of finished products or products for use in further manufacturing processes.

The principal metals or ores which form the basic materials used in these industries are copper, lead, zinc, tin, gold, silver, and aluminum. It should be noted, however, that these same basic metals are used to a large extent in certain industries assigned to other groups; for example, "Electrical machinery, apparatus, and supplies" and other industries of the "Machinery, not including transportation equipment" group. A number of industries in Groups 11 and 16 also manufacture various commodities made wholly or in part from metals other than iron and steel.

Since the metals and alloys produced by the basic industries of Group 12 are used as materials by other industries in the group, there are considerable amounts of duplication in the total cost of materials and the total value of products for the group as a whole. (See GENERAL EXPLANATIONS—Duplication in Cost of Materials and Value of Products," p. 7.)

The basic industries which extract the metals from the ore or refine or alloy them usually add relatively little to the value of the raw materials which they use, while the more highly elaborated manufacturing processes employed by the industries which use these metals and alloys as materials add very considerably to their value.

This group, as constituted at former censuses, included the "Pens, gold" industry, which now forms a part of the "Pens, fountain and stylographic; pen points, gold, steel, and brass" industry, in Group 16.

The former industry "Enameling and japanning," in Group 16, has been consolidated with "Stamped and enameled ware," in this group, under the new title "Stamped ware, enameled ware, and metal stamping, enameling, japanning, and lacquering."

The totals for the group, for 1927 and prior years, have been adjusted in accordance with the changes described in the preceding paragraphs, in order to make them fairly comparable with those for 1929.

Summary statistics for the group as a whole, by subgroups and industries, are presented in the table beginning below; and detailed reports for the individual industries, all of which have been published separately in pamphlet form, will be found on pages 1029 to 1095.

SUMMARY FOR GROUP 12.—NONFERROUS METALS AND THEIR PRODUCTS: 1914 TO 1929

[The totals for 1927 and prior years have been revised for comparison with those for 1929 by adding the figures for "Enameling and japanning," formerly classified separately in Group 16, but now included in the "Stamped ware, enameled ware, and metal stamping, enameling, japanning, and lacquering" industry, in Group 12, and by deducting the figures for the former "Pens, gold" 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 ¹	Horse-power
Aggregate for the group.....	1929	7,522	314,741	\$443,466,623	\$2,465,444,198	\$3,597,057,717	\$1,131,613,519	1,570,217
	1927	6,761	272,607	383,184,596	1,783,213,460	2,677,107,246	893,893,777	1,230,411
	1925	7,006	276,616	382,652,350	1,948,438,054	2,839,550,465	891,112,411	1,162,140
	1923	7,501	297,798	395,078,970	1,767,637,612	2,637,159,840	869,522,228	1,171,192
	1921	7,853	212,680	256,892,785	886,264,843	1,408,069,444	521,794,601	(²)
	1919	10,441	304,768	359,171,419	1,737,233,945	2,519,031,512	781,797,567	953,109
	1914	9,808	239,542	154,579,750	964,555,945	1,329,834,086	365,278,141	550,993
Smelting and refining, total.....	1929	250	36,046	56,447,479	1,344,040,270	1,519,641,736	175,601,466	618,486
	1927	238	34,087	50,514,720	935,014,146	1,086,162,537	151,138,391	481,441
	1925	238	37,194	54,793,120	1,070,193,357	1,244,505,890	174,312,639	* 479,412
	1923	205	37,634	55,095,282	924,227,805	1,060,440,314	136,212,500	460,321
	1921	222	20,909	27,807,490	419,419,120	491,156,185	71,737,065	(²)
	1919	279	42,431	59,586,160	939,168,772	1,077,822,855	138,654,083	467,644
	1914	250	37,774	31,258,335	629,704,222	737,628,615	107,924,393	273,551
Primary, total.....	1929	75	30,681	49,239,319	1,199,025,259	1,345,799,941	146,774,682	696,081
	1927	69	30,510	44,799,809	807,242,176	942,734,864	135,492,688	465,164
	1925	71	32,992	47,947,907	912,063,507	1,067,124,899	155,061,332	* 465,496
	1923	88	35,140	51,510,128	830,089,699	952,734,111	122,644,412	446,047
	1921	85	19,014	25,148,682	308,331,888	430,031,904	61,700,016	(²)
	1919	111	39,620	55,649,412	848,755,914	972,093,552	123,337,638	456,582
	1914	88	34,733	28,983,145	572,744,382	669,138,943	96,394,561	261,419
Copper.....	1929	26	14,544	23,951,955	920,361,441	904,783,802	74,432,421	412,244
	1927	20	13,924	20,581,865	527,703,711	609,299,017	81,535,306	323,799
	1925	26	15,588	22,641,626	573,190,428	665,176,767	91,986,339	* 321,906
	1923	29	16,777	25,469,100	554,099,924	625,432,965	71,333,041	332,943
	1921	28	8,293	11,199,279	205,903,896	234,895,245	28,991,349	(²)
	1919	34	17,345	25,723,371	584,410,173	651,101,591	66,691,418	321,610
	1914	37	17,731	16,149,261	379,167,030	444,021,958	64,864,928	194,969

See footnotes at end of summary.

NONFERROUS METALS AND THEIR PRODUCTS

1027

SUMMARY FOR GROUP 12.—NONFERROUS METALS AND THEIR PRODUCTS: 1914 TO 1929—Continued

[See note at head of this summary, p. 1026]

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 ¹	Horse-power
Smelting and refining—Continued.								
Primary—Continued.								
Lead.....	1929	10	4,819	\$7,577,094	\$203,913,730	\$232,115,009	\$28,201,279	59,936
	1927	18	5,398	7,630,680	202,859,134	225,137,872	22,278,758	18,298
	1925	17	6,115	9,001,580	254,881,029	283,042,542	28,161,513	47,219
	1923	20	6,194	8,767,924	207,314,578	227,735,149	20,429,571	42,377
	1921	23	4,509	5,957,961	134,061,121	150,593,779	16,532,658	(²)
	1919	25	6,438	9,170,615	179,373,646	196,794,519	17,429,873	69,668
	1914	22	7,385	6,134,274	154,014,765	171,578,587	17,563,822	29,734
Zinc.....	1929	30	11,618	17,710,270	74,760,088	118,901,070	44,140,982	123,901
	1927	25	11,188	16,528,264	76,019,331	108,297,977	31,678,644	93,067
	1925	28	11,289	16,394,701	83,992,410	118,905,599	34,913,480	86,398
	1923	35	11,918	16,895,864	64,434,114	94,183,909	30,044,786	69,583
	1921	29	5,778	7,245,760	24,312,298	37,482,699	13,170,467	(³)
	1919	30	13,796	17,783,278	70,014,728	104,122,958	34,108,210	74,604
	1914	29	9,617	6,699,620	39,572,587	53,538,398	13,965,811	56,705
Metals not elsewhere classified.....	1923	4	257	387,180	4,541,083	5,382,097	841,014	1,144
	1921	5	434	747,682	4,054,663	7,060,205	3,095,542	(⁴)
	1919	13	2,041	2,963,148	14,957,367	29,074,504	5,117,137	11,760
Secondary, total.....	1929	175	5,065	7,208,160	145,015,011	173,841,795	28,826,784	22,404
	1927	159	3,577	5,714,911	127,771,970	143,417,673	15,645,763	16,277
	1925	167	4,202	6,845,222	158,129,790	177,380,967	19,251,207	23,016
	1923	117	2,488	3,585,154	94,138,106	107,706,203	13,568,097	14,274
	1921	137	1,985	2,658,808	51,087,232	61,124,281	10,037,049	(⁵)
	1919	168	2,811	3,096,748	90,412,858	105,729,393	15,316,445	11,062
	1914	162	3,041	2,275,190	56,069,840	68,480,672	11,529,832	12,132
Gold, silver, and platinum, reducing and refining, not from the ore.....	1929	69	931	1,633,838	61,570,083	67,959,140	6,389,097	4,230
	1927	57	801	1,434,620	58,877,476	62,647,127	3,769,651	1,288
	1925	65	1,258	2,165,685	88,867,196	95,243,474	6,376,278	9,676
	1923	70	901	1,361,287	65,088,918	71,920,702	6,831,784	4,620
	1921	77	785	1,130,572	41,055,751	45,974,226	4,918,475	(⁶)
	1919	87	644	843,668	49,736,978	55,483,215	5,746,237	3,141
	1914	78	450	390,865	25,769,133	28,587,558	2,878,425	2,061
Metals other than gold, silver, or platinum, not from the ore.....	1929	106	4,134	5,574,322	83,444,918	105,882,655	22,437,737	18,174
	1927	102	2,776	4,280,291	68,894,494	80,770,546	11,876,052	11,989
	1925	102	2,944	4,679,537	69,262,594	82,137,523	12,874,929	14,240
	1923	41	1,587	2,223,917	29,049,188	35,785,501	6,730,313	9,654
	1921	60	1,200	1,528,236	10,081,481	15,150,055	5,118,574	(⁷)
	1919	81	2,167	3,093,140	40,675,880	50,246,088	9,570,208	7,921
	1914	84	2,585	1,884,825	31,250,707	39,902,114	8,651,407	10,071
Metals and manufactures of metals, total.....	1929	7,272	278,695	387,010,144	1,121,403,928	2,077,415,981	956,012,653	951,732
	1927	6,533	258,580	332,603,576	848,194,323	1,506,954,709	742,755,386	744,970
	1925	6,768	239,422	327,859,227	878,244,697	1,595,044,599	716,799,872	678,128
	1923	7,296	260,164	339,983,688	843,409,807	1,576,719,526	733,309,719	710,871
	1921	7,631	191,681	229,085,295	466,845,723	916,903,259	450,057,436	(⁸)
	1919	10,162	262,337	299,585,259	788,065,173	1,441,208,657	643,143,484	485,465
	1914	9,568	201,768	123,321,415	334,851,723	592,205,471	257,353,748	277,852
Aluminum manufactures.....	1929	150	21,210	29,692,727	94,086,463	153,457,248	59,420,785	107,846
	1927	139	14,798	20,891,843	79,888,509	123,557,112	43,718,603	71,907
	1925	127	14,353	19,753,349	84,984,923	127,830,756	42,845,833	62,306
	1923	119	16,288	19,843,546	66,650,519	106,930,307	40,270,848	58,272
	1921	87	9,584	10,835,567	25,952,529	45,822,161	19,869,632	(⁹)
	1919	83	11,402	13,327,366	49,271,861	75,277,948	26,006,087	30,280
	1914	37	4,614	2,611,261	14,421,319	19,597,465	5,176,146	12,297
Clocks, clock movements, time-recording devices, and time stamps.....	1929	56	10,401	12,481,894	10,675,113	42,165,875	31,490,762	12,451
	1927	52	9,865	11,750,639	10,062,765	38,195,803	28,133,438	9,610
	1925	45	7,945	9,237,716	8,920,194	29,379,164	20,459,060	8,514
	1923	38	6,359	6,878,949	8,172,538	28,553,582	20,381,044	8,285
	1921	37	6,535	6,558,047	6,590,966	17,750,069	11,159,094	(¹⁰)
	1919	40	8,252	7,861,611	7,177,813	23,380,190	16,292,377	6,952
	1914	48	6,754	3,653,146	4,067,764	11,031,720	7,023,956	5,998
Collapsible tubes ⁴	1929	17	1,821	1,782,024	5,385,906	8,912,977	3,527,071	2,272
	1927	17	1,984	1,918,055	7,163,927	11,350,710	4,246,783	2,849
	1925	16	1,948	1,876,526	5,693,610	9,449,029	3,755,419	2,671
Copper, tin, and sheet-iron work, including galvanized-iron work, not elsewhere classified.....	1929	2,161	28,593	43,254,611	112,648,112	222,484,625	100,836,513	53,749
	1927	1,981	24,627	38,667,690	98,385,897	191,128,636	92,742,739	35,880
	1925	2,107	24,996	37,824,995	84,079,626	175,042,925	90,963,296	35,273
	1923	2,524	28,852	42,445,832	93,507,014	188,928,028	95,401,014	34,243
	1921	3,105	25,172	36,561,785	75,864,192	148,776,164	72,880,062	(¹¹)
	1919	4,796	27,640	33,896,823	80,586,528	160,313,945	79,416,417	24,130
	1914	4,527	28,714	20,517,568	50,174,216	94,890,599	44,716,383	21,275
Electroplating.....	1929	584	5,928	9,536,800	4,798,667	23,727,916	18,929,249	24,015
	1927	419	3,556	5,629,104	3,335,140	13,930,321	10,695,181	14,690
	1925	449	3,337	5,253,845	2,541,165	12,440,510	9,809,345	10,743
	1923	440	3,374	5,195,183	2,012,673	12,297,333	9,684,660	9,505
	1921	392	2,460	3,562,980	1,989,639	8,040,954	6,081,315	(¹²)
	1919	615	3,024	3,793,605	2,639,248	10,389,617	7,750,369	6,788
	1914	479	2,584	1,712,922	1,335,062	4,773,309	3,437,647	5,308
Fire extinguishers, chemical.....	1929	28	740	958,570	4,187,524	8,566,089	4,378,565	1,464
	1927	26	832	1,191,708	4,069,775	8,035,166	4,025,381	1,564
	1925	26	842	1,131,127	4,122,137	8,087,174	3,916,037	1,440
	1923	26	762	847,420	3,366,159	6,152,082	2,785,923	1,235
	1921	31	580	625,958	2,081,052	4,254,261	2,173,209	(¹³)
	1919	32	777	751,119	2,693,416	5,563,180	2,869,764	855
	1914	27	256	200,096	673,978	1,267,723	723,748	269

See footnotes at end of summary.

CENSUS OF MANUFACTURES: 1929

SUMMARY FOR GROUP 12.—NONFERROUS METALS AND THEIR PRODUCTS: 1914 TO 1929—Continued

[See note at head of this summary, p. 1026]

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 ¹	Horse-power
Metals and manufactures of metals—Continued								
Gas and electric fixtures; lamps, lanterns, and reflectors.....	1929	614	23,580	\$33,268,595	\$57,918,407	\$144,965,706	\$87,047,299	40,209
	1927	481	21,030	29,260,824	55,608,545	127,802,407	72,193,862	31,291
	1925	517	22,334	31,072,058	57,770,818	129,698,389	71,927,571	30,038
	1923	535	22,919	29,097,143	52,639,530	118,978,627	66,339,088	30,534
	1921	465	16,866	18,523,190	32,801,606	72,054,398	39,262,792	(2)
	1919	512	18,155	19,094,877	38,687,571	80,366,870	41,679,299	22,278
	1914	611	18,047	10,677,034	22,101,898	45,378,224	23,276,326	18,213
Gold leaf and foil.....	1929	75	1,177	1,134,044	1,032,667	3,978,024	2,045,357	383
	1927	77	1,146	1,120,434	1,721,174	3,571,190	1,850,016	346
	1925	84	1,148	1,112,685	1,838,611	3,745,807	1,907,100	326
	1923	64	918	933,591	1,896,806	3,561,856	1,665,050	281
	1921	72	1,104	1,042,028	4,994,718	7,014,496	2,019,778	(3)
	1919	87	950	983,600	2,655,335	4,401,568	1,808,233	408
	1914	79	1,135	498,273	1,462,429	2,432,145	979,710	360
Jewelry.....	1929	1,536	27,922	38,979,810	79,804,617	177,386,932	97,582,315	27,402
	1927	1,367	24,116	36,765,805	76,915,375	164,865,087	87,949,682	17,070
	1925	1,468	23,837	35,177,020	79,885,823	166,816,370	86,930,847	17,266
	1923	1,622	26,354	36,423,704	83,983,485	174,033,912	90,050,427	16,851
	1921	1,671	23,482	29,938,313	58,059,348	127,230,777	69,171,429	(2)
	1919	2,054	30,871	35,863,718	110,450,083	203,939,230	93,488,547	15,096
	1914	1,914	28,289	18,301,565	39,110,136	81,006,289	41,890,153	13,862
Needles, pins, hooks and eyes, and snap fasteners.....	1929	43	6,242	6,565,732	6,187,822	22,030,950	15,843,128	6,694
	1927	45	5,606	6,098,477	5,922,844	20,325,250	14,402,406	7,250
	1925	48	5,850	5,855,679	5,925,652	18,178,674	12,247,922	7,603
	1923	49	6,834	6,703,079	7,795,975	22,147,468	14,851,493	10,367
	1921	68	6,542	5,542,404	6,162,949	18,896,168	12,738,219	(3)
	1919	92	9,294	8,869,781	10,227,169	29,364,995	19,077,796	8,423
	1914	49	5,339	2,506,611	3,241,637	7,890,879	4,049,222	4,783
Nonferrous-metal alloys and products, not including aluminum products ⁴	1929	1,225	79,183	116,948,996	600,410,913	909,804,050	309,393,137	506,273
	1927	1,197	65,923	95,351,041	378,190,134	581,568,767	203,878,633	411,925
	1925	1,140	65,135	93,820,242	401,316,012	593,555,540	192,230,528	360,239
	1923	1,156	67,289	92,248,986	381,935,366	573,043,584	191,108,218	314,757
	1921	1,047	42,287	40,448,884	161,273,348	252,277,546	91,004,198	(2)
	1919	1,252	78,512	98,286,297	367,752,118	559,455,010	191,702,892	277,713
	1914	1,140	42,371	26,436,242	137,625,252	189,779,577	52,154,325	128,251
Plated ware.....	1929	96	10,728	14,941,552	16,750,985	55,429,959	38,678,974	28,899
	1927	94	11,752	16,141,501	16,719,962	56,719,962	36,507,041	27,712
	1925	90	11,290	15,236,348	20,070,741	54,330,033	34,259,292	23,914
	1923	83	12,118	15,640,896	19,813,842	53,898,534	34,084,602	22,390
	1921	66	9,535	10,664,149	12,408,683	33,944,136	21,535,453	(3)
	1919	68	9,492	10,913,091	17,706,536	41,634,585	23,868,049	14,212
	1914	72	8,717	5,000,381	8,304,039	18,484,235	10,180,196	10,494
Silversmithing and silverware.....	1929	83	5,007	7,636,413	10,134,708	30,452,366	20,317,658	7,325
	1927	84	4,967	7,803,183	11,165,068	30,704,218	19,530,150	7,499
	1925	93	5,587	8,607,244	13,100,356	32,531,670	10,425,814	7,770
	1923	98	4,972	7,330,041	10,859,156	27,206,693	16,347,537	7,284
	1921	103	5,287	7,150,690	8,964,865	24,410,809	15,445,944	(3)
	1919	99	6,453	7,350,409	13,060,929	29,126,133	16,065,204	6,843
	1914	108	7,070	4,793,347	8,275,506	19,780,317	11,510,811	7,899
Stamped ware, enameled ware, and metal stamping, enameling, japanning, and lacquering ⁵	1929	562	40,000	50,091,700	87,639,495	204,306,134	116,666,630	98,184
	1927	476	36,853	38,172,046	68,880,269	150,936,053	85,585,784	73,619
	1925	465	31,254	38,276,937	79,736,661	160,991,786	81,255,125	68,121
	1923	412	36,552	44,348,384	86,340,191	176,371,354	90,081,163	71,053
	1921	388	24,807	27,879,975	49,292,541	103,105,530	58,812,989	(2)
	1919	433	35,237	35,902,259	66,628,109	147,069,783	80,441,674	52,767
	1914	382	30,273	16,041,418	33,536,323	67,668,207	34,131,879	36,276
Tin and other foils, not including gold foil ⁶	1929	7	1,710	1,850,371	13,548,399	20,954,849	7,406,550	18,642
	1927	10	1,658	2,083,578	15,350,016	20,951,679	5,601,663	18,770
	1925	10	1,670	2,124,422	15,648,376	20,611,277	4,962,901	16,041
Watch and clock materials and parts, except watchcases.....	1929	17	311	287,079	256,984	930,837	673,853	197
	1927	17	415	407,345	315,486	1,309,303	993,817	210
	1925	25	501	479,762	376,160	1,363,244	987,084	219
	1923	25	396	380,025	378,565	1,288,866	910,301	170
	1921	23	390	374,702	356,581	1,086,444	729,863	(3)
	1919	27	582	412,820	549,521	1,341,697	792,176	252
	1914	25	670	379,614	342,621	1,014,549	671,928	621
Watchcases.....	1929	40	3,404	4,626,111	4,631,225	13,491,045	8,859,829	5,581
	1927	40	3,360	4,326,393	5,310,674	13,724,703	8,414,020	4,121
	1925	45	3,480	4,462,687	6,049,905	14,793,211	8,743,306	4,106
	1923	57	4,325	5,414,232	7,498,768	17,817,046	10,318,278	5,710
	1921	37	3,698	4,217,210	5,625,146	13,806,957	8,180,811	(3)
	1919	33	3,900	4,000,727	8,205,754	19,618,773	11,413,019	4,275
	1914	31	3,514	1,938,358	4,001,595	7,830,987	3,829,392	2,369
Watches and watch movements.....	1929	8	10,738	12,981,115	10,455,921	34,370,399	23,014,478	10,146
	1927	11	12,192	15,090,229	5,871,384	32,278,362	29,406,978	9,557
	1925	13	13,915	10,556,685	6,178,017	36,254,110	30,076,093	12,345
	1923	17	11,571	13,869,688	8,835,769	30,630,265	21,794,490	7,396
	1921	17	12,174	13,602,029	5,160,842	24,396,516	19,235,674	(3)
	1919	18	15,888	10,598,896	6,392,562	32,044,299	26,661,737	7,202
	1914	15	12,390	7,524,146	2,669,511	14,275,279	11,605,798	6,624

¹ Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.² Not called for on schedule.³ Revised; revision not carried to aggregate for the group.⁴ The manufacture of collapsible tubes and the manufacture of tin and other foils, not including gold foil, were formerly covered by the single industry classification "Tin and other foils, not including gold and silver; collapsible tubes." The figures for 1927 and 1925 have been adjusted for comparison with those for 1929, but no adjustments can be made for earlier years.⁵ Formerly 3 separate industry classifications; namely, "Babbitt metal, white metal, type metal, and solder," "Brass, bronze, and other nonferrous alloys, and manufactures of these alloys and of copper, not specifically classified," and "Lead: Bar, pipe, and sheet."⁶ See headnote.

ALUMINUM MANUFACTURES

Description of the industry.—This industry embraces establishments engaged in the manufacture of aluminum plates and sheets; motor-vehicle and other commercial castings; kitchen and household utensils and appliances (except electrical appliances); bottle closures; and other aluminum products. The manufacture of pig aluminum from the ore is not included in this industry, but is treated as part of the "Chemicals" industry. Establishments engaged in the recovery of aluminum from scrap are treated for census purposes as part of the "Smelting and refining, metals other

than gold, silver, or platinum, not from the ore" industry. The value of aluminum ingots made from scrap is, however, included in that given for "Ingots produced for sale" in Table 3, page 1030.

Statistics by States.—Although some of the States for which data are not shown separately are more important in this industry than those shown individually, they could not be shown separately without disclosure of data for individual establishments. Some of the important States not shown separately are New York, Pennsylvania, Michigan, and New Jersey.

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 comparable data for years prior to 1914]

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 ¹	Value added by manufacture ²	Horsepower
1929.....	150	21,210	\$29,692,727	\$94,036,463	\$153,457,248	\$59,420,785	107,846
1927.....	139	14,798	20,891,845	79,838,509	123,557,112	43,718,603	71,907
1925.....	127	14,353	19,759,349	84,084,923	127,830,756	42,845,833	62,306
1923.....	119	16,288	19,843,546	66,659,519	106,930,367	40,270,848	58,272
1921.....	87	9,584	19,835,597	25,952,529	45,822,161	19,869,632	(³)
1919.....	83	11,402	13,327,306	49,271,861	75,277,948	26,006,087	30,280
1914.....	37	4,614	2,611,251	14,421,319	19,597,465	5,176,146	12,297
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	7.9	43.3	42.1	17.8	24.2	35.9	50.6
1925-1927.....	9.4	3.1	5.8	-6.1	-3.3	2.0	15.3
1923-1925.....	6.7	-11.9	-0.5	27.5	19.5	6.4	7.0
1921-1923.....	(⁴)	69.9	83.1	156.9	133.4	102.7	-----
1919-1921.....	(⁴)	-15.9	-18.7	-47.3	-39.1	-23.6	-----
1919-1929.....	(⁴)	86.0	122.8	90.9	103.9	128.5	256.2

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

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

³ Not called for on schedule.

⁴ 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. Certain of the "Other States," 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 ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	150	2,517	21,210	107,846	13,995	93,851	\$5,749,124	\$29,092,727	\$94,036,463	\$90,920,982	\$3,115,481	\$153,457,248	\$50,420,785
	1927	139	2,093	14,798	71,907	14,510	37,307	5,117,524	20,891,843	79,838,509	77,240,473	2,592,036	123,557,112	43,718,603
	1919	53	1,821	11,402	30,280	13,555	16,725	3,306,074	13,327,306	49,271,801	47,075,750	1,290,105	76,277,948	26,006,087
California	1929	14	34	180	511		511	81,031	283,083	386,905	368,938	17,967	983,219	500,314
	1927	7	19	87	151		151	36,818	184,041	184,455	156,004	8,451	493,401	287,946
Illinois	1929	15	106	812	2,552		2,552	371,306	1,284,176	2,777,178	2,072,050	104,619	6,097,463	3,320,278
	1927	15	103	671	2,002		2,002	334,887	1,182,651	2,719,852	2,037,375	81,977	5,809,197	2,679,846
Massachusetts	1929	6	68	333	436		436	129,722	385,302	1,172,183	1,154,965	17,218	785,448	294,026
	1927	6	16	112	2,852		2,852	39,118	149,102	408,241	417,809	50,982	702,267	294,026
	1919	4	35	139	2,981		2,981	88,335	179,011	713,900	653,873	59,783	1,110,682	307,076
Missouri	1929	4	14	103	173		173	28,893	84,102	229,477	222,008	6,809	306,447	165,970
	1927	9	32	131	290		290	98,076	181,303	542,737	525,268	17,499	1,096,718	553,981
	1919	7	20	90	292		292	53,207	120,773	403,338	389,144	14,194	720,338	317,000
Ohio	1929	28	537	3,333	11,529		805	1,244,505	5,020,092	13,526,478	12,926,570	599,908	24,252,861	10,728,373
	1927	24	377	2,146	8,720		775	916,844	3,274,626	9,838,379	9,315,635	522,744	16,193,032	6,569,653
	1919	20	538	1,840	4,721		1,060	1,244,100	2,746,873	6,072,572	6,476,630	105,942	11,132,231	4,459,659
Wisconsin	1929	15	369	3,921	14,650		2,471	905,425	3,634,635	10,949,832	9,698,487	351,145	21,931,117	11,881,438
	1927	16	414	3,023	11,916		2,450	905,165	3,217,762	9,031,935	8,732,062	299,273	10,408,004	10,376,969
	1919	13	472	2,147	4,807		2,192	695,484	2,017,575	8,157,008	7,062,282	104,724	14,173,700	6,016,766
Other States	*1929	63	1,434	12,721	75,462		10,719	3,014,063	18,120,617	66,285,295	64,311,754	1,973,541	98,338,623	32,048,328
	*1927	61	1,125	8,642	45,935		11,285	2,792,408	12,773,370	57,172,444	55,361,780	1,810,664	80,262,558	28,060,111
	*1919	40	729	6,979	20,983		9,820	1,208,499	8,030,304	33,040,623	32,150,211	881,412	47,018,873	14,578,260

¹ Not including proprietors and firm members. The total numbers of persons engaged and the numbers of proprietors and firm members, as reported for the industry, are as follows: For 1929, total, 23,788; proprietors and firm members, 61. For 1927, total, 16,945; proprietors and firm members, 54. For 1919, total, 13,257; proprietors and firm members, 34.

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

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

⁴ Alabama, 1 establishment; Colorado, 1; Connecticut, 4; Indiana, 2; Kansas, 1; Kentucky, 1; Michigan, 17; Minnesota, 1; Nebraska, 1; New Jersey, 7; New York, 15; Oregon, 1; Pennsylvania, 6; Tennessee, 2; Washington, 2; West Virginia, 1.

⁵ Alabama, 1 establishment; Colorado, 1; Connecticut, 6; Indiana, 5; Maryland, 1; Michigan, 11; Minnesota, 2; Nebraska, 1; New Jersey, 8; New York, 14; Pennsylvania, 6; Tennessee, 2; Washington, 2; West Virginia, 1.

⁶ California, 2 establishments; Connecticut, 1; Indiana, 1; Michigan, 6; Missouri, 4; Nebraska, 1; New Jersey, 5; New York, 13; Pennsylvania, 6; Rhode Island, 1.

TABLE 3.—PRODUCTS, BY CLASS 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
	Pounds	Value	Value	Value		Pounds	Value	Value	Value
1. Aluminum-manufactures industry, all products, total value		\$153,457,248	\$123,557,112	\$127,830,756	Aluminum manufactures, all industries: Aggregate (sum of 2 and 4)		\$161,994,398	\$138,793,819	\$141,291,346
2. Aluminum products		147,351,351	117,440,843	122,036,577	Ware (principally cooking utensils and household articles)		35,100,001	28,988,708	32,052,179
3. Other products (not normally belonging to the industry), value, and receipts for custom and repair work		6,105,897	6,116,269	5,794,179	Motor-vehicle accessories and parts	15,333,432	7,466,752	16,272,132	9,404,048
					Castings	82,979,337	33,267,674	21,059,400	29,339,957
					Ingots produced for sale	120,721,143	26,299,723	(¹)	(¹)
4. Aluminum products made as secondary products in other industries, value		14,043,047	21,352,976	10,254,769	Other aluminum manufactures, including rolled forms (bars, plates, and sheets)		54,860,248	72,473,570	70,495,162

¹ No comparable data.

² Includes value of ingots.

TABLE 4.—PRINCIPAL MATERIALS CONSUMED IN THE ALUMINUM-MANUFACTURES INDUSTRY, BY KIND, QUANTITY, AND COST: 1929

[Quantities and costs of the principal materials consumed were reported by only 109 of the 150 establishments in this industry. The combined value of products reported by these 109 establishments amounted to \$136,657,583, or 89.1 per cent of the aggregate value of products of the 150 establishments in the industry. Another reason for the difference between the sum of the costs of the 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	Pounds	Cost	KIND AND STATE	Pounds	Cost
Aluminum consumed, total	340,990,415	\$73,705,891	Scrap aluminum (Ala., Calif., Colo., Conn., Ill., Kans., Mass., Mich., Mo., N. J., N. Y., Ohio, Pa., Tenn., W. Va., Wis.)	24,410,767	\$4,313,183
Pig aluminum (Calif., Colo., Conn., Ill., Ind., Kans., Ky., Mass., Mich., Minn., Mo., N. J., N. Y., Ohio, Oreg., Pa., Tenn., Wash., W. Va., Wis.)	316,579,658	69,392,708			

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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	6,490	Horsepower 167,846	4,497	Horsepower 71,937	2,941	Horsepower 62,366	986	Horsepower 30,280	213	Horsepower 12,297	100.0	100.0
Prime movers, total	31	13,095	22	14,510	25	13,628	41	13,555	36	7,608	13.0	44.8
Steam, total	27	13,224	17	13,715	19	12,773	31	12,372	30	6,798	12.3	40.9
Engines	11	3,045	9	3,940	12	4,600	19	4,859	(1)	(1)	2.8	16.1
Turbines	16	10,179	8	9,775	7	8,083	12	7,513	(1)	(1)	9.5	24.8
Internal-combustion engines	4	771	5	795	6	855	9	1,103	6	900	0.7	3.6
Water wheels and water turbines							1	80				0.2
Electric motors driven by purchased energy	6,459	93,851	4,475	57,397	2,916	48,738	945	16,725	177	4,689	87.0	55.2
Electric motors, total	8,068	119,538	5,713	79,185	4,036	63,713	1,570	27,334	386	9,616	100.0	100.0
Driven by purchased energy	6,459	93,851	4,475	57,397	2,916	48,738	945	16,725	177	4,689	75.5	61.2
Driven by energy generated in establishments reporting	1,609	25,687	1,238	21,788	1,120	14,975	625	10,609	209	4,927	21.5	38.8
Electric generators	13	Kilowatts 8,614 Kilowatt-hours	14	Kilowatts 8,692	16	Kilowatts 9,607	(2)	(2)	(2)	(2)		
Electric energy purchased ¹		102,485,370		(4)		(4)		(4)		(4)		

¹ Not called for separately on schedule.
² Not called for on schedule.
³ This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.
⁴ 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 is of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
United States:														
1929	21,210	<i>19,085</i>	19,900	21,013	21,884	22,336	22,027	21,842	21,272	21,061	22,200	21,628	20,275	85.4
1925	14,353	<i>13,837</i>	13,990	14,218	14,314	14,277	14,400	14,493	14,054	14,306	14,733	14,813	14,798	93.4
1919	11,402	<i>9,749</i>	<i>9,656</i>	9,912	9,991	10,696	11,002	11,984	12,027	11,715	12,444	13,543	14,106	68.5
1914 ¹	4,614	<i>4,027</i>	4,295	4,579	4,597	4,532	4,590	4,471	4,639	4,782	4,911	5,018	4,807	80.3
California	180	<i>163</i>	160	162	178	188	164	158	157	208	205	204	195	73.6
Illinois	812	<i>830</i>	839	850	848	822	797	793	811	809	797	784	773	91.1
Massachusetts	112	<i>110</i>	114	115	113	112	108	114	123	118	115	93	102	79.7
Missouri	131	<i>92</i>	110	103	122	127	150	153	166	160	160	122	113	64.8
Ohio	3,333	<i>2,922</i>	3,019	3,250	3,394	3,710	3,778	3,493	3,392	3,233	3,478	3,277	2,998	77.8
Wisconsin	3,921	<i>4,016</i>	4,117	4,171	4,074	3,961	3,875	3,900	3,892	3,827	3,807	3,774	3,638	87.2

¹ No comparable figures for earlier years.

CLOCKS, WATCHES, AND PARTS

Description of the industries.—This report covers four industries, whose primary products are, respectively (1) clocks, clock movements, and clock mechanisms for driving time switches, recording instruments, and other devices; (2) watches and watch movements; (3) watchcases; (4) clock and watch materials and parts, except watchcases.

TABLE 1.—SUMMARY FOR THE GROUP AND FOR EACH INDUSTRY, 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 †	Value added by manufacture ‡	Horsepower
CLOCKS, WATCHES, AND PARTS							
1929	121	24,854	\$30,376,199	\$26,019,243	\$90,958,166	\$64,938,913	28,375
1927	120	25,832	31,574,587	21,560,309	85,508,171	63,947,802	23,198
1925	128	25,841	30,736,750	21,524,186	81,789,729	60,205,543	25,287
1923	137	25,651	29,542,894	24,885,640	78,289,769	53,404,110	21,561
1921	114	22,797	24,751,988	17,733,535	57,034,977	39,305,442	(*)
1919	124	28,622	28,874,054	22,325,650	76,384,959	54,059,309	18,681
1914	119	23,328	13,495,264	11,021,491	34,152,535	23,181,044	15,007
1909	120	23,857	12,944,169	11,130,698	35,196,842	24,066,144	14,014
1904	97	22,579	11,891,567	9,872,245	29,789,596	19,917,351	10,593
1899	109	17,155	8,314,507	8,819,120	22,109,774	13,290,664	6,990
Per cent of increase or decrease (—):							
1927-1929	0.8	-3.8	-3.8	20.7	6.4	1.5	22.3
1925-1927	-6.2	(*)	2.7	0.2	4.5	6.1	-8.3
1923-1925	-6.6	0.7	4.0	-13.5	4.5	12.8	17.3
1921-1923	21.2	12.5	19.4	40.3	37.3	35.9	
1919-1921	-8.1	-20.4	-14.3	-20.6	-25.3	-27.3	
1919-1929	-2.4	-13.2	5.2	16.5	19.1	20.1	51.9
1909-1919	3.3	20.0	123.1	100.0	117.0	124.6	25.3
1899-1909	10.1	39.1	55.7	26.2	59.2	81.1	113.1
CLOCKS, CLOCK MOVEMENTS, TIME-RECORDING DEVICES, AND TIME STAMPS							
1929	56	10,401	\$12,481,894	\$10,675,113	\$42,165,875	\$31,490,762	12,451
1927	52	9,865	11,750,620	10,062,705	38,195,803	28,133,038	9,510
1925	45	7,945	9,237,716	8,920,104	20,379,164	20,459,060	8,014
1923	38	9,359	9,878,949	8,172,538	28,553,582	20,381,044	8,285
1921	37	6,535	6,558,047	6,590,906	17,750,060	11,159,094	(*)
1919	40	8,252	7,881,611	7,177,813	23,380,190	16,202,377	6,952
1914	43	6,754	3,653,146	4,007,764	11,031,720	7,023,956	5,993
1909	52	7,961	4,142,344	3,692,754	12,235,631	8,542,877	5,608
1904	38	7,249	3,514,185	3,077,574	8,898,000	5,790,420	4,409
1899	46	6,097	2,650,703	3,028,606	7,157,856	4,129,250	3,401
Per cent of increase or decrease (—):							
1927-1929	(*)	5.4	6.2	6.1	10.4	11.9	30.9
1925-1927	(*)	24.2	27.2	12.8	30.0	37.5	10.4
1923-1925	(*)	-15.1	-6.5	9.1	2.9	0.4	4.0
1921-1923	(*)	43.2	50.6	24.0	60.9	82.6	
1919-1921	(*)	-20.8	-16.6	-8.2	-24.1	-31.1	
1919-1929	(*)	26.0	53.8	48.7	80.3	94.4	79.1
1909-1919	(*)	3.7	80.8	94.4	91.1	89.7	24.0
1899-1909	(*)	31.9	50.3	21.9	70.9	106.9	64.9
WATCHES AND WATCH MOVEMENTS							
1929	8	10,738	\$12,981,115	\$10,455,921	\$34,370,399	\$23,914,478	10,146
1927	11	12,192	15,090,229	5,871,384	32,278,362	26,400,978	9,357
1925	13	13,915	16,550,685	6,178,017	36,264,110	30,076,093	12,348
1923	17	11,571	13,869,688	8,835,769	30,630,265	21,794,496	7,396
1921	17	12,174	13,602,029	5,160,842	24,399,516	19,235,674	(*)
1919	18	15,888	16,598,896	6,392,562	32,044,299	25,651,737	7,202
1914	15	12,390	7,524,146	2,669,511	14,275,279	11,605,768	6,624
1909	13	10,684	6,085,700	2,185,825	11,771,065	9,585,240	5,006
1904	14	10,724	6,024,400	2,253,683	11,866,400	9,607,717	3,172
1899	13	6,830	3,536,723	1,291,318	6,822,611	5,531,293	1,762
Per cent of increase or decrease (—):							
1927-1929	(*)	-11.9	-14.0	78.1	6.5	-0.4	8.4
1925-1927	(*)	-12.4	-8.9	-5.0	-11.0	-12.2	-24.2
1923-1925	(*)	20.3	19.4	-30.1	18.4	35.0	87.0
1921-1923	(*)	-5.0	2.0	71.2	25.6	13.3	
1919-1921	(*)	-23.4	-18.1	-19.3	-23.9	-26.0	
1919-1929	(*)	-32.4	-21.8	63.6	7.3	-6.8	40.9
1909-1919	(*)	48.7	172.8	192.5	172.2	167.6	28.5
1899-1909	(*)	55.3	69.7	69.3	72.5	73.3	218.2
WATCHCASES							
1929	40	3,404	\$4,626,111	\$4,631,225	\$13,491,045	\$9,850,820	5,581
1927	40	3,360	4,326,393	5,310,674	13,724,703	8,414,029	4,121
1925	45	3,480	4,462,587	6,049,905	14,793,211	8,743,306	4,106
1923	57	4,325	5,414,232	7,498,768	17,817,046	10,318,278	5,710
1921	37	3,698	4,217,210	5,625,146	13,805,957	8,180,811	(*)
1919	33	3,900	4,000,727	8,205,754	19,618,773	11,413,019	4,275
1914	31	3,514	1,935,358	4,001,595	7,830,987	3,826,392	2,369
1909	29	4,569	2,428,292	5,034,377	10,514,854	5,490,477	3,366
1904	28	4,221	2,170,507	4,423,627	8,626,304	4,897,877	2,789
1899	30	3,907	1,924,847	4,393,647	7,783,960	3,390,313	1,644

See footnotes at end of table.

CLOCKS, WATCHES, AND PARTS

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TABLE 1.—SUMMARY FOR THE GROUP AND FOR EACH INDUSTRY, 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 ¹	Value added by manufacture ²	Horsepower
WATCHCASES—continued							
Per cent of increase or decrease (—):							
1927-1929		1.3	0.9	-12.8	-1.7	5.3	35.4
1925-1927	(9)	-3.4	-3.1	-12.2	-7.2	-3.8	0.4
1923-1925	(9)	-19.5	-17.6	-19.3	-17.0	-15.3	-28.1
1921-1923	(9)	17.0	28.4	33.3	29.1	26.1	-----
1919-1921	(9)	-5.2	5.4	-31.4	-29.6	-28.3	-----
1919-1929	(9)	-12.7	15.6	-43.6	-31.2	-22.4	30.5
1909-1919	(9)	-14.6	64.8	63.0	86.6	108.2	27.0
1899-1909	(9)	18.9	26.2	14.6	35.1	61.7	104.7
WATCH AND CLOCK MATERIALS AND PARTS, EXCEPT WATCHCASES							
1929	17	311	\$287,079	\$256,984	\$930,837	\$673,853	197
1927	17	415	407,345	315,486	1,309,303	963,817	210
1925	25	501	479,762	376,160	1,363,244	987,084	219
1923	25	396	390,025	378,565	1,288,866	910,301	170
1921	23	390	374,702	356,581	1,086,444	730,863	(9)
1919	27	582	412,820	549,521	1,341,697	792,176	252
1914	25	670	379,614	342,621	1,014,549	671,928	621
1909	26	643	287,663	217,742	675,292	457,550	334
1904	17	385	182,475	107,361	428,692	321,331	163
1899	20	331	152,234	105,549	345,347	239,798	102
Per cent of increase or decrease (—):							
1927-1929		-25.1	-29.5	-18.5	-28.9	-32.2	-6.2
1925-1927	(9)	-17.2	-15.1	-16.1	-4.0	0.7	-4.1
1923-1925	(9)	26.5	26.2	-0.6	5.8	8.4	28.8
1921-1923	(9)	1.5	1.4	6.2	18.6	24.7	-----
1919-1921	(9)	-33.0	-9.2	-35.1	-19.0	-7.9	-----
1919-1929	(9)	-46.6	-30.5	-53.2	-30.6	-14.9	-21.8
1909-1919	(9)	-9.5	43.4	152.4	98.7	73.1	-24.6
1899-1909	(9)	94.3	89.1	109.3	65.5	90.8	74.0

¹ The figures for all census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.
² Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
³ Not called for on schedule.
⁴ Less than one-tenth of 1 per cent.
⁵ Per cent not computed where base is less than 100.

TABLE 2.—GENERAL STATISTICS, BY STATES, FOR EACH INDUSTRY: 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 ¹	Value added by manufacture ²
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
CLOCKS, CLOCK MOVEMENTS, TIME-RECORDING DEVICES, AND TIME STAMPS														
United States														
	1929	56	1,538	10,401	12,451	6,081	0,370	\$3,827,459	\$12,481,894	\$10,675,113	\$10,317,489	\$357,624	\$42,165,875	\$31,490,762
	1927	52	1,396	9,865	9,510	5,329	4,181	3,507,361	11,750,620	10,062,765	9,733,421	329,344	38,195,803	28,133,038
	1919	46	997	8,252	6,952	4,227	2,725	1,998,374	7,861,611	7,177,813	6,962,991	214,822	23,860,190	16,202,377
Individual States:														
Connecticut														
	1929	7	410	5,065	4,661	1,360	3,301	1,168,639	5,833,671	3,916,682	3,752,467	164,215	15,467,165	11,550,483
	1927	9	468	4,891	3,673	1,260	2,413	1,316,513	5,751,214	4,100,530	3,634,333	166,197	16,166,267	12,065,677
	1919	8	345	4,925	4,367	2,715	1,682	802,233	4,968,276	4,119,849	3,975,141	144,708	12,964,421	8,764,872
Illinois														
	1929	9	485	3,015	3,899	3,401	498	1,314,826	3,289,841	2,063,418	2,923,062	80,356	13,323,491	10,320,073
Massachusetts														
	1929	6	253	485	430	85	345	496,585	616,998	971,565	946,597	24,968	3,266,514	2,294,949
	1927	6	186	393	237	85	152	462,082	529,110	491,340	476,051	15,283	2,179,257	1,687,617
	1919	3	62	311	147	85	62	77,415	313,000	279,857	270,919	8,938	840,870	661,013
New Jersey														
	1929	5	23	63	91	-----	91	70,039	140,549	116,850	112,799	4,051	338,778	221,928
	1927	4	15	63	85	-----	85	40,925	82,708	70,697	68,561	2,136	282,779	212,082
New York														
	1929	13	266	1,261	2,619	1,235	1,384	579,408	1,817,960	1,700,859	1,644,588	56,271	7,232,712	5,531,853
	1927	11	226	1,446	1,230	420	810	576,242	1,927,904	1,735,119	1,687,628	47,491	6,051,890	4,810,771
	1919	10	149	898	1,056	480	576	361,432	716,499	718,537	699,530	19,007	2,819,504	1,600,967
Ohio														
	1929	6	56	431	419	-----	419	172,263	608,039	672,910	653,024	19,880	1,770,364	1,097,454
	1927	7	54	305	424	-----	424	102,910	407,236	490,867	476,450	14,417	1,618,211	1,127,344
Pennsylvania														
	1929	3	12	26	25	-----	25	17,885	33,233	26,432	24,332	2,100	117,619	91,187
	1927	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
	1919	4	6	2	27	27	-----	5,178	2,584	35,637	35,543	394	39,444	3,507
Other States (Calif., 2 est.; Ind., 1; Mich., 3; S. C., 1)														
	1929	7	33	85	307	-----	307	75,814	141,603	266,397	260,620	5,777	643,232	382,835
States not shown separately														
	1927	15	422	2,767	3,861	3,564	297	1,098,679	3,061,448	3,174,212	3,090,398	83,814	11,897,459	8,723,247
	1919	21	445	2,116	1,325	920	405	751,356	1,861,252	2,023,633	1,981,858	41,775	7,275,951	5,252,318

See footnotes at end of table.

CENSUS OF MANUFACTURES: 1929

TABLE 2.—GENERAL STATISTICS, BY STATES, FOR EACH INDUSTRY: 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 ¹	Value added by manufacture ²
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
WATCHES AND WATCH MOVEMENTS														
United States.....	1929	8	7 897	10,738	10,146	8,500	1,646	\$1,752,497	\$12,981,115	\$10,455,021	\$10,238,625	\$217,396	\$34,370,399	\$23,914,478
	1927	11	7 790	12,192	9,357	7,760	1,597	1,519,979	15,090,229	5,871,384	5,616,870	254,514	32,278,862	26,406,678
	1919	18	7 961	15,883	7,202	6,475	727	1,697,030	16,598,896	6,392,502	6,109,014	283,548	32,044,299	25,651,737
Groups of States:														
Ill., 2 est.; Pa., 1.....	1929	3	591	5,653	5,358	4,750	608	954,090	7,367,532	6,715,395	6,611,137	104,258	21,176,668	14,460,273
Conn., 1 est.; Ind., 1; Mass., 2; N. J., 1.....	1929	5	300	5,085	4,788	3,750	1,038	798,407	5,613,583	3,740,520	3,627,388	113,138	13,194,731	9,464,205
WATCHCASES														
United States.....	1929	40	10 517	3,404	5,581	3,410	2,171	1,325,805	4,620,111	4,631,225	4,430,828	200,397	13,491,045	8,850,820
	1927	40	10 584	3,360	4,121	2,717	1,404	1,472,544	4,326,393	5,310,674	5,188,091	122,583	13,724,703	8,414,029
	1919	33	10 672	3,900	4,275	3,294	981	1,316,735	4,000,727	8,205,754	8,058,887	146,867	19,618,773	11,418,019
Individual States:														
New York.....	1929	31	135	679	971	250	721	385,396	1,195,057	1,701,946	1,652,801	49,145	4,224,162	2,522,216
	1927	29	120	550	345	-----	345	357,138	949,542	1,439,381	1,410,110	29,271	3,468,066	2,026,685
	1919	18	141	834	575	425	150	407,670	1,024,034	2,605,741	2,564,921	40,820	5,946,925	3,341,184
Groups of States:														
N. J., 1 est.; R. I., 2.....	1929	3	100	830	2,011	1,750	261	188,248	1,191,590	1,028,272	950,619	77,653	3,080,243	2,051,971
Other States (Calif., 1 est.; Ill., 2; Ky., 1; Mich., 1; Ohio, 1).....	1929	6	282	1,886	2,599	1,410	1,180	752,161	2,230,464	1,901,007	1,827,408	73,599	6,180,640	4,285,633
States not shown separately.....	1927	11	464	2,810	3,770	2,717	1,059	1,115,406	3,376,851	3,871,293	3,777,981	93,312	10,256,637	6,385,344
	1919	15	531	3,066	3,700	2,869	831	909,065	2,976,693	5,600,013	5,498,966	106,047	13,671,848	8,071,835
WATCH AND CLOCK MATERIALS AND PARTS, EXCEPT WATCHCASES														
United States.....	1929	17	13 39	311	197	-----	197	92,276	287,079	256,984	244,217	12,767	630,837	673,883
	1927	17	13 68	415	210	25	185	110,423	407,345	315,486	302,467	13,019	1,309,303	993,817
	1919	27	13 72	582	252	156	96	115,001	412,820	549,521	531,126	18,395	1,341,697	792,176
Individual States:														
Connecticut.....	1929	5	13	102	53	-----	53	30,780	94,216	45,698	40,967	4,731	264,211	218,513
	1927	(¹)	(¹)	(¹)	(¹)	-----	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
	1919	5	5	39	27	-----	27	10,500	31,102	44,651	42,532	2,119	110,677	72,026
Massachusetts.....	1929	5	10	103	133	-----	133	12,657	98,081	69,051	61,560	7,491	240,255	180,204
	1927	6	24	134	87	-----	87	37,448	157,859	68,324	63,121	5,203	366,883	238,559
	1919	6	18	236	53	6	47	16,403	166,494	75,242	67,013	8,229	339,027	255,785
New York.....	1929	3	4	17	5	-----	5	14,250	23,086	30,502	30,282	220	97,250	66,748
	1927	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
	1919	7	23	105	33	25	8	40,334	67,234	160,286	157,744	2,542	331,937	171,651
Other States (Calif., 1 est.; Ill., 2; Kans., 1).....	1929	4	12	89	6	-----	6	34,589	71,699	111,738	111,408	325	320,121	208,388
States not shown separately.....	1927	11	44	281	123	25	98	72,975	249,486	247,162	239,346	7,816	942,420	695,258
	1919	9	26	202	139	125	14	47,704	147,990	269,342	263,837	5,505	554,056	284,714

¹ The figures for all census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.² Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.³ 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, 11,943; proprietors and firm members, 4. For 1927, total, 11,268; proprietors and firm members, 7. For 1919, total, 9,200; proprietors and firm members, 11.⁴ Statistics can not be given without disclosing data for individual establishments.⁵ California, 1 establishment; Illinois, 8; Indiana, 1; Maryland, 1; Michigan, 2; Pennsylvania, 2.⁶ Illinois, 5 establishments; Kentucky, 1; Maryland, 1; Michigan, 3; New Jersey, 2; Ohio, 6; Rhode Island, 2; Wisconsin, 1.⁷ 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, 11,635; proprietors and firm members, none. For 1927, total, 12,983; proprietors and firm members, 3. For 1919, total, 16,852; proprietors and firm members, 3.⁸ Connecticut, 2 establishments; Illinois, 2; Indiana, 1; Massachusetts, 2; New Jersey, 1; Ohio, 2; Pennsylvania, 1.⁹ Connecticut, 3 establishments; Illinois, 2; Indiana, 1; Massachusetts, 5; New Jersey, 2; New York, 3; Ohio, 1; Pennsylvania, 1.¹⁰ 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, 3,944; proprietors and firm members, 23. For 1927, total, 3,906; proprietors and firm members, 22. For 1919, total, 4,587; proprietors and firm members, 15.¹¹ Illinois, 2 establishments; Kentucky, 1; Michigan, 1; Minnesota, 1; New Jersey, 2; Ohio, 2; Rhode Island, 2.¹² Connecticut, 1 establishment; Illinois, 4; Kentucky, 1; Michigan, 1; New Jersey, 3; Ohio, 3; Pennsylvania, 2.¹³ 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, 861; proprietors and firm members, 11. For 1927, total, 495; proprietors and firm members, 12. For 1919, total, 678; proprietors and firm members, 24.¹⁴ Connecticut, 2 establishments; Illinois, 3; New Jersey, 2; New York, 3; Pennsylvania, 1.¹⁵ Illinois, 5 establishments; New Jersey, 1; Pennsylvania, 3.

CLOCKS, WATCHES, AND PARTS

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

[The figures for both census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

CLASS	1929		1927	
	Number	Value	Number	Value
1. Clocks, watches, and parts industries, all products.....		\$90,958,156		\$85,508,171
2. Clocks, watches, and parts.....		85,719,146		80,707,175
3. Other products (not normally belonging to the industries).....		4,125,895		3,151,999
4. Receipts for custom work and repairing.....		1,122,115		1,648,997
5. Clocks, watches, and parts made as secondary products in other industries.....		1,047,344		1,806,584
Clocks, watches, and parts, all industries:				
Total value (sum of 2 and 5).....		86,767,490		82,513,759
Clocks complete for use as timepieces only, total value.....		25,512,258		28,708,350
Clocks, except alarm and electric—				
With domestic movements—				
1-day clocks, except automobile and chime.....	722,490	1,134,467	2,295,912	13,032,998
8-day clocks, except automobile and chime.....	1,186,875	5,012,880		
Automobile.....	248,032	1,184,730		
Chime.....	66,285	1,025,965		
With imported movements—				
Automobile.....	157,843	973,518	107,885	694,138
Other types.....	4,759	222,368		
Alarm clocks, except electric.....	9,462,293	10,765,117	10,620,317	18,120,007
Electric clocks—				
Automobile.....	55,973	216,726	87,333	1,621,212
Other—				
Reported with number.....	386,500	4,659,156		
Reported without number.....		317,361		
Clock movements—				
For use as timepieces only.....	698,636	729,935	622,560	777,451
For use in recording instruments, gauges, time-stamps, switches, time locks, etc.....	239,078	1,633,530		
Instruments and devices complete, with clockwork mechanism—			250,645	4,711,445
Time stamps, watchmen's clocks, time switches, time locks, etc.....	129,310	1,790,382		
Time-recording clocks.....	47,383	5,159,912		
Clock materials and parts, including cases.....		1,071,430		804,181
Watches, watchcases, watch movements, and parts, total value.....		50,860,013		47,512,332
Nonjeweled watches, men's and women's.....	9,479,079	9,672,554	8,891,633	7,895,794
Jeweled watches, complete—				
With domestic movements and cases, men's and women's.....	1,482,896	22,454,411	2,281,303	121,948,842
With cases produced and movements imported, men's and women's.....	40,630	1,318,436		
Watchcases for sale separately—				
Solid platinum, gold, or silver—				
Men's.....	172,296	1,624,820	5,805,055	15,471,078
Women's.....	208,693	1,240,221		
Gold-filled—				
Men's.....	1,205,729	3,942,383		
Women's.....	623,226	1,307,953		
Other metals—				
Men's.....	1,075,335	899,213		
Women's.....	476,331	445,348		
Cases not reported by kind or quantity.....		2,043,648		
Jeweled movements, watch materials, and parts (produced for sale as such).....		5,911,026		* 2,196,618

* Not strictly comparable with items for 1923. Value of jeweled movements produced for sale separately is included for 1927 but not for 1929.

† Combined in order to avoid disclosing data for individual manufacturers.

‡ Value of watch materials and parts only.

TABLE 4.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY, FOR EACH INDUSTRY—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
CLOCKS, CLOCK MOVEMENTS, TIME-RECORDING DEVICES, AND TIME STAMPS												
Prime movers and electric motors driven by purchased energy, aggregate.....	1,749	Horse-power 12,451	738	Horse-power 9,510	452	Horse-power 8,614	372	Horse-power 6,952	138	Horse-power 5,993	100.0	100.0
Prime movers, total.....	24	6,081	14	5,329	19	6,485	28	4,227	39	4,956	48.8	60.8
Steam, total.....	21	5,926	10	5,150	14	6,265	19	3,910	29	4,582	47.6	56.3
Engines.....	18	5,791	10	5,150	14	6,265	18	3,760	(1)	(1)	46.5	54.1
Turbines.....	3	135					1	150	(1)	(1)	1.1	2.2
Internal-combustion engines.....	1	35	2	49	2	50	3	62	4	179	0.3	0.8
Water wheels and water turbines.....	2	120	2	130	3	176	6	255	6	195	0.9	3.7
Electric motors driven by purchased energy.....	1,725	6,370	724	4,181	433	2,129	344	2,725	99	1,037	51.2	29.2
Electric motors, total.....	4,640	12,851	2,887	9,742	2,216	8,199	1,230	4,912	429	3,293	100.0	100.0
Driven by purchased energy.....	1,725	6,370	724	4,181	433	2,129	344	2,725	99	1,037	49.6	55.5
Driven by energy generated in establishments reporting.....	2,915	6,481	2,163	5,561	1,783	6,070	876	2,187	330	2,256	50.4	44.6
Electric generators.....	11	Kilo-watts 5,625	9	Kilo-watts 3,992	13	Kilo-watts 4,121	(?)	(?)	(?)	(?)		
Electric energy purchased.....		Kilowatt-hours 4,725,767		(?)		(?)		(?)		(?)		

See footnotes at end of table.

TABLE 4.—PRIME MOVERS, MOTORS, GENERATORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY, FOR EACH INDUSTRY—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—Continued

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
WATCHES AND WATCH MOVEMENTS												
Prime movers and electric motors driven by purchased energy, aggregate.....	560	Horse-power 10,140	621	Horse-power 9,357	570	Horse-power 12,348	201	Horse-power 7,202	218	Horse-power 6,624	100.0	100.0
Prime movers, total.....	17	8,500	23	7,760	33	9,882	27	6,475	26	5,977	83.8	89.9
Steam, total.....	17	8,500	20	7,325	30	9,447	24	6,040	24	5,787	83.8	88.9
Engines.....	16	6,400	19	5,725	29	7,314	22	5,900	(1)	(1)	63.1	81.9
Turbines.....	1	2,100	1	1,600	1	2,133	2	140	(1)	(1)	20.7	2.0
Internal-combustion engines.....			3	435	3	435	3	435	2	190		6.0
Electric motors driven by purchased energy.....	552	1,646	598	1,597	537	2,466	174	727	192	647	16.2	10.1
Electric motors, total.....	1,848	5,841	1,403	5,892	1,142	6,512	985	4,192	801	3,448	100.0	100.0
Driven by purchased energy.....	552	1,646	598	1,597	537	2,466	174	727	192	647	28.2	17.8
Driven by energy generated in establishments reporting.....	796	4,195	805	4,295	605	4,046	811	3,465	609	2,801	71.8	82.7
Electric generators.....	14	Kilowatts 4,064	15	Kilowatts 4,540	32	Kilowatts 8,339	(2)	(2)	(2)	(2)		
Electric energy purchased ¹		Kilowatt-hours 1,855,421		(4)		(4)		(2)		(2)		
WATCHCASES												
Prime movers and electric motors driven by purchased energy, aggregate.....	788	Horse-power 5,581	627	Horse-power 4,121	479	Horse-power 4,100	187	Horse-power 4,275	278	Horse-power 2,369	100.0	100.0
Prime movers, total.....	13	3,410	10	2,717	10	2,845	18	3,294	14	1,136	61.1	77.1
Steam, total.....	9	2,850	6	2,585	6	2,385	11	2,040	13	1,132	51.1	47.7
Engines.....	8	2,800	5	2,350	5	2,350	11	2,040	(1)	(1)	50.2	47.7
Turbines.....	1	50	1	35	1	35			(1)	(1)	0.9	
Internal-combustion engines.....	4	500	4	332	4	460	6	1,004	1	4	10.0	23.5
Water wheels and water turbines.....							1	250				5.9
Electric motors driven by purchased energy.....	775	2,171	617	1,404	469	1,261	169	981	264	1,233	38.9	22.9
Electric motors, total.....	1,457	4,896	1,126	3,537	978	3,394	509	3,085	331	1,592	100.0	100.0
Driven by purchased energy.....	775	2,171	617	1,404	469	1,261	169	981	264	1,233	44.8	31.8
Driven by energy generated in establishments reporting.....	692	2,725	509	2,133	509	2,133	340	2,104	67	369	55.7	68.2
Electric generators.....	8	Kilowatts 1,950	12	Kilowatts 2,170	12	Kilowatts 2,170	(2)	(2)	(2)	(2)		
Electric energy purchased ¹		Kilowatt-hours 1,530,690		(4)		(4)		(2)		(2)		
WATCH AND CLOCK MATERIALS AND PARTS, EXCEPT WATCHCASES												
Prime movers and electric motors driven by purchased energy, aggregate.....	92	Horse-power 197	58	Horse-power 210	66	Horse-power 219	41	Horse-power 252	36	Horse-power 621	100.0	100.0
Prime movers, total.....			1	25	1	25	4	156	10	475		61.9
Steam engines.....							1	100	6	362		39.7
Internal-combustion engines.....			1	25	1	25	2	50	3	110		19.8
Water wheels and water turbines.....							1	6	1	3		2.4
Electric motors driven by purchased energy.....	92	197	57	185	65	194	37	96	26	146	100.0	38.1
Electric motors, total.....	92	197	57	185	65	194	37	96	48	511	100.0	100.0
Driven by purchased energy.....	92	197	57	185	65	194	37	96	26	146	100.0	100.0
Driven by energy generated in establishments reporting.....									22	265		
Electric energy purchased ¹		Kilowatt-hours 154,050		(4)		(4)		(2)		(2)		

¹ Not called for separately on schedule.

² Not called for on schedule.

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

⁴ Data incomplete.

CLOCKS, WATCHES, AND PARTS

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TABLE 5.—WAGE EARNERS, BY MONTHS, FOR EACH INDUSTRY, 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		
CLOCKS, CLOCK MOVEMENTS, TIME-RECORDING DEVICES, AND TIME STAMPS															
United States:															
1929.....	10,401	10,199	<i>8,068</i>	10,146	10,226	10,331	10,415	10,503	10,544	10,475	10,682	10,776	10,544	10,544	92.5
1925.....	7,945	<i>7,745</i>	7,882	8,083	7,862	7,877	7,864	7,795	7,908	7,921	8,048	8,153	8,199	8,199	94.5
1919.....	8,252	<i>7,829</i>	7,636	7,876	8,022	8,101	8,280	8,315	8,618	8,484	8,679	8,817	8,867	8,867	82.7
1914.....	6,754	<i>6,979</i>	7,030	<i>7,094</i>	6,874	6,753	6,780	6,515	6,615	6,745	6,719	6,578	<i>6,566</i>	6,566	89.7
Connecticut.....	5,005	5,059	4,886	4,927	4,979	4,998	4,962	4,960	5,026	5,094	5,140	5,145	4,879	4,879	94.8
Illinois.....	3,015	2,975	3,024	3,074	2,963	2,932	2,936	2,954	2,995	2,979	3,068	3,131	3,153	3,153	93.0
Massachusetts.....	485	<i>412</i>	415	422	434	454	470	481	480	501	640	588	619	619	66.6
New Jersey.....	93	98	100	101	100	100	99	89	86	86	94	91	91	91	80.2
New York.....	1,261	1,135	<i>1,012</i>	1,127	1,230	1,308	1,416	1,474	1,415	1,270	1,255	1,220	1,245	1,245	70.7
Ohio.....	431	426	408	<i>401</i>	427	430	429	431	432	430	470	470	425	425	85.3
Pennsylvania.....	26	28	27	28	27	27	26	25	25	23	23	23	25	25	82.1
WATCHES AND WATCH MOVEMENTS															
United States:															
1929.....	10,738	11,127	11,209	10,987	10,740	10,532	10,417	10,377	10,519	10,648	10,871	10,828	10,601	10,601	92.6
1925.....	13,915	<i>12,981</i>	13,597	13,818	13,821	13,705	13,715	13,542	14,055	14,192	14,391	14,542	14,620	14,620	88.8
1919.....	15,888	<i>16,239</i>	15,326	15,490	15,689	15,427	15,582	15,435	16,103	16,439	16,515	16,713	16,698	16,698	91.2
1914.....	12,390	12,363	12,385	12,913	12,487	12,557	12,388	11,642	12,185	12,197	12,280	12,210	12,073	12,073	90.2
WATCHCASES															
United States:															
1929.....	3,404	3,364	3,399	3,431	3,380	3,299	3,272	3,227	3,382	3,513	3,684	3,527	3,415	3,415	88.8
1925.....	3,480	<i>3,528</i>	3,365	3,334	3,359	3,382	3,439	3,392	3,526	3,576	3,705	3,731	3,627	3,627	89.2
1919.....	3,900	<i>3,626</i>	3,769	3,767	3,797	3,841	3,970	4,079	4,068	3,840	3,737	4,034	4,283	4,283	84.6
1914.....	3,514	3,387	3,559	3,525	3,805	3,699	3,659	3,283	3,382	3,312	3,209	3,161	3,087	3,087	79.4
New York.....	679	653	669	691	691	653	645	621	695	730	742	692	665	665	83.7
WATCH AND CLOCK MATERIALS AND PARTS, EXCEPT WATCHCASES															
United States:															
1929.....	311	318	334	346	335	326	299	298	297	295	293	287	269	269	82.9
1925.....	501	444	457	465	474	500	532	509	516	513	530	531	543	543	81.8
1919.....	582	513	<i>507</i>	514	540	562	651	665	639	578	599	603	583	583	76.2
1914.....	670	787	715	706	695	686	653	629	623	649	650	646	661	661	85.7
Connecticut.....	102	103	108	115	113	117	111	111	104	99	93	73	82	82	62.4
Massachusetts.....	103	98	103	106	108	107	104	101	82	100	97	109	109	109	84.4
New York.....	17	17	17	17	17	17	17	17	17	17	17	17	17	17	.....

¹ Statistics for States can not be given without disclosing data reported by individual establishments.

COLLAPSIBLE TUBES

Description of the industry.—This industry embraces establishments whose principal products are collapsible tubes, made chiefly of tin, lead, and aluminum, for use as containers for tooth paste, shoe polish, shaving cream, etc. At former censuses the manufacture of collapsible tubes and that of tin and other foils, not

including gold foil, were covered by a single industry classification, "Tin and other foils, not including gold and silver; collapsible tubes." The figures for 1927 and 1925 as given in this report have been adjusted so as to make them comparable with those for 1929.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1925 TO 1929

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 ¹	Value added by manufacture ²	Horsepower
1929	17	1,821	\$1,782,024	\$5,385,906	\$8,912,977	\$3,527,071	2,272
1927	17	1,984	1,918,055	7,103,927	11,350,710	4,240,783	2,849
1925 ³	16	1,948	1,876,520	5,693,610	9,449,029	3,755,419	2,671
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929		-8.2	-7.1	-24.2	-21.5	-10.9	-20.8
1925-1927	(4)	1.8	2.2	24.8	20.1	13.1	6.7

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

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

³ No comparable data for years prior to 1925.

⁴ Per cent not computed where base is less than 100.

TABLE 2.—GENERAL STATISTICS FOR THE UNITED STATES, 1929 AND 1927, AND 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	Census year	Number of establishments	Salaried officers and employes ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	17	147	1,821	2,272	540	1,732	\$646,996	\$1,782,024	\$5,385,906	\$5,286,217	\$99,689	\$8,912,977	\$3,527,071
	1927	17	185	1,984	2,849	603	2,246	650,000	1,918,055	7,103,927	7,002,891	101,036	11,350,710	4,240,783
Individual States:														
New Jersey	1929	7	60	622	629		629	300,648	695,233	1,990,838	1,952,828	38,010	3,420,228	1,429,390
Pennsylvania	1929	3	25	335	392	40	352	115,344	264,419	1,023,137	1,006,400	16,737	1,478,800	455,663
Groups of States:														
Conn., 1 est.; N. Y., 1; R. I., 1	1929	3	37	368	508		508	135,554	343,997	1,022,640	1,003,580	19,060	1,789,782	767,142
Other States (Del., 1 est.; Ill., 2; W. Va., 1)	1929	4	25	466	743	500	243	95,450	478,375	1,349,291	1,323,409	25,882	2,224,167	874,876

¹ No proprietors or firm members were reported for this industry for either 1929 or 1927.

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

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

⁴ Connecticut, 1 establishment; Delaware, 1; Illinois, 2; New Jersey, 7; New York, 1; Pennsylvania, 3; Rhode Island, 1; West Virginia, 1.

COLLAPSIBLE TUBES

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TABLE 3.—PRODUCTS, BY QUANTITY AND VALUE, BY 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. Figures are given for each State which can be shown separately without disclosing data for individual establishments]

	1929		1927	
	Quantity (gross)	Value	Quantity (gross)	Value
1. Collapsible tubes industry, all products, total value.....		\$8,912,977		\$11,350,710
2. Collapsible tubes.....	3,175,711	7,815,823	2,999,183	9,235,320
3. Other products, not normally belonging to the industry.....		1,097,154		2,115,390
4. Collapsible tubes made as secondary products in other industries.....	272,227	748,627		
Collapsible tubes, all industries, total (sum of 2 and 4).....	3,447,938	8,564,450	2,999,183	9,235,320
New Jersey.....	1,556,454	3,980,357	1,273,191	4,114,174
Pennsylvania.....	482,177	1,266,225	563,832	1,610,588
Other States (Conn., Del., Ill., N. Y., R. I., W. Va.).....	1,409,307	3,317,868	1,162,160	3,510,558

TABLE 4.—PRINCIPAL MATERIALS, BY KIND, QUANTITY, AND COST: 1929

[The difference between the sum of the costs of the 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]

KIND	Quantity (pounds)	Cost
Tin (Conn., Del., Ill., N. J., N. Y., Pa., R. I., W. Va.).....	7,501,082	\$3,831,771
Lead (Conn., Del., Ill., N. J., N. Y., Pa., W. Va.).....	4,981,842	323,397
Aluminum (N. J., N. Y., W. Va.).....	304,842	87,967

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		Percent distribution of rated horsepower capacity, 1929	TYPE	1929		1927		1925		Percent distribution of rated horsepower capacity, 1929
	Number	Capacity	Number	Capacity	Number	Capacity			Number	Capacity	Number	Capacity	Number	Capacity	
Prime movers and electric motors driven by purchased energy, aggregate.....	466	Horse-power 2,272	400	Horse-power 2,849	413	Horse-power 2,671	100.0	Electric motors, total.....	475	Horse-power 2,010	410	Horse-power 2,812	426	Horse-power 2,742	100.0
Prime movers (internal-combustion engines).....	8	540	9	603	8	478	23.8	Driven by purchased energy.....	458	1,732	391	2,246	405	2,193	86.2
Electric motors driven by purchased energy.....	458	1,732	391	2,246	405	2,193	76.2	Driven by energy generated in establishments reporting.....	17	278	19	566	21	549	13.8
								Electric generators.....	5	Kilo-watts 320 Kilowatt-hours 1,689,747	4	Kilo-watts 225	6	Kilo-watts 251	
								Electric energy purchased ¹				(?)		(?)	

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

² Data incomplete.

TABLE 6.—WAGE EARNERS, BY MONTHS, BY STATES: 1929¹

[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.....	1,821	1,773	1,841	1,969	1,965	1,932	1,883	1,838	1,824	1,790	1,709	1,660	1,674	84.3
New Jersey.....	622	605	638	678	699	683	647	628	619	630	562	516	554	73.8
Pennsylvania.....	335	349	362	356	355	350	350	340	322	322	311	305	302	83.4

¹ No comparable data for prior years.

COPPER, TIN, AND SHEET-IRON WORK, INCLUDING GALVANIZED-IRON WORK, NOT ELSEWHERE CLASSIFIED

Description of the industry.—The establishments classified in this industry are engaged in the production, *in the shop*, of cornices, gutters, spouts, etc., for the exterior of buildings; and of radiator shields, stove and furnace pipes, ventilators and skylights, tanks and bins, and culverts; and in general coppersmithing and

sheet-iron work. The materials used are copper, bronze, tin plate, sheet iron, and galvanized iron. The statistics *do not* include data for the outside work, such as the laying of sheet-metal roofs and the installation of cornices, gutters, spouts, etc., done by some of the establishments in the 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, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²	Horsepower
1929	2,161	28,593	\$43,254,611	\$112,648,112	\$222,484,625	\$109,836,513	53,749
1927	1,981	24,527	38,667,690	98,385,897	191,128,636	92,742,730	36,880
1925	2,107	24,996	37,824,995	84,079,626	175,042,925	90,963,290	35,273
1923	2,524	28,852	42,445,932	93,507,014	188,908,028	95,401,014	34,243
1921	3,105	25,172	36,561,785	75,896,102	148,776,164	72,880,062	(³)
1919	4,796	27,640	33,866,823	80,898,528	160,313,945	79,415,417	24,130
1914	4,527	28,714	20,517,568	50,174,216	94,890,596	44,716,383	21,275
1909	3,671	28,448	10,367,740	46,933,262	89,387,570	42,454,308	18,847
1904	1,989	22,556	13,765,698	27,147,964	56,082,029	28,934,065	10,816
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929	9.1	16.6	11.9	14.5	16.4	18.4	49.8
1925-1927	-6.0	-1.9	2.2	17.0	9.2	2.0	1.7
1923-1925	-16.5	-13.4	-10.9	-10.1	-7.3	-4.7	3.0
1921-1923	-18.7	14.6	16.1	23.2	27.0	30.9	-----
1919-1921	-35.3	-8.9	8.0	-6.2	-7.2	-8.2	-----
1919-1929	-54.9	3.4	27.7	39.2	38.8	38.3	122.7
1909-1919	30.6	-2.8	74.9	72.4	79.3	87.1	28.0

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

COPPER, TIN, AND SHEET-IRON WORK

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	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 ¹	Value added by manufacture ²
					Total	Prime-movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	2,161	0,964	28,503	53,749	4,597	49,152	\$18,413,534	\$43,254,611	\$112,648,112	\$111,097,444	\$1,550,668	\$222,484,625	\$109,836,513
	1927	1,981	5,915	24,527	35,880	3,636	32,244	14,585,751	38,667,090	98,385,897	97,128,899	1,256,998	191,128,636	92,742,739
	1919	4,790	5,863	27,040	24,130	4,982	19,148	11,009,498	33,866,823	80,898,328	79,924,660	973,968	160,313,945	79,415,417
Individual States:														
Alabama	1929	9	26	132	122		122	66,649	182,951	584,570	576,587	7,983	1,110,233	525,603
	1927	12	25	215	159		159	76,294	250,595	694,696	654,814	9,852	1,204,719	540,053
	1919	33	67	319	173	15	158	140,302	290,141	1,296,494	1,198,097	8,397	1,990,727	784,233
Arkansas	1929	9	15	91	106		106	47,500	90,612	608,148	603,147	5,001	881,906	273,158
	1927	6	12	56	146		146	25,500	48,821	548,961	543,763	3,198	706,728	159,707
	1919	32	27	104	133	42	91	41,740	101,864	515,227	510,352	4,875	758,998	243,771
California	1929	204	404	1,701	2,717	9	2,708	953,370	2,652,637	5,629,386	5,567,077	62,309	12,313,389	6,684,003
	1927	233	347	1,554	1,858	5	1,853	740,834	2,437,802	4,565,230	4,455,913	49,317	10,373,467	5,898,237
	1919	322	195	1,462	1,186	75	1,111	367,673	1,952,529	3,240,459	3,201,851	38,608	7,159,783	3,919,324
Colorado	1929	15	60	195	629		629	127,615	261,733	859,452	844,166	15,286	1,541,951	682,499
	1927	17	40	257	615		615	95,951	346,416	974,641	941,833	12,808	1,647,190	672,549
	1919	49	41	220	37		37	130,681	282,821	682,041	676,503	5,538	1,411,036	728,995
Connecticut	1929	26	73	305	429		429	193,228	449,247	927,027	910,414	16,613	1,875,692	948,665
	1927	17	41	177	274		274	109,284	318,353	624,037	613,859	10,178	1,235,264	611,227
	1919	81	85	292	187	24	163	134,993	358,916	672,036	654,359	17,677	1,427,119	755,053
Delaware	1929	3	8	27	18		18	14,749	34,629	55,139	53,434	1,705	133,288	78,149
	1927	4	9	20	11		11	16,346	29,449	32,133	31,061	1,072	97,419	65,286
	1919	11	13	62	8		8	23,042	83,000	94,641	92,728	1,913	255,230	160,589
District of Columbia	1929	7	16	81	54	35	19	34,702	125,192	147,845	147,077	768	357,772	209,927
	1927	11	20	82	56	35	21	41,899	139,061	172,310	169,898	2,412	419,774	247,464
	1919	22	35	144	65	35	30	53,324	174,973	181,668	179,152	2,516	525,707	344,039
Florida	1929	16	31	132	212		212	83,929	169,437	731,332	727,325	4,007	1,110,330	378,995
	1927	15	35	175	209	10	199	112,026	254,602	733,088	727,061	6,087	1,353,127	620,039
	1919	22	22	99	81		81	37,223	117,168	296,905	294,432	2,473	540,253	243,358
Georgia	1929	17	44	216	269		269	125,776	193,911	1,192,429	1,184,527	7,902	2,001,540	803,111
	1927	12	94	170	131	15	116	211,524	189,365	1,370,017	1,360,963	9,054	1,981,073	611,056
	1919	43	32	332	197	10	187	59,434	337,911	828,459	822,431	6,028	1,879,231	550,772
Illinois	1929	256	749	3,207	6,217	221	5,996	2,265,638	5,637,547	9,769,543	9,586,405	183,138	23,702,526	13,932,983
	1927	234	697	2,662	3,492	410	3,082	1,739,077	4,669,536	8,640,704	8,497,468	143,236	19,555,922	10,915,268
	1919	391	460	2,232	2,269	244	2,025	977,113	2,893,171	6,146,451	6,045,462	100,989	13,208,281	7,061,830
Indiana	1929	46	104	614	970		970	338,529	548,193	1,648,174	1,616,002	31,572	3,096,810	2,049,636
	1927	41	124	474	664		664	328,891	697,569	2,105,766	2,084,781	20,985	3,920,769	1,815,003
	1919	172	160	696	483	54	429	263,185	790,235	2,702,016	2,681,219	20,797	4,586,580	2,884,564
Iowa	1929	40	136	504	1,304	45	1,259	315,593	548,895	2,435,883	2,401,994	33,889	4,146,102	1,710,219
	1927	36	112	399	838	25	813	183,714	452,584	1,565,497	1,540,690	24,807	2,864,717	1,299,220
	1919	120	202	803	670	94	476	304,149	913,977	2,633,895	2,601,327	32,568	5,061,989	2,428,094
Kansas	1929	15	45	133	405		405	121,730	233,658	776,367	768,169	8,198	1,637,631	861,264
	1927	13	52	143	200		200	136,196	207,092	868,931	863,960	4,935	1,688,037	819,106
	1919	47	33	104	219	10	209	59,400	215,130	410,467	403,844	6,623	949,022	538,553
Kentucky	1929	22	113	278	1,528		1,528	248,592	422,901	3,014,490	3,588,198	26,292	4,997,315	1,382,825
	1927	19	113	508	601		601	254,600	580,205	4,284,503	4,259,180	25,333	5,758,372	1,474,069
	1919	44	72	276	287		287	116,870	291,746	1,897,332	1,889,636	7,696	2,716,479	819,147
Louisiana	1929	17	40	281	279	15	264	97,440	343,291	422,329	413,907	8,422	1,275,800	853,471
	1927	17	69	338	205	15	190	150,109	365,113	795,285	786,720	8,565	1,464,497	669,212
	1919	43	81	433	497	21	476	161,193	438,594	1,137,286	1,125,857	11,429	2,152,126	1,014,840
Maine	1929	7	17	54	67		67	41,846	84,340	204,000	199,950	4,050	493,997	279,997
	1927	8	12	68	41		41	35,694	96,788	157,253	156,113	1,140	368,268	211,015
	1919	23	13	68	75		75	12,611	89,496	116,844	114,693	2,151	310,650	193,206
Maryland	1929	26	87	278	589	150	439	151,882	389,272	865,430	853,150	12,280	1,838,394	972,964
	1927	24	74	277	401	100	301	182,488	368,381	900,689	890,977	9,712	1,735,874	835,185
	1919	73	60	444	634	112	522	149,141	564,109	945,549	945,549	14,995	2,106,039	1,161,390
Massachusetts	1929	89	311	1,310	1,661	84	1,577	890,663	2,164,935	3,809,653	3,731,435	78,218	8,759,005	4,949,352
	1927	83	261	923	1,119	75	1,044	598,680	1,635,547	2,117,596	2,065,804	51,792	3,965,701	3,866,701
	1919	137	515	1,533	1,026	384	1,542	829,458	1,919,135	3,227,986	3,163,582	64,404	8,315,508	5,087,522
Michigan	1929	66	400	1,362	2,543	194	2,349	969,732	2,200,533	4,882,375	4,817,502	64,873	11,167,506	6,285,131
	1927	63	292	1,453	1,021	12	1,909	840,837	2,043,979	3,565,054	3,516,256	48,798	9,696,302	6,131,245
	1919	115	152	694	471	26	445	273,648	956,254	1,721,707	1,701,678	26,029	3,790,651	2,065,944
Minnesota	1929	55	192	874	1,393		1,393	483,703	1,080,271	2,523,773	2,467,465	56,308	5,893,693	3,369,920
	1927	61	191	806	1,616	32	1,484	402,610	990,132	2,257,810	2,212,955	44,855	4,788,190	2,630,880
	1919	128	184	758	586	4	682	223,963	870,165	2,062,888	2,037,026	25,822	3,802,994	1,740,100
Mississippi	1929	8	14	79	3		3	20,283	83,573	91,553	91,184	369	267,631	176,078
	1927	5	9	80	7		7	21,751	92,294	122,864	122,269	505	311,439	188,575
	1919	14	15	84	34		34	16,923	67,828	153,231	151,720	1,511	462,238	309,007
Missouri	1929	78	217	722	1,451	150	1,301	650,353	1,054,507	2,327,561	2,292,668	34,893	5,150,961	2,823,400
	1927	91	201	705	1,185	150	1,035	532,269	1,102,568	2,606,737	2,638,111	28,626	5,414,701	2,747,964
	1919	180	245	1,208	1,137	226	911	555,225	1,475,600	4,551,893	4,510,601	41,292	8,145,676	3,593,783

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 ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
Individual States—Con.														
Montana	1929	3	3	14	11		11	\$8,760	\$18,837	\$65,731	\$64,985	\$746	\$118,913	\$53,182
	1927	4	1	19	5		5	1,740	31,945	52,387	52,058	329	105,755	53,368
	1919	34	12	70	22		22	25,811	122,210	293,165	289,700	3,465	565,318	272,153
Nebraska	1929	16	49	118	312		312	121,355	155,557	459,473	450,903	8,570	1,020,354	560,881
	1927	19	49	159	377		359	104,052	210,649	608,152	602,196	5,956	1,192,821	584,669
	1919	49	45	156	221		205	66,027	196,731	560,393	552,818	7,575	1,028,311	467,918
New Jersey	1929	78	243	923	1,733	255	1,478	727,727	1,736,189	2,814,434	2,755,555	58,879	6,435,273	3,620,839
	1927	66	214	909	1,318	259	1,059	592,217	1,726,528	2,992,171	2,946,248	45,923	6,788,780	3,796,609
	1919	151	160	921	836	153	683	337,612	1,235,434	2,132,617	2,103,631	28,986	4,711,084	2,578,467
New York	1929	297	798	3,142	3,624	130	3,494	2,552,369	5,774,907	9,257,916	9,102,532	155,384	22,918,041	13,660,125
	1927	243	723	3,090	3,167	168	2,999	2,091,980	5,805,980	8,099,854	7,948,333	151,521	20,471,430	12,371,576
	1919	647	904	3,847	2,774	426	2,348	1,861,159	4,864,794	10,356,089	10,201,855	154,204	21,831,389	11,475,300
North Carolina	1929	17	17	147	34		34	52,541	134,299	378,354	376,515	1,839	683,826	305,472
	1927	12	20	88	57		57	38,797	116,883	343,968	343,046	922	601,713	287,745
	1919	86	52	336	223	73	150	97,660	402,820	808,292	797,242	11,050	1,716,860	908,568
Ohio	1929	142	1,063	4,486	11,534	1,262	10,272	2,638,011	6,097,090	27,600,707	27,304,605	296,102	42,494,583	14,893,876
	1927	118	604	2,575	3,772	499	3,273	1,463,410	4,746,504	18,991,144	18,754,438	236,706	28,876,019	9,884,875
	1919	262	519	2,650	3,105	920	2,185	1,101,165	2,916,330	8,489,469	8,398,148	91,321	15,809,262	7,319,793
Oklahoma	1929	17	17	108	250		250	34,413	165,841	296,567	290,907	5,660	686,748	390,181
	1927	13	16	52	40		40	34,861	139,400	425,454	424,209	1,245	747,612	322,158
	1919	75	26	187	42	7	35	39,825	262,717	431,927	427,853	4,074	983,826	581,899
Oregon	1929	56	67	298	263		263	143,749	404,608	753,764	743,234	10,530	1,586,974	833,210
	1927	33	76	286	675		675	187,312	435,457	892,234	879,144	13,090	1,888,471	994,237
	1919	63	65	204	264		264	108,741	325,337	598,200	589,789	8,411	1,339,305	741,105
Pennsylvania	1929	125	589	2,532	4,894	590	4,304	1,581,518	3,810,436	8,949,112	8,795,556	153,556	20,541,105	11,592,083
	1927	137	593	2,330	4,113	330	3,783	1,409,717	3,512,165	8,802,755	8,718,704	144,051	18,641,454	9,778,699
	1919	453	499	2,883	2,340	1,074	1,266	933,264	3,669,587	7,034,301	6,941,297	93,004	14,824,359	7,790,058
Rhode Island	1929	18	44	218	237		237	126,569	345,284	455,203	444,564	10,639	1,106,178	650,975
	1927	15	45	159	148		148	125,502	282,848	309,100	300,030	9,070	922,000	612,900
	1919	44	49	230	132	33	99	68,359	284,123	432,732	422,193	10,539	1,005,759	573,027
South Carolina	1929	4	3	20	15		15	3,370	24,171	43,996	42,669	1,327	84,847	40,851
	1927	13	12	107	14	3	11	24,371	131,765	275,463	273,639	1,824	491,432	215,969
	1919	4	16	38	105		105	50,946	71,265	282,756	279,540	3,216	550,300	267,544
South Dakota	1929	29	16	65	142	100	42	37,362	77,685	283,187	290,319	2,868	542,247	249,060
	1927	19	38	188	281		281	104,563	187,500	987,692	974,317	13,375	1,579,347	591,655
	1927	14	36	161	86		86	58,640	158,156	667,419	663,390	4,029	1,090,944	423,525
	1919	59	30	235	53		53	30,703	224,659	375,985	372,081	3,904	839,270	463,285
Texas	1929	79	99	544	686	20	666	218,247	774,655	2,025,827	2,005,151	20,676	4,001,036	1,975,209
	1927	63	114	457	610		610	248,723	693,241	3,082,634	3,069,393	13,299	4,764,234	1,681,600
	1919	215	82	740	397	61	336	129,154	883,000	2,230,803	2,213,335	17,410	4,206,506	1,975,703
Utah	1929	11	24	83	546		546	45,977	118,105	365,036	358,912	6,124	691,320	326,284
	1927	13	15	66	421		421	30,193	91,446	282,924	279,433	3,491	535,516	252,592
	1919	48	29	149	162		162	67,510	178,244	542,364	537,598	4,766	1,017,374	475,010
Vermont	1929	5	15	47	42		42	24,614	64,886	217,255	213,351	3,904	460,435	243,180
	1927	5	17	41	33		33	33,714	48,504	187,495	184,868	2,627	376,912	189,417
	1919	15	22	111	60		60	26,098	111,828	305,200	301,093	4,107	570,337	265,137
Virginia	1929	10	39	97	177		177	87,934	119,538	725,262	720,261	5,001	1,040,141	314,879
	1927	11	37	98	241		241	81,241	138,917	356,102	352,348	3,754	719,545	363,443
	1919	30	44	229	108		108	69,904	266,434	462,031	456,065	5,366	1,108,887	646,856
Washington	1929	80	126	615	684	90	594	365,300	1,014,226	1,557,147	1,541,455	15,692	3,743,932	2,186,785
	1927	75	110	524	401		401	249,561	851,238	1,234,749	1,221,746	13,003	2,902,247	1,667,498
	1919	110	80	409	332		332	178,403	630,915	1,142,775	1,132,553	10,222	2,547,367	1,404,592
West Virginia	1929	11	118	1,140	3,574	550	3,024	261,711	1,447,927	3,613,577	3,558,741	54,836	5,598,350	1,984,773
	1927	11	86	757	3,405	800	2,605	219,409	911,196	4,061,430	4,016,781	44,649	5,765,992	1,704,562
	1919	39	34	170	170	7	163	59,965	230,484	1,607,930	1,602,925	5,005	2,150,705	542,775
Wisconsin	1929	67	452	1,063	1,485	797	688	994,586	1,487,587	7,173,722	7,117,875	55,847	11,804,020	4,630,298
	1927	90	302	1,015	1,143	678	465	668,618	1,414,701	6,530,557	6,489,799	40,753	10,842,966	4,312,409
	1919	199	433	1,302	1,275	716	559	759,604	1,414,946	6,395,716	6,336,853	58,863	10,669,369	4,273,653
Groups of States:														
Ariz., 3 est.; Nev., 1, N. Mex., 1, Other States (Idaho, 2 est.; N. H., 2; N. Dak., 2)	1929	5	4	25	3		3	5,448	30,939	54,059	53,878	181	119,863	65,804
States not shown separately	1927	17	32	109	219		219	104,140	141,260	733,596	728,368	5,228	1,325,829	592,233
	1919	64	32	177	217	17	200	55,485	232,017	704,414	695,781	8,633	1,293,361	593,947

¹ Not including proprietors and firm members, as follows: For 1929, 1,516; 1927, 1,623; 1919, 5,056. 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, 37,063; 1927, 32,065; 1919, 38,559.

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

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

⁴ 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.

⁵ Withheld from publication in order to avoid disclosing data for individual establishments.

⁶ Arizona, 1 establishment; Idaho, 2; Nevada, 2; New Hampshire, 2; North Dakota, 4; South Carolina, 2; South Dakota, 4.

⁷ Arizona, 16 establishments; Idaho, 7; Nevada, 4; New Hampshire, 8; New Mexico, 9; North Dakota, 16; Wyoming, 4.

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	9, 176	<i>Horse-power</i> 63, 749	6, 021	<i>Horse-power</i> 35, 880	5, 396	<i>Horse-power</i> 35, 273	3, 891	<i>Horse-power</i> 24, 130	2, 437	<i>Horse-power</i> 21, 275	100. 0	100. 0
Prime movers, total	65	4, 597	54	3, 636	63	5, 061	295	4, 932	311	8, 462	8. 6	20. 6
Steam engines	29	2, 064	12	2, 330	14	3, 602	36	2, 006	58	4, 761	3. 9	8. 3
Internal-combustion engines	36	2, 533	41	1, 301	49	1, 469	255	2, 946	248	3, 619	4. 7	12. 2
Water wheels and water turbines			1	5			4	30	5	82		. 1
Electric motors driven by purchased energy	9, 111	49, 152	5, 967	32, 244	5, 333	30, 212	3, 596	19, 148	2, 126	12, 813	91. 4	79. 4
Electric motors, total	9, 416	51, 200	6, 344	35, 091	5, 788	32, 394	3, 910	21, 409	2, 350	14, 841	100. 0	100. 0
Driven by purchased energy	9, 111	49, 152	5, 967	32, 244	5, 333	30, 212	3, 596	19, 148	2, 126	12, 813	96. 0	89. 4
Driven by energy generated in establishments reporting	305	2, 048	377	2, 847	405	2, 182	314	2, 261	224	2, 028	4. 0	10. 6
Electric generators	15	<i>Kilowatts</i> 2, 104 <i>Kilowatt-hours</i>	17	<i>Kilowatts</i> 1, 968	15	<i>Kilowatts</i> 1, 188	(1)	(1)	(1)	(1)		
Electric energy purchased		28, 479, 534		(2)		(2)		(1)		(1)		

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

TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1929, 1925, 1919, 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	28, 593	26, 423	<i>26, 567</i>	26, 941	27, 768	28, 701	28, 897	29, 327	29, 955	30, 148	30, 452	29, 820	28, 322	28, 322	86. 6
1925	24, 996	<i>23, 368</i>	23, 571	24, 090	24, 126	24, 226	24, 736	25, 106	25, 543	26, 097	26, 588	26, 578	25, 928	25, 928	87. 9
1919	27, 640	25, 479	<i>24, 602</i>	24, 787	25, 451	26, 192	27, 399	28, 374	29, 175	29, 434	29, 818	30, 483	30, 488	30, 488	80. 7
1914 ¹	28, 714	27, 812	<i>26, 915</i>	27, 545	28, 518	29, 152	29, 276	29, 480	29, 662	29, 825	29, 674	29, 021	27, 698	27, 698	90. 2
Alabama	132	138	149	107	143	120	118	140	105	<i>89</i>	180	121	167	167	55. 0
Arkansas	91	86	84	89	85	93	91	94	88	100	97	94	86	86	84. 0
California	1, 701	1, 679	1, 644	<i>1, 610</i>	1, 654	1, 736	1, 714	1, 724	1, 734	1, 718	1, 789	1, 705	1, 711	1, 711	90. 0
Colorado	195	<i>153</i>	160	170	207	213	202	225	231	224	210	179	167	167	66. 2
Connecticut	305	320	315	311	302	300	<i>257</i>	300	311	334	326	311	269	269	76. 9
Delaware	27	23	<i>21</i>	25	25	41	38	27	24	25	22	27	27	27	51. 2
District of Columbia	81	62	<i>59</i>	68	77	94	77	79	87	92	92	87	93	93	62. 8
Florida	132	142	139	135	125	128	135	127	<i>121</i>	120	138	128	139	139	85. 2
Georgia	216	269	260	256	192	193	188	184	180	202	207	218	237	237	68. 4
Illinois	3, 297	3, 020	<i>3, 003</i>	3, 144	3, 152	3, 259	3, 325	3, 453	3, 490	3, 559	3, 591	3, 441	3, 129	3, 129	83. 6
Indiana	614	<i>545</i>	580	610	596	609	631	590	642	665	654	636	604	604	82. 0
Iowa	504	484	470	<i>465</i>	493	484	503	506	512	517	523	527	568	568	81. 9
Kansas	133	127	131	<i>123</i>	124	130	134	135	130	136	137	138	156	156	78. 8
Kentucky	278	260	269	272	261	<i>254</i>	256	267	302	314	299	292	274	274	80. 9
Louisiana	281	271	279	277	269	266	259	286	287	296	315	309	<i>254</i>	254	80. 6
Maine	54	50	<i>41</i>	46	50	52	51	53	54	65	68	70	70	70	58. 6
Maryland	278	277	266	269	<i>265</i>	260	267	275	282	280	304	290	288	288	87. 2
Massachusetts	1, 316	1, 207	1, 197	<i>1, 186</i>	1, 235	1, 308	1, 286	1, 352	1, 401	1, 431	1, 452	1, 412	1, 320	1, 320	81. 7
Michigan	1, 362	1, 335	<i>1, 268</i>	1, 332	1, 373	1, 488	1, 463	1, 354	1, 384	1, 356	1, 343	1, 313	1, 309	1, 309	85. 5
Minnesota	874	800	809	853	911	920	921	896	885	901	894	853	846	846	86. 9
Mississippi	79	75	75	77	74	75	75	83	85	<i>82</i>	83	80	80	80	85. 9
Missouri	722	<i>653</i>	656	678	696	733	717	738	767	801	813	734	672	672	80. 3
Montana	14	13	<i>11</i>	11	15	14	13	13	15	18	18	16	15	15	61. 1
Nebraska	118	111	112	107	114	123	145	140	126	108	108	<i>105</i>	112	112	72. 4
New Jersey	923	872	<i>858</i>	875	881	908	870	895	920	970	1, 019	1, 066	957	957	81. 3
New York	3, 142	3, 018	<i>2, 980</i>	3, 023	3, 078	3, 131	3, 203	3, 213	3, 269	3, 218	3, 220	3, 210	3, 138	3, 138	91. 2
North Carolina	147	147	145	147	147	148	<i>144</i>	150	148	145	148	147	146	146	96. 0
Ohio	4, 486	<i>4, 024</i>	4, 138	4, 220	4, 354	4, 475	4, 498	4, 492	4, 683	4, 761	4, 871	4, 802	4, 514	4, 514	82. 6
Oklahoma	108	<i>97</i>	98	98	106	113	115	120	130	112	109	106	106	106	80. 8
Oregon	298	274	<i>258</i>	275	274	293	322	306	301	338	351	311	275	275	72. 1
Pennsylvania	2, 532	2, 259	<i>2, 237</i>	2, 307	2, 456	2, 515	2, 556	2, 644	2, 738	2, 696	2, 666	2, 696	2, 610	2, 610	81. 7
Rhode Island	218	215	202	<i>197</i>	207	214	220	215	221	230	235	231	230	230	83. 8
South Carolina	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
South Dakota	38	<i>27</i>	27	27	37	41	39	44	43	47	46	43	37	37	57. 4
Tennessee	188	162	<i>156</i>	162	175	192	196	189	207	205	193	210	193	193	74. 3
Texas	544	489	<i>483</i>	503	516	517	519	554	611	599	590	594	544	544	79. 9
Utah	53	65	<i>58</i>	70	71	98	97	92	88	90	94	90	77	77	59. 2
Vermont	47	51	<i>57</i>	52	47	40	56	45	45	45	46	49	52	52	68. 4
Virginia	97	<i>66</i>	73	81	86	91	88	85	98	93	100	146	158	158	43. 1
Washington	615	536	<i>489</i>	534	602	652	656	724	651	633	656	636	610	610	67. 5
West Virginia	1, 140	<i>978</i>	1, 058	1, 066	1, 163	1, 198	1, 245	1, 243	1, 234	1, 176	1, 135	1, 170	1, 019	1, 019	78. 6
Wisconsin	1, 063	943	<i>942</i>	962	1, 002	1, 049	1, 092	1, 133	1, 203	1, 190	1, 175	1, 116	951	951	78. 3

¹ No comparable statistics available for years prior to 1914.

ELECTROPLATING

Description of the industry.—The establishments classified in this industry are engaged primarily in the plating, by the electric process, of various metal articles, such as automobile accessories, lighting fixtures, musical instruments, and jewelry, with gold, silver, nickel, copper, or chromium. The "Value of products" repre-

sents, to a large extent, receipts for electroplating done on articles owned by others. Many establishments which manufacture plated jewelry or other plated goods do their own electroplating and do not report its value separately, and therefore the report for this industry does not cover all electroplating work done.

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 ¹	Value added by manufacture ²	Horsepower
1929-----	534	5,928	\$9,536,800	\$4,798,667	\$23,727,916	\$18,929,249	24,015
1927-----	419	3,556	5,629,104	3,335,140	13,930,321	10,595,181	14,090
1925-----	449	3,337	5,253,845	2,541,165	12,440,510	9,899,345	10,743
1923-----	446	3,374	5,195,183	2,612,673	12,297,333	9,684,660	9,505
1921-----	392	2,460	3,562,980	1,959,639	8,040,954	6,081,315	(3)
1919-----	515	3,024	3,793,605	2,639,248	10,389,617	7,750,369	6,788
1914-----	479	2,584	1,712,922	1,335,662	4,773,309	3,437,647	5,308
1909-----	461	2,717	1,652,315	1,295,185	4,509,559	3,304,374	3,500
1904-----	312	1,943	1,092,835	747,331	2,965,014	2,217,683	1,870
1899-----	302	2,086	949,062	783,854	2,719,961	1,936,107	1,837
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929-----	27.4	66.7	69.4	43.9	70.3	78.7	70.4
1925-1927-----	-6.7	6.6	7.1	31.2	12.0	7.0	31.2
1923-1925-----	.7	-1.1	1.1	-2.7	1.2	2.2	13.0
1921-1923-----	13.8	37.2	45.8	33.3	52.9	50.3	-----
1919-1921-----	-23.9	-18.7	-6.1	-25.8	-22.6	-21.5	-----
1919-1929-----	3.7	96.0	151.4	81.8	128.4	144.2	253.8
1909-1919-----	11.7	11.3	129.6	110.0	130.4	134.5	93.9
1899-1909-----	52.6	30.2	74.1	53.8	65.8	70.7	90.5

¹ Includes values of miscellaneous products normally belonging to other industries, as follows: For 1929, \$214,068; 1927, \$132,158; 1925, \$142,376. Does not include receipts for electroplating reported by establishments engaged primarily in other industries, as follows: For 1929, \$691,071; 1927, \$101,972; 1925, \$506,269. No corresponding figures are available for earlier years.

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

³ Not called for on schedule.

ELECTROPLATING

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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 ¹	Wage earners (average for the year)	HORSEPOWER CAPACITY OF EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	534	915	5,928	24,015	277	23,738	\$2,557,492	\$9,536,800	\$4,798,667	\$3,918,792	\$879,875	\$23,727,916	\$18,929,249
	1927	419	570	3,556	14,090	271	13,819	1,365,634	5,629,104	3,335,140	2,779,423	555,717	13,930,321	10,595,181
	1919	515	418	3,024	6,788	768	6,020	743,256	3,793,605	2,639,248	2,373,033	296,215	10,382,617	7,750,369
Individual States:														
California	1929	52	58	345	3,386	16	3,371	110,800	623,243	273,895	233,232	40,663	1,578,162	1,304,267
	1927	39	47	329	1,175		1,175	93,691	481,094	222,116	178,766	43,350	1,131,999	906,883
	1919	30	14	188	352		352	21,831	199,283	75,826	63,351	12,445	438,764	362,938
Connecticut	1929	9	36	174	648		648	60,081	241,263	66,549	32,302	34,247	576,317	509,768
	1927	8	9	83	250		250	21,351	75,066	33,815	39,494	13,821	182,940	129,625
	1919	14	3	40	149		149	5,720	55,549	33,167	25,372	7,795	144,146	110,979
District of Columbia	1929	3	3	14	54		54	7,991	24,092	11,675	9,575	2,100	49,112	37,437
	1927	4	2	23	42		42	3,578	27,280	13,339	10,797	2,542	71,542	58,203
	1919	3	1	8	17		8	312	9,005	3,539	2,975	594	19,202	16,063
Illinois	1929	83	167	1,161	4,639		4,639	486,721	1,970,098	1,506,342	1,325,461	180,881	5,615,393	4,169,051
	1927	66	107	776	2,862		2,847	300,003	1,351,688	1,010,679	862,180	118,499	3,609,635	2,598,986
	1919	49	81	621	1,142		8	177,361	713,124	500,270	453,189	42,081	2,411,328	1,911,088
Indiana	1929	19	37	288	1,069		1,069	142,610	498,386	162,961	122,646	40,315	1,013,768	850,797
	1927	15	25	119	643		643	67,030	165,820	172,594	149,661	23,033	501,788	329,169
	1919	11	1	37	143		15	1,829	35,878	20,164	16,362	3,802	82,714	62,550
Kentucky	1929	5	4	41	186		25	5,054	62,437	24,154	13,639	5,515	121,767	97,613
Maryland	1929	7	5	45	115		115	10,351	57,717	24,221	19,986	4,235	139,615	115,394
	1927	8	8	37	111		37	74	53,737	17,301	13,650	3,651	117,276	99,975
	1919	6	5	43	77		18	59	50,205	61,514	58,345	3,169	155,532	94,018
Massachusetts	1929	36	59	391	882		882	121,870	523,001	237,599	189,500	48,099	1,205,008	968,009
	1927	38	49	272	783		13	104,451	379,955	160,282	127,330	32,952	894,466	734,184
	1919	48	62	288	498		15	90,444	323,742	168,571	147,658	20,912	834,325	665,764
Michigan	1929	34	91	853	2,826		2,826	304,340	1,455,543	653,792	502,324	151,468	3,074,528	2,420,786
	1927	14	52	298	1,171		1,171	154,008	437,272	214,689	160,943	53,746	901,735	687,046
	1919	21	31	177	619		41	578	242,724	101,884	77,797	24,087	585,620	433,783
Minnesota	1929	11	9	84	189		189	14,442	101,856	66,197	53,019	13,178	287,410	221,213
	1927	8	3	40	265		265	3,684	74,865	40,075	30,854	9,221	152,998	112,923
	1919	7	8	30	102		102	9,082	32,188	20,887	20,867	5,620	100,586	74,199
Missouri	1929	18	34	158	742		742	84,542	238,749	98,514	70,525	27,969	594,783	496,299
	1927	14	12	95	272		272	24,777	170,283	51,267	35,054	15,613	323,884	272,617
	1919	15	14	96	197		197	30,479	122,015	85,992	77,351	8,641	296,328	210,836
New Jersey	1929	18	28	155	573		20	64,938	268,984	144,777	123,687	21,090	663,085	548,008
	1927	21	14	133	446		20	36,957	200,806	130,291	109,818	20,473	536,510	406,219
	1919	27	5	87	183		38	5,384	106,259	62,390	55,000	7,890	250,629	188,243
New York	1929	98	155	857	2,518		35	2,518	1,504,232	694,661	473,968	120,663	3,698,621	3,103,960
	1927	73	90	513	1,427		20	1,407	223,838	871,857	404,038	80,600	2,091,315	1,687,271
	1919	133	92	681	1,486		204	1,282	168,881	890,983	452,516	396,178	2,173,657	1,721,117
Ohio	1929	40	99	676	3,183		20	3,163	269,946	1,058,544	381,936	289,192	92,744	1,910,648
	1927	34	52	372	1,801		1,801	111,150	596,141	265,528	206,200	59,328	1,267,518	1,001,990
	1919	39	38	236	834		195	639	61,610	325,822	188,998	136,178	717,924	558,928
Oregon	1929	4	4	8	64		64	3,748	12,648	8,281	5,793	2,488	41,739	33,458
Pennsylvania	1929	37	55	274	1,511		150	154,720	413,638	272,779	227,020	45,759	1,255,088	982,309
	1927	32	51	205	1,078		128	103,959	316,245	382,173	347,838	34,835	1,130,031	747,858
	1919	37	24	172	427		195	33,068	212,917	113,918	98,172	15,746	533,035	419,117
Rhode Island	1929	18	31	139	306		306	83,840	145,021	102,264	91,697	10,567	486,039	383,775
	1927	8	18	65	91		38	39,452	81,058	49,232	40,005	9,227	223,276	174,044
	1919	23	27	221	166		166	52,030	169,370	614,489	604,949	9,540	1,044,013	429,524
Texas	1929	(⁴)	(⁴)	(⁴)	(⁴)		(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
	1927	(⁴)	(⁴)	(⁴)	(⁴)		(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
	1919	(⁴)	(⁴)	(⁴)	(⁴)		(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Washington	1929	8	7	26	101		101	20,291	59,365	24,581	21,418	3,163	133,415	108,834
	1927	8	2	30	110		110	4,100	43,005	20,908	15,369	5,519	111,727	90,819
	1919	5	2	7	48		48	2,309	12,764	3,602	7,155	1,447	36,168	27,566
Wisconsin	1929	12	23	147	681		12	75,472	202,519	98,277	72,522	25,755	694,020	495,743
	1927	9	11	99	452		452	34,527	143,060	54,353	37,534	10,819	337,309	282,956
	1919	14	15	130	324		324	27,871	122,022	75,724	64,496	11,258	288,824	215,110
Groups of States:														
Del., 1 est.; Iowa, 3;	1929	5	7	31	135		135	11,280	41,661	17,717	12,583	5,134	111,701	93,984
Me., 1	1929	3		14	40		40		15,842	5,125	5,125		34,157	20,032
Fla., 1 est.; La., 2;	1929	3												
Colo., 1 est.; Kans., 1;	1929	3	2	10	55		55	13,500	16,212	8,207	7,042	1,165	56,376	48,169
Nebr., 1	1929	2												
States not shown separately	1927	20	18	97	1,111		1,111	30,354	143,410	72,960	60,062	12,898	344,407	271,447
	1919	27	4	90	266		31	4,116	119,838	68,268	57,378	10,890	284,879	216,611

¹ Not including proprietors and firm members, as follows: For 1929, 470; 1927, 463; 1919, 530. 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, 7,313; 1927, 4,539; 1919, 4,032.

² See footnote 1, Table 1.

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

⁴ 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.

⁵ Withheld from publication in order to avoid disclosing data for individual establishments.

⁶ Colorado, 1 establishment; Delaware, 1; Iowa, 3; Kentucky, 2; Louisiana, 1; Maine, 1; Nebraska, 2; Oklahoma, 1; Oregon, 3; Tennessee, 2; Texas, 3.

⁷ Alabama, 1 establishment; Arizona, 1; Colorado, 1; Delaware, 1; Georgia, 1; Iowa, 6; Kentucky, 2; Louisiana, 2; Nebraska, 3; New Hampshire, 1; North Dakota, 1; Oklahoma, 1; Oregon, 2; Tennessee, 1; Vermont, 1; Virginia, 2.

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
		Horse-power		Horse-power		Horse-power		Horse-power		Horse-power		
Prime movers and electric motors driven by purchased energy, aggregate	3,463	24,015	2,114	14,090	1,762	10,743	1,108	6,788	689	5,308	100.0	100.0
Prime movers, total	12	277	10	271	17	391	42	768	76	1,788	1.2	11.3
Steam engines	9	222	5	172	6	195	6	152	21	863	1.0	2.2
Internal-combustion engines	3	55	5	99	10	176	35	601	54	865	.2	8.9
Water wheels and water turbines					1	20	1	15	1	60		.2
Electric motors driven by purchased energy	3,451	23,738	2,104	13,819	1,745	10,352	1,066	6,020	613	3,520	98.8	88.7
Electric motors, total	3,464	23,934	2,104	13,819	1,745	10,352	1,075	6,045	630	3,623	100.0	100.0
Driven by purchased energy	3,451	23,738	2,104	13,819	1,745	10,352	1,066	6,020	613	3,520	99.2	99.6
Driven by energy generated in establishments reporting	13	196					9	25	17	103	.8	.4
Electric generators	2	Kilowatts 159 Kilowatt-hours		Kilowatts		Kilowatts	(1)	(1)	(1)	(1)		
Electric energy purchased ¹		18,315,202		(?)		(?)		(1)		(1)		

¹ Not called for on schedule.
² This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.
³ 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	5,928	5,504	5,903	5,969	6,358	6,235	6,135	5,977	6,007	6,088	6,126	5,764	5,875	84.3	
1925	3,337	5,107	3,159	3,299	3,379	3,375	3,277	3,246	3,227	3,393	3,484	3,583	3,505	86.5	
1919	3,024	2,623	<i>2,616</i>	2,735	2,844	2,962	2,941	3,080	3,165	3,208	3,270	3,408	3,436	76.1	
1914	2,584	2,555	2,567	2,583	2,572	2,599	2,588	2,542	<i>2,492</i>	2,584	2,665	2,647	2,614	93.5	
1909	2,717	2,644	2,642	2,704	2,710	2,670	2,624	<i>2,575</i>	2,595	2,789	2,882	2,890	2,871	89.1	
California	345	317	<i>314</i>	330	329	331	362	349	366	363	371	372	337	84.4	
Connecticut	174	117	154	152	186	201	175	172	161	190	214	212	158	54.7	
District of Columbia	14	<i>12</i>	<i>12</i>	<i>12</i>	<i>12</i>	13	14	15	16	16	16	16	18	75.0	
Illinois	1,161	<i>1,066</i>	1,069	1,119	1,145	1,118	1,132	1,113	1,165	1,276	1,410	1,299	1,079	71.3	
Indiana	283	294	303	312	303	295	284	284	285	274	268	266	225	72.1	
Kentucky	41	<i>30</i>	<i>30</i>	31	45	45	44	44	44	44	44	44	44	66.7	
Maryland	45	47	46	44	47	45	45	45	47	45	45	45	44	93.0	
Massachusetts	391	370	369	372	406	429	411	379	401	392	405	397	362	84.4	
Michigan	858	803	979	1,065	1,124	1,069	1,021	873	841	768	671	<i>570</i>	572	45.4	
Minnesota	84	69	70	68	69	76	81	92	97	97	94	95	102	66.7	
Missouri	158	<i>146</i>	<i>146</i>	160	170	167	160	158	162	163	157	158	154	85.9	
New Jersey	155	<i>146</i>	<i>146</i>	152	154	157	162	154	155	163	164	151	151	89.0	
New York	857	808	814	822	876	870	878	851	849	871	893	900	849	89.8	
Ohio	676	709	729	700	733	734	668	704	681	687	647	606	<i>514</i>	70.0	
Oregon	8	8	8	8	9	8	8	8	7	7	7	7	8	77.8	
Pennsylvania	274	264	<i>256</i>	257	277	287	283	288	284	278	282	263	258	87.4	
Rhode Island	139	121	121	120	124	137	141	154	155	159	149	148	142	75.5	
Texas	27	27	27	27	27	27	27	27	27	27	26	26	26	96.3	
Washington	36	33	33	34	36	36	35	36	37	37	38	37	37	86.8	
Wisconsin	147	<i>123</i>	126	133	132	134	138	174	167	169	170	158	143	70.7	

FIRE EXTINGUISHERS, CHEMICAL

Description of the industry.—The establishments assigned to this industry are those whose primary products are portable fire extinguishers, hose reels, and other apparatus (except motor-propelled apparatus) and appliances for fire extinguishing by the use of chemicals; chemical preparations for use with such apparatus and appliances; hand grenades for fire extinguishing, 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 ¹	Value added by manufacture ²	Horsepower
1929.....	28	740	\$958,570	\$4,187,524	\$8,566,069	\$4,378,565	1,464
1927.....	26	832	1,191,708	4,009,775	8,035,156	4,025,381	1,564
1925.....	26	842	1,131,127	4,122,137	8,037,174	3,915,037	1,440
1923.....	26	762	847,420	3,364,159	6,152,682	2,785,923	1,235
1921.....	31	580	626,958	2,051,052	4,254,261	2,178,209	(1)
1919.....	32	777	751,119	2,693,416	5,563,180	2,869,764	855
1914.....	27	256	200,096	573,975	1,297,723	723,745	269
1909.....	31	195	126,728	304,821	754,165	449,344	192
1904.....	35	178	107,540	229,003	581,970	352,907	63
1899.....	17	64	32,828	70,874	217,833	146,959	11
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	(1)	-11.1	-19.6	4.4	(1) 6.6	8.8	-0.4
1925-1927.....	(1)	-1.2	5.4	-2.7	(1)	2.8	8.6
1923-1925.....	(1)	10.5	33.5	22.5	30.6	40.5	16.6
1921-1923.....	(1)	31.4	35.4	61.8	44.6	28.2	-----
1919-1921.....	(1)	-25.4	-16.7	-22.7	-23.5	-24.3	-----
1919-1929.....	(1)	-4.8	27.6	55.5	54.0	52.6	71.2
1909-1919.....	(1)	268.5	492.7	783.6	637.7	538.7	345.3
1899-1909.....	(1)	204.7	288.0	330.1	246.2	205.8	1,648.5

¹ For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.
² Includes values of miscellaneous products normally belonging to other industries as follows: For 1929, \$1,118,546; 1927, \$1,160,029; 1925, \$692,810. Does not include following values of chemical fire-extinguishing apparatus and appliances made as secondary products by establishments classified in other industries: For 1929, \$96,576; 1927, \$629,239. No corresponding figures available for earlier years.
³ Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
⁴ Not called for on schedule.
⁵ Per cent not computed where base is less than 100.
⁶ Less than one-tenth of 1 per cent.

TABLE 2.—GENERAL STATISTICS FOR THE UNITED STATES, 1929, 1927, AND 1919, AND FOR MICHIGAN, 1929 AND 1927

(Michigan is the only State for which statistics can be shown separately without disclosing, exactly or approximately, the data reported by individual establishments. Several of the States for which figures are given in combination with those for others, however, reported larger values of products than Michigan. 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 ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States.....	1929	28	336	740	1,464	-----	1,464	\$907,375	\$958,570	\$4,187,524	\$4,118,974	\$68,550	\$8,566,069	\$4,378,565
	1927	26	355	832	1,564	-----	1,564	607,132	1,191,708	4,009,775	3,944,957	64,818	8,035,156	4,025,381
	1919	32	332	777	855	11	844	645,611	751,119	2,693,416	2,652,765	40,651	5,563,180	2,869,764
Michigan.....	1929	3	3	7	6	-----	6	2,063	4,874	17,528	17,862	166	66,860	49,332
	1927	3	11	3	6	-----	6	17,091	5,212	18,965	18,862	403	49,935	30,970
Groups of States:														
Del., 1 est.; Mass., 3.....	1929	4	18	43	121	-----	121	36,774	62,604	250,261	242,601	7,460	447,378	197,112
Ill., 2 est.; Mo., 2.....	1929	4	27	95	158	-----	158	93,996	142,311	406,226	399,504	6,722	827,882	421,656
Ind., 1 est.; Ohio, 5.....	1929	6	106	141	293	-----	293	245,328	216,858	872,584	862,069	10,495	2,320,172	1,447,588
N. J., 2 est.; N. Y., 4.....	1929	6	175	443	876	-----	876	524,827	526,469	2,626,792	2,585,334	43,458	4,872,163	2,243,401
Other States (Calif., 1 est.; Colo., 1; Iowa, 1; Tex., 1; Wash., 1).....	1929	5	7	11	10	-----	10	4,357	5,454	12,133	11,884	249	31,669	10,476
States not shown separately.....	1927	23	344	829	1,558	-----	1,558	590,041	1,166,496	3,990,810	3,026,365	64,415	7,985,221	3,994,411

¹ Not including proprietors and firm members, as follows: For 1929, 8; 1927, 6; 1919, 19. 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, 1,084; 1927, 1,103; 1919, 1,128.
² For 1929, sales (shipments or deliveries) by manufacturers; for earlier years, production. See GENERAL EXPLANATIONS—Value of Products. See also note 2, Table 1.
³ Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
⁴ Connecticut, 1 establishment; Delaware, 1; Illinois, 3; Massachusetts, 2; Michigan, 2; Minnesota, 1; Missouri, 2; New York, 12; Ohio, 5; Pennsylvania, 2; Wisconsin, 1.
⁵ Delaware, 1 establishment; Illinois, 2; Indiana, 1; Massachusetts, 3; Missouri, 3; New Jersey, 1; New York, 6; Ohio, 4; Pennsylvania, 1; Wisconsin, 1.

GAS AND ELECTRIC FIXTURES; LAMPS, LANTERNS, AND REFLECTORS

Description of the industry.—This industry classification embraces establishments engaged primarily in the manufacture of electric lighting equipment (not including incandescent electric bulbs) for residential, commercial, and industrial use; motor-vehicle lamps; gas, kerosene, and gasoline lighting equipment; reflectors and shades; parts, etc. (Establishments which manufacture incandescent electric bulbs as their primary product are classified in the "Electrical machinery, apparatus, and supplies" industry.)

Detailed statistics of products.—Detailed data on the values of specified classes of products sold by manufacturers were collected at the census for 1929 but not at any preceding biennial census. Annual canvasses of manufacturers of lighting equipment were made for the years 1922 to 1927, inclusive, but the statistics compiled from the returns received at those canvasses are not comparable with the figures for 1929.

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 ¹	Value added by manufacture ²	Horsepower
1929.....	614	23,580	\$33,268,595	\$57,918,407	\$144,965,706	\$87,047,299	40,209
1927.....	481	21,030	29,260,824	55,608,545	127,802,407	72,193,862	31,291
1925.....	517	22,334	31,072,058	57,770,818	129,698,889	71,927,571	30,088
1923.....	535	22,919	29,097,143	52,639,539	118,978,627	66,339,088	30,534
1921.....	465	15,866	18,523,190	32,801,006	72,054,398	39,252,792	(3)
1919.....	512	18,165	19,094,877	38,087,571	80,366,570	41,679,299	22,278
1914.....	611	18,047	10,677,034	22,101,898	45,378,224	23,276,326	19,213
1909.....	619	18,861	10,393,078	20,467,357	45,057,372	24,690,015	14,614
1904.....	406	12,570	6,407,984	11,077,758	26,560,360	15,482,502	7,579
1899.....	377	11,238	5,188,063	7,961,965	19,821,334	11,859,369	5,849
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	27.7	12.1	13.7	4.2	13.4	20.6	28.5
1925-1927.....	-7.0	-5.8	-5.8	-3.7	-1.5	.4	4.2
1923-1925.....	-3.4	-2.6	6.8	9.7	9.0	8.4	-1.6
1921-1923.....	15.1	44.5	57.1	60.5	65.1	69.0	-----
1919-1921.....	-9.2	-12.6	-3.0	-15.2	-10.3	-5.8	-----
1919-1929.....	19.9	29.9	74.2	49.7	80.4	108.9	80.5
1909-1919.....	-17.3	-3.7	83.7	89.0	78.4	89.5	52.4
1899-1909.....	64.2	67.8	100.3	157.1	127.3	107.3	149.9

¹ For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.
² Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
³ 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. Certain of the States for which the items 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 ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States.....	1929	614	4,759	23,580	40,209	4,224	35,985	\$13,710,800	\$33,268,595	\$57,918,407	\$56,211,179	\$1,707,228	\$144,965,706	\$37,047,299
	1927	481	4,791	21,030	31,291	4,873	26,418	12,036,807	29,260,824	55,608,545	54,214,043	1,393,902	127,802,407	32,193,882
	1919	512	3,621	18,155	22,278	7,435	14,843	7,132,926	19,094,877	38,687,571	37,775,626	911,945	80,366,870	41,679,299
Individual States:														
California.....	1929	83	236	977	1,140	-----	1,140	728,234	1,531,769	2,315,548	2,282,548	33,000	5,969,188	3,653,640
	1927	57	316	890	978	-----	978	775,754	1,307,301	1,803,842	1,778,909	25,038	5,122,846	3,319,094
	1919	34	144	360	468	-----	468	230,707	405,730	1,120,835	1,107,150	13,685	2,209,635	1,088,800
Connecticut.....	1929	18	316	1,224	2,970	185	2,785	673,668	1,779,349	2,122,702	2,018,986	103,717	5,138,314	3,015,611
	1927	11	312	1,042	1,852	135	1,717	400,507	1,176,500	2,434,250	2,430,596	73,664	5,400,204	2,965,954
	1919	12	159	1,562	2,481	1,000	1,481	409,372	1,781,810	2,215,066	2,132,460	82,606	5,147,930	2,932,864
Illinois.....	1929	82	1,144	4,592	7,131	562	6,569	3,242,771	6,492,183	11,153,517	10,727,872	425,645	30,325,851	19,172,334
	1927	76	1,052	5,018	6,204	1,357	4,847	2,589,263	6,882,365	12,315,387	12,028,553	286,834	29,788,948	17,473,561
	1919	67	595	2,638	2,550	1,295	1,255	1,146,301	2,501,326	5,778,161	5,663,569	114,592	11,832,657	6,054,496
Indiana.....	1929	14	333	1,825	4,328	180	4,148	774,576	2,038,055	4,275,608	4,118,687	156,921	10,826,411	6,550,803
	1927	7	560	949	1,803	-----	1,803	1,253,481	1,043,543	5,277,537	5,180,934	90,003	9,282,432	3,984,896
	1919	9	45	266	980	105	884	63,016	199,920	472,573	459,535	13,038	873,308	400,735
Kentucky.....	1929	3	8	17	45	6	39	13,112	13,532	8,633	7,769	864	42,831	34,198
Maryland.....	1929	6	10	26	82	-----	82	19,355	28,445	58,634	56,926	1,708	160,675	92,041
	1927	6	5	22	44	-----	44	13,379	20,474	77,653	76,162	1,891	138,635	61,082
	1919	4	8	35	21	6	15	21,780	34,631	84,857	83,594	1,263	169,630	84,773
Massachusetts.....	1929	15	70	493	1,007	5	1,002	214,696	677,134	1,044,337	997,539	46,748	2,648,023	1,003,686
	1927	15	63	351	856	-----	856	201,846	516,235	821,028	777,332	43,696	2,039,279	1,218,251
	1919	15	101	716	1,091	-----	1,091	180,676	647,793	1,047,441	1,004,683	42,758	2,161,320	1,113,879
Michigan.....	1929	15	99	2,010	4,962	1,475	3,487	402,276	3,180,406	4,672,530	4,543,422	129,108	13,128,787	8,456,257
	1927	(4)	(9)	(5)	(8)	(4)	8	(5)	(8)	(5)	(5)	(8)	(5)	(6)
	1919	21	169	1,042	1,847	-----	1,839	332,351	1,519,366	2,910,178	2,848,308	61,870	6,981,235	4,071,057
Minnesota.....	1929	7	17	50	100	-----	100	19,025	40,086	54,916	52,973	1,943	129,808	74,892
	1927	5	9	29	84	-----	84	13,348	38,441	67,489	65,644	1,845	131,460	63,971
	1919	7	32	75	91	-----	91	52,424	75,283	203,985	200,821	3,164	427,523	223,538
Missouri.....	1929	13	178	487	570	-----	570	560,716	735,018	1,020,134	982,391	37,743	3,162,206	2,142,072
	1927	13	140	493	561	-----	561	391,141	730,911	998,353	969,633	28,720	2,834,100	1,835,747
New Jersey.....	1929	22	167	552	1,645	700	945	409,939	1,002,783	1,482,439	1,424,446	57,993	3,845,704	2,363,265
	1927	15	273	1,331	2,391	850	1,541	731,211	1,292,775	2,111,004	2,026,286	84,718	4,358,120	2,247,125
	1919	17	396	1,903	1,570	1,409	161	454,116	1,452,861	4,161,267	4,053,619	123,648	7,086,354	2,925,087
New York.....	1929	210	1,242	5,639	5,559	662	4,897	3,887,668	8,810,790	16,926,611	16,573,902	352,709	39,232,208	22,305,597
	1927	156	1,045	3,474	5,178	1,187	3,981	3,411,900	8,243,236	13,966,407	13,572,544	393,863	34,139,032	20,172,625
	1919	162	937	4,002	3,833	1,278	2,555	2,082,841	5,170,844	8,282,895	8,112,513	170,382	18,670,416	10,387,521
Ohio.....	1929	39	374	3,202	8,640	74	8,566	1,290,084	4,090,918	8,254,882	8,036,626	218,256	19,005,904	10,751,022
	1927	32	326	2,246	4,397	-----	4,397	831,205	3,285,032	6,850,736	6,697,684	169,052	14,280,450	7,403,714
	1919	40	282	1,934	4,013	583	3,430	756,127	2,265,501	5,011,657	5,777,789	123,868	10,651,973	4,640,316
Oregon.....	1929	4	15	19	20	-----	20	24,461	33,122	77,506	76,653	853	143,422	65,916
	1927	3	4	33	12	-----	12	5,325	55,941	82,335	80,400	1,935	200,360	118,031
Pennsylvania.....	1929	41	227	1,157	1,193	375	818	617,729	1,456,305	2,243,564	2,167,369	76,195	5,575,936	3,332,372
	1927	39	206	972	1,185	344	841	586,785	1,340,611	1,830,990	1,769,041	61,649	4,762,240	2,931,250
	1919	63	263	991	1,444	910	534	400,805	988,813	1,649,215	1,587,208	62,007	4,009,594	2,360,679
Washington.....	1929	11	61	184	94	-----	94	157,291	285,839	323,618	317,857	5,761	898,253	574,635
	1927	14	69	143	360	-----	360	144,337	242,423	378,253	371,362	6,891	931,612	553,359
	1919	9	35	49	99	-----	99	65,805	75,439	205,575	202,210	3,365	447,271	241,696
Wisconsin.....	1929	17	124	368	337	-----	337	343,930	500,332	892,648	890,565	32,283	2,105,434	1,302,486
	1927	15	145	393	303	-----	303	274,058	469,308	1,039,990	1,617,955	22,035	3,247,434	1,607,444
Groups of States:														
Okla., 2 est.; Tex., 2	1929	4	9	29	31	-----	31	16,114	47,639	64,788	61,289	3,499	178,221	113,433
Colo., 2 est.; Iowa, 3;	1929	7	118	407	338	-----	338	300,259	467,612	877,719	856,431	21,288	2,289,188	1,411,469
Kans., 1; Nebr., 1;	1929	3	6	22	17	-----	17	13,996	17,388	47,772	46,878	894	79,342	31,570
Ala., 1 est.; Fla., 1;	1929	3	6	22	17	-----	17	13,996	17,388	47,772	46,878	894	79,342	31,570
R. I., 1	1929	3	6	22	17	-----	17	13,996	17,388	47,772	46,878	894	79,342	31,570
States not shown separately.....	1927	17	276	1,684	5,023	1,000	4,023	573,507	2,613,438	4,947,391	4,835,708	111,683	11,185,240	6,237,849
	1919	43	455	1,982	2,121	841	1,280	886,545	1,974,512	4,643,866	4,548,167	95,609	9,707,724	5,153,858

¹ Not including proprietors and firm members, as follows: For 1929, 270; 1927, 261; 1919, 337. 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, 28,609; 1927, 20,082; 1919, 22,113.

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

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

⁴ 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.

⁵ Withheld from publication in order to avoid disclosing data for individual establishments.

⁶ Colorado, 2 establishments; Iowa, 2; Kansas, 2; Kentucky, 1; Louisiana, 1; Michigan, 6; Oklahoma, 1; Texas, 1; Virginia, 1.

⁷ Colorado, 2 establishments; District of Columbia, 2; Iowa, 2; Kansas, 1; Kentucky, 1; Louisiana, 1; Missouri, 7; Nebraska, 1; Mississippi, 1; Oklahoma, 1; Oregon, 4; Rhode Island, 4; Tennessee, 2; Texas, 1; West Virginia, 1; Wisconsin, 13.

GAS AND ELECTRIC FIXTURES; LAMPS, ETC.

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TABLE 3.—PRODUCTS BY KIND 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 some cases, however, certain of the "Other States" reported larger values of the specified products than some of the States shown separately]

KIND AND STATE	Value	KIND AND STATE	Value
1. "Gas and electric fixtures; lamps, lanterns, and reflectors" industry, all products, total value.....	\$144,965,706	Gas and electric fixtures, lamps, lanterns, and reflectors—Con.	
2. Gas and electric fixtures, lamps, lanterns, and reflectors.....	137,593,290	Electric-lighting equipment—Continued.	
3. Other products (not normally belonging to the industry).....	7,372,416	Residence fixtures—Continued.	
4. Gas and electric fixtures, and lamps, lanterns, and reflectors made as secondary products in other industries, value.....	10,149,157	Portable lamps—Continued.	
Gas and electric fixtures, lamps, lanterns, and reflectors, all industries, aggregate (sum of 2 and 4).....	147,742,447	Lanterns and other outdoor fixtures, total.....	\$1,763,093
Electric-lighting equipment—		California.....	152,108
Residence fixtures, total.....	51,256,780	Illinois.....	145,488
Calling or chandelier type (except kitchen units), total.....	16,611,810	Michigan.....	61,561
California.....	906,443	Minnesota.....	3,785
Illinois.....	1,323,014	Missouri.....	29,167
Minnesota.....	38,526	New York.....	295,471
Missouri.....	558,515	Ohio.....	521,509
New Jersey.....	509,419	Pennsylvania.....	414,870
New York.....	8,229,227	Washington.....	11,550
Ohio.....	1,694,045	Wisconsin.....	25,246
Pennsylvania.....	1,152,231	Other States (Colo., Conn., Ky., Mass., N. J., Okla., Oreg.).....	102,338
Washington.....	185,173	Other residence fixtures, total.....	3,719,735
Wisconsin.....	1,113,739	California.....	245,969
Other States (Colo., Conn., Ind., Iowa, Mass., Mich., Okla., Oreg., Tex.).....	816,278	Illinois.....	484,873
Wall or bracket type (except kitchen units), total.....	7,094,845	Michigan.....	20,811
California.....	641,645	New York.....	1,538,521
Illinois.....	718,154	Other States (Colo., Conn., Mo., N. J., Ohio, Okla., Pa., Wash., Wis.).....	1,429,561
Minnesota.....	18,980	Commercial fixtures, total.....	15,300,476
Missouri.....	329,910	Auditorium, church, and theater, total.....	5,878,902
New Jersey.....	456,841	California.....	590,585
New York.....	3,155,153	Illinois.....	2,044,783
Ohio.....	464,357	Missouri.....	336,488
Pennsylvania.....	505,524	New York.....	1,809,525
Washington.....	120,691	Ohio.....	191,759
Wisconsin.....	115,265	Pennsylvania.....	112,086
Other States (Colo., Conn., Ind., Iowa, Ky., Mass., Mich., Okla., Oreg., Tex.).....	568,325	Wisconsin.....	122,329
Kitchen units, total.....	1,539,841	Other States (Colo., Conn., Ind., Iowa, Ky., Mass., Minn., Nebr., N. J., Okla., Wash.).....	701,407
California.....	128,964	Public-building, bank, store, office-building, school, etc., total.....	7,988,256
Illinois.....	115,020	California.....	340,906
New York.....	665,466	Illinois.....	1,952,700
Ohio.....	106,010	New York.....	2,585,284
Pennsylvania.....	54,567	Ohio.....	1,119,678
Washington.....	25,474	Pennsylvania.....	374,550
Other States (Colo., Conn., Mass., Minn., Mo., N. J., Okla., Wis.).....	454,350	Washington.....	117,016
Portable lamps—		Wisconsin.....	93,462
Table and boudoir, total.....	9,385,005	Other States (Colo., Conn., Ind., Ky., Mass., Minn., Mo., N. J., Okla.).....	1,404,570
California.....	198,586	Window and show-case, total.....	1,108,520
Connecticut.....	382,544	California.....	144,944
Illinois.....	3,500,903	Illinois.....	255,622
New Jersey.....	157,426	New York.....	470,657
New York.....	4,277,212	Other States (Colo., Conn., Ky., Mass., Mich., Minn., Mo., N. J., Ohio, Pa., R. I., Wash.).....	237,297
Ohio.....	82,265	Photographing, photo-engraving, and blue printing (Calif., Mich., N. Y., Ohio, Pa.).....	374,738
Pennsylvania.....	134,038	Industrial fixtures, total.....	2,147,984
Other States (Colo., Ind., Mass., Mich., Minn., Mo., Okla., Tex., Wash., Wis.).....	652,031	Factory (Calif., Ill., Mass., Minn., Mo., N. Y., Okla., Pa., Wash., Wis.).....	1,630,983
Bridge and floor, total.....	10,492,565	Office and drafting-room, total.....	517,001
California.....	254,834	California.....	50,923
Connecticut.....	629,066	New York.....	67,839
Illinois.....	4,510,096	Other States (Ill., Mass., Mo., N. J., Pa., Wash., Wis.).....	392,239
Indiana.....	496,604	Miscellaneous lighting equipment, total.....	52,879,19
New Jersey.....	125,623	Street and highway fixtures (Calif., Ill., Ind., Md., Mass., N. Y., Pa.).....	3,287,588
New York.....	2,717,018	Desk and reading lamps, total.....	1,077,356
Ohio.....	158,600	New York.....	455,614
Pennsylvania.....	1,183,415	Other States (Calif., Colo., Conn., Ill., Iowa, Md., Mass., Mich., Minn., N. J., Ohio, Okla., Pa., Wash.).....	621,742
Other States (Ala., Colo., Iowa, Md., Mass., Mich., Minn., Mo., Okla., Oreg., Wash., Wis.).....	325,309	Motor-vehicle lamps, complete, total.....	30,384,191
Candelabra, candlesticks, and electric candles, total.....	739,866	Illinois.....	3,479,286
California.....	17,167	New Jersey.....	374,579
New York.....	400,521		
Pennsylvania.....	16,932		
Other States (Colo., Conn., Ill., Iowa, Ky., Mass., Minn., Mo., N. J., Ohio, Tex., Wash.).....	305,266		

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

[See note at head of this table]

KIND AND STATE	Value	KIND AND STATE	Value
Gas and electric fixtures, lamps, lanterns, and reflectors—Con. Electric-lighting equipment—Continued. Miscellaneous lighting equipment—Continued. Motor-vehicle lamps, complete—Continued.		Gas and electric fixtures, lamps, lanterns, and reflectors—Con. Reflectors and shades, total	\$4,060,813
New York	\$520, 123	Metal, all types, total	3,683,071
Ohio	12,847,526	California	17,384
Other States (Calif., Conn., Ind., Md., Mass., Mich., Mo., Wis.)	19,162,677	Other States (Colo., Conn., Ill., Ind., Md., Mass., Mich., Minn., Mo., N. Y., Ohio, Pa., Tex., Wash.)	3,665,687
Other electric fixtures, including arc lamps, motorcycle and miners' lamps, total	11,830,060	All-glass and all-porcelain, total	1,277,742
California	1,041,686	New York	130,560
Illinois	3,334,120	Other States (Calif., Ill., Ind., Mass., Mo., N. J., Ohio, Pa., Wis.)	1,147,173
Maryland	37,310	Incandescent mantles (Conn., Ill., Kans., Mass., N. J., Ohio)	1,595,978
Missouri	295,179	Carbide lamps (miners', bicycle, motorcycle, etc.), total	751,504
New Jersey	288,406	Illinois	570,192
New York	5,406,982	Other States (Conn., Ky., N. Y., Ohio)	181,312
Pennsylvania	89,687	Other lighting fixtures and equipment, including— Gas fixtures and posts and standards, total	3,785,530
Other States (Conn., Fla., Ind., Mass., Mich., Minn., Ohio, Okla., Oreg., Wash.)	1,336,630	California	163,297
Kerosene and gasoline lighting equipment, total	5,676,259	Connecticut	354,418
Lamps (Conn., Ill., Ind., Kans., Mass., Mo., N. Y., Ohio, Pa., Wis.)	2,084,257	Illinois	1,724,418
Lanterns, total	3,592,002	New York	867,653
New York	2,680,264	Pennsylvania	240,970
Other States (Ill., Kans., Mo., Ohio, W. Va.)	911,738	Other States (Colo., Ky., Mass., Mich., Minn., Mo., N. J., Ohio, Okla., Wash., Wis.)	435,076
Lighting equipment not separately reported as to kind by manufacturers, total	4,920,711	Parts, total	4,767,217
California	249,372	California	120,190
Connecticut	1,598,199	Illinois	1,259,641
Illinois	221,993	Indiana	676,627
Massachusetts	115,753	New York	538,736
New York	738,490	Other States (Conn., Iowa, Kans., Ky., Mass., Minn., Ohio, Pa., Tenn., W. Va., Wis.)	2,172,123
Pennsylvania	682,683		
Wisconsin	146,853		
Other States (Fla., Ind., Ky., Md., Mich., Minn., Mo., Ohio, Tex., Wash.)	1,167,368		

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

[Costs of principal materials consumed were reported by only 422 of the 614 establishments in this industry. The combined value of products reported by these 422 establishments amounted to \$106,905,161, or 73.8 per cent of the aggregate value of the products of all establishments in 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 certain specified materials, whereas the others 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 "Other States" reported larger costs of specified materials than some of the States shown separately]

KIND AND STATE	Cost	KIND AND STATE	Cost	KIND AND STATE	Cost
Copper, brass, and bronze sheets and other forms, including castings, total	\$15,408,073	Glass and glass products—Continued. Other States (Colo., Ind., Kans., Ky., Md., Mass., Mich., Minn., Mo., N. Y., Okla., Oreg., Wash.)	\$7,446,313	Electric wire and electrical supplies for assembly—Continued. Minnesota	\$12,454
California	304,921	Iron and steel, all forms, total	5,614,586	New Jersey	254,110
Illinois	1,756,097	California	269,844	New York	1,185,511
Indiana	1,159,339	Connecticut	169,604	Ohio	608,232
Massachusetts	206,082	Illinois	1,466,132	Pennsylvania	265,393
Michigan	44,733	Indiana	329,687	Wisconsin	53,856
Missouri	78,898	Massachusetts	168,908	Other States (Colo., Iowa, Ky., Md., Mich., Mo., Okla., Oreg., Tex., Wash.)	452,163
New Jersey	316,076	Michigan	63,773	Paint, enamel, varnish, lacquer, etc., total	1,813,139
New York	6,331,161	New York	1,819,165	California	39,877
Ohio	2,526,334	Ohio	542,474	Connecticut	46,943
Pennsylvania	508,378	Pennsylvania	309,558	Illinois	524,893
Wisconsin	205,278	Wisconsin	76,963	Massachusetts	9,745
Other States (Colo., Conn., Iowa, Kans., Ky., Md., Minn., Okla., Oreg., Tex., Wash.)	1,970,776	Other States (Colo., Fla., Iowa, Kans., Ky., Md., Minn., Mo., N. J., Okla., Oreg., Tex., Wash.)	398,478	Missouri	140,065
Glass and glass products, total	9,179,360	Electric wire and electrical supplies for assembly, total	4,441,900	New York	705,572
California	131,009	California	312,765	Ohio	133,772
Connecticut	77,610	Connecticut	161,277	Pennsylvania	82,707
Illinois	583,193	Illinois	944,727	Washington	7,442
New Jersey	148,336	Indiana	47,196	Wisconsin	34,898
Ohio	554,143	Massachusetts	85,216	Other States (Colo., Ind., Iowa, Ky., Md., Mich., Minn., N. J., Okla., Oreg.)	87,225
Pennsylvania	199,973				
Wisconsin	38,783				

GAS AND ELECTRIC FIXTURES; LAMPS, ETC.

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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.....	7,749	40,269	4,816	31,291	3,950	30,638	2,268	22,278	1,352	18,213	100.0	100.0
Prime movers, total.....	34	4,224	38	4,873	50	7,149	96	7,435	147	9,007	10.5	33.4
Steam, total.....	26	3,385	24	3,607	33	5,507	48	6,039	75	7,088	8.4	27.1
Engines.....	25	3,260	23	3,452	30	5,460	48	6,039	(1)	(1)	8.1	27.1
Turbines.....	1	125	1	125	3	137			(1)	(1)	.3	
Internal-combustion engines.....	4	89	9	141	11	392	41	1,169	66	1,722	1.2	5.3
Water wheels and water turbines.....	4	750	5	1,125	6	1,160	7	227	6	187	1.9	1.0
Electric motors driven by purchased energy.....	7,715	35,985	4,778	26,418	3,900	22,889	2,112	14,843	1,205	9,206	89.5	66.6
Electric motors, total.....	7,948	37,034	5,087	28,304	4,555	26,266	2,576	18,390	1,658	11,491	100.0	100.0
Driven by purchased energy.....	7,715	35,985	4,778	26,418	3,900	22,889	2,112	14,843	1,205	9,206	97.2	80.7
Driven by energy generated in establishments reporting.....	233	1,049	309	1,946	655	3,377	464	3,547	453	2,285	2.8	19.3
Electric generators.....	28	Kilowatts 2,885 Kilowatt-hours	10	Kilowatts 2,229	27	Kilowatts 4,042	(2)	(2)	(2)	(2)		
Electric energy purchased ¹		45,002,670		(1)		(4)		(2)		(5)		

¹ Not called for separately on schedule.
² Not called for on schedule.

³ This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.
⁴ 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.....	23,580	23,097	23,693	23,504	24,141	24,101	23,672	23,339	23,999	24,613	24,348	22,656	<i>21,461</i>	87.2	
1925.....	22,334	<i>21,018</i>	21,561	21,619	21,759	21,446	21,120	21,046	21,841	23,235	24,497	24,895	23,966	84.4	
1919.....	18,155	<i>16,887</i>	16,429	16,573	16,848	17,085	17,337	18,228	19,081	19,206	19,783	20,215	20,688	79.2	
1914.....	18,047	18,319	19,063	19,034	18,883	17,930	17,550	<i>16,888</i>	17,098	17,764	18,483	17,977	17,077	88.6	
1909.....	18,861	<i>17,691</i>	17,804	18,181	18,593	17,923	17,986	17,743	18,379	19,373	20,457	21,600	21,198	83.5	
California.....	977	991	<i>982</i>	<i>949</i>	966	977	950	983	980	987	1,002	1,015	948	93.2	
Connecticut.....	1,224	1,179	1,171	1,214	1,289	1,196	<i>1,167</i>	1,174	1,232	1,249	1,281	1,333	1,269	88.2	
Illinois.....	4,592	4,357	4,459	4,405	4,365	4,354	4,377	4,467	4,873	5,120	5,082	4,864	4,375	85.0	
Indiana.....	1,825	1,927	1,929	1,811	1,934	1,909	1,917	1,968	1,930	1,821	1,745	1,522	<i>1,487</i>	75.6	
Kentucky.....	17	18	16	13	<i>12</i>	13	13	13	14	16	20	19	19	60.0	
Maryland.....	26	26	26	28	28	28	27	27	27	26	26	25	<i>24</i>	85.7	
Massachusetts.....	493	489	545	565	529	518	489	501	484	478	486	442	451	75.4	
Michigan.....	2,010	1,951	2,130	2,015	2,092	2,240	2,174	2,189	2,161	2,078	1,997	<i>1,566</i>	1,585	67.2	
Minnesota.....	50	48	47	51	51	49	50	50	49	49	50	54	52	87.0	
Missouri.....	487	522	489	487	505	491	495	485	480	492	478	474	448	85.8	
New Jersey.....	852	822	820	837	817	830	836	863	905	914	841	845	896	89.4	
New York.....	5,639	<i>5,206</i>	5,304	5,353	5,493	5,398	5,425	5,309	5,815	6,205	6,412	6,162	5,584	81.2	
Ohio.....	3,202	3,303	3,612	3,803	3,893	3,848	3,580	3,289	2,929	2,927	2,753	2,268	<i>2,216</i>	66.1	
Oregon.....	19	27	<i>12</i>	<i>12</i>	<i>12</i>	<i>12</i>	<i>12</i>	13	13	29	29	29	28	41.4	
Pennsylvania.....	1,157	1,196	1,223	1,241	1,225	1,179	1,175	1,068	1,083	1,150	1,178	1,142	1,082	81.2	
Washington.....	184	182	175	180	164	162	191	186	188	191	196	191	206	78.6	
Wisconsin.....	368	<i>357</i>	362	366	366	372	371	363	364	374	373	379	364	94.2	

GOLD LEAF AND FOIL

(FORMERLY "GOLD AND SILVER, LEAF AND FOIL")

Description of the industry.—This industry embraces establishments engaged primarily in beating gold into thin sheets for use in sign painting, decorating, book-binding, etc. The products are reported in packs of 500 sheets. Small quantities of silver leaf and foil were reported as minor products at former censuses.

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 ¹	Value added by manufacture ²	Horsepower
1920.....	75	1,177	\$1,134,044	\$1,932,667	\$3,978,024	\$2,045,857	383
1927.....	77	1,146	1,120,434	1,721,174	3,571,190	1,850,016	346
1925.....	84	1,148	1,112,685	1,838,611	3,745,807	1,907,196	326
1923.....	64	918	933,591	1,896,806	3,551,855	1,665,050	281
1921.....	72	1,104	1,042,028	4,894,718	7,014,498	2,019,778	(3)
1919.....	87	950	983,600	2,655,335	4,401,558	1,806,233	408
1914.....	79	1,135	498,273	1,452,429	2,432,145	979,716	360
1909.....	88	1,383	636,967	1,517,874	2,630,500	1,112,626	264
1904.....	83	1,402	662,813	1,476,111	2,695,298	1,219,187	277
1899.....	93	1,163	498,692	1,604,013	2,666,224	1,062,211	144
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929.....	(4)	2.7	1.2	12.3	11.4	10.6	10.7
1925-1927.....	(4)	-0.2	0.7	-6.4	-4.7	-3.0	6.1
1923-1925.....	(4)	25.1	19.2	-3.1	5.2	14.5	16.0
1921-1923.....	(4)	-16.8	-10.4	-62.0	-49.2	-17.6	-----
1919-1921.....	(4)	16.2	5.9	88.1	57.2	11.8	-----
1919-1929.....	(5)	23.9	15.3	-27.2	-10.8	13.2	-6.1
1909-1919.....	(5)	-31.3	54.4	74.9	69.6	62.3	60.6
1899-1909.....	(5)	18.9	27.7	-5.4	-1.3	4.7	76.4

¹ For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.
² Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
³ This amount includes \$1,151,529, the cost of 54,079 troy ounces of gold, reported by 63 of the 75 establishments in the industry. The combined value of products reported by these 63 establishments amounted to \$3,016,987, or 75.8 per cent of the aggregate value of products of the industry.
⁴ Not called for on schedule.
⁵ Per cent not computed where base is less than 100.

GOLD LEAF AND FOIL

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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 employes ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States.....	1929	75	81	1,177	383	7	376	\$261,796	\$1,134,044	\$1,932,667	\$1,903,904	\$28,763	\$3,978,024	\$2,045,357
	1927	77	72	1,146	346	8	338	177,403	1,120,434	1,721,174	1,692,742	28,432	3,571,190	1,850,016
	1919	87	99	950	408	91	317	204,592	983,600	2,655,335	2,630,724	24,611	4,461,568	1,800,233
Individual States:														
California.....	1929	6	1	15	3		3	2,184	16,539	23,649	23,619	30	64,199	40,550
	1927	6		18	1		1		21,024	23,985	23,776	209	65,798	41,813
Illinois.....	1929	7	6	129	23		23	16,264	152,373	120,163	118,381	1,782	326,665	206,492
	1927	7	6	107	21		21	13,977	134,776	108,451	106,720	1,731	283,003	178,182
	1919	6	19	133	34		34	34,608	130,999	255,966	253,153	2,813	470,429	214,463
Massachusetts.....	1929	17	14	133	66	7	59	18,189	138,238	187,051	182,930	4,121	417,764	230,713
	1927	18	9	142	40	8	32	20,659	145,075	258,449	254,110	4,339	540,015	281,566
	1919	12	10	124	41	12	29	12,437	125,753	193,265	190,827	2,488	399,443	208,178
New Jersey.....	1929	11	5	145	47		47	9,957	123,200	302,207	296,958	5,249	675,312	373,105
	1927	11	7	124	26		26	2,625	98,748	107,205	105,136	2,069	253,803	146,598
	1919	17	6	143	59	22	37	16,300	128,795	194,367	189,963	4,404	448,856	254,489
New York.....	1929	23	8	236	69		69	47,418	236,499	359,350	383,602	5,848	819,269	429,919
	1927	24	12	246	85		85	38,821	253,514	358,043	376,203	11,840	816,796	428,763
	1919	41	28	240	130	7	123	71,025	269,536	1,218,611	1,210,393	8,218	1,789,597	570,986
Groups of States:														
Conn., 2 est.; Pa., 4; R. I., 2	1929	8	47	498	174		174	167,784	453,246	896,269	884,966	11,303	1,639,938	743,609
Other States (Me., 1 est.; Md., 1; Minn., 1)	1929	3		21	1		1		13,949	13,978	13,548	430	34,887	20,909
States not shown separately.....	1927	11	38	509	173		173	101,421	466,697	835,041	826,797	8,244	1,611,175	776,134
	1919	11	36	310	144	50	94	70,222	328,517	793,126	786,888	6,738	1,353,243	560,117

¹ Not including proprietors and firm members, as follows: For 1929, 69; 1927, 84; 1919, 97. 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, 1,327; 1927, 1,362; 1919, 1,146.
² For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.
³ Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
⁴ This amount includes \$1,151,529, the cost of 54,079 troy ounces of gold, reported by 63 of the 75 establishments in the industry. The combined value of products reported by these 63 establishments amounted to \$3,016,987, or 75.8 per cent of the aggregate value of products of the industry.
⁵ Connecticut, 2 establishments; Maine, 1; Maryland, 1; Minnesota, 1; Pennsylvania, 4; Rhode Island, 2.
⁶ California, 2 establishments; Connecticut, 2; Maryland, 1; Pennsylvania, 4; Rhode Island, 2.

CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRODUCTS, BY QUANTITY AND VALUE, BY 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. Figures are given for each State which can be shown separately without disclosing data for individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

	1929	1927		1929	1927		1929	1927
United States:			Massachusetts:			New York:		
Total packs.....	320,685	230,229	Packs.....	34,471	27,535	Packs.....	61,577	61,118
Total value.....	\$3,872,481	\$2,739,602	Value.....	\$394,306	\$327,955	Value.....	\$765,260	\$679,236
California:			New Jersey:			Other States: ³		
Packs.....	5,833	5,674	Packs.....	57,480	23,348	Packs.....	134,042	94,278
Value.....	\$64,199	\$65,798	Value.....	\$975,312	\$253,803	Value.....	\$1,646,749	\$1,129,207
Illinois:								
Packs.....	27,282	24,276						
Value.....	\$326,655	\$253,603						

¹ The difference of \$105,543 between this amount and the total value of products as given in Tables 1 and 2 represents the value of commodities other than gold leaf, made as secondary products in the gold leaf and foil industry.
² This value differs from the total value of products given in Tables 1 and 2 because of the fact that it represents the total output of gold leaf made in all industries (as a primary product in the gold-leaf industry and as a secondary product in other industries), whereas the value of products as given in Tables 1 and 2 represents the value of gold leaf made in the gold-leaf industry alone, plus the value of other commodities made as secondary products in that industry.
³ For 1929: Connecticut, Maine, Maryland, Minnesota, Pennsylvania, Rhode Island.

TABLE 4.—PRIME MOVERS, MOTORS, AND CONSUMPTION OF PURCHASED ELECTRIC ENERGY—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS, 1929, 1927, 1925, 1919, AND 1914; 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.....	202	Horse-power 383	146	Horse-power 346	109	Horse-power 326	97	Horse-power 408	70	Horse-power 360	100.0	100.0
Prime movers, total.....	2	7	3	8	5	18	10	91	13	154	1.8	22.3
Steam engines.....							2	65	4	111		15.9
Internal-combustion engines.....	2	7	3	8	5	18	8	26	9	43	1.8	6.4
Electric motors driven by purchased energy.....	200	376	143	338	104	308	87	317	57	206	98.2	77.7
Electric motors, total.....	200	376	143	338	104	308	88	322	59	216	100.0	100.0
Driven by purchased energy.....	200	376	143	338	104	308	87	317	57	206	100.0	98.4
Driven by energy generated in establishments reporting.....							1	5	2	10		1.6
Electric energy purchased ¹		Kilowatt-hours 310,156		(?)		(?)		(?)		(?)		

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

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.....	1,177	1,154	1,187	1,193	1,193	1,190	1,187	1,171	<i>1,159</i>	1,173	1,172	1,172	1,188	95.5
1925.....	1,148	1,166	1,154	1,163	1,147	1,150	1,143	1,136	<i>1,127</i>	1,155	1,152	1,140	1,145	96.7
1919.....	950	933	935	926	923	920	890	929	935	964	989	1,021	1,035	86.0
1914.....	1,135	1,168	1,177	1,187	1,148	1,133	1,120	1,128	<i>1,038</i>	1,117	1,129	1,124	1,121	92.4
1909.....	1,383	1,351	1,362	1,376	1,393	1,404	1,387	1,350	<i>1,325</i>	1,374	1,428	1,439	1,417	91.9
California.....	15	15	15	15	15	15	15	15	15	15	15	15	15	88.1
Illinois.....	129	<i>118</i>	123	126	131	134	130	133	130	130	130	132	131	87.1
Massachusetts.....	133	140	139	133	132	131	126	127	<i>122</i>	135	140	138	133	93.2
New Jersey.....	145	<i>158</i>	146	145	146	145	144	144	143	144	145	145	148	93.2
New York.....	236	234	243	251	250	250	245	231	<i>215</i>	225	226	225	238	85.6

GOLD, SILVER, AND PLATINUM, REDUCING AND REFINING, NOT FROM THE ORE

Description of the industry.—The establishments classified in this industry are engaged primarily in refining and alloying gold, silver, and platinum, for jewelers' and silversmiths' use. The materials used include old gold, silver, and platinum, sweepings, clippings, and plated scrap, as well as purchased bullion. (To the extent to which gold is produced

from copper ore and silver from lead and zinc ores, the smelting and refining of these metals are covered by the "Smelting and refining, copper," "Smelting and refining, lead," and "Smelting and refining, zinc" industries, respectively. A small quantity of platinum is also obtained from the smelting of copper ore.)

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 ¹	Value added by manufacture ²	Horsepower
1929.....	69	931	\$1,633,838	\$61,570,093	\$67,959,140	\$6,289,047	4,230
1927.....	57	801	1,434,620	58,877,476	62,647,127	3,769,651	4,288
1925.....	66	1,258	2,165,685	88,867,196	96,243,474	6,376,278	9,076
1923.....	70	901	1,361,237	65,088,918	71,920,702	6,831,784	4,620
1921.....	77	785	1,130,572	41,055,751	45,974,226	4,918,475	(³)
1919.....	87	644	843,008	49,736,978	55,483,215	5,746,287	3,141
1914.....	78	466	390,865	25,709,133	28,587,558	2,878,425	2,061
1909.....	62	456	345,738	21,983,709	23,611,764	1,628,055	1,619
1904.....	41	287	206,263	17,538,379	18,724,085	1,185,716	1,027
1899.....	57	219	141,400	10,932,361	11,511,537	879,176	711
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	(⁴)	16.2	13.9	4.6	8.5	69.5	-1.4
1925-1927.....	(⁴)	-36.3	-33.8	-33.7	-34.2	-40.9	-55.7
1923-1925.....	(⁴)	39.6	59.1	36.5	32.4	-6.7	109.4
1921-1923.....	(⁴)	14.8	20.4	58.5	56.4	38.9	-----
1919-1921.....	(⁴)	21.9	34.0	-17.5	-17.1	-14.4	-----
1919-1929.....	(⁴)	44.6	93.7	23.8	22.5	11.2	34.7
1909-1919.....	(⁴)	41.2	144.0	126.2	135.0	253.0	94.0
1899-1909.....	(⁴)	108.2	144.5	101.1	99.9	85.2	127.7

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

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

³ Not called for on schedule.

⁴ 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 of- ficers and em- plo- ees ¹	Wage earn- ers (aver- age for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PUR- CHASED ELECTRIC ENERGY			Value of products ²	Value added by man- ufacture ³
					Total	Prime movers	Motors run by pur- chased energy			Total	Materials	Fuel and purchased energy		
United States.....	1929	60	439	631	4,230	584	3,046	\$1,303,597	\$1,633,838	\$61,570,093	\$61,354,738	\$215,355	\$67,950,140	\$6,389,047
	1927	57	313	801	4,288	1,068	3,220	951,456	1,434,020	58,877,476	58,687,315	190,161	62,647,127	3,789,651
	1919	87	270	644	4,141	1,171	1,970	687,693	848,608	49,736,978	49,540,636	196,342	55,483,215	5,746,237
Individual States:														
California.....	1929	7	20	33	184	-----	184	65,673	52,912	1,147,112	1,141,739	5,373	1,362,480	215,368
	1927	4	18	19	147	-----	147	39,022	57,209	1,064,048	1,058,822	5,226	1,212,134	148,086
	1919	7	10	18	94	-----	94	14,815	26,717	809,238	865,223	4,015	954,140	84,902
Massachusetts.....	1929	4	7	18	79	-----	79	17,481	26,858	1,859,452	1,850,975	8,477	2,040,902	190,450
	1927	4	8	15	82	-----	82	17,234	22,059	1,738,563	1,725,246	8,317	1,863,188	129,625
	1919	5	7	20	111	4	107	11,995	22,901	481,677	474,243	7,434	639,313	167,636
New Jersey.....	1929	16	236	565	2,572	565	2,007	780,381	1,017,358	28,097,143	28,574,769	122,374	31,470,767	2,773,024
	1927	17	195	516	2,905	1,028	1,877	635,322	942,196	29,213,009	29,077,459	136,150	31,062,362	2,448,753
	1919	14	116	312	1,697	1,066	631	270,871	380,904	16,546,054	16,462,520	83,534	18,390,063	1,844,009
Pennsylvania.....	1929	3	18	9	42	-----	42	49,334	18,164	604,248	600,468	3,780	756,310	152,068
	1927	(⁴)	(⁵)	(⁶)	(⁷)	-----	(⁸)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
	1919	7	5	9	26	-----	26	7,956	11,035	462,303	461,806	497	532,076	69,773
Rhode Island.....	1929	12	31	44	178	-----	176	90,117	85,352	2,169,914	2,156,019	13,895	2,751,414	581,500
	1927	13	32	47	156	-----	116	91,267	72,586	2,212,552	2,203,030	9,522	2,554,894	342,342
	1919	17	33	60	160	45	115	71,513	70,482	3,034,089	3,017,715	16,374	3,409,467	375,368
Groups of States:														
Ind., 1 est.; Mich., 2; Ohio, 2.....	1929	5	13	12	44	11	33	28,106	19,652	630,316	627,647	2,669	752,821	122,505
Other States (Conn., 3 est.; Mo., 1; N. Y., 17; Wash., 1.....	1929	22	105	250	1,133	8	1,125	266,505	413,542	26,461,008	26,403,121	58,787	28,815,440	2,353,532
tates not shown sep- arately.....	1927	19	62	204	998	-----	998	168,611	340,570	24,653,704	24,622,758	30,946	25,354,549	700,845
	1919	37	99	225	1,191	59	1,135	260,543	331,509	28,343,617	28,259,129	84,488	31,557,566	3,213,949

¹ Not including proprietors and firm members, as follows: For 1929, 46; 1927, 32; 1919, 81. 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, 1,416; 1927, 1,146; 1919, 995.

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

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

⁴ 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.

⁵ Withheld from publication in order to avoid disclosing data for individual establishments.

⁶ Connecticut, 2 establishments; Illinois, 1; Louisiana, 1; Michigan, 1; New York, 11; Ohio, 1; Pennsylvania, 2.

⁷ Colorado, 1 establishment; Connecticut, 3; Illinois, 4; Louisiana, 2; Michigan, 2; Minnesota, 1; Missouri, 1; Nebraska, 1; New York, 15; Ohio, 4; Washington, 1; Wisconsin, 2.

GOLD, SILVER, AND PLATINUM

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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.....	1,063	<i>Horsepower</i> 4,230	788	<i>Horsepower</i> 4,288	894	<i>Horsepower</i> 9,676	408	<i>Horsepower</i> 3,141	154	<i>Horsepower</i> 2,061	100.0	100.0
Prime movers, total.....	8	584	9	1,068	10	1,031	20	1,171	21	904	13.8	37.3
Steam, total.....	5	513	7	1,035	8	998	10	1,077	14	836	12.1	34.3
Engines.....	5	513	7	1,035	8	998	9	1,015	(1)	(1)	12.1	32.3
Turbines.....							1	62	(1)	(1)		2.0
Internal-combustion engines.....	3	71	2	33	2	33	10	94	7	68	1.7	3.0
Electric motors driven by purchased energy.....	1,055	3,646	779	3,220	884	8,645	388	1,970	133	1,157	86.2	62.7
Electric motors, total.....	1,134	4,231	843	3,711	893	8,705	406	2,132	172	1,472	100.0	100.0
Driven by purchased energy.....	1,055	3,646	779	3,220	884	8,645	388	1,970	133	1,157	86.2	92.4
Driven by energy generated in establishments reporting.....	79	585	64	491	9	60	18	162	39	315	13.8	7.6
Electric generators.....	3	<i>Kilowatts</i> 450	2	<i>Kilowatts</i> 200	4	<i>Kilowatts</i> 600	(2)	(2)	(2)	(2)		
Electric energy purchased ¹		<i>Kilowatt-hours</i> 2,593,540		(4)		(4)		(4)		(2)		

¹ Not called for separately on schedule.

² Not called for on schedule.

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

⁴ 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.....	931	<i>875</i>	887	898	929	928	912	924	940	968	985	965	957	957	88.8
1925.....	1,258	1,218	1,215	1,226	1,220	1,259	1,225	1,295	1,333	1,347	1,278	1,205	1,275	89.5	
1919.....	644	628	629	<i>615</i>	633	622	632	641	645	664	665	664	690	89.1	
1914.....	456	471	463	463	460	456	461	469	445	444	444	440	456	93.4	
1909.....	456	467	489	452	450	445	446	456	450	450	455	458	453	94.5	
California.....	33	34	34	35	36	32	33	33	33	32	31	31	32	86.1	
Massachusetts.....	18	18	18	19	18	19	18	18	18	18	19	17	18	89.5	
New Jersey.....	565	<i>527</i>	530	537	566	570	564	560	566	581	593	587	605	86.1	
Pennsylvania.....	9	9	9	9	9	9	9	9	9	9	9	9	9		
Rhode Island.....	44	44	44	<i>45</i>	45	43	44	45	45	45	43	44	46	93.5	

JEWELRY

Description of the industry.—This industry classification embraces establishments engaged in manufacturing articles, chiefly for personal adornment, made of gold, silver, platinum, gold-filled metal, rolled-gold

plate, brass, bronze, copper, or other metals, plain, engraved, or chased, and with or without precious or semiprecious stones.

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 ¹	Value added by manufacture ²	Horsepower
1929	1,536	27,922	\$38,979,810	\$79,804,617	\$177,386,932	\$97,582,315	27,402
1927	1,367	24,116	36,765,805	76,915,375	164,665,057	87,949,682	17,070
1925	1,468	23,837	35,177,020	79,885,523	166,816,370	86,930,547	17,296
1923	1,622	26,354	36,423,704	83,983,485	174,033,912	90,050,427	16,851
1921	1,671	23,482	29,938,313	58,059,348	127,230,777	69,171,429	(³)
1919	2,054	30,871	35,863,718	110,450,683	203,939,230	93,488,547	15,096
1914	1,914	28,289	18,301,565	39,116,136	81,006,289	41,890,163	13,862
1909	1,537	30,347	18,357,950	36,674,869	80,349,874	43,075,015	8,821
1904	1,023	22,080	12,592,846	24,177,229	53,225,681	20,048,452	5,093
1899	851	20,488	10,643,887	22,234,634	46,128,659	23,894,025	4,025
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929	12.4	15.8	-6.0	3.8	7.6	11.0	60.5
1925-1927	-6.9	1.2	4.5	-3.7	-1.2	1.2	-1.3
1923-1925	-9.5	-9.6	-3.4	-4.0	-4.1	-3.5	2.6
1921-1923	-2.9	12.2	21.7	44.7	36.8	30.2	-----
1919-1921	-18.6	-23.9	-16.5	-47.4	-37.6	-25.0	-----
1919-1929	-25.2	-9.6	8.7	-27.7	-13.0	4.4	81.5
1909-1919	33.6	1.7	95.4	201.2	153.8	114.1	71.1
1899-1909	80.6	48.3	72.5	64.9	74.2	82.8	119.2

¹ The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATIONS—Value of Products.
² Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
³ 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. Certain of the "Other States," however, were more important in the industry than some of the States shown separately. 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	Cen- sus year	Num- ber of estab- lish- ments	Sala- ried officers and em- ploy- ees ¹	Wage earn- ers (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 ²	Value added by manu- facture ³
					Total	Prime movers	Electric motors driven by pur- chased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	1,536	5,535	27,922	27,402	1,387	26,015	\$16,090,552	\$38,979,810	\$79,804,617	\$78,937,552	\$867,065	\$177,386,932	\$97,582,315
	1927	1,367	5,721	24,116	17,070	2,241	14,829	13,947,534	36,765,805	76,915,375	76,067,371	848,004	164,665,057	87,949,682
	1919	2,054	6,420	30,871	15,096	2,306	12,790	14,187,847	35,863,718	110,450,683	109,713,874	730,809	203,939,230	93,488,547
California	1929	111	139	699	648	-----	648	262,581	1,151,244	1,599,446	1,589,890	13,558	4,244,741	2,645,295
	1927	71	138	610	578	-----	576	285,051	1,010,387	1,201,037	1,182,361	18,678	3,338,407	2,137,370
	1919	88	104	650	648	-----	648	183,114	951,829	856,059	837,964	18,095	2,555,291	1,699,232
Colorado	1929	12	8	62	30	-----	30	9,806	84,452	77,863	76,794	1,069	285,767	207,904
	1927	11	13	54	22	-----	22	16,593	82,401	82,214	81,507	707	266,215	184,001
	1919	25	9	66	60	-----	60	8,820	84,359	114,392	111,848	2,544	325,707	211,315
District of Columbia	1929	3	2	26	3	-----	3	10,500	39,705	70,979	70,921	58	142,268	71,289
	1927	(⁴)	(⁴)	(⁴)	(⁴)	-----	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
	1919	7	5	17	7	-----	7	10,837	38,006	45,369	45,008	361	134,981	89,612
Georgia	1929	4	6	32	5	-----	5	6,745	34,727	52,743	52,451	292	149,362	96,619
	1927	78	316	1,155	612	-----	612	856,363	1,952,010	3,297,470	3,258,165	39,305	8,446,220	5,148,760
	1919	78	268	992	455	-----	120	666,195	1,301,130	2,637,049	2,618,048	19,001	6,032,086	3,445,037
Indiana	1929	11	48	178	99	-----	99	186,547	270,080	398,388	392,848	5,540	1,334,387	935,999
	1927	9	52	136	111	-----	111	140,297	208,538	400,780	397,209	3,571	1,023,364	622,584
	1919	9	20	76	41	-----	41	41,706	68,921	113,719	112,422	1,297	302,108	188,889

See footnotes at end of table.

JEWELRY

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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 employees ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Electric motors driven by purchased energy			Total	Materials and containers	Fuel and purchased energy		
Iowa	1929	5	7	29	13	-----	13	\$3,448	\$39,154	\$14,490	\$13,717	\$773	\$109,854	\$89,364
	1927	5	9	37	9	-----	9	21,434	45,058	20,853	20,244	609	114,061	93,208
	1919	18	25	66	46	-----	46	24,910	65,393	89,136	86,461	2,075	273,660	184,524
Kentucky	1929	7	2	23	11	-----	11	3,328	27,426	31,354	31,070	284	86,137	54,783
	1927	5	4	23	9	-----	9	4,960	17,264	16,504	16,136	368	67,699	51,195
	1919	5	2	19	5	-----	5	990	18,754	22,325	22,079	246	54,637	32,312
Louisiana	1929	6	4	61	45	-----	45	11,500	71,299	35,463	34,488	975	163,171	127,708
	1927	4	4	62	38	-----	38	7,078	95,435	39,357	37,819	1,538	166,867	127,510
	1919	7	24	71	41	-----	41	23,478	76,396	53,387	51,388	1,969	236,499	183,112
Maryland	1929	12	31	71	37	-----	37	60,837	101,804	132,192	128,341	3,851	426,128	293,931
	1927	10	27	81	42	-----	42	42,338	116,316	185,595	183,382	2,213	443,646	258,051
	1919	21	19	91	56	16	40	31,480	128,332	273,881	271,807	2,074	544,304	270,423
Massachusetts	1929	120	767	5,422	4,551	506	4,046	2,069,054	6,836,212	12,414,702	12,414,293	200,409	28,087,253	15,472,551
	1927	135	858	5,216	4,217	656	3,561	2,004,646	6,373,966	12,295,079	11,986,334	219,345	26,781,180	14,575,601
	1919	165	954	6,786	4,404	971	3,433	2,042,907	7,233,590	18,364,502	18,171,466	163,036	34,816,822	19,452,320
Michigan	1929	19	73	188	94	-----	94	242,686	361,230	933,547	925,113	8,434	2,143,454	1,200,907
	1927	21	86	211	86	-----	86	233,065	415,951	847,891	840,078	6,913	2,230,948	1,383,057
	1919	22	50	121	76	-----	76	113,966	159,954	423,745	422,250	1,495	961,685	637,040
Minnesota	1929	20	79	231	72	-----	72	149,063	307,090	364,013	357,060	6,933	1,086,567	722,554
	1927	17	60	188	58	-----	58	69,106	278,385	433,113	429,033	4,080	1,101,821	668,708
	1919	22	30	150	73	-----	73	26,688	179,047	268,491	266,281	2,210	663,691	395,200
Missouri	1929	27	122	391	134	-----	134	238,882	537,148	616,254	610,042	6,212	1,826,420	1,210,166
	1927	23	77	326	220	-----	220	139,832	334,643	540,309	533,540	6,769	1,457,028	916,719
	1919	29	113	446	170	-----	170	172,339	549,713	641,067	634,960	6,107	1,927,269	1,286,202
Nebraska	1929	3	7	25	12	-----	12	11,379	36,017	10,851	10,642	209	74,399	63,458
	1927	5	6	25	10	-----	10	15,446	30,351	35,347	34,985	362	111,816	76,469
	1919	8	1	37	11	-----	11	10,615	47,364	63,349	64,875	474	149,614	84,265
New Jersey	1929	121	585	2,381	1,770	298	1,472	2,060,765	3,703,610	6,844,114	6,788,664	84,450	17,220,166	10,376,052
	1927	138	795	2,464	1,592	395	1,197	2,072,218	4,247,309	9,125,732	9,029,940	85,792	19,860,120	10,734,388
	1919	174	870	3,234	1,648	472	1,176	2,406,000	4,418,852	14,667,315	14,570,643	86,872	27,890,566	13,232,050
New York	1929	594	1,531	5,204	3,261	332	2,929	5,175,505	10,695,349	31,127,343	30,983,259	144,087	60,877,242	29,749,899
	1927	491	1,552	4,359	3,230	400	2,830	4,147,481	10,275,033	28,167,622	28,033,763	163,859	55,664,555	27,467,033
	1919	717	1,778	5,511	2,874	409	2,466	4,395,834	8,867,393	39,604,963	39,473,839	131,124	67,400,968	27,796,005
Ohio	1929	41	144	420	244	-----	244	298,658	682,567	1,004,017	991,345	12,672	2,891,602	1,887,855
	1927	30	135	443	171	-----	171	241,686	662,356	1,172,826	1,161,100	11,726	2,810,208	1,637,382
	1919	52	143	658	207	-----	207	270,719	618,936	1,769,432	1,754,196	15,236	3,349,547	1,580,115
Oregon	1929	10	4	34	20	-----	20	4,164	56,227	41,868	41,472	396	161,363	119,495
	1927	(⁴)	(⁴)	(⁴)	(⁴)	-----	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
	1919	6	11	55	32	-----	32	15,154	72,066	45,781	44,943	838	187,490	141,709
Pennsylvania	1929	68	158	633	393	12	381	342,288	983,612	1,790,473	1,769,100	21,373	4,082,240	2,291,767
	1927	68	148	593	307	-----	307	319,631	1,012,576	1,830,382	1,812,383	17,999	4,184,786	2,354,404
	1919	203	173	613	479	96	383	266,799	798,584	2,283,853	2,268,852	15,001	4,552,827	2,268,974
Rhode Island	1929	238	1,420	10,273	15,102	240	14,802	3,915,733	10,482,300	18,162,824	17,960,751	302,073	41,692,203	23,529,379
	1927	188	1,305	7,826	5,530	615	4,915	3,124,224	8,696,059	15,587,351	15,343,233	244,118	35,451,319	19,863,068
	1919	288	1,681	10,570	4,304	127	4,177	3,273,714	9,352,452	26,975,959	26,760,432	215,527	48,596,440	21,620,481
Texas	1929	9	7	43	22	-----	22	10,211	55,739	67,648	66,315	1,333	203,413	135,765
	1927	13	8	51	18	-----	18	18,900	82,541	70,882	69,307	1,485	232,164	161,232
	1919	19	8	98	43	-----	43	20,180	164,336	132,266	130,750	1,516	419,018	286,752
Utah	1929	3	3	15	8	-----	8	3,300	20,525	18,834	18,436	398	32,080	43,846
	1927	(⁴)	(⁴)	(⁴)	(⁴)	-----	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
	1919	5	4	14	13	-----	13	3,606	30,313	30,825	30,059	766	82,136	51,311
Washington	1929	13	16	66	26	-----	26	22,661	97,197	130,079	128,667	1,412	355,802	225,723
	1927	13	34	129	22	-----	22	54,584	139,749	213,375	207,068	6,307	545,581	333,206
	1919	16	38	215	381	-----	381	60,567	323,593	453,646	446,178	7,468	1,021,725	568,680
Wisconsin	1929	6	4	54	22	-----	22	4,452	73,811	36,702	35,322	1,380	157,207	120,505
	1927	4	7	37	13	-----	13	7,568	65,031	34,631	33,538	1,093	162,223	127,592
	1919	13	36	81	36	-----	36	18,468	85,897	93,833	92,246	1,587	247,420	153,587
Other States	⁵ 1929	25	52	206	168	-----	168	125,146	276,269	330,960	321,369	9,591	1,076,681	745,721
	⁶ 1927	30	66	254	170	-----	170	157,503	331,374	351,611	340,999	10,612	1,305,663	954,052
	⁶ 1919	57	44	225	200	-----	200	99,652	248,830	434,139	424,879	9,260	1,163,739	729,600

¹ 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, 34,797; proprietors and firm members, 1,340. For 1927, total, 31,174; proprietors and firm members, 1,337. For 1919, total, 39,630; proprietors and firm members, 2,339.

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

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

⁴ 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.

⁵ Withheld from publication in order to avoid disclosing data for individual establishments.

⁶ Arkansas, 1 establishment; Connecticut, 6; Florida, 2; Kansas, 2; Maine, 1; Montana, 2; Nevada, 1; New Mexico, 3; North Carolina, 1; North Dakota, 1; Oklahoma, 2; South Dakota, 1; Tennessee, 2.

⁷ Alabama, 1 establishment; Connecticut, 5; Delaware, 1; District of Columbia, 1; Florida, 1; Georgia, 1; Kansas, 1; Maine, 1; Montana, 1; New Mexico, 1; North Carolina, 1; North Dakota, 1; Oklahoma, 4; Oregon, 2; South Carolina, 1; South Dakota, 2; Tennessee, 3; Utah, 1; Virginia, 1.

⁸ Alabama, 1 establishment; Arizona, 2; Arkansas, 3; Connecticut, 20; Delaware, 1; Florida, 1; Georgia, 1; Kansas, 1; Maine, 3; Montana, 3; New Hampshire, 1; New Mexico, 2; North Carolina, 1; North Dakota, 1; Oklahoma, 1; South Carolina, 1; South Dakota, 6; Tennessee, 5; Virginia, 3.

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. No detailed production data were collected for earlier years]

KIND	1929	1927	KIND	1929	1927
1. Jewelry industry, all products, total value.....	\$177,386,632	\$164,865,057	Jewelry and findings, all Industries: Aggregate (sum of 2 and 4).....	\$164,140,104	\$156,270,642
2. Jewelry and findings.....	163,136,305	154,999,465	Jewelry, total.....	142,433,383	140,944,198
3. Other products (not normally belonging to the industry) and receipts for custom work and repairing.....	14,250,627	9,865,592	Platinum.....	41,372,454	35,730,360
4. Jewelry made as a secondary product in other industries, value.....	1,003,799	1,271,177	Gold.....	43,637,733	39,654,691
			Gold-filled and rolled-gold-plate.....	10,980,158	11,228,077
			Gold-electroplated.....	5,842,163	3,306,479
			Silver.....	10,609,618	6,086,567
			Platinum, gold, and silver jewelry, not reported separately as to kind.....		26,787,439
			Other metals.....	29,991,257	18,261,576
			Jewelry findings.....	21,706,721	15,326,444

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. Certain of the "Other States," however, reported larger production than some of the States shown separately]

KIND AND STATE	Value	KIND AND STATE	Value	KIND AND STATE	Value
Jewelry and findings, all industries.....	\$164,140,104	Jewelry and findings—Continued. Jewelry—Continued.		Jewelry and findings—Continued. Jewelry—Continued.	
Jewelry, total.....	142,433,383	Gold-filled and rolled-gold-plate, total.....	\$10,980,158	Other metals, total.....	\$29,991,257
Platinum, total.....	41,372,454	California.....	106,110	California.....	475,343
California.....	1,474,108	Illinois.....	190,749	Illinois.....	603,661
Colorado.....	36,881	Massachusetts.....	4,276,975	Kentucky.....	56,614
Illinois.....	2,967,384	Missouri.....	165,525	Louisiana.....	41,833
Indiana.....	30,492	New Jersey.....	193,219	Massachusetts.....	5,670,315
Massachusetts.....	851,688	New York.....	1,450,087	Minnesota.....	55,653
Minnesota.....	118,723	Ohio.....	75,520	New Jersey.....	1,391,261
Missouri.....	333,613	Pennsylvania.....	18,010	New York.....	6,145,482
New Jersey.....	2,246,490	Rhode Island.....	4,355,023	Ohio.....	31,000
New York.....	30,358,508	Other States (Colo., Ga., Ind., Me., Md., Mich., Minn., Oreg., Tex., Wash., and Wis.).....	179,960	Pennsylvania.....	320,185
Ohio.....	951,323	Gold-electroplated, total.....	5,842,163	Rhode Island.....	14,382,409
Pennsylvania.....	1,228,109	Massachusetts.....	2,562,187	Other States (Colo., Conn., D. C., Fla., Ga., Ind., Iowa, Kans., Mich., Mo., Mont., N. Dak., Oreg., Tex., Utah, Wash., and Wis.).....	817,041
Washington.....	9,865	Rhode Island.....	1,923,385	Jewelry findings, total.....	21,706,721
Other States (Conn., Ga., Iowa, Ky., La., Me., Md., Mich., Nebr., Nev., N. Mex., Oreg., R. I., Tenn., Tex., and Wis.).....	765,272	Other States (Calif., Colo., Conn., Ga., Ill., Me., Minn., Mo., N. J., N. Y., Ohio, Pa., Wash., and Wis.).....	1,350,591	Massachusetts.....	8,394,903
Gold, total.....	43,637,733	Silver, total.....	10,609,618	New Jersey.....	892,681
California.....	1,138,162	California.....	108,957	New York.....	3,376,713
Colorado.....	74,584	Illinois.....	214,176	Pennsylvania.....	17,766
Illinois.....	2,027,678	Maryland.....	44,829	Rhode Island.....	8,259,997
Maryland.....	70,704	Massachusetts.....	1,573,416	Other States (Calif., Colo., Conn., Ill., La., Mich., Mo., Ohio, Tex., and Wash.).....	764,601
Massachusetts.....	2,995,274	Missouri.....	34,384		
Michigan.....	1,187,585	New Jersey.....	1,962,776		
Minnesota.....	622,617	New York.....	463,863		
Missouri.....	580,982	Ohio.....	63,850		
Nebraska.....	12,694	Pennsylvania.....	105,546		
New Jersey.....	10,024,501	Rhode Island.....	5,553,713		
New York.....	15,801,885	Washington.....	1,408		
Ohio.....	1,015,188	Other States (Colo., Conn., Ga., Ind., La., Me., Mich., Minn., Nebr., Okla., Oreg., Tex., and Wis.).....	392,700		
Oregon.....	42,031				
Pennsylvania.....	1,062,048				
Rhode Island.....	6,466,760				
Texas.....	29,241				
Washington.....	51,395				
Other States (Conn., Ga., Ind., Iowa, Ky., La., Me., Nev., N. Mex., N. C., Okla., S. Dak., Tenn., and Wis.).....	428,404				

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

[Cost of principal materials consumed was reported by only 1,068 of the 1,536 establishments in this industry. The combined value of products reported by these 1,068 establishments amounted to \$157,203,993, or 88.6 per cent of the aggregate value of products of the 1,536 establishments in 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 consumed as given in Tables 1 and 2 is found in the fact that this table covers only certain specified materials, whereas the others cover the cost of all materials.]

KIND AND STATE	Cost of principal materials	KIND AND STATE	Cost of principal materials	KIND AND STATE	Cost of principal materials
Aggregate.....	\$30,760,762	Gold—Continued.		Silver—Continued.	
Platinum, total.....	6,540,933	Minnesota.....	\$67,562	Other States (Conn., D. C., Ga., Ind., Iowa, Ky., Me., Md., Mich., Nebr., N. C., Oreg., S. Dak., Tenn., Tex., and Utah).....	\$49,930
California.....	278,630	Missouri.....	146,491	Brass and other nonferrous metals, total.....	6,861,086
Colorado.....	12,994	New Jersey.....	2,896,159	Illinois.....	79,667
Illinois.....	301,415	New York.....	5,624,205	Massachusetts.....	1,869,010
Indiana.....	7,216	Ohio.....	247,492	Minnesota.....	739
Maryland.....	21,197	Pennsylvania.....	338,251	Missouri.....	10,949
Massachusetts.....	156,797	Rhode Island.....	4,814,926	New Jersey.....	110,440
Minnesota.....	22,786	Washington.....	16,773	New York.....	237,962
Missouri.....	63,605	Wisconsin.....	6,215	Ohio.....	2,769
New Jersey.....	443,249	Other States (Conn., D. C., Ga., Ind., Iowa, Ky., Me., Mont., Nebr., N. Mex., N. C., Oreg., S. Dak., Tenn., Tex., and Utah).....	384,863	Rhode Island.....	4,466,600
New York.....	4,593,782	Silver, total.....	3,881,857	Other States (Calif., Colo., Conn., Ind., Me., Mich., N. C., Oreg., Pa., Tenn., Tex., Utah, Wash., and Wis.).....	82,950
Ohio.....	186,205	California.....	50,515	Not distributed according to kind, total.....	1,078,429
Pennsylvania.....	282,572	Colorado.....	12,281	New Jersey.....	564,643
Rhode Island.....	35,528	Illinois.....	111,725	New York.....	244,025
Washington.....	5,280	Massachusetts.....	1,825,116	Ohio.....	14,199
Other States (Conn., D. C., Ga., Ky., Iowa, Me., Mich., Nebr., N. Mex., N. C., Oreg., Tenn., Tex., Utah, and Wis.).....	129,677	Minnesota.....	3,435	Rhode Island.....	130,067
Gold, total.....	21,407,457	Missouri.....	5,710	Other States (Calif., Ill., Mass., Mich., Minn., Mo., Pa., and Wis.).....	125,425
California.....	278,138	New Jersey.....	151,315		
Colorado.....	21,694	New York.....	180,927		
Illinois.....	536,245	Ohio.....	12,214		
Maryland.....	18,548	Pennsylvania.....	48,032		
Massachusetts.....	5,832,873	Rhode Island.....	1,729,651		
Michigan.....	177,132	Washington.....	722		
		Wisconsin.....	253		

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		PERCENT 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.....	8,965	Horse-power 27,402	6,895	Horse-power 17,070	6,887	Horse-power 17,296	6,047	Horse-power 15,096	4,735	Horse-power 13,862	100.0	100.0
Prime movers, total.....	22	1,387	33	2,241	46	2,456	62	2,306	104	3,420	5.1	15.3
Steam, total.....	12	962	22	1,935	29	2,062	28	1,647	45	2,271	3.5	10.9
Engines.....	12	962	22	1,935	28	2,017	27	1,587	(1)	(1)	3.5	10.5
Turbines.....					1	75	1	60	(1)	(1)		0.4
Internal-combustion engines.....	6	305	6	185	12	234	31	545	54	1,013	1.2	3.6
Water wheels and water turbines.....	4	120	5	121	5	130	3	114	5	145	0.4	0.8
Electric motors driven by purchased energy.....	8,943	26,015	6,862	14,829	6,841	14,840	5,985	12,790	4,631	10,433	94.9	84.7
Electric motors, total.....	9,307	26,769	7,234	15,646	7,217	15,580	6,265	15,750	4,868	11,392	100.0	100.0
Driven by purchased energy.....	8,943	26,015	6,862	14,829	6,841	14,840	5,985	12,790	4,631	10,433	97.2	81.2
Driven by energy generated in establishments reporting.....	364	754	372	817	376	740	280	2,960	265	959	2.8	18.8
Electric generators.....	11	Kilowatts 625 Kilowatt-hours	9	Kilowatts 778	18	Kilowatts 1,143	(1)	(1)	(1)	(1)		
Electric energy purchased ³		15,442,404		(1)		(1)		(1)		(1)		

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

CENSUS OF MANUFACTURES: 1929

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												Percent minimum is of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
United States:															
1929	27,922	27,268	27,695	27,895	27,412	27,085	26,878	<i>26,805</i>	27,539	29,247	30,002	29,555	27,685	89.3	
1925	23,837	24,078	24,330	24,094	23,259	22,642	22,038	<i>21,675</i>	22,525	24,142	25,816	25,816	25,528	83.6	
1919	30,871	27,152	28,241	29,295	30,020	30,856	31,322	32,281	32,462	32,243	31,380	32,383	32,617	82.7	
1914	28,289	30,377	29,941	29,314	28,741	28,568	27,709	<i>26,512</i>	26,807	28,075	28,567	27,677	27,150	87.4	
1909	30,347	30,156	29,445	29,134	<i>28,113</i>	28,609	28,728	28,129	29,309	31,747	33,259	33,716	33,809	83.2	
California	699	<i>689</i>	700	708	703	703	703	693	697	707	703	701	690	86.5	
Colorado	62	61	61	62	63	63	60	62	63	63	64	63	62	92.2	
District of Columbia	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
Georgia	32	<i>33</i>	33	31	31	31	32	32	32	32	31	32	32	89.9	
Illinois	1,155	<i>1,088</i>	1,107	1,126	1,135	1,122	1,216	1,098	1,113	1,137	1,246	1,287	1,210	84.4	
Indiana	178	186	178	174	169	166	179	161	159	179	187	196	202	78.7	
Iowa	29	29	29	29	29	29	29	29	29	29	29	29	29	29	
Kentucky	23	23	23	23	23	23	23	23	23	23	23	23	23	23	
Louisiana	61	61	61	61	61	61	61	61	61	61	61	61	61	61	
Maryland	71	<i>54</i>	73	74	72	73	74	72	73	71	71	72	72	73.0	
Massachusetts	5,422	5,451	5,406	5,454	5,452	5,367	5,200	<i>5,119</i>	5,207	5,631	5,426	5,862	5,492	87.3	
Michigan	188	190	191	193	190	<i>182</i>	183	<i>182</i>	183	187	187	193	196	92.9	
Minnesota	231	227	224	223	222	221	216	<i>213</i>	225	238	242	253	265	80.4	
Missouri	391	389	390	398	388	388	382	<i>376</i>	380	394	395	399	402	93.6	
Nebraska	25	25	25	25	25	<i>24</i>	<i>24</i>	<i>24</i>	<i>24</i>	<i>24</i>	26	27	27	88.9	
New Jersey	2,381	2,295	2,323	2,374	2,370	2,382	2,345	2,300	2,419	2,523	2,591	2,407	2,244	86.6	
New York	5,204	5,044	5,076	5,150	5,033	5,032	<i>5,016</i>	5,157	5,096	5,398	5,589	5,589	5,271	80.7	
Ohio	420	441	435	432	421	420	409	396	391	412	438	440	440	88.7	
Oregon	34	35	35	34	34	34	34	34	35	35	35	33	33	91.4	
Pennsylvania	633	639	637	635	638	639	635	620	614	<i>613</i>	639	627	658	93.2	
Rhode Island	10,273	9,908	10,256	10,270	9,963	9,731	<i>9,645</i>	9,751	10,311	11,103	11,637	10,862	9,842	82.9	
Texas	43	<i>41</i>	43	45	42	42	<i>41</i>	44	<i>41</i>	44	46	43	43	89.1	
Utah	15	13	14	15	14	14	15	15	15	15	15	15	15	87.7	
Washington	66	67	66	66	65	63	64	65	64	63	64	69	70	90.0	
Wisconsin	54	54	55	58	<i>53</i>	54	55	<i>53</i>	54	54	54	54	55	94.6	

NEEDLES, PINS, HOOKS AND EYES, AND SNAP FASTENERS

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of (1) needles of all kinds, including sewing-machine needles, knitting-machine needles, and darning, canvas, and bag needles; (2) pins—common or toilet pins, safety pins, and metal hairpins; (3) hooks and

eyes; and (4) snap fasteners. Pins made of precious metals are not treated as products of this industry, but are classified as jewelry. Hairpins made of materials other than metal are classified as products of the "Combs and hairpins, not made of metal or rubber" 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 ¹	Value added by manufacture ²	Horsepower
1929.....	43	6,242	\$6,565,732	\$6,167,822	\$22,030,950	\$15,843,123	6,694
1927.....	45	5,606	6,098,477	5,922,844	20,325,250	14,402,406	7,250
1925.....	48	5,850	5,855,679	5,925,652	18,173,574	12,247,922	7,603
1923.....	49	6,834	6,703,079	7,795,975	22,147,468	14,351,493	10,367
1921.....	68	6,542	5,542,404	6,162,949	18,896,168	12,733,219	(3)
1919.....	92	9,294	8,809,781	10,227,199	29,304,995	19,077,796	8,423
1914.....	49	5,339	2,506,611	3,241,657	7,890,879	4,649,222	4,783
1909.....	49	4,638	2,064,378	2,328,674	6,694,095	4,365,421	4,504
1904.....	46	3,965	1,595,923	1,583,644	4,760,589	3,166,945	2,299
1899.....	52	2,653	1,067,364	1,227,997	3,237,962	2,009,985	2,023
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	(4)	11.3	7.7	4.5	8.4	10.0	-7.7
1925-1927.....	(4)	-4.2	4.1	(4)	11.8	17.6	-4.6
1923-1925.....	(4)	-14.4	-12.6	-24.0	-17.9	-14.7	-26.7
1921-1923.....	(4)	4.5	20.9	26.5	17.2	12.7	-----
1919-1921.....	(4)	-39.6	-37.1	-39.7	-35.5	-33.3	-----
1919-1929.....	(4)	-32.8	-25.5	-39.5	-24.8	-17.0	-20.5
1909-1919.....	(4)	100.4	326.8	339.2	337.8	337.0	87.0
1899-1909.....	(4)	74.8	93.4	89.6	106.7	117.2	122.6

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

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

³ Not called for on schedule.

⁴ Per cent not computed where base is less than 100.

⁵ Less than one-tenth of 1 per cent.

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 ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States.....	1929	43	772	6,242	6,604	3,123	3,571	\$2,021,477	\$6,505,732	\$6,187,822	\$5,935,203	\$252,619	\$22,030,950	\$15,843,128
	1927	45	722	5,606	7,250	3,857	3,393	1,865,555	6,098,477	5,922,844	5,684,179	238,665	20,325,250	14,402,406
	1919	92	1,056	9,294	8,423	4,951	3,472	2,506,250	8,809,781	10,227,199	9,826,308	400,891	29,304,995	19,077,796
Individual States:														
Connecticut.....	1929	10	251	2,388	3,050	1,912	1,133	541,178	2,719,761	2,252,499	2,163,265	89,234	8,870,529	6,624,080
	1927	13	254	2,353	3,623	2,547	1,076	617,127	2,712,227	2,357,508	2,262,221	95,287	8,481,852	6,124,244
	1919	23	494	4,037	4,355	3,421	934	962,089	4,208,987	5,017,443	5,395,552	221,891	13,904,286	8,286,843
New Hampshire.....	1929	5	34	396	296	155	141	69,544	390,845	81,090	69,169	11,921	701,984	620,894
	1927	5	29	378	296	155	141	53,761	402,241	88,829	79,698	9,131	642,316	553,487
	1919	9	34	983	459	200	259	73,899	823,628	155,263	189,053	10,210	1,704,998	1,549,735
New Jersey.....	1929	5	63	571	697	484	213	161,268	625,599	635,647	611,886	23,761	1,827,765	1,192,118
	1927	5	54	595	609	484	125	142,958	618,925	624,125	600,393	23,732	1,959,198	1,335,073
	1919	10	40	418	571	484	87	75,209	350,530	480,282	400,435	30,847	1,203,961	723,679
New York.....	1929	6	38	272	483	295	188	121,298	280,571	409,846	396,712	13,134	1,050,334	640,488
	1927	4	34	287	489	295	194	111,167	250,882	340,803	324,739	16,067	910,097	569,294
	1919	19	68	497	620	325	295	164,080	420,488	648,138	625,384	22,784	1,603,745	1,015,607
Pennsylvania.....	1929	4	157	1,168	1,003	277	726	471,379	1,233,301	1,088,088	1,046,938	41,150	3,859,594	2,771,506
	1927	4	125	1,043	847	290	557	383,279	1,135,479	1,206,255	1,171,293	34,962	4,080,755	2,880,600
	1919	8	82	739	250	154	96	174,917	533,644	601,597	588,940	12,657	1,724,194	1,122,697
Groups of States:														
Mass., 3 est.; R. I., 1; Vt., 1.....	1929	5	139	906	802	.....	802	390,656	985,501	1,155,368	1,100,083	49,285	3,591,136	2,435,768
Ill., 3 est.; Mich., 1; Ohio, 1.....	1929	5	84	510	305	.....	305	254,610	301,845	528,184	508,276	19,908	2,038,289	1,510,105
Calif., 1 est.; Mo., 1; Wis., 1.....	1929	3	6	31	58	.....	58	11,544	28,309	37,100	32,874	4,226	85,319	48,219
States not shown separately	1927	14	226	950	1,386	86	1,200	557,263	978,723	1,305,324	1,245,838	59,486	4,245,032	2,939,708
	1919	23	338	2,620	2,212	367	1,845	1,050,046	2,472,504	2,724,476	2,616,974	107,502	9,103,811	6,379,335

¹ 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, 7,023; proprietors and firm members, 9. For 1927, total, 6,338; proprietors and firm members, 10. For 1919, total, 10,389; proprietors and firm members, 39.

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

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

⁴ 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.

⁵ California, 1 establishment; Illinois, 4; Massachusetts, 3; Michigan, 1; Missouri, 1; Ohio, 1; Rhode Island, 1; Vermont, 1; Wisconsin, 1.

⁶ Illinois, 3 establishments; Maryland, 1; Massachusetts, 7; Michigan, 3; Missouri, 1; Ohio, 2; Oregon, 1; Rhode Island, 4; Vermont, 1.

TABLE 3.—PRODUCTS, BY CLASS, QUANTITY, 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. "Needles, pins, hooks and eyes, and snap fasteners" industry, all products, total value.....	\$22,030,950	\$20,325,250	\$18,173,574	Needles, pins, hooks and eyes, and snap fasteners, all industries—Continued.			
2. Needles, pins, hooks and eyes, and snap fasteners.....	\$19,073,153	\$17,372,452	\$15,066,148	Pins—Continued.			
3. Other products (not normally belonging to the industry).....	\$2,957,797	\$2,952,798	\$2,507,426	Hairpins, metal—			
4. Needles, pins, hooks and eyes, and snap fasteners made as secondary products in other industries, value.....	\$1,352,544	\$2,152,441	\$1,358,938	Pounds.....	4,799,175	4,287,113	3,423,331
Needles, pins, hooks and eyes, and snap fasteners, all industries:				Value.....	\$2,335,504	\$1,559,723	\$1,100,216
Aggregate value (sum of 2 and 4).....	\$20,425,697	\$19,524,803	\$17,025,086	Safety pins—			
Needles, total value.....	\$6,488,869	\$5,503,227	\$5,607,192	Gross.....	8,008,813	9,252,187	(1)
Knitting-machines (latch and spring), value.....	\$4,828,865	\$3,977,596	\$4,090,033	Value.....	\$2,218,807	\$2,188,365	\$2,478,021
Other needles, including sewing-machine—				Hooks and eyes—			
Thousands.....	128,554	103,012	(1)	Great gross.....	181,656	180,516	278,334
Value.....	\$1,660,004	\$1,525,631	\$1,511,159	Value.....	\$200,467	\$195,799	\$342,772
Pins, total value.....	\$6,263,563	\$5,180,988	\$5,055,394	Eyelets—			
Common or toilet, made of steel and brass wire, total value.....	\$1,709,162	\$1,432,900	\$1,477,158	Great gross.....	433,035	(1)	(1)
Pounds.....	2,015,152	1,948,508	(1)	Value.....	\$784,043	(1)	(1)
Value.....	\$1,221,101	\$877,456	\$768,358	Hook-and-eye tape—			
Packs.....	1,187,231	1,432,128	1,793,410	Yards.....	14,276,203	(1)	(1)
Value.....	\$488,061	\$555,444	\$708,800	Value.....	\$1,156,055	(1)	(1)
				Snap fasteners and clasps, value.....	\$5,532,700	\$6,320,184	\$5,126,214
				Miscellaneous products (including eyelets and hook-and-eye tape) ¹		\$2,324,695	\$893,514

¹ No comparable data.

² Statistics on the production of hairpins other than metal are given in the report on "Combs and hairpins, not made of metal or rubber."

³ Applies to 1927 and 1925 only.

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.....	1,312	Horse-power 6,694	1,117	Horse-power 7,250	908	Horse-power 7,603	758	Horse-power 8,423	298	Horse-power 4,733	100.0	100.0
Prime movers, total.....	21	3,123	32	3,857	30	4,374	43	4,951	37	3,984	46.7	58.8
Steam, total.....	15	2,641	19	3,249	19	3,644	28	4,126	26	3,359	39.5	49.0
Engines.....	9	1,638	12	1,846	12	2,241	25	3,492	(1)	(1)	24.5	41.5
Turbines.....	6	1,003	7	1,403	7	1,403	3	633	(1)	(1)	15.0	7.5
Internal-combustion engines.....	1	25	3	25	1	25	1	4	1	5	0.4	(2)
Water wheels and water turbines.....	5	457	10	538	10	705	14	822	10	620	6.8	9.8
Electric motors driven by purchased energy.....	1,291	3,571	1,085	3,393	878	3,229	715	3,472	261	799	58.3	41.2
Electric motors, total.....	1,512	6,272	1,294	5,487	1,115	5,376	931	5,903	393	2,447	100.0	100.0
Driven by purchased energy.....	1,291	3,571	1,085	3,393	878	3,229	715	3,472	261	799	58.9	58.8
Driven by energy generated in establishments reporting.....	221	2,701	209	2,094	237	2,147	216	2,431	132	1,648	43.1	41.2
Electric generators.....	13	Kilo-watts 1,655	13	Kilo-watts 1,960	18	Kilo-watts 2,105	(1)	(1)	(1)	(1)		
Electric energy purchased ¹		Kilowatt-hours 4,259,317		(1)		(1)		(1)		(1)		

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 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.....	6,242	<i>5,872</i>	6,010	6,013	6,056	6,055	6,399	6,302	6,358	6,726	6,790	6,309	6,015	86.5
1925.....	5,850	<i>5,675</i>	5,740	5,785	5,777	5,691	5,680	5,748	5,903	5,977	6,042	6,087	6,062	83.2
1919.....	9,294	<i>9,008</i>	9,094	8,949	8,824	8,823	8,925	9,314	9,587	9,525	9,092	9,835	10,052	87.8
1914.....	5,239	<i>5,487</i>	5,474	5,445	5,421	5,405	5,268	5,318	5,189	5,288	5,279	5,258	5,216	94.6
1909.....	4,638	<i>4,370</i>	4,424	4,587	4,668	4,704	4,604	4,496	4,652	4,702	4,759	4,789	4,821	88.8
Connecticut.....	2,388	2,400	2,405	2,407	2,421	2,430	2,404	2,494	2,421	2,375	2,342	2,289	<i>2,268</i>	90.9
New Hampshire.....	306	<i>332</i>	386	393	389	356	402	397	387	398	404	410	418	92.5
New Jersey.....	571	553	565	591	589	587	581	569	579	565	577	551	<i>549</i>	92.9
New York.....	272	267	287	273	265	266	257	261	260	272	278	268	309	83.2
Pennsylvania.....	1,168	<i>909</i>	942	982	995	1,033	1,116	1,146	1,271	1,514	1,473	1,385	1,248	60.0

NONFERROUS-METAL ALLOYS AND PRODUCTS, NOT INCLUDING ALUMINUM PRODUCTS; SMELTING AND REFINING, METALS OTHER THAN GOLD, SILVER, OR PLATINUM, NOT FROM THE ORE

A close relationship exists between these two industries because of the fact that they manufacture, to some extent, the same general classes of products, although each establishment must be classified in one of the industries according to the character of its principal products.

Description of the industries.—The establishments assigned to the "Nonferrous-metal alloys and products, not including aluminum products" industry are engaged primarily in the manufacture of brass, bronze, and other nonferrous alloys, such as nickel alloys, anti-friction bearing metal, type metal, solders, etc., and the rolling and drawing of these alloys and of copper, lead, and zinc into plates, sheets, rods, bars, tubing, and pipe; and the manufacture of castings, bearings, and other finished products from these alloys and from copper.

The "Smelting and refining, metals other than gold, silver, or platinum, not from the ore" industry embraces establishments engaged primarily in the recovery of copper, lead, zinc, nickel, aluminum, and alloys thereof from scrap and dross.

Detailed statistics of products (Tables 3, 4, 5, 6, and 7).—In making use of the figures presented in these tables, it should be remembered that data for the production of copper, lead, zinc, and other nonferrous metals from the ore are not included in any case. Table 7 presents, in detail, statistics relating to the production in the "Nonferrous-metal alloys and products, not including aluminum products" industry of certain commodities normally produced in other industries but manufactured to a considerable extent in that industry, the total value of products for which includes data for these commodities. (See item "Miscellaneous nonferrous products normally belonging to other industries," at foot of Table 4.) The total production of these several classes of products is shown in the statistics on the industries in which they are classified. No aggregate of the values of products covered by Tables 3 and 4 is given, for the reason that such an aggregate would include a large amount of duplication resulting from the use of the products of some establishments, especially ingots and pigs, as materials by others.

NONFERROUS-METAL ALLOYS, ETC.

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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, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²	Horsepower
THE GROUP AS A WHOLE							
1929	1,331	83,317	\$122,518,318	\$683,855,831	\$1,015,686,705	\$331,830,874	524,447
1927	1,239	88,699	99,631,332	447,084,628	662,539,313	215,234,685	423,914
1925	1,242	68,079	98,499,779	470,578,606	675,693,663	205,114,457	383,479
1923	1,197	68,876	94,472,903	410,984,554	608,829,085	197,844,531	324,411
1921	1,107	43,487	50,977,120	171,304,829	267,427,601	96,122,772	(³)
1919	1,333	80,679	101,379,437	408,427,998	609,701,098	201,278,100	285,634
1914	1,233	44,956	28,320,567	168,875,959	229,681,691	60,805,732	138,322
1910	1,224	44,878	26,233,791	146,544,732	207,935,449	61,390,717	121,610
1909	1,008	36,625	19,656,737	98,650,444	143,187,611	44,537,167	87,919
1899	894	29,952	15,055,682	81,969,981	114,355,645	32,385,604	59,868
Per cent of increase or decrease (-):							
1927-1929	2.5	21.3	23.0	53.0	53.3	54.2	23.7
1925-1927	4.6	0.9	1.1	-5.0	-2.0	4.9	10.5
1923-1925	3.8	-1.2	4.3	14.5	11.0	3.7	18.2
1921-1923	8.1	58.4	85.3	139.9	127.7	105.8	-----
1919-1921	-17.0	-46.1	-49.7	-58.1	-56.1	-52.2	-----
1919-1929	-0.2	3.3	20.9	67.4	66.6	64.9	83.6
1909-1919	5.0	79.8	286.4	178.7	193.2	227.9	135.1
1899-1909	47.0	49.8	74.2	78.8	81.8	89.6	102.9
NONFERROUS-METAL ALLOYS AND PRODUCTS, NOT INCLUDING ALUMINUM PRODUCTS							
1929	1,225	79,183	116,943,996	600,410,913	909,804,050	369,393,137	500,273
1927	1,197	65,923	95,351,041	378,190,134	581,568,767	203,378,633	411,925
1925	1,140	65,135	93,820,242	401,316,012	593,555,540	192,239,528	369,239
1923	1,156	67,289	92,248,986	381,935,366	573,043,584	191,108,218	314,757
1921	1,047	42,287	49,448,884	161,273,348	252,277,546	91,004,198	(³)
1919	1,252	78,512	95,286,297	367,752,118	559,455,010	191,702,892	277,713
1914	1,140	42,371	26,436,242	137,625,252	189,779,577	52,154,325	128,251
1909	1,181	42,731	24,952,667	123,382,313	179,863,408	56,481,095	110,811
1904	941	34,913	18,661,806	84,890,639	125,784,624	40,893,985	70,825
1899	803	28,969	14,523,614	76,070,046	106,570,950	30,600,904	51,235
Per cent of increase or decrease (-):							
1927-1929	2.3	20.1	22.6	58.8	56.4	52.1	22.9
1925-1927	5.0	1.2	1.6	-5.8	-2.0	5.8	11.6
1923-1925	-1.4	-3.2	1.7	5.1	3.6	6.6	17.3
1921-1923	10.4	59.1	86.6	136.8	127.1	116.6	-----
1919-1921	-16.4	-46.1	-49.7	-56.1	-54.9	-52.5	-----
1919-1929	-2.2	0.9	19.0	63.3	62.6	61.4	82.3
1909-1919	6.0	83.7	293.9	196.1	211.0	239.4	150.6
1899-1909	47.1	47.5	71.8	62.2	68.8	85.2	110.3
SMELTING AND REFINING, METALS OTHER THAN GOLD, SILVER, OR PLATINUM, NOT FROM THE ORE							
1929	106	4,134	5,574,322	83,444,918	105,882,655	22,437,737	18,174
1927	102	2,776	4,280,291	68,894,494	80,770,546	11,876,052	11,989
1925	102	2,944	4,679,537	69,262,694	82,137,523	12,874,929	14,240
1923	41	1,587	2,223,917	29,049,188	35,785,501	6,736,313	9,654
1921	60	1,200	1,528,236	10,031,451	15,150,055	5,118,574	(³)
1919	81	2,167	3,063,140	46,675,880	50,246,088	9,570,208	7,921
1914	84	2,585	1,884,325	31,250,707	39,902,114	8,651,407	10,071
1909	89	2,147	1,281,124	23,162,419	28,072,041	4,909,822	10,699
1904	65	1,712	994,951	13,759,805	17,402,987	3,643,182	17,094
1899	61	983	532,068	5,899,935	7,784,695	1,884,760	8,633
Per cent of increase or decrease (-):							
1927-1929	3.9	48.9	30.2	21.1	31.1	88.9	51.6
1925-1927	(⁴)	-5.7	-8.5	-0.5	-1.7	-7.8	-15.8
1923-1925	(⁴)	85.5	110.4	138.4	129.5	91.1	47.5
1921-1923	(⁴)	32.3	45.5	189.6	136.2	31.6	-----
1919-1921	(⁴)	-44.6	-50.6	-75.3	-69.8	-46.5	-----
1919-1929	(⁴)	90.8	80.2	105.1	110.7	134.5	129.4
1909-1919	(⁴)	0.9	141.4	75.6	79.0	94.9	-26.0
1899-1909	(⁴)	118.4	140.8	292.6	260.6	160.5	23.9

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

CENSUS OF MANUFACTURES: 1929

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	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, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products ¹	Value added by manufacture ²
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
NONFERROUS-METAL ALLOYS AND PRODUCTS, NOT INCLUDING ALUMINUM PRODUCTS														
United States.....	1929	1,225	12,218	79,183	506,273	125,200	381,073	\$34,513,121	\$116,943,996	\$600,410,913	\$582,809,282	\$17,541,681	\$909,804,050	\$309,393,137
	1927	1,197	10,195	65,923	411,925	110,094	301,831	28,406,186	95,351,041	378,190,134	364,619,733	13,570,401	581,508,767	203,378,633
	1919	1,262	11,541	78,512	277,713	120,298	143,415	26,401,152	98,286,297	367,752,118	354,392,903	13,359,215	559,455,010	191,702,392
Individual States:														
California.....	1929	70	215	1,028	3,068	25	3,043	646,092	1,580,833	6,419,091	6,273,535	145,556	10,587,942	4,168,851
	1927	65	172	912	2,448	20	2,428	448,313	1,619,373	5,647,763	5,552,203	95,560	8,776,744	3,128,981
Colorado.....	1929	12	25	110	462	15	447	76,342	142,364	1,560,516	1,529,180	31,336	2,198,394	637,878
	1927	13	25	123	453	—	453	49,150	164,105	1,025,138	992,310	32,828	1,357,911	332,773
Connecticut.....	1929	62	2,849	22,478	175,429	72,278	103,151	8,895,497	32,818,770	143,641,351	137,998,385	5,642,966	224,229,776	80,588,425
	1927	67	2,873	20,442	165,577	63,651	101,920	8,179,688	23,537,673	97,278,629	92,442,225	4,836,404	152,389,739	55,111,110
Delaware.....	1929	3	9	29	25	—	25	20,376	35,244	114,482	105,865	8,617	211,616	97,134
	1927	4	3	24	42	—	42	16,240	37,219	122,417	118,193	4,224	188,964	60,547
Georgia.....	1929	5	13	44	363	—	363	24,903	42,967	570,745	560,550	10,195	725,722	154,977
Illinois.....	1929	115	898	5,406	22,124	1,695	20,429	2,443,105	8,592,591	45,578,918	44,353,173	1,220,745	68,716,404	23,142,486
Indiana.....	1929	34	166	1,056	5,575	—	5,575	470,730	1,414,123	4,987,111	4,752,848	234,263	8,341,305	3,354,194
	1927	34	154	1,283	9,818	—	9,818	393,308	1,705,106	2,935,313	2,768,770	166,543	5,833,329	2,898,016
Kentucky.....	1929	7	42	219	330	15	315	122,227	345,891	626,713	608,144	18,569	1,276,888	650,175
	1927	7	28	182	127	15	112	95,550	295,238	357,618	342,937	14,681	961,860	604,242
Louisiana.....	1929	4	14	32	114	—	114	28,877	44,966	89,689	85,603	4,086	190,037	100,398
	1927	4	9	32	89	—	89	20,128	40,154	68,741	65,342	3,399	141,324	72,583
Maryland.....	1929	23	624	1,872	22,146	40	22,106	935,595	2,491,104	30,019,140	29,635,168	483,972	33,507,719	8,488,579
Massachusetts.....	1929	76	385	1,861	14,396	2,800	11,596	1,087,235	2,592,332	10,291,321	9,840,833	450,483	13,000,782	7,700,461
Michigan.....	1929	93	1,231	10,219	45,355	15,543	29,812	4,045,131	15,181,748	57,777,516	55,727,189	2,050,327	91,469,188	33,691,672
	1927	90	1,052	7,736	48,059	15,643	32,416	3,161,716	11,754,385	40,729,966	39,064,595	1,665,371	64,683,476	23,963,610
Minnesota.....	1929	16	42	188	697	—	697	125,408	249,503	1,686,923	1,642,952	43,971	2,406,592	719,669
Missouri.....	1929	27	223	997	5,126	—	5,126	682,284	1,283,650	12,267,626	12,077,423	190,203	16,544,314	4,276,688
New Jersey.....	1929	80	682	4,140	45,927	4,288	41,639	1,655,026	6,362,575	68,970,947	67,769,092	1,201,855	94,955,405	25,984,618
New York.....	1929	219	2,418	13,901	71,228	18,353	52,875	6,599,428	20,021,813	92,803,075	90,424,686	2,379,089	143,232,010	50,428,385
Ohio.....	1929	112	820	4,769	13,622	1,625	11,997	2,470,342	7,585,953	17,583,451	16,884,504	698,947	35,500,973	17,917,622
	1927	114	623	3,896	10,226	1,560	8,666	1,678,319	6,238,750	13,067,591	13,370,513	587,078	27,125,513	13,167,922
Oregon.....	1929	11	22	69	230	5	225	58,911	100,503	322,957	310,464	12,493	561,613	238,656
Pennsylvania.....	1929	122	690	4,808	22,767	2,618	20,149	2,105,107	7,065,845	29,944,323	29,046,862	897,461	46,852,570	16,908,247
	1927	127	727	3,864	17,789	2,073	15,716	1,977,693	5,445,546	24,660,335	23,932,252	723,083	36,367,369	11,707,034
Texas.....	1929	12	38	150	717	—	717	106,235	219,010	1,321,959	1,288,083	33,876	1,987,770	665,811
	1927	13	34	175	692	—	692	77,992	233,172	1,191,074	1,160,800	30,274	1,725,099	634,025
Washington.....	1929	19	43	173	791	—	791	124,221	283,391	838,603	818,651	20,042	1,582,785	744,092
Groups of States:														
Ala., 3 est.; Tenn., 4; Va., 2.....	1929	9	33	202	720	—	720	77,559	215,226	1,989,395	1,943,012	46,383	2,545,700	556,305
Ark., 1 est.; Okla., 3.....	1929	4	10	44	105	—	105	26,195	79,579	75,909	71,054	4,855	285,180	209,221
Iowa, 7 est.; Kans., 2; Nebr., 3.....	1929	12	18	165	919	50	869	65,110	215,914	1,820,423	1,776,729	43,694	2,496,841	676,418
Me., 1 est.; N. H., 3; Vt., 2.....	1929	6	14	39	143	—	143	27,744	45,501	348,409	336,817	11,592	466,073	117,664
D. C., 1 est.; Fla., 2; Mont., 1; N. C., 1; R. I., 16; Utah, 2; W. Va., 6; Wis., 43.....	1929	72	685	5,175	53,894	5,850	48,044	1,586,841	7,933,400	68,764,630	67,108,575	1,650,055	95,930,391	27,165,761
States not shown separately.....	1927	659	4,495	27,240	156,605	27,132	129,473	12,308,089	39,380,320	190,215,549	184,809,593	5,405,956	232,017,439	91,801,890

See footnotes at end of table.

NONFERROUS-METAL ALLOYS, 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 employes ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
SMELTING AND REFINING, METALS OTHER THAN GOLD, SILVER, OR PLATINUM, NOT FROM THE ORE														
United States.....	1929	106	821	4,134	18,174	605	17,569	3,223,763	5,574,322	83,444,918	61,692,519	1,752,399	105,882,655	22,437,737
	1927	102	694	2,776	11,989	1,463	10,526	2,244,024	4,280,291	68,844,494	67,623,566	1,270,928	80,770,546	11,876,082
	1919	81	573	2,167	7,921	3,025	4,896	1,571,130	3,093,140	40,675,880	39,849,163	726,717	50,246,088	9,570,208
Individual States:														
California.....	1929	6	82	301	2,334	150	2,184	270,552	415,841	4,711,323	4,602,057	169,266	5,856,788	1,145,465
	1927	6	60	239	2,059	150	1,909	224,41	363,982	4,916,251	4,775,563	140,688	6,295,172	1,378,921
Illinois.....	1929	25	199	1,153	2,914	335	2,579	1,026,147	1,641,041	29,571,514	29,190,122	361,392	37,205,967	7,634,453
	1927	23	158	694	2,970	918	2,052	656,102	1,085,568	22,190,987	21,898,012	292,975	25,543,803	3,352,816
	1919	17	62	479	1,610	918	692	170,410	637,087	9,316,031	9,181,613	134,418	11,233,227	1,917,166
Indiana.....	1929	4	61	177	1,017	-----	1,017	210,267	265,982	6,329,804	6,237,838	91,966	7,574,296	1,244,494
	1927	4	46	121	960	-----	960	127,091	163,417	5,068,027	4,983,411	74,616	5,508,042	450,015
	1919	4	77	257	915	305	610	233,550	434,500	3,410,236	3,325,608	84,628	4,869,444	1,489,208
Massachusetts.....	1929	5	28	64	201	-----	201	69,034	83,462	1,735,332	1,711,743	23,589	2,039,960	304,634
	1927	6	22	63	176	-----	176	38,395	86,494	1,731,064	1,711,621	19,443	1,983,680	262,616
New Jersey.....	1929	7	32	205	1,142	-----	1,142	101,386	260,672	3,503,316	3,383,803	119,513	4,109,414	696,098
	1927	7	20	95	321	-----	321	57,258	138,893	2,168,011	2,108,066	59,915	2,704,443	536,432
	1919	10	116	468	2,375	1,565	810	272,777	747,828	3,651,085	3,484,085	167,000	5,058,691	1,407,606
New York.....	1929	11	75	272	841	-----	841	336,516	404,187	7,671,689	7,558,891	112,798	9,418,253	1,746,564
	1927	13	93	328	661	275	386	268,276	473,431	9,040,294	8,938,008	102,286	10,360,527	1,326,233
	1919	11	90	186	418	25	393	290,508	237,548	12,677,803	12,635,505	42,298	14,761,649	2,083,846
Ohio.....	1929	10	38	146	342	-----	342	129,922	167,708	3,445,960	3,390,188	55,772	4,075,991	630,031
	1927	11	45	120	278	-----	278	124,618	199,163	3,417,654	3,365,243	51,811	3,936,848	519,794
	1919	7	40	88	130	20	110	127,413	109,400	1,681,882	1,650,573	25,309	2,288,447	606,565
Pennsylvania.....	1929	14	141	783	1,964	120	1,844	522,091	893,349	16,325,089	15,920,340	405,349	19,204,865	2,879,116
	1927	14	143	643	1,729	130	1,609	474,745	1,061,694	14,013,309	13,712,170	301,339	16,420,621	2,407,112
	1919	11	50	188	378	192	186	133,174	255,153	5,050,761	4,981,901	68,860	5,912,459	861,728
Groups of States:														
Mich., 9 est.; Wis., 3.....	1920	12	54	287	1,646	-----	1,646	251,411	366,585	5,064,613	4,987,758	76,855	7,760,787	2,096,174
Colo., 1 est.; Kans., 1; Mo., 1; Nebr., 1; Okla., 1.....	1920	5	50	258	1,391	-----	1,391	167,335	309,398	3,599,403	3,502,805	96,598	5,356,451	1,757,048
Ala., 1 est.; Conn., 1; Del., 1; N. H., 1; Oreg., 1; Wash., 1; W. Va., 1.....	1920	7	61	458	4,382	-----	4,382	138,202	716,117	1,486,276	1,206,974	279,301	3,279,935	1,793,660
States not shown separately.	⁵ 1927	18	107	473	2,835	-----	2,835	275,123	707,659	6,359,297	6,131,442	227,855	8,011,410	1,662,113
	⁶ 1919	21	138	501	2,095	-----	2,095	343,298	671,624	4,888,082	4,683,878	204,204	6,092,141	1,204,059

¹ Not including proprietors and firm members. The total numbers of persons engaged and the numbers of proprietors and firm members, as reported for each of these industries, are as follows: Nonferrous-metal alloys and products, not including aluminum products, for 1929, total, 92,095; proprietors and firm members, 604. For 1927, total, 76,790; proprietors and firm members, 672. For 1919, total, 90,877; proprietors and firm members, 824. Smelting and refining, metals other than gold, silver, or platinum, not from the ore, for 1929, total, 4,901; proprietors and firm members, 36. For 1927, total, 3,517; proprietors and firm members, 47. For 1919, total, 2,793; proprietors and firm members, 53.

² The figures for all census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.
³ Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
⁴ Alabama, 4 establishments; District of Columbia, 1; Florida, 1; Georgia, 4; Illinois, 122; Iowa, 4; Kansas, 3; Maine, 1; Maryland, 17; Massachusetts, 89; Minnesota, 13; Missouri, 23; Montana, 1; Nebraska, 3; New Hampshire, 3; New Jersey, 69; New York, 210; Oklahoma, 2; Oregon, 8; Rhode Island, 11; South Carolina, 1; Tennessee, 2; Utah, 2; Vermont, 2; Virginia, 3; Washington, 18; West Virginia, 6; and Wisconsin, 36.
⁵ Alabama, 1 establishment; Connecticut, 1; Delaware, 1; Kansas, 1; Michigan, 3; Missouri, 2; Nebraska, 1; New Hampshire, 1; Virginia, 1; Washington, 1; West Virginia, 1; Wisconsin, 4.
⁶ California, 3 establishments; Connecticut, 4; Delaware, 1; Massachusetts, 4; Michigan, 4; New Hampshire, 1; North Dakota, 1; Virginia, 2; Wisconsin, 1.

CENSUS OF MANUFACTURES: 1929

TABLE 3.—INGOTS AND PIGS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1929, 1927, AND 1925

[This table presents statistics for the total production of ingots and pigs in the "Smelting and refining, metals other than gold, silver, or platinum, not from the ore" industry and the "Nonferrous-metal alloys and products, not including aluminum products" industry. The figures for the latter industry include data for the production, where such production was reported, of the specified commodities made as secondary products in other industries. The value of this secondary production amounted to \$3,237,506 in 1929, \$1,229,281 in 1927, and \$7,612,522 in 1925. The figures for all census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

[Ton, 2,000 pounds]

CLASS	1929	1927	1925	CLASS	1929	1927	1925
INGOTS AND PIGS				INGOTS AND PIGS—continued			
Aggregate value.....	\$169,447,667	\$133,252,833	\$136,844,307	Brass and bronze, total value.....	\$43,568,172	\$20,503,535	\$23,586,420
Copper (secondary), total value.....	\$16,512,500	\$4,253,957	\$10,707,278	"Smelting and refining, not from the ore" industry—			
"Smelting and refining, not from the ore" industry—				Tons.....	112,259	94,770	73,709
Tons.....	44,215	16,426	24,061	Value.....	\$33,427,374	\$22,211,205	\$16,976,824
Value.....	\$14,648,156	\$4,131,178	\$6,688,193	"Nonferrous-metal alloys and products" industry—			
"Nonferrous-metal alloys and products" industry—				Tons.....	33,231	30,062	25,734
Tons.....	5,907	410	15,017	Value.....	\$10,140,798	\$7,292,330	\$6,009,596
Value.....	\$1,864,344	\$122,779	\$4,049,085	Antifriction bearing metal, total.....	\$20,301,315	\$17,467,002	\$21,817,354
Lead (secondary), total value.....	\$21,538,673	\$14,773,503	\$12,693,450	"Smelting and refining, not from the ore" industry—			
"Smelting and refining, not from the ore" industry—				Tons.....	11,611	15,222	13,308
Common—				Value.....	\$4,212,937	\$5,436,553	\$6,484,202
Tons.....	29,634			"Nonferrous-metal alloys and products" industry—			
Value.....	\$4,042,627	\$4,429	\$4,826	Tons.....	42,758	23,324	35,570
Antimonial—		\$11,748,560	\$7,911,317	Value.....	\$16,088,378	\$12,030,449	\$16,333,152
Tons.....	78,286			Solders, total.....	\$28,595,090	\$29,857,096	\$25,085,262
Value.....	\$10,945,001			"Smelting and refining, not from the ore" industry—			
"Nonferrous-metal alloys and products" industry—				Tons.....	15,935	10,221	4,412
Common—				Value.....	\$7,267,091	\$7,062,789	\$2,804,318
Tons.....	27,425			"Nonferrous-metal alloys and products" industry—			
Value.....	\$4,063,829	\$24,253	\$4,739	Tons.....	40,488	38,020	38,312
Antimonial—		\$3,024,943	\$4,782,133	Value.....	\$21,327,999	\$22,794,907	\$22,790,944
Tons.....	17,697			Type metal, total.....	\$7,885,354	\$7,340,897	\$6,517,359
Value.....	\$2,487,216			"Smelting and refining, not from the ore" industry—			
Zinc (secondary), total value.....	\$5,519,127	\$5,979,749	\$6,618,408	Tons.....	11,845	10,845	4,466
"Smelting and refining, not from the ore" industry—				Value.....	\$2,367,318	\$2,212,198	\$1,062,752
Tons.....	38,184	48,978	39,210	"Nonferrous-metal alloys and products" industry—			
Value.....	\$5,322,352	\$5,878,101	\$6,413,296	Tons.....	30,445	26,200	25,586
"Nonferrous-metal alloys and products" industry—				Value.....	\$5,518,036	\$5,128,699	\$5,454,607
Tons.....	1,659	830	593	Other nonferrous metals, total.....	\$22,862,676	\$24,076,494	\$20,318,776
Value.....	\$196,775	\$101,648	\$105,112	"Smelting and refining, not from the ore" industry, value.....	\$14,969,692	\$17,556,303	\$16,267,345
Tin (secondary), total value.....	\$2,664,760	(?)	(?)	"Nonferrous-metal alloys and products" industry, value.....	\$7,892,984	\$6,520,191	\$13,051,431
"Smelting and refining, not from the ore" industry—							
Tons.....	1,361	(?)	(?)				
Value.....	\$1,167,248	(?)	(?)				
"Nonferrous-metal alloys and products" industry—							
Tons.....	1,795	(?)	(?)				
Value.....	\$1,497,512	(?)	(?)				

1 Revised.

2 No comparable data.

3 Not reported separately for 1927 and 1925.

4 Includes aluminum ingots, data for which are included in the total production of ingots as given in the "Aluminum manufactures" report.

5 Includes value reported for tin.

NONFERROUS-METAL ALLOYS, ETC.

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TABLE 4.—PRODUCTS OTHER THAN INGOTS AND PIGS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1929, 1927, AND 1925

[This table presents statistics for the total output of nonferrous-metal products, except ingots and pigs (see Table 3), by establishments classified in the "Nonferrous-metal alloys and products, not including aluminum products" industry and by establishments classified in other industries. The value of the production by the latter group of establishments was \$26,607,263 in 1929, \$30,171,255 in 1927, and \$23,618,342 in 1925. The figures for all census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

[Ton, 2,000 pounds]

CLASS	1929	1927	1925	CLASS	1929	1927	1925
Plates and sheets, total value.....	\$193,945,176	\$131,549,729	\$124,473,260	Tubing and pipe—Continued.			
Brass and bronze, total tons.....	255,255			Brass and bronze—Continued.			
For sale.....	215,575			Produced and consumed in same works, tons.....	313	(2)	(3)
Value.....	\$91,024,037			Copper:			
Transferred to other plants of same company—		164,787	189,486	For sale and interplant transfer—			
Tons.....	18,646	\$60,767,996	\$71,024,795	Tons.....	49,062	36,164	28,977
Assigned value.....	\$7,521,019			Value.....	\$25,774,350	\$17,852,019	\$14,909,452
Produced and consumed in same works, tons.....	21,034	(2)	(2)	Lead:			
Copper, total tons.....	129,223			For sale and interplant transfer—			
For sale and interplant transfer—				Tons.....	37,026	43,835	52,858
Tons.....	127,789	92,603	81,158	Value.....	\$7,000,576	\$8,292,077	\$11,850,902
Value.....	\$59,539,928	\$39,232,472	\$35,231,493	Nickel alloys:			
Produced and consumed in same works, tons.....	1,434	(2)	(2)	For sale and interplant transfer—			
Lead:				Tons.....	1,759	(2)	(2)
For sale and interplant transfer—				Value.....	\$2,541,819	(2)	(2)
Tons.....	35,802	26,296	25,592	Other nonferrous metals and alloys:			
Value.....	\$6,490,493	\$4,807,378	\$5,681,165	For sale and interplant transfer—			
Zinc:				Tons.....	3,686	(2)	(2)
For sale and interplant transfer—				Value.....	\$2,342,147	\$2,022,531	\$701,674
Tons.....	54,135	(2)	(2)	Other tubing, including brazed	\$4,013,360	\$3,354,420	\$3,707,053
Value.....	\$9,543,739	(2)	(2)	Castings, rough, total value.....	\$115,586,925	\$79,683,888	\$75,301,014
Nickel alloys:				Brass and bronze—			
For sale and interplant transfer—				Pounds.....	413,512,944	(2)	(2)
Tons.....	27,162	18,517	(2)	Value.....	\$98,908,131	\$66,261,802	\$67,027,234
Value.....	\$18,337,961	\$12,583,270	(2)	Copper—			
Other metals:				Pounds.....	9,798,512	4,511,029	4,907,055
For sale and interplant transfer—				Value.....	\$2,090,725	\$1,312,760	\$1,307,329
Tons.....	2,419	(2)	(2)	Nickel alloys—			
Value.....	\$1,457,999	\$14,158,613	\$12,535,807	Pounds.....	5,227,046	(2)	(2)
Rods, total value.....	\$135,852,141	\$53,008,990	\$58,988,472	Value.....	\$2,942,165	\$1,772,389	(2)
Brass and bronze, total tons.....	170,228	(2)	(2)	Other ⁶ :			
For sale and interplant transfer—				Pounds.....	28,006,556	(2)	(2)
Tons.....	125,243	91,680	80,409	Value.....	\$11,050,904	\$10,316,937	\$7,056,451
Value.....	\$45,860,031	\$28,240,630	\$26,522,416	FINISHED PRODUCTS ⁷			
Produced and consumed in same works, tons.....	44,985	(2)	(2)	Extruded shapes, total value.....	\$6,665,268	\$4,678,076	\$1,808,667
Copper, total tons.....	569,540	(2)	(2)	Brass and bronze.....	\$5,245,183	\$2,610,761	\$1,408,050
For sale and interplant transfer—				Other, including copper.....	\$1,420,085	\$2,067,315	\$400,617
Tons.....	227,308	110,055	113,474	Bearings and bushings (including anti-friction linings), total value.....	\$27,680,058	\$18,722,607	\$21,184,034
Value.....	\$81,057,185	\$32,475,636	\$36,485,503	Brass and bronze.....	\$26,599,654	\$18,513,238	\$19,542,592
Produced and consumed in same works, tons.....	342,232	(2)	(2)	Other.....	\$1,080,404	\$209,429	\$1,641,442
Nickel alloys, total tons.....	8,064	(2)	(2)	Bells.....	\$809,245	\$820,200	\$1,182,690
For sale.....				Die castings.....	\$22,076,623	\$20,059,381	\$20,116,492
Tons.....	7,232	(2)	(2)	Finished castings, total value.....	\$15,550,907	\$17,536,111	\$14,079,922
Value.....	\$5,875,561	\$3,984,646	(2)	Brass and bronze.....	\$12,352,183	\$16,320,846	\$12,844,329
Produced and consumed in same works, tons.....	832	(2)	(2)	Other.....	\$3,198,724	\$1,215,265	\$1,835,593
Other nonferrous metals and alloys:				Forgings and hot-pressed parts, total value.....	\$7,768,582	\$4,331,537	(2)
For sale.....				Brass and bronze.....	\$7,651,635	\$4,214,378	(2)
Tons.....	3,628	(2)	(2)	Copper.....	\$89,692	(2)	(2)
Value.....	\$3,050,364	\$908,078	\$5,980,553	Other.....	\$27,255	\$117,159	(2)
Tubing (seamless) and pipe, total value.....	\$73,888,613	\$54,076,301	\$52,217,893	Other nonferrous products.....	\$42,020,428	\$37,933,768	\$35,715,400
Brass and bronze, total tons.....	71,569	(2)	(2)	Miscellaneous nonferrous products normally classified in other industries (see Table 7).....	\$208,321,547	\$92,153,501	\$115,054,797
For sale.....							
Tons.....	68,650						
Value.....	\$35,108,937						
Transferred to other plants of same company—		62,294	51,286				
Tons.....	2,636	\$25,909,674	\$24,746,835				
Assigned value.....	\$1,122,784						

¹ This figure does not include value of quantities reported as produced and consumed in same works.

² Not called for on schedule.

³ No comparable data.

⁴ Includes value reported for zinc.

⁵ Includes value reported for nickel alloys.

⁶ Includes aluminum castings made in this industry. The total production and the value of aluminum castings are shown in the "Aluminum manufacturers" report.

⁷ Data on quantity not called for.

CENSUS OF MANUFACTURES: 1929

TABLE 5.—INGOTS AND PIGS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, BY STATES: 1929

[See headnote, Table 3. Figures are given for each State which can be shown separately without disclosing the output of individual establishments, and for the remaining States in groups]

CLASS	Quantity	Value	CLASS	Quantity	Value	CLASS	Quantity	Value
	(Ton, 2,000 lbs.)			(Ton, 2,000 lbs.)			(Ton, 2,000 lbs.)	
Aggregate value.....		\$169,447,667	Tin, total.....	3,156	\$2,664,760	Solders, total.....	56,423	\$28,595,990
Copper, total.....	50,122	16,512,500	Illinois.....	377	356,396	California.....	3,008	1,870,566
New Jersey.....	1,972	625,533	New Jersey.....	327	263,790	Colorado.....	321	122,131
Pennsylvania.....	16,760	6,031,599	New York.....	143	128,982	Illinois.....	13,609	7,954,297
Delaware, New York.....	16,546	4,804,975	Pennsylvania.....	102	81,909	Massachusetts.....	987	558,286
Illinois, Indiana, Michigan.....	13,174	4,436,286	California, Colorado, Kansas, Missouri, Nebraska.....	931	848,729	Michigan.....	4,780	2,321,040
Other States (Calif., Ga., Kans., Ohio, Oreg., Wis.).....	1,670	614,107	Indiana, Maryland, Massachusetts, Michigan, Minnesota, Ohio, Wisconsin.....	1,276	684,954	Missouri.....	2,142	1,060,819
Lead (common and antimonial), total.....	153,042	21,538,673	Brass and bronze, total.....	145,400	43,568,172	New Jersey.....	13,512	6,584,806
California.....	9,212	1,425,034	Illinois.....	57,784	17,305,147	New York.....	8,774	4,354,431
Colorado.....	1,296	199,435	Michigan.....	14,084	4,440,580	Ohio.....	2,335	1,331,066
Illinois.....	44,035	5,947,960	Ohio.....	4,001	1,265,430	Pennsylvania.....	4,692	1,985,882
Massachusetts.....	6,390	1,100,478	Pennsylvania.....	30,071	9,039,240	Other States (Conn., Ga., Ind., Kans., Md., Minn., Oreg., Tenn., Wash., Wis.).....	2,263	1,031,706
Michigan.....	3,014	397,566	California, Kansas, Oregon.....	5,974	1,785,287	Type metal, total.....	42,290	7,885,354
New Jersey.....	21,417	2,921,628	Indiana, Missouri, Wisconsin.....	13,038	3,564,764	Illinois.....	10,702	2,054,074
New York.....	22,272	3,119,372	Connecticut, Massachusetts, New Hampshire, New Jersey, New York.....	20,538	6,158,724	Massachusetts.....	1,074	215,883
Ohio.....	1,464	246,655	Antifriction bearing metal, total.....	54,369	20,301,315	Michigan.....	798	144,384
Pennsylvania.....	14,200	1,840,749	California.....	1,656	827,928	Minnesota.....	1,185	134,080
Indiana, Missouri.....	24,811	3,578,083	Colorado.....	85	36,150	Missouri.....	2,924	695,567
Kansas, Minnesota, Nebraska, Wisconsin.....	3,910	620,438	Illinois.....	10,545	4,096,551	New York.....	6,822	1,127,595
Other States (Conn., Ga., Md., N. H., Oreg.).....	1,021	141,275	Michigan.....	2,845	2,229,306	California, Colorado, Oregon, Washington.....	1,380	425,692
Zinc, total.....	39,843	5,519,127	Missouri.....	2,066	894,919	Maryland, New Jersey, Pennsylvania.....	12,300	2,140,123
Massachusetts.....	628	74,076	New York.....	6,662	3,694,076	Indiana, Ohio, Wisconsin.....	4,849	988,226
Michigan.....	440	58,060	Ohio.....	1,581	522,934	Other States (Conn., Ga., Kans., Nebr.).....	247	49,930
New York.....	3,448	513,058	Pennsylvania.....	3,368	1,338,063	Other, total ¹		22,882,676
Pennsylvania.....	16,336	2,313,231	Wisconsin.....	105	40,044	California.....		648,250
Alabama, Georgia, Illinois, New Jersey, Ohio, West Virginia, Wisconsin.....	17,779	2,406,719	Alabama, Georgia, Virginia.....	743	142,680	Illinois.....		5,211,452
California, Colorado, Kansas, Missouri, Nebraska, Oregon.....	1,203	153,983	Connecticut, Maryland, Massachusetts, New Jersey.....	24,075	6,208,482	Michigan.....		1,230,999
			Kansas, Minnesota, Nebraska, Wisconsin.....	236	79,031	New Jersey.....		795,522
			Oregon, Washington.....	402	191,151	New York.....		3,078,851
						Ohio.....		3,610,784
						Pennsylvania.....		1,450,036
						Other States (Calif., Conn., Ga., Ind., Kans., Mass., Mo., Nebr., R. I., Va., Wis.).....		6,824,882

¹ Includes data for aluminum ingots made as secondary products in this industry. The total production of such ingots is shown in Table 3 of the report for the "Aluminum manufactures" industry.

TABLE 6.—PRODUCTS OTHER THAN INGOTS AND PIGS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, BY STATES: 1929

[See headnote, Table 4. Figures are given for each State which can be shown separately without disclosing the output of individual establishments, and for the remaining States in groups]

CLASS	Quantity	Value	CLASS	Quantity	Value	CLASS	Quantity	Value
	Ton, 2,000 pounds			Ton, 2,000 pounds			Ton, 2,000 pounds	
Plates and sheets: Total value.....		\$193,945,176	Plates and sheets—Contd. Other metals, total.....	2,419	\$1,487,999	Tubing and pipe—Contd. Brass and bronze—Conn. Michigan.....	3,274	\$1,088,260
Brass and bronze, total.....	234,221	98,545,050	Connecticut.....	425	528,610	Mass., N. J., N. Y., R. I.....	17,488	8,927,933
Connecticut.....	118,773	49,423,013	Other States (Ill., La., Mass., N. Y., W. Va.).....	1,994	959,383	Other States (Md., Ohio, Pa., Wis.).....	7,018	3,613,649
Illinois, Michigan, Wisconsin.....	73,395	30,143,835	Rods and bars: Total value.....		135,852,141	Copper, total.....	49,062	25,774,350
Maryland, New Jersey, Pennsylvania.....	5,817	3,345,602	Brass and bronze, total.....	125,243	45,869,031	Connecticut.....	18,541	10,025,995
Massachusetts, New York, Rhode Island.....	36,236	15,632,606	Connecticut.....	73,419	26,523,697	Michigan.....	12,316	6,263,733
Copper, total.....	127,789	59,539,928	Michigan.....	18,064	6,550,194	Maryland, Massachusetts, New Jersey, New York.....	14,832	7,582,246
Connecticut.....	24,812	12,459,177	Ill., Pa., Wis.....	26,531	9,868,140	Other States (Ohio, Pa., R. I., Wis.).....	3,373	1,932,376
Michigan.....	22,705	10,723,664	Other States (Mass., N. J., N. Y.).....	7,229	2,927,000	Lead (Calif., Colo., Ga., Ill., Md., Mass., Mich., Minn., Mo., Nebr., N. J., N. Y., Ohio, Pa., Wash., Wis.).....	37,026	7,000,576
Massachusetts, New Jersey, New York.....	31,582	14,244,886	Copper, total.....	227,308	81,057,185	Nickel alloys (Conn., Mass., Mich., Pa., Wis.).....	1,789	2,541,819
Illinois, Maryland, Ohio, Pennsylvania, Wisconsin.....	48,690	22,112,201	New Jersey.....	24,098	11,016,755	Other metals (Conn., Ill., Mass., Mich., N. Y., Pa., W. Va.).....	3,686	2,342,147
Lead, common and antimonial (Calif., Colo., Conn., Ga., Ill., Md., Mass., N. J., N. Y., Ohio, Pa., Wash.).....	35,802	6,490,493	New York.....	51,516	16,350,445	Other tubing, including brazed (Conn., Ill., Mich., N. Y., Ohio, Pa., W. Va., Wis.).....	(1)	4,013,360
Zinc (Conn., Ill., Ind., Md., N. Y., Pa., Wis.).....	54,135	9,543,739	Other States (Conn., Ill., Mich., N. J., Pa., W. Va.).....	151,694	53,683,985			
Nickel alloys, total.....	27,162	18,337,961	Nickel alloys (Conn., Ill., Mich., N. J., Pa., W. Va., Wis.).....	7,232	5,875,561			
Connecticut.....	16,393	9,310,401	Other metals (Conn., Ill., Mich., Ohio, W. Va.).....	3,628	3,050,364			
Other States (Ill., Md., Mich., N. J., Pa., W. Va., Wis.).....	10,769	9,027,560	Tubing (seamless) and pipe: Total value.....		73,883,613			
			Brass and bronze, total.....	71,286	36,229,721			
			Connecticut.....	43,606	21,699,879			

¹ No data.

NONFERROUS-METAL ALLOYS, ETC.

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TABLE 6.—PRODUCTS OTHER THAN INGOTS AND PIGS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, BY STATES: 1929—Continued

[See note at head of this table]

CLASS	Quantity	Value	CLASS	Quantity	Value	CLASS	Quantity	Value
Castings, rough:			Castings, rough—continued			FINISHED PRODUCTS—con.		
Total value.....		\$115,580,925	Other metals—Continued.	<i>Pounds</i>		Bearings and bushings—con.		
Brass and bronze, total.....	413,512,944	98,903,131	Connecticut.....	868,674	\$347,894	Other metals (Calif., Colo., Ill., Ind., Kans., Mass., Mich., N. J., Ohio, Pa., Wash., Wis.).....		\$1,080,404
Alabama.....	1,239,010	277,166	Illinois.....	2,231,738	1,047,091	Bells (Calif., Conn., Ill., La., Mo., N. Y., Ohio, Wis.).....		809,245
California.....	16,873,100	4,315,112	Indiana.....	1,582,442	1,012,821	Die castings, total value.....		22,076,623
Connecticut.....	12,045,892	3,309,013	Iowa.....	1,345,702	519,338	Illinois.....		6,334,656
Illinois.....	63,199,823	12,068,512	Maryland.....	111,297	76,479	Michigan.....		1,402,194
Indiana.....	8,543,645	2,182,392	Massachusetts.....	1,779,539	713,943	New York.....		5,624,084
Kentucky.....	289,120	82,867	Michigan.....	2,393,853	945,232	Other States (Calif., Conn., Ind., Mass., N. J., Ohio, Pa., Wis.).....		8,715,689
Louisiana.....	368,399	93,521	Minnesota.....	593,670	203,266	Finished castings, total value.....		15,550,907
Maryland.....	2,109,603	505,733	Missouri.....	513,555	183,340	Brass and bronze, total value.....		12,352,183
Massachusetts.....	9,950,704	2,718,022	New Jersey.....	2,008,447	866,513	California.....		618,269
Michigan.....	23,093,490	5,446,476	New York.....	2,229,966	1,078,911	Maryland.....		148,392
Minnesota.....	4,863,764	1,078,181	Ohio.....	3,864,836	1,528,842	Massachusetts.....		475,419
Missouri.....	41,662,878	9,164,806	Pennsylvania.....	4,508,577	1,299,530	Michigan.....		3,755,792
New Hampshire.....	1,656,330	415,359	Rhode Island.....	17,992	11,687	Missouri.....		193,777
New Jersey.....	15,101,017	4,307,451	Texas.....	114,543	45,730	New York.....		2,519,712
New York.....	43,985,246	11,808,483	Washington.....	263,669	75,315	Ohio.....		1,535,041
Ohio.....	31,264,533	8,711,788	West Virginia.....	27,979	12,780	Pennsylvania.....		1,407,925
Pennsylvania.....	94,692,212	10,861,734	Wisconsin.....	552,576	230,754	Texas.....		30,262
Rhode Island.....	814,537	289,456	Alabama, Florida, Kentucky, Louisiana, Tennessee, Virginia.....	152,833	61,814	Wisconsin.....		395,710
Texas.....	8,206,804	1,818,779	Arizona, Idaho, Oregon, Utah, Wyoming.....	133,569	51,600	Alabama, Georgia, Louisiana.....		125,185
Vermont.....	440,090	162,844	Delaware, District of Columbia, Maine, New Hampshire, Vermont.....	52,626	23,214	Colorado, Oklahoma, Oregon, Washington.....		256,007
Washington.....	2,987,752	658,284	Kansas, Nebraska, Oklahoma.....	217,544	80,473	Connecticut, Delaware, New Jersey, Rhode Island.....		175,898
Wisconsin.....	9,909,584	2,458,601	FINISHED PRODUCTS			Illinois, Indiana, Iowa, Minnesota.....		714,794
Arkansas, Florida, Georgia, Mississippi, North Carolina, Tennessee, South Carolina, Virginia, West Virginia.....	11,247,839	2,582,588	Extruded shapes, total value.....		6,665,268	Other metals, total value.....		3,198,724
Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah.....	8,824,977	2,054,642	Brass and bronze (Conn., Ill., Mass., Mich., Wis.).....		5,245,183	New York.....		867,741
Delaware, District of Columbia, Maine.....	747,708	219,548	Other metals, total value.....		1,420,085	Ohio.....		117,953
Iowa, Kansas, Nebraska, Oklahoma.....	10,289,078	2,417,713	Illinois.....		308,132	Wisconsin.....		21,970
Copper, total.....	9,798,512	2,600,725	Other States (Conn., Ga., Mich., Minn., Mo., N. J., N. Y., Ohio, Pa., Wis.).....		1,111,953	Connecticut, Maryland, Massachusetts, New Jersey, Pennsylvania, Rhode Island.....		1,398,734
California.....	265,310	82,170	Bearings and bushings, total value.....		27,680,058	Illinois, Indiana, Iowa, Michigan, Minnesota.....		685,870
Connecticut.....	62,423	19,834	Brass and bronze, total value.....		26,599,654	Other States (Calif., Colo., Mo., Tex.).....		106,426
Illinois.....	1,534,732	441,891	California.....		1,179,494	Forgings and hot-pressed parts, total value.....		7,768,582
Massachusetts.....	204,591	71,696	Illinois.....		178,181	Brass and bronze (Conn., Ill., Mich., N. Y., Pa., Wis.).....		7,651,635
Michigan.....	916,732	228,078	Indiana.....		616,509	Copper (Conn., Ill., Wis.).....		89,692
Missouri.....	82,879	19,362	Michigan.....		12,004,135	Other metals (Conn., Ill., Pa., Wis.).....		27,255
New York.....	454,184	131,097	Minnesota.....		435,934			
Ohio.....	1,373,455	462,879	New Jersey.....		117,210			
Pennsylvania.....	1,004,119	289,525	New York.....		265,507			
Other States (Ala., Del., Ind., Iowa, Md., Minn., N. J., R. I., Tex., Utah, Wash., Wis.).....	3,900,087	894,193	Ohio.....		7,024,977			
Nickel alloys (Calif., Conn., Ill., Ind., La., Mass., Mich., Mo., N. J., N. Y., Ohio, Pa., Wis.).....	5,227,046	2,942,165	Pennsylvania.....		2,666,040			
Other metals, total.....	28,000,556	11,050,904	Washington.....		39,432			
California.....	2,462,908	610,338	Alabama, Georgia, Kentucky, Louisiana, Tennessee, Texas.....		1,306,324			
Colorado.....	71,191	20,943	Maryland, Massachusetts, Rhode Island, Vermont, West Virginia.....		306,467			

¹ Includes data for aluminum castings made as secondary products in this industry. The total production of such castings is shown in Table 3 of the report for the "Aluminum manufactures" industry.

TABLE 7.—MISCELLANEOUS NONFERROUS-METAL PRODUCTS NORMALLY CLASSIFIED IN OTHER INDUSTRIES, BY KIND AND VALUE: 1929, 1927, AND 1925

[This table does not show the total production of any of the products specified, but merely that portion reported by establishments classified in the "Nonferrous-metal alloys and products, not including aluminum products" industry. Establishments manufacturing these commodities as their chief products are classified in other industries. See "Description of the Industries," p. 1068. The figures for all census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products]

CLASS	1929	1927	1925	CLASS	1929	1927	1925
Wire (bare), total value.....	\$149,165,724	\$40,235,234	\$51,095,533	Plumbers' goods and valves, total value.....	\$15,289,134	\$22,150,037	\$23,444,254
Brass and bronze—				Brass and bronze.....	13,072,477	20,075,390	20,309,448
Tons.....	31,622	32,379	42,132	Copper and other metals.....	2,216,657	2,074,647	3,134,806
Value.....	\$15,189,123	\$13,283,489	\$17,399,135	Screw-machine products, brass, bronze, and other metals.....	3,189,665	2,955,823	3,167,771
Copper—				Spun and stamped products, total value.....	16,754,450	10,134,065	4,613,229
Tons.....	303,808	79,882	95,236	Brass and bronze.....	11,771,754	3,913,233	3,742,877
Value.....	\$131,384,528	\$25,366,212	\$32,511,665	Copper.....	2,627,616	5,496,826	624,830
Other metals—				Other metals.....	2,455,080	724,006	245,722
Tons.....	2,204	1,394	773	Architectural and ornamental work, including grilles, railings, etc., total value.....	7,657,719	6,838,751	4,639,544
Value.....	\$2,592,073	\$1,585,533	\$794,733	Brass and bronze.....	7,300,579	6,813,332	4,390,526
Wire products.....	\$5,197,316	\$2,857,631	\$3,894,898	Copper and other metals.....	357,140	25,419	256,018
Electrical supplies, brass, bronze, and other metals.....	\$8,318,829	\$5,377,524	\$7,588,792				
Hardware, total value.....	\$2,749,310	\$1,604,436	\$16,763,776				
Brass and bronze.....	\$2,716,513	\$1,579,760	\$16,659,264				
Copper and other metals.....	\$32,797	\$24,676	\$104,512				

TABLE 8.—PRINCIPAL MATERIALS CONSUMED IN THE "NONFERROUS-METAL ALLOYS AND PRODUCTS, NOT INCLUDING ALUMINUM PRODUCTS" INDUSTRY, BY KIND, QUANTITY, AND COST, BY STATES: 1929

[Quantities and costs of the principal materials consumed were reported by only 877 of the 1,225 establishments in this industry. The combined value of products reported by these 877 establishments amounted to \$498,059,545, or 54.7 per cent of the aggregate value of products of the 1,225 establishments in 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 certain specified materials, whereas the others cover all materials.]

KIND AND STATE	Quantity	Cost	KIND AND STATE	Quantity	Cost	KIND AND STATE	Quantity	Cost
Principal materials, aggregate.....	Pounds	\$169,898,170	Copper—Continued.	Pounds		Zinc—Continued.	Pounds	
Aluminum, total.....	24,365,436	5,014,147	West Virginia.....	1,279,121	\$229,769	Illinois.....	18,789,558	\$1,478,076
California.....	554,565	104,239	Wisconsin.....	1,989,431	350,751	Massachusetts.....	3,681,710	273,930
Colorado.....	21,283	3,417	Other States (Ala., Del., Iowa, Ky., La., Me., Minn., Nebr., N. H., Okla., Oreg., Tenn., Utah, Vt., Va.).....	1,973,818	329,058	Michigan.....	9,717,816	744,225
Connecticut.....	475,792	103,540	Lead, total.....	98,638,136	0,295,904	Missouri.....	359,450	23,712
Illinois.....	5,164,478	963,633	California.....	1,300,547	89,786	New Jersey.....	844,695	59,620
Indiana.....	767,937	131,758	Connecticut.....	1,832,863	119,334	New York.....	14,512,132	1,141,826
Maryland.....	108,126	35,364	Illinois.....	5,022,725	434,350	Ohio.....	9,950,597	883,860
Massachusetts.....	889,583	168,069	Maryland.....	2,822,633	197,830	Pennsylvania.....	6,750,844	485,521
Michigan.....	1,659,334	308,483	Massachusetts.....	3,818,451	248,139	Wisconsin.....	1,207,708	93,136
Minnesota.....	323,308	63,505	Michigan.....	6,997,532	559,841	Other States (Ala., Colo., Del., Ind., Iowa, Ky., Md., Minn., Nebr., N. H., Okla., Oreg., R. I., Tenn., Tex., Utah, Vt., Va., Wash., W. Va.).....	430,511	31,888
Missouri.....	237,906	47,936	Minnesota.....	273,069	15,786	Other base metals, total.....	37,827,115	4,157,608
New Jersey.....	1,608,972	279,895	Missouri.....	2,376,957	159,772	California.....	165,570	65,585
New York.....	6,070,007	1,399,469	New Jersey.....	10,206,845	605,964	Connecticut.....	3,965,987	1,123,057
Ohio.....	3,429,077	785,237	New York.....	14,799,997	942,807	Illinois.....	600,262	73,645
Pennsylvania.....	1,609,259	274,587	Ohio.....	4,245,041	313,655	Massachusetts.....	1,433,820	240,039
Texas.....	44,727	12,194	Pennsylvania.....	12,917,841	872,625	Michigan.....	3,388,746	700,756
Washington.....	24,126	6,364	Other States (Ala., Colo., Del., Ind., Iowa, Ky., Me., Nebr., N. H., Okla., Oreg., R. I., Tenn., Tex., Utah, Vt., Va., Wash., W. Va., Wis.).....	31,923,635	1,736,075	New York.....	15,285,828	649,781
Wisconsin.....	577,880	118,859	Tin, total.....	22,728,103	10,136,078	Ohio.....	6,814,698	314,514
Other States (Ala., Del., D. C., Iowa, Ky., La., Me., Nebr., N. H., Okla., Oreg., R. I., Tenn., Utah, Vt., W. Va.).....	798,986	207,598	California.....	1,106,196	540,883	Pennsylvania.....	535,053	114,220
Antimony, total.....	15,221,619	1,520,857	Connecticut.....	908,215	424,079	Wisconsin.....	170,666	25,571
Michigan.....	799,836	93,676	Illinois.....	1,789,517	913,879	Other States (Fla., Ind., Iowa, Ky., Md., Minn., Mo., N. J., N. Wash.).....	5,466,485	850,440
New York.....	2,127,460	262,809	Indiana.....	55,998	26,599	Alloys, total.....	615,593,615	73,314,014
Pennsylvania.....	2,593,976	253,181	Massachusetts.....	395,369	178,252	California.....	6,477,225	997,818
Other States (Calif., Colo., Conn., Ill., Ind., Ky., La., Md., Mass., Minn., Mo., N. J., Ohio, Okla., Oreg., R. I., Tenn., Vt., W. Va., Wis.).....	9,700,847	971,191	Michigan.....	8,236,754	3,768,338	Colorado.....	411,343	44,704
Copper, total.....	339,000,182	58,694,887	Minnesota.....	47,430	17,252	Connecticut.....	188,030,200	27,018,211
California.....	3,794,876	650,850	Missouri.....	1,409,572	655,637	Illinois.....	14,023,124	1,966,874
Colorado.....	117,206	35,561	New Jersey.....	927,698	194,723	Indiana.....	4,545,059	800,068
Connecticut.....	156,560,696	26,856,685	New York.....	2,310,389	917,327	Massachusetts.....	11,191,711	2,002,961
Illinois.....	18,179,724	2,961,865	Ohio.....	940,575	410,046	Michigan.....	40,267,390	6,655,823
Indiana.....	881,500	141,033	Pennsylvania.....	3,187,702	1,452,145	Missouri.....	22,860,029	3,307,518
Maryland.....	4,975,769	969,853	Rhode Island.....	44,072	21,729	New Jersey.....	19,965,536	1,718,184
Massachusetts.....	9,820,309	1,814,964	Washington.....	46,728	23,565	New York.....	40,609,885	8,150,598
Michigan.....	29,727,271	4,708,234	Wisconsin.....	134,113	54,497	Ohio.....	155,292,494	5,783,302
Missouri.....	3,084,921	501,577	Other States (Ala., Colo., Del., Iowa, Ky., Me., Md., Nebr., N. H., Okla., Oreg., Tenn., Tex., Utah, Vt., Va., W. Va.).....	1,187,775	537,127	Pennsylvania.....	82,085,465	10,444,782
New Jersey.....	11,795,233	2,615,971	Zinc, total.....	137,815,054	10,764,615	Texas.....	1,091,070	152,752
New York.....	17,960,069	3,187,554	California.....	1,153,417	80,993	Washington.....	555,859	105,970
Ohio.....	15,405,137	2,585,160	Connecticut.....	70,416,616	5,467,828	West Virginia.....	920,251	152,172
Pennsylvania.....	18,196,110	3,120,627			Wisconsin.....	3,847,216	619,781	
Rhode Island.....	42,361,983	7,481,143			Other States (Ala., Ark., Del., D. C., Fla., Iowa, Ky., La., Me., Md., Minn., N. H., Okla., Oreg., R. I., Tenn., Vt., Va.).....	23,409,858	3,393,086	
Texas.....	333,755	63,446						
Washington.....	650,168	94,746						

NONFERROUS-METAL ALLOYS, ETC.

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TABLE 9.—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
NONFERROUS-METAL ALLOYS AND PRODUCTS, NOT INCLUDING ALUMINUM PRODUCTS												
Prime movers and electric motors driven by purchased energy, aggregate.....	27,771	Horse-power 506,273	10,720	Horse-power 411,925	15,453	Horse-power 369,239	9,608	Horse-power 277,713	3,180	Horse-power 128,251	100.0	100.0
Prime movers, total.....	190	125,200	243	110,094	262	112,645	413	129,298	655	94,878	24.7	46.6
Steam, total.....	154	121,704	187	106,294	199	99,398	273	122,676	324	82,757	24.1	44.2
Engines.....	109	87,256	141	39,666	149	43,663	235	68,021	(1)	(1)	7.4	24.5
Turbines.....	45	84,448	46	66,598	40	55,730	38	54,655	(1)	(1)	16.7	19.7
Internal-combustion engines.....	19	531	32	859	54	11,814	113	3,900	197	8,665	0.1	1.4
Water wheels and water turbines.....	17	2,965	24	2,971	19	1,433	27	2,722	34	3,426	5.9	1.0
Electric motors driven by purchased energy.....	27,581	381,073	19,477	301,831	15,191	256,594	9,195	148,415	2,625	33,373	75.3	53.4
Electric motors, total.....	34,604	494,638	24,623	398,007	19,738	338,872	12,017	193,769	4,975	67,700	100.0	100.0
Driven by purchased energy.....	27,581	381,073	19,477	301,831	15,191	256,594	9,195	148,415	2,625	33,373	77.0	76.6
Driven by energy generated in establishments reporting.....	7,023	113,615	5,146	96,176	4,547	82,278	2,822	45,354	2,350	34,327	23.0	23.4
Electric generators.....	70	Kilowatts 41,218 Kilowatt-hours	77	Kilowatts 50,599	107	Kilowatts 61,539	(?)	(?)	(?)	(?)		
Electric energy purchased ¹		554,437,739		(?)		(?)		(?)		(?)		
SMELTING AND REFINING, METALS OTHER THAN GOLD, SILVER, OR PLATINUM, NOT FROM THE ORE												
Prime movers and electric motors driven by purchased energy, aggregate.....	1,667	Horse-power 18,174	914	Horse-power 11,989	776	Horse-power 14,240	528	Horse-power 7,921	272	Horse-power 10,071	100.0	100.0
Prime movers, total.....	10	605	9	1,463	26	4,233	34	3,025	57	7,781	3.3	38.2
Steam, total.....	3	380	6	1,345	16	3,625	23	2,590	45	7,557	2.1	32.7
Engines.....	3	380	6	1,345	15	3,125	22	2,110	(1)	(1)	2.1	26.6
Turbines.....					1	509	1	480	(1)	(1)		6.1
Internal-combustion engines.....	7	225	3	118	7	596	11	425	10	205	1.2	5.5
Water wheels and water turbines.....					3	12			2	19		
Electric motors driven by purchased energy.....	1,657	17,569	905	10,526	750	10,007	494	4,896	215	2,290	96.7	61.8
Electric motors, total.....	1,657	17,569	944	10,659	824	10,469	505	6,847	458	7,564		100.0
Driven by purchased energy.....	1,657	17,569	905	10,526	750	10,007	494	4,896	215	2,290		71.5
Driven by energy generated in establishments reporting.....			39	133	74	462	11	1,951	243	5,274		28.5
Electric generators.....	3	Kilowatts 2,926 Kilowatt-hours	5	Kilowatts 550	12	Kilowatts 1,936	(?)	(?)	(?)	(?)		
Electric energy purchased ¹		27,785,651		(?)		(?)		(?)		(?)		

¹ Not called for separately on schedule.

² Not called for on schedule.

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

⁴ Data incomplete.

CENSUS OF MANUFACTURES: 1929

TABLE 10.—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 is of maximum		
		January	February	March	April	May	June	July	August	September	October	November	December			
NONFERROUS-METAL ALLOYS AND PRODUCTS, NOT INCLUDING ALUMINUM PRODUCTS																
United States:																
1929	79,183	79,288	81,602	83,641	83,725	83,091	81,714	80,195	70,776	78,894	76,908	72,760	<i>68,606</i>	68,606	81.0	
1925	65,185	63,523	65,055	65,004	63,542	63,432	63,830	64,053	64,554	65,026	66,804	68,162	68,624	68,624	92.4	
1919	78,512	85,212	78,918	73,435	71,750	71,025	70,784	73,229	78,048	81,415	84,362	86,280	86,186	86,186	82.0	
1914 ¹	42,371	42,444	42,444	43,849	44,114	43,852	43,051	42,500	41,761	41,293	40,742	41,323	41,323	41,323	92.4	
California	1,028	1,028	1,047	1,053	1,064	1,093	1,078	982	1,037	1,013	1,022	967	<i>946</i>	967	86.6	
Colorado	110	114	115	112	109	93	102	112	113	133	111	104	104	110	79.7	
Connecticut	22,478	22,599	22,971	23,398	23,410	23,365	23,281	23,048	22,874	22,315	21,863	20,849	<i>19,622</i>	19,622	84.7	
Delaware	29	26	26	26	28	29	30	31	31	31	30	30	30	30	83.9	
Georgia	44	52	52	48	47	40	40	40	40	39	38	38	38	38	73.1	
Illinois	5,406	5,176	5,425	5,645	5,746	5,714	5,656	5,712	5,526	5,540	5,354	4,917	<i>4,485</i>	4,485	77.7	
Indiana	1,050	984	1,066	1,174	1,186	1,187	1,101	1,067	1,062	1,056	997	860	860	910	74.8	
Kentucky	219	213	217	220	222	220	214	<i>212</i>	214	214	217	234	233	233	90.6	
Louisiana	32	33	33	31	32	33	34	34	33	29	31	30	30	30	85.3	
Maryland	1,872	2,006	2,053	1,989	1,999	1,899	1,853	1,733	1,788	1,892	1,876	1,822	<i>1,559</i>	1,559	75.6	
Massachusetts	1,861	1,900	1,880	1,916	1,927	1,846	1,800	1,798	1,848	1,865	1,866	1,868	1,824	1,824	93.3	
Michigan	10,210	10,439	11,328	11,779	11,627	11,586	10,925	10,397	10,042	9,800	9,022	8,194	<i>7,484</i>	7,484	63.6	
Minnesota	188	147	147	163	170	192	201	219	217	205	196	218	218	218	67.1	
Missouri	997	955	963	1,008	1,025	1,005	990	1,004	1,004	990	1,024	1,015	981	981	93.2	
New Jersey	4,149	4,081	4,184	4,222	4,231	4,193	4,212	4,147	4,185	4,242	4,160	4,019	<i>3,627</i>	3,627	92.6	
New York	13,901	14,087	14,330	14,598	14,197	14,124	13,985	13,763	14,190	14,206	14,107	13,232	<i>12,045</i>	12,045	52.5	
Ohio	4,789	4,794	4,915	5,016	5,112	5,174	5,044	4,973	4,775	4,642	4,427	4,210	<i>4,141</i>	4,141	80.0	
Oregon	89	88	70	69	68	68	71	69	69	72	68	66	66	66	89.2	
Pennsylvania	4,808	4,689	4,783	4,960	5,118	5,135	5,126	4,974	4,856	4,772	4,561	4,399	<i>4,322</i>	4,322	84.2	
Texas	150	157	181	155	156	151	149	144	147	145	144	143	145	145	88.8	
Washington	173	162	167	183	182	176	180	182	179	163	176	170	168	168	86.3	
SMELTING AND REFINING, METALS OTHER THAN GOLD, SILVER, OR PLATINUM, NOT FROM THE ORE																
United States:																
1929	4,134	3,945	4,123	4,217	4,232	4,168	4,172	4,191	4,241	4,199	4,129	4,099	<i>3,866</i>	3,866	91.9	
1925	2,944	2,889	2,901	2,902	2,889	2,873	2,844	2,813	2,937	3,022	3,065	3,139	2,900	2,900	90.9	
1919	2,167	2,284	2,156	2,119	2,079	2,070	2,046	2,141	2,188	2,189	2,226	2,245	2,227	2,227	89.6	
1914	2,585	2,828	2,732	2,777	2,832	2,801	2,779	2,718	<i>1,839</i>	2,160	2,525	2,517	2,517	2,517	84.9	
1909	2,147	1,975	2,183	2,281	2,033	2,192	2,036	1,960	<i>1,882</i>	2,077	2,314	2,402	2,412	2,412	78.0	
California	301	300	307	294	307	268	282	295	335	308	314	301	297	297	80.0	
Illinois	1,153	1,094	1,127	1,182	1,206	1,201	1,147	1,168	1,170	1,154	1,184	1,133	<i>1,070</i>	1,070	88.7	
Indiana	177	180	183	189	195	172	189	145	<i>144</i>	157	174	192	194	194	72.4	
Massachusetts	64	66	71	72	72	73	54	55	62	59	69	59	61	61	74.0	
New Jersey	205	184	198	184	191	207	209	202	215	225	231	221	203	203	79.7	
New York	272	288	290	282	285	275	269	280	260	271	263	251	<i>249</i>	249	85.9	
Ohio	146	169	172	168	163	160	142	129	133	131	137	128	116	116	67.4	
Pennsylvania	783	729	781	817	839	777	801	792	788	786	760	806	721	721	85.9	

¹ No comparable figures for earlier years.

PLATED WARE

Description of the industry.—This industry classification embraces establishments engaged primarily in the manufacture of silver-plated or other plated ware and of nickel-silver and pewter ware. The products of the industry include flat and hollow tableware, toilet articles, fancy articles, etc., plated with silver or other metals, and similar articles made from nickel-silver and pewter.

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 ¹	Value added by manufacture ²	Horsepower
1899	96	10,728	\$14,941,552	\$16,750,985	\$55,429,959	\$38,678,974	28,899
1929	94	11,752	16,141,501	20,212,341	56,719,982	36,507,641	27,712
1925	90	11,290	15,236,348	20,070,741	54,330,033	34,259,292	23,914
1923	83	12,118	15,640,896	19,813,842	53,898,534	34,084,692	22,300
1921	66	9,535	10,664,149	12,498,683	33,944,136	21,535,453	(3)
1919	68	9,492	10,913,091	17,766,536	41,634,585	23,868,049	14,212
1914	72	8,717	5,000,381	8,304,033	18,484,235	10,180,196	10,494
1909	58	7,967	4,459,809	8,246,798	18,526,193	10,279,345	(1)
1904	60	6,281	3,360,425	5,448,619	12,138,886	6,690,267	5,723
1899	66	6,392	3,088,224	5,875,312	12,608,770	6,733,468	5,108
PER CENT OF INCREASE OR DECREASE (-)							
1927-1929	(9)	-8.7	-7.4	-17.1	-2.3	5.9	4.3
1925-1927	(9)	4.1	5.9	0.7	4.4	6.6	15.9
1923-1925	(9)	-6.8	-2.6	1.3	.8	.5	0.8
1921-1923	(9)	27.1	46.7	59.7	58.8	58.3	
1919-1921	(9)	0.5	-2.3	-30.2	-18.4	-9.8	
1919-1929	(9)	13.0	36.9	-5.7	33.1	62.1	103.3
1909-1919	(9)	19.1	144.7	115.4	124.7	132.2	
1899-1909	(9)	24.6	44.4	49.4	46.9	52.7	

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

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

³ Not called for on schedule.

⁴ No comparable data available.

⁵ 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 ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States	1929	96	1,925	10,728	28,899	9,101	19,798	\$5,184,039	\$14,941,552	\$16,750,985	\$15,957,349	\$793,636	\$55,429,959	\$38,678,974
	1927	94	1,810	11,752	27,712	10,094	17,618	4,724,969	16,141,501	20,212,341	19,478,626	733,715	56,719,982	36,507,641
	1919	68	1,943	9,492	14,212	8,730	5,482	3,436,530	10,913,091	17,766,536	17,265,899	506,637	41,634,585	23,868,049
Individual States:														
Connecticut	1929	26	799	5,275	11,315	4,641	6,674	1,771,294	7,323,656	8,770,130	8,426,000	344,130	27,903,210	19,133,080
	1927	25	551	5,636	10,865	4,833	6,032	1,322,130	7,352,249	10,549,043	10,263,510	285,533	26,173,273	15,624,230
	1919	26	914	5,192	7,483	4,319	3,164	1,490,638	5,442,093	10,094,730	9,732,495	272,235	22,661,960	12,657,236
Illinois	1929	5	32	134	367	367	65,455	184,326	199,885	148,285	11,600	685,231	525,346	
	1927	6	19	145	380	380	25,618	198,875	303,102	289,892	13,210	584,094	284,692	
	1919	10	97	733	1,480	850	610	304,284	907,251	744,432	679,907	64,325	2,536,079	2,091,647
Massachusetts	1929	14	205	1,238	2,075	1,585	480	517,787	1,547,893	1,167,604	1,092,343	75,261	4,401,258	3,235,084
	1919	7	83	469	1,143	825	323	165,535	494,820	468,978	395,347	73,631	1,340,284	871,306
New Jersey	1929	4	10	107	107	107	44,581	150,356	154,522	154,522	10,069	417,390	263,344	
New York	1929	30	845	2,879	11,012	3,215	7,797	2,494,027	4,740,041	5,480,663	5,229,620	251,073	18,424,071	12,843,378
	1927	32	897	3,369	10,744	3,281	7,463	2,412,080	5,290,115	6,462,066	6,211,206	251,760	20,088,543	13,625,577
	1919	21	852	3,048	4,300	3,286	1,023	1,661,045	4,182,281	6,215,464	6,103,520	111,944	15,076,892	8,861,398
Ohio	1929	4	40	224	617	220	397	116,892	248,177	151,157	134,591	16,566	745,317	594,160
	1927	3	36	241	616	220	396	124,894	266,402	167,753	153,050	14,703	782,168	614,415
Groups of States:														
Me., 1 est.; N. H., 1; R. I., 2	1929	4	42	554	497	75	422	130,843	572,256	223,200	204,121	19,085	1,538,590	1,365,384
Pa., 3 est.; Va., 1; Ind., 2; Mich., 1	1929	7	60	794	3,504	100	3,404	256,063	816,089	1,056,890	990,302	76,588	2,829,625	1,762,635
States not shown separately	⁵ 1927	14	102	1,203	3,026	175	2,851	321,890	1,485,967	1,561,873	1,468,625	93,248	4,686,616	3,124,743
	⁶ 1919	14	94	783	1,312	300	1,012	179,292	794,097	1,077,364	1,034,537	42,827	2,555,473	1,478,109

¹ 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, 12,683; proprietors and firm members, 30. For 1927, total, 13,593; proprietors and firm members, 31. For 1919, total, 11,459; proprietors and firm members, 24.

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

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

⁴ 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.

⁵ Indiana, 2 establishments; Maine, 1; New Hampshire, 1; New Jersey, 3; Pennsylvania, 4; Rhode Island, 2; Virginia, 1.

⁶ California, 1 establishment; Illinois, 2; Indiana, 1; Maine, 1; Maryland, 1; New Jersey, 2; Ohio, 1; Pennsylvania, 4; Virginia, 1.

CENSUS OF MANUFACTURES: 1929

TABLE 3.—PRODUCTS, BY CLASS 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, No detailed production data were collected for earlier years]

CLASS	1929	1927	CLASS	1929	1927
1. Plated-ware industry, all products, total value.....	\$55,429,059	\$56,719,982	Silver-plated ware, nickel silverware, etc.—Continued.		
2. Silver-plated ware.....	42,874,630	45,853,897	Electro silver-plated ware—Continued.		
3. Nickel-silver ware.....	4,941,305	5,665,766	Hollow ware (except electrical household appliances).....	\$11,644,300	\$16,886,360
4. Pewter ware.....	2,801,970	(1)	Hotel services.....	2,522,418	(1)
5. Other products (not normally belonging to the industry) and receipts for custom work and repairing.....	14,812,054	5,200,319	Commercial lines.....	9,121,972	(1)
6. Silver-plated ware made as secondary products in other industries, value.....	1,884,946	2,523,854	Toilet ware and novelties.....	1,280,942	(1)
			Other articles.....	1,910,846	4,974,364
			Nickel-silver ware (nickel base not plated with silver), total.....	4,941,305	5,665,766
Silver-plated ware, nickel silverware, and pewter ware, all industries:			Flatware (including cutlery).....	2,878,497	2,927,809
Aggregate (sum of 2, 3, 4, and 6).....	52,502,851	54,043,517	Hollow ware (except electrical household appliances).....	1,239,979	1,529,400
Electro silver-plated ware, total.....	44,623,305	48,877,751	Toilet ware and novelties.....	355,206	(1)
Flatware, including cutlery ¹	29,772,127	30,517,027	Other articles.....	467,623	1,208,557
Hotel patterns.....	2,679,941	(1)	Pewter ware, total.....	2,938,241	(1)
Commercial patterns.....	27,092,186	(1)	Hollow ware.....	2,642,202	(1)
			Novelties.....	296,039	(1)

¹ No comparable data.
² Includes \$859,339 reported as the value of electrical household appliances made in this industry. The total production of such commodities in all industries was valued at \$24,485,488. See report for "Electrical machinery, apparatus, and supplies."
³ Statistics on the production of cutlery other than plated will be found in the reports for "Cutlery and edge tools" and "Silversmithing and silverware."
⁴ Includes value of plated electric household appliances.

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 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
Electro silver-plated ware, total.....	\$44,623,305	Electro silver-plated ware—Continued.		Nickel-silver ware (nickel base, not plated with silver), total.....	\$4,941,305
Flatware, including cutlery, total.....	29,772,127	Hollow ware, etc.—Continued.		Flatware, including cutlery (Conn., N. H., N. Y.) ¹	2,878,497
Hotel patterns (Conn., Mass., N. Y.) ¹	2,679,941	Commercial lines—Continued.		Hollow ware, except electrical household appliances (Ill., N. Y., and R. I.) ¹	1,239,979
Commercial patterns (Conn., Ill., Ind., Md., Mass., N. H., N. J., N. Y., Va.) ¹	27,092,186	New York.....	\$2,558,998	Toilet ware and novelties, total.....	855,206
Hollow ware, except electrical household appliances, total.....	11,644,390	California, Ohio, Pennsylvania.....	713,357	New York, Rhode Island.....	262,131
Hotel services, total.....	2,522,418	Maine, Maryland, New Jersey.....	55,102	Other States (Conn., Ill., Mass.).....	93,075
Connecticut.....	1,400,478	Toilet ware and novelties, total.....	1,280,942	Other articles (Mass., N. Y., R. I.) ¹	467,623
Massachusetts, New York.....	1,121,942	New York.....	268,394	Pewter ware, total.....	2,938,241
Commercial lines, total.....	9,121,972	Other States (Calif., Conn., Ill., Mass., N. J.).....	1,018,548	Hollow ware, total.....	2,642,202
Connecticut.....	4,097,660	Other articles, total.....	1,910,846	Connecticut.....	935,333
Illinois.....	264,837	Connecticut.....	72,090	Illinois, Indiana.....	445,307
Massachusetts.....	1,432,018	New York.....	447,394	Maine, Massachusetts.....	721,596
		Illinois, Michigan, Ohio.....	109,290	New York, Ohio.....	539,016
		Massachusetts, New Jersey, Pennsylvania.....	1,291,072	Novelties (Mass., N. J., N. Y.) ¹	296,039

¹ No production reported from other States.

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

[Quantities and costs of the principal materials consumed were reported by only 80 of the 96 establishments in this industry. The combined value of products reported by these 80 establishments amounted to \$54,213,773, or 97.8 per cent of the aggregate value of products of the 96 establishments in the industry. 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 mainly to the fact that this table covers only certain specified materials whereas, the others cover all materials]

KIND AND STATE	Cost of principal materials	KIND AND STATE	Cost of principal materials	KIND AND STATE	Cost of principal materials
Aggregate.....	\$6,440,153	Nickel—Continued.		Silver—Continued.	
Copper and brass:		New York—		Other States (Ill., Ind., Mo., N. H., N. J., N. Y., Pa., Va.)—	
Total pounds.....	4,667,545	Pounds.....	674,073	Ounces, troy.....	1,707,980
Total cost.....	\$1,128,551	Cost.....	\$293,911	Cost.....	\$981,147
New York—		Other States (Ill., Ind., Mass., N. J., Pa., R. I., Va.)—		Steel:	
Pounds.....	2,259,504	Pounds.....	2,399,227	Total tons.....	6,651
Cost.....	\$461,339	Cost.....	\$926,522	Total cost.....	\$763,364
Other States (Conn., Ill., Ind., Me., Mass., N. H., N. J., Ohio, Pa., R. I.)—		Silver:		Connecticut—	
Pounds.....	2,408,041	Total ounces, troy.....	4,968,123	Tons.....	3,674
Cost.....	\$607,212	Total cost.....	\$2,734,872	Cost.....	\$296,857
Nickel:		Connecticut—		New York—	
Total pounds.....	6,064,164	Ounces, troy.....	3,067,390	Tons.....	1,474
Total cost.....	\$1,813,366	Cost.....	\$1,689,083	Cost.....	\$360,209
Connecticut—		Massachusetts—		Other States (Ill., Ind., Mass., Va.)—	
Pounds.....	2,990,864	Ounces, troy.....	79,252	Tons.....	1,403
Cost.....	\$892,933	Cost.....	\$46,073	Cost.....	\$106,288
		Ohio—			
		Ounces, troy.....	113,501		
		Cost.....	\$18,569		

PLATED WARE

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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.....	3,560	Horse-power 28,869	2,983	Horse-power 27,712	2,075	Horse-power 23,914	649	Horse-power 14,212	560	Horse-power 10,494	100.0	100.0
Prime movers, total.....	35	9,101	39	10,094	45	10,462	55	8,730	59	6,665	31.5	61.4
Steam, total.....	25	8,680	29	9,581	29	9,889	38	8,018	47	6,212	30.0	56.4
Engines.....	16	2,700	20	3,551	21	4,009	35	5,420	(1)	(1)	9.5	38.1
Turbines.....	9	5,980	9	6,030	8	5,880	2	2,598	(2)	(2)	20.7	18.3
Internal-combustion engines.....	2	50	2	40	4	70	7	200	5	88	0.2	1.4
Water wheels and water turbines.....	8	371	8	473	12	503	10	512	7	305	1.3	3.6
Electric motors driven by purchased energy.....	3,525	19,798	2,944	17,618	2,050	13,452	594	5,452	501	3,799	68.5	38.6
Electric motors, total.....	4,229	22,936	3,638	21,806	2,590	17,131	1,218	10,868	891	6,958	100.0	100.0
Driven by purchased energy.....	3,525	19,798	2,944	17,618	2,050	13,452	594	5,452	501	3,799	86.3	50.4
Driven by energy generated in establishments reporting.....	704	3,138	694	4,188	560	3,679	624	5,386	390	3,159	13.7	49.6
Electric generators.....	31	Kilowatts 6,877 Kilowatt-hours	25	Kilowatts 9,227	33	Kilowatts 5,942	(2)	(2)	(2)	(2)		
Electric energy purchased ¹		18,588,584		(4)		(4)		(4)		(5)		

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

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.....	10,728	<i>10,589</i>	10,570	10,641	10,577	10,571	10,587	10,585	10,639	10,953	11,203	11,165	10,852	92.7
1925.....	11,290	11,271	11,431	11,434	11,310	10,990	10,904	<i>9,783</i>	11,152	11,462	11,904	12,020	11,875	80.9
1919.....	9,492	<i>7,491</i>	8,009	8,493	8,773	9,164	9,284	9,637	10,279	10,413	10,653	10,831	10,872	68.9
1914 ¹	8,717	8,817	9,097	9,181	9,049	8,904	8,664	<i>8,204</i>	8,448	8,594	8,734	8,622	8,280	89.3
Connecticut.....	5,275	5,147	<i>5,140</i>	5,206	5,219	5,246	5,260	5,173	5,232	5,377	5,465	5,430	5,402	94.1
Illinois.....	134	130	135	140	138	132	133	<i>125</i>	128	131	139	136	141	88.7
Massachusetts.....	753	714	732	750	732	728	714	731	759	783	817	819	768	87.2
New Jersey.....	115	112	121	118	112	109	108	109	116	121	124	115	115	87.1
New York.....	2,879	2,822	2,890	2,862	2,793	<i>2,748</i>	2,756	<i>2,748</i>	2,821	2,968	2,970	2,997	2,977	88.7
Ohio.....	224	217	219	221	216	<i>214</i>	217	<i>214</i>	226	226	240	244	226	87.7

¹ No comparable figures are available for years prior to 1914.

SILVERSMITHING AND SILVERWARE

Description of the industry.—This industry classification embraces establishments engaged primarily in manufacturing sterling-silver commodities, such as hollow and flat tableware, toilet articles, ornaments,

vases, fancy articles, novelties, silver-deposited glass-ware and chinaware, etc. The manufacture of small quantities of gold ware was also reported by some of the establishments in this 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 ¹	Value added by manufacture ²	Horsepower
1929.....	83	5,007	\$7,636,413	\$10,134,708	\$30,452,366	\$20,317,658	7,325
1927.....	84	4,967	7,803,183	11,165,068	30,704,218	19,539,150	7,499
1925.....	93	5,587	8,007,244	13,106,356	32,531,670	19,425,314	7,770
1923.....	98	4,972	7,330,041	10,859,156	27,206,693	16,347,537	7,284
1921.....	103	5,287	7,150,600	8,964,865	24,410,809	15,445,944	(³)
1919.....	99	6,453	7,359,409	13,060,929	29,126,133	16,065,204	6,843
1914.....	108	7,070	4,795,347	8,275,506	19,786,317	11,510,811	7,899
1909.....	125	8,643	5,821,952	10,085,309	23,702,364	13,017,045	7,752
1904.....	98	6,580	5,265,049	9,010,086	20,700,703	11,090,617	5,586
1899.....	103	5,813	3,443,142	5,783,646	13,505,583	7,721,938	2,504
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	(⁴)	0.8	-2.1	-9.2	-0.8	4.0	-2.3
1925-1927.....	(⁴)	-11.1	-9.3	-14.8	-5.6	0.6	-3.5
1923-1925.....	(⁴)	12.4	17.4	20.7	19.6	18.8	6.7
1921-1923.....	-4.9	-6.0	2.5	21.1	11.5	5.8	-----
1919-1921.....	(⁴)	-18.1	-2.8	-31.4	-16.1	-3.0	-----
1919-1929.....	(⁴)	-22.4	3.8	-22.4	4.0	26.5	7.0
1909-1919.....	-20.8	-25.3	26.4	29.5	22.9	18.0	-11.7
1899-1909.....	21.4	48.7	69.1	74.4	75.5	76.3	208.6

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

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

³ Not called for on schedule.

⁴ 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. Certain of the "Other States," however, were more important in the industry than some of the States shown separately. 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	Salaried officers and employes ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States.....	1929	83	1,037	5,007	7,325	3,292	4,033	\$2,516,311	\$7,636,413	\$10,134,708	\$9,875,654	\$259,054	\$30,452,366	\$20,317,658
	1927	84	1,029	4,967	7,499	3,191	4,308	2,316,082	7,803,183	11,165,068	10,833,914	331,154	30,704,218	19,539,150
	1919	99	1,088	6,453	6,843	4,082	4,761	2,329,514	7,359,409	13,060,929	12,724,302	336,627	29,126,133	16,065,204
California.....	1929	6	6	41	57	-----	57	12,542	55,582	54,136	52,712	1,424	106,405	142,289
Illinois.....	1929	4	2	16	16	-----	16	3,838	32,622	39,740	38,659	1,081	95,278	55,639
Maryland.....	1929	5	5	16	18	-----	18	9,552	34,273	40,466	39,884	582	136,404	95,038
Massachusetts.....	1929	4	43	244	312	-----	312	157,092	382,896	608,214	590,568	17,648	1,518,077	909,863
New Jersey.....	1929	19	310	1,944	2,163	1,306	857	949,205	2,663,891	3,352,880	3,251,086	101,803	9,979,870	6,626,981
New York.....	1929	16	152	1,247	1,452	591	861	556,442	1,766,433	2,007,236	2,553,285	53,951	7,131,401	4,524,165
Other States.....	1929	18	297	1,876	1,843	1,270	573	695,862	1,976,151	3,831,184	3,732,485	98,699	8,484,941	4,653,767
	1927	16	185	920	877	513	164	207,106	1,055,459	849,866	823,329	26,227	2,391,866	1,542,010
	1919	13	190	810	1,110	898	212	357,018	1,036,862	1,736,493	1,707,840	28,653	3,831,837	2,095,344
	1927	25	115	341	500	-----	500	292,958	731,049	1,089,484	1,062,390	27,094	2,627,039	1,537,555
	1919	35	265	873	900	310	590	284,773	1,237,757	2,092,491	2,018,777	73,714	5,012,323	2,920,322
	1927	17	528	1,831	3,328	1,332	1,996	1,010,626	2,718,953	4,348,788	4,056,916	141,722	12,578,938	8,230,150
	1919	24	315	2,774	2,877	1,349	1,528	728,524	3,064,813	5,367,337	5,193,184	169,153	11,725,207	6,367,570

¹ 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, 6,091; proprietors and firm members, 47. For 1927 total, 6,068; proprietors and firm members, 72. For 1919, total, 7,599; proprietors and firm members, 58.

² The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for earlier years represent production. See GENERAL EXPLANATION—Value of products.

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

⁴ 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.

⁵ Connecticut, 5 establishments; New Hampshire, 1; North Carolina, 1; Rhode Island, 3.
⁶ California, 2 establishments; Connecticut, 8; New Hampshire, 1; North Carolina, 1; Ohio, 1; Rhode Island, 4.
⁷ California, 3 establishments; Connecticut, 6; New Hampshire, 1; Pennsylvania, 6; Rhode Island, 8.

SILVERSMITHING AND SILVERWARE

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TABLE 3.—SILVERWARE (STERLING)—PRODUCTION, 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]

CLASS	1929	1927	CLASS	1929	1927
1. Silversmithing and silverware industry, all products, total value.....	\$30,452,366	\$30,704,218	5. Silverware (sterling), all industries: Aggregate (sum of 2 and 4).....	\$26,167,556	\$27,757,156
2. Silverware (sterling) made in the industry.....	24,604,527	25,052,999	Flatware (including cutlery).....	11,251,910	11,907,685
3. Other products (not normally belonging to the industry) and receipts for custom work and repairing.....	5,787,839	5,651,228	Hollow ware, except electrical household appliances.....	10,432,147	12,882,205
4. Silverware made as a secondary product in other industries, value.....	1,503,029	2,704,166	Novelties, except electrical household appliances.....	1,241,315	1,557,225
			Toilet ware, total.....	1,749,957	1,409,951
			Other sterling silver articles.....	1,489,227	

TABLE 4.—SILVERWARE (STERLING)—PRODUCTION, 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
Flatware, including cutlery, total.....	\$11,254,910	Hollow ware, except electrical household appliances—Continued.		Toilet ware, total.....	\$1,749,957
Massachusetts.....	4,062,840	Massachusetts.....	\$3,008,498	Massachusetts.....	696,134
Connecticut, Rhode Island.....	4,889,727	New Jersey.....	1,001,805	Connecticut, Illinois, Maryland, New Jersey, Rhode Island.....	1,053,823
North Carolina, Maryland.....	770,298	New York.....	1,855,304	Other articles, total.....	1,489,227
California, Illinois, New Hampshire, New Jersey, New York.....	1,532,045	New Hampshire, North Carolina, Rhode Island.....	2,022,863	Connecticut.....	187,917
Hollow ware, except electrical household appliances, total.....	10,432,147	Novelties, except electrical household appliances, total.....	1,241,315	New Jersey.....	607,810
California.....	36,765	Massachusetts.....	633,997	New York.....	427,275
Connecticut.....	1,717,081	New York.....	128,318	California, Illinois, Massachusetts, Rhode Island.....	266,225
Illinois.....	81,528	Connecticut, New Jersey, Rhode Island.....	479,000		
Maryland.....	708,303				

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

[Quantities and costs of the principal materials consumed were reported by only 71 of the 83 establishments in this industry. The combined value of products reported by these 71 establishments amounted to \$29,681,758, or 97.5 per cent of the aggregate value of products of the 83 establishments in the industry. 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 mainly to the fact that this table covers only certain specified materials, whereas the others cover all materials]

KIND AND STATE	Cost of principal materials	KIND AND STATE	Cost of principal materials	KIND AND STATE	Cost of principal materials
Aggregate.....	\$7,255,842	Silver—Continued.		Silver—Continued.	
Copper and brass (Calif., Ill., Md., Mass., N. H., N. J., N. Y., R. I.):		California—		New Jersey—	
Total pounds.....	151,331	Ounces, troy.....	34,772	Ounces, troy.....	1,049,351
Total cost.....	\$38,557	Cost.....	\$25,916	Cost.....	\$544,685
Nickel (Conn., Mass., N. J., N. Y., R. I.):		Illinois—		New York—	
Total pounds.....	284,676	Ounces, troy.....	56,597	Ounces, troy.....	1,086,162
Total cost.....	\$127,636	Cost.....	\$36,423	Cost.....	\$799,790
Silver:		Maryland—		Other States (Conn., N. H., R. I.)—	
Total ounces, troy.....	13,035,357	Ounces, troy.....	689,538	Ounces, troy.....	5,846,399
Total cost.....	\$6,860,640	Cost.....	\$511,713	Cost.....	\$2,567,644
		Massachusetts—		Steel (Calif., Mass., N. H., R. I.):	
		Ounces, troy.....	4,072,528	Tons.....	249
		Cost.....	\$2,374,469	Cost.....	\$229,009

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		PERCENT 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, aggregated.....	1,475	Horse-power 7,325	1,300	Horse-power 7,499	1,057	Horse-power 7,770	753	Horse-power 6,843	465	Horse-power 7,899	100.0	100.0
Prime movers, total.....	24	3,292	46	3,191	33	3,484	34	4,082	57	6,508	44.9	59.7
Steam, total.....	17	2,984	39	2,918	26	3,211	25	3,750	38	5,450	40.7	54.8
Engines.....	10	2,961	37	2,843	24	3,061	23	3,615	(1)	(1)	40.4	52.8
Turbines.....	1	23	2	75	2	150	2	185	(1)	(1)	0.3	2.0
Internal-combustion engines.....	2	28	3	53	3	53	5	132	11	688	0.4	1.0
Water wheels and water turbines.....	5	280	4	220	4	220	4	200	8	420	3.8	2.9
Electric motors driven by purchased energy.....	1,451	4,033	1,254	4,308	1,024	4,286	719	2,761	408	1,391	55.1	40.3
Electric motors, total.....	1,774	5,550	1,810	6,805	1,389	6,166	993	4,517	967	4,010	100.0	100.0
Driven by purchased energy.....	1,451	4,033	1,254	4,308	1,024	4,286	719	2,761	408	1,391	72.6	61.1
Driven by energy generated in establishments reporting.....	323	1,523	556	2,497	365	1,880	274	1,756	559	2,619	27.4	38.9
Electric generators.....	9	Kilowatts 1,309 Kilowatt-hours	15	Kilowatts 1,702	22	Kilowatts 1,912	(?)	(?)	(?)	(?)		
Electric energy purchased ¹		2,595,607		(?)		(?)		(?)		(?)		

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

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.....	5,007	<i>4,876</i>	4,923	5,010	4,978	4,995	4,960	4,899	4,936	5,043	5,184	5,214	5,062	93.5
1925.....	5,587	<i>5,378</i>	5,365	5,374	5,394	5,436	5,428	5,381	5,576	5,743	5,910	6,023	6,033	85.9
1919.....	6,453	<i>6,167</i>	6,085	6,321	6,524	6,648	6,432	6,327	6,404	6,563	6,642	6,634	6,749	89.3
1914 ¹	7,070	<i>7,283</i>	7,298	7,214	7,110	6,973	6,929	6,465	6,887	7,033	7,249	7,239	7,160	88.6
California.....	41	<i>35</i>	36	38	38	40	43	43	43	44	45	45	46	76.1
Illinois.....	16	<i>15</i>	15	15	16	16	17	16	16	16	16	15	15	83.2
Maryland.....	244	<i>255</i>	261	259	240	241	227	235	235	239	242	242	246	87.0
Massachusetts.....	1,944	<i>1,875</i>	1,874	1,909	1,930	1,950	1,965	1,956	1,963	1,985	2,012	1,990	1,917	93.1
New Jersey.....	528	<i>604</i>	510	517	506	531	531	520	525	531	552	567	552	90.5
New York.....	341	<i>331</i>	345	346	342	327	<i>312</i>	312	320	352	369	369	373	83.9

¹ Comparable figures not available for years prior to 1914.

SMELTING AND REFINING

Description of the industries.—Establishments engaged in smelting and refining nonferrous metals are classified for census purposes under three industry designations, namely: (1) Copper, (2) lead, and (3) zinc. Considerable smelting and refining are done on a toll basis, but the cost of materials reported for establishments which treat ore, matte, or bullion for others includes the estimated values of such materials treated, and the value of products reported for these establishments includes the values of the metals produced. Many of the plants classified as smelters and refineries produce considerable quantities of sulphuric acid, nickel and copper sulphate, lithopone, pigments, zinc oxide, and precious metals, the values of which are included in the total value of refined products.

Duplication in cost of materials and value of products.—The total cost of materials and the total value of products include extensive duplications resulting from the use of the products of certain establishments as materials by others. For example, considerable quantities of the blister copper and lead bullion pro-

duced by smelters are used as materials by refineries. Thus the value of this blister copper and lead bullion, which represent intermediate stages in the production of refined copper and lead from the ore, appears twice in the total value of products for the industry; and a corresponding duplication enters into the total cost of materials for the industry.

Detailed statistics of products.—The annual reports of the United States Bureau of Mines show the quantities of the several classes of products of the smelting and refining industry. Because of the extent to which gold and silver and the various chemicals contribute to the values of products reported by the copper and lead smelters and refineries, and because of the duplication due to the use of the products of certain establishments as materials by others (see "Duplication in cost of materials and value of products"), the values of products for the several branches of the industry as compiled from the Census returns can not be coordinated with the production figures for the several classes of products as compiled by the Bureau of Mines.

TABLE 1.—SUMMARY FOR THE INDUSTRIES, IN COMBINATION AND SEPARATELY, 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 ¹	Value added by manufacture ²	Horsepower
THE INDUSTRIES AS A GROUP							
1929.....	75	30,961	\$49,239,819	\$1,199,025,259	\$1,345,799,941	\$148,774,032	590,081
1927.....	69	30,510	44,799,809	807,242,176	942,734,864	135,492,688	465,164
1925.....	71	32,902	47,947,907	912,063,567	1,067,124,899	155,061,332	455,496
1923 ³	88	35,146	51,510,128	830,059,669	952,734,111	122,644,412	446,047
1921 ⁴	85	19,014	25,148,682	368,231,888	430,031,904	61,700,016	(⁵)
1919.....	111	39,020	55,649,412	848,755,914	972,069,552	123,397,638	456,582
1914.....	88	34,733	28,983,145	572,744,382	669,138,943	96,394,561	261,419
1909.....	95	29,707	23,036,712	510,724,061	580,417,518	69,692,837	206,637
1904.....	103	26,853	20,088,200	382,728,480	451,398,354	68,674,874	120,665
1899.....	117	24,512	15,973,626	279,655,350	358,786,472	79,131,122	89,117
Per cent of increase or decrease (—):							
1927-1929.....	(⁶)	1.5	9.9	48.5	42.8	8.3	28.1
1925-1927.....	(⁶)	-7.5	-6.6	-11.5	-11.7	-12.6	2.1
1923-1925.....	(⁶)	-6.1	-6.9	9.9	12.0	26.4	2.1
1921-1923.....	(⁶)	84.8	104.8	125.4	121.5	98.8	-----
1919-1921.....	-23.4	-52.0	-54.8	-56.6	-55.3	-50.0	-----
1919-1929.....	-32.4	-21.8	-11.5	41.3	38.4	19.0	30.6
1909-1919.....	(⁶)	33.4	141.6	66.2	67.5	77.0	121.1
1899-1909.....	-16.8	21.2	44.2	82.6	61.8	-11.9	131.3
COPPER							
1929.....	26	14,544	\$23,951,955	\$920,351,441	\$994,783,862	\$74,432,421	412,244
1927.....	26	13,924	20,581,865	527,763,711	609,299,017	81,556,366	329,799
1925.....	26	15,588	22,641,625	573,190,428	665,176,767	91,986,339	321,909
1923.....	29	16,777	25,459,160	554,099,824	628,432,965	71,335,041	332,943
1921.....	28	8,293	11,199,279	205,965,590	234,595,245	28,931,340	(⁵)
1919.....	34	17,345	28,723,371	584,410,173	651,101,591	66,691,418	321,610
1914.....	37	17,731	16,149,251	379,157,030	444,021,958	64,864,928	194,980
1909.....	38	15,628	13,395,719	333,631,638	378,805,974	45,274,336	158,126
1904.....	40	12,752	10,827,043	196,739,986	240,780,218	44,043,230	76,524
1899.....	47	11,324	8,529,021	122,174,129	165,131,670	42,957,541	61,630
Per cent of increase or decrease (—):							
1927-1929.....		4.5	16.4	74.4	63.3	-8.7	27.3
1925-1927.....		-10.7	-9.1	-7.9	-8.4	-11.4	0.6
1923-1925.....	(⁶)	-7.1	-11.1	3.4	6.4	29.0	-3.3
1921-1923.....	(⁶)	102.3	127.3	169.1	166.3	146.0	-----
1919-1921.....	(⁶)	-52.2	-56.5	-64.8	-63.9	-56.5	-----
1919-1929.....	(⁶)	-16.1	-6.9	57.5	52.8	11.6	28.2
1909-1919.....	(⁶)	11.0	92.0	75.2	71.9	47.3	103.4
1899-1909.....	(⁶)	38.0	57.1	173.0	129.4	5.4	156.9

¹ The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.

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

³ The figures for 1923, 1921, and 1919 include data for establishments engaged in the smelting and refining of nonferrous metals other than copper, lead, or zinc, as follows: For 1923, 4 establishments; for 1921, 5; for 1919, 13. The totals for these years for the industries as a group are, therefore, somewhat in excess of the sums of the corresponding items for the three industries.

⁴ Not called for on schedule.

⁵ Per cent not computed where base is less than 100.

CENSUS OF MANUFACTURES: 1929

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

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²	Horsepower
LEAD							
1929	19	4,819	\$7,577,094	\$203,913,730	\$232,115,000	\$28,201,279	69,936
1927	18	5,398	7,689,680	202,859,134	225,137,872	22,278,738	48,298
1925	17	6,115	9,001,580	254,891,029	283,042,542	28,161,613	47,219
1923	20	6,194	8,767,924	207,314,578	227,735,149	20,420,571	42,877
1921	23	4,509	5,957,961	134,061,121	150,598,779	16,532,658	(³)
1919	25	6,438	9,179,615	179,373,646	190,794,519	17,420,873	49,068
1914	22	7,385	6,134,274	154,014,765	171,878,587	17,668,822	29,734
1909	28	7,424	5,430,652	151,963,022	167,408,050	15,442,628	26,954
1904	32	7,573	5,371,691	168,958,076	185,826,839	18,808,763	28,667
1899	39	8,319	5,088,684	144,195,163	175,466,304	31,271,141	16,342
Per cent of increase or decrease (—):							
1927-1929	(⁴)	-10.7	-1.5	0.5	3.1	26.6	24.1
1925-1927	(⁴)	-11.7	-14.0	-20.4	-20.5	-20.9	2.8
1923-1925	(⁴)	-1.3	2.7	22.0	24.3	37.9	11.4
1921-1923	(⁴)	37.4	47.2	54.6	51.2	23.5	-----
1919-1921	(⁴)	-30.0	-35.1	-25.3	-23.5	-5.1	-----
1919-1929	(⁴)	-25.1	-17.5	13.7	17.9	61.9	20.7
1909-1919	(⁴)	-13.3	69.0	18.0	17.6	12.3	84.3
1899-1909	(⁴)	-10.8	6.7	5.4	-4.6	-50.6	64.9
ZINC							
1929	30	11,618	\$17,710,270	\$74,760,088	\$118,901,070	\$44,140,082	123,901
1927	25	11,188	16,528,264	70,619,331	108,297,975	31,678,044	93,067
1925	28	11,289	16,304,701	83,092,110	118,905,590	34,913,480	86,868
1923	35	11,918	16,895,864	64,134,114	94,183,900	30,409,786	69,588
1921	29	5,778	7,243,760	24,312,208	37,482,675	13,170,467	(⁵)
1919	39	13,796	17,783,278	70,014,728	104,122,938	34,108,210	73,604
1914	29	9,617	6,069,020	39,572,587	53,538,398	13,995,811	36,705
1909	29	6,655	4,210,341	25,230,001	34,205,894	8,975,893	21,457
1904	31	6,528	3,856,466	17,028,418	24,791,299	7,762,881	18,404
1899	31	4,899	2,355,021	13,286,058	18,188,498	4,902,440	11,145
Per cent of increase or decrease (—):							
1927-1929	(⁴)	3.8	7.2	-2.4	9.8	39.3	33.1
1925-1927	(⁴)	-0.9	1.4	-8.8	-8.0	-9.3	7.8
1923-1925	(⁴)	-5.3	-3.5	31.0	26.2	16.2	24.1
1921-1923	(⁴)	106.3	133.2	163.8	151.3	128.2	-----
1919-1921	(⁴)	-58.1	-59.3	-65.3	-64.0	-61.4	-----
1919-1929	(⁴)	-15.8	-0.4	6.8	14.2	29.4	68.3
1909-1919	(⁴)	107.3	322.4	177.5	204.4	280.0	243.0
1899-1909	(⁴)	36.7	78.7	89.9	88.1	83.1	92.5

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

TABLE 2.—GENERAL STATISTICS, FOR THE INDUSTRIES, 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. 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, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products ¹	Value added by manufacture ²	
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy			
COPPER															
United States	1929	26	³ 1,993	14,544	412,244	245,165	167,079	\$5,567,743	\$23,951,955	\$920,351,441	\$905,614,326	\$14,737,115	\$904,783,862	\$74,432,421	
	1927	26	³ 1,766	13,024	323,799	177,491	146,308	3,943,652	20,581,865	627,763,711	614,153,540	13,610,171	609,299,017	81,635,906	
	1919	34	³ 2,309	17,345	321,610	194,261	127,349	5,896,345	25,723,371	584,410,173	565,167,149	19,243,024	651,101,691	66,691,418	
Individual States:															
	Arizona	1929	10	434	3,711	143,957	115,157	28,800	1,335,600	6,062,449	146,270,880	139,920,844	6,350,045	150,671,668	10,400,779
		1927	8	334	2,964	70,219	61,562	8,657	897,792	4,325,430	50,989,959	55,648,866	4,341,093	82,745,917	22,755,958
	1919	10	508	3,112	86,253	66,859	19,394	1,656,106	4,771,998	78,668,906	71,670,910	6,997,987	94,184,312	15,515,406	
New Jersey	1929	3	564	3,730	60,990	58,565	2,425	1,392,364	6,445,004	276,973,873	274,916,965	2,056,908	302,540,434	25,572,561	
	1927	3	504	3,145	55,496	55,496	-----	1,052,203	5,071,547	198,702,372	196,425,915	2,276,457	210,201,789	11,499,417	
	1919	4	595	4,096	40,683	45,683	4,000	1,128,892	5,345,591	231,413,434	228,660,121	2,753,313	244,268,519	12,865,068	
Groups of States:															
	Mont., 2 est., Nev., 1; Wash., 1; Other States (Md., 1 est., Mich., 3; N. Y., 1; Tenn., 2; Tex., 1; Utah, 1)	1929	4	467	2,723	126,336	20,735	105,601	1,165,835	5,117,066	169,079,166	166,210,927	2,868,239	188,680,728	19,601,562
States not shown separately	1927	15	928	7,815	198,034	60,433	137,651	1,993,657	11,184,898	269,071,350	262,078,759	6,992,621	316,351,311	47,270,931	
	1919	20	1,206	10,167	185,674	81,719	103,955	3,111,347	15,605,482	274,327,833	264,830,109	9,491,724	312,648,760	38,320,927	

See footnotes at end of table.

SMELTING AND REFINING, COPPER, LEAD, AND ZINC

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

[See note at head of this table]

STATE	Cen- sus year	Number of estab- lish- ments	Salaried officers and employ- ees	Wage earners (average for the year)	HORSEPOWER (RATED CA- PACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL AND PUR- CHASED ELECTRIC ENERGY			Value of products ¹	Value added by manufac- ture ¹
					Total	Prime movers	Motors run by purchas- ed energy			Total	Materials	Fuel and purchased energy		
LEAD														
United States.	1929	10	871	4,819	59,936	13,462	46,474	\$2,206,453	\$7,577,094	\$203,913,730	\$199,230,316	\$4,683,414	\$232,115,000	\$28,201,279
	1927	18	770	5,398	48,298	13,239	35,059	1,715,941	7,689,680	202,859,134	197,803,342	5,065,792	235,137,872	22,278,738
	1919	25	915	6,438	49,668	25,339	24,329	2,101,786	9,179,615	179,373,646	173,697,163	5,676,483	196,784,519	17,420,873
Individual States:														
Utah.....	1929	3	271	1,468	21,873	6,297	15,576	645,255	2,439,840	32,965,175	31,369,360	1,595,815	38,820,392	5,855,217
	1927	3	297	1,573	14,328	4,852	9,476	611,549	2,231,576	30,184,295	28,193,265	1,991,030	34,513,685	4,329,390
	1919	3	231	1,749	14,110	10,375	3,735	519,480	2,700,111	23,737,729	21,094,498	2,133,231	27,518,050	3,780,321
Groups of States:														
Ill., 3 est.; Ind., 2.....	1929	5	158	982	7,920	1,500	6,420	527,610	1,663,548	45,873,839	45,263,750	608,089	53,301,234	7,517,395
Kans., 1 est.; Mo., 2; Neb., 1.....	1929	4	164	905	8,593	4,235	4,358	362,310	1,304,781	49,099,551	48,424,457	675,094	54,490,656	5,391,105
Other States (Calif., 1 est.; Colo., 2; Idaho, 1; Mont., 1; N. J., 1; Okla., 1)														
	1929	7	278	1,404	21,550	1,430	20,120	671,278	2,168,925	75,975,165	74,170,749	1,804,416	88,412,727	9,487,562
States not shown separately.....														
	1927	15	473	3,825	33,970	8,387	25,583	1,104,392	5,458,104	172,674,839	169,610,077	3,064,762	190,624,187	17,949,348
	1919	22	684	4,689	38,455	14,964	23,491	1,582,306	6,479,504	155,635,917	152,692,665	3,543,252	169,276,469	13,640,552
ZINC														
United States.	1929	30	1,083	11,618	123,901	58,879	65,022	3,043,505	17,710,270	74,760,088	64,159,172	10,600,916	118,901,070	44,140,982
	1927	25	870	11,188	93,067	60,237	32,830	2,463,481	16,528,364	76,619,331	66,659,029	9,960,302	108,297,975	31,678,644
	1919	39	1,107	13,796	73,694	60,096	13,598	2,461,469	17,783,278	70,014,728	60,508,127	9,446,601	104,122,938	31,108,210
Individual States:														
Illinois.....	1929	8	321	3,098	29,412	11,150	18,262	904,771	4,308,889	12,882,375	10,986,648	1,895,727	21,854,222	8,971,847
	1927	5	224	2,827	15,475	12,260	3,215	765,418	4,063,524	12,945,372	11,206,415	1,739,957	19,696,455	6,751,083
	1919	7	282	4,224	19,706	16,554	3,242	737,417	4,993,890	18,453,248	15,812,236	2,641,012	24,952,922	6,500,704
Kansas.....	1929	3	67	544	4,195	1,310	2,885	167,135	771,442	4,743,197	3,914,387	828,810	6,940,850	2,197,653
	1927	3	50	550	3,174	1,567	1,607	148,678	759,693	4,684,448	4,120,152	564,296	5,813,661	1,129,213
	1919	3	58	717	3,523	3,005	518	116,960	885,584	4,663,571	3,996,282	667,399	6,037,920	1,374,349
Oklahoma.....	1929	4	74	1,400	3,626	3,036	590	142,811	1,917,587	10,042,094	8,857,375	1,184,719	12,732,286	2,690,192
	1927	6	62	1,717	4,033	2,805	1,228	191,453	2,592,541	12,727,781	11,719,954	1,007,827	15,207,106	2,479,324
	1919	11	138	2,272	6,952	5,295	1,687	301,112	3,174,486	14,549,978	12,743,825	1,806,153	19,517,566	4,967,688
Pennsylvania..	1929	3	262	3,583	47,438	39,123	8,315	856,171	5,658,550	16,997,878	14,422,841	2,375,037	34,843,206	17,845,327
	1927	3	265	3,573	44,643	39,490	5,153	720,465	5,571,251	21,017,215	17,890,196	3,127,019	34,601,749	13,584,534
Groups of States:														
Ark., 1 est.; Colo., 1; Tex., 1.....	1929	3	62	825	4,851	460	3,891	153,492	1,114,652	6,908,475	6,096,927	811,548	8,563,602	1,655,127
Other States (Ind., 1 est.; Mont., 3; Ohio, 1; W. Va., 2; Wis., 2)														
	1929	9	297	2,162	34,879	3,800	31,079	817,125	3,939,150	23,186,069	19,680,994	3,505,075	33,966,905	10,780,836
States not shown separately.....														
	1927	8	269	2,521	25,742	4,115	21,627	637,468	3,631,255	25,244,515	21,723,312	3,521,203	32,979,005	7,734,490
	1919	18	629	6,583	43,933	35,272	8,061	1,305,971	8,729,328	32,347,931	28,015,834	4,332,097	53,613,500	21,265,569

¹ The figures for all years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.
² Value of products less cost of materials, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
³ The total numbers of persons engaged—salaried officers and employees and wage earners—as reported for this industry, are as follows: For 1929, 16,537; 1927, 15,690; 1919, 19,654. No proprietors or firm members were reported.
⁴ California, 1 establishment; Maryland, 1; Michigan, 3; Montana, 2; Nevada, 2; New York, 1; Tennessee, 2; Texas, 1; Utah, 1; Washington, 1.
⁵ California, 3 establishments; Maryland, 1; Michigan, 4; Montana, 3; Nevada, 2; New York, 1; Tennessee, 2; Texas, 1; Utah, 1; Virginia, 1; Washington, 1.
⁶ The total numbers of persons engaged, as reported for this industry, are as follows: For 1929, 5,690; 1927, 6,168; 1919, 7,354. No proprietors or firm members were reported for either 1929 or 1927; one proprietor is included for 1919.
⁷ 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.
⁸ California, 1 establishment; Colorado, 2; Idaho, 1; Illinois, 2; Indiana, 2; Kansas, 1; Missouri, 2; Montana, 1; Nebraska, 1; New Jersey, 1; Oklahoma, 1.
⁹ California, 1 establishment; Colorado, 5; Idaho, 1; Illinois, 2; Indiana, 2; Kansas, 1; Missouri, 3; Montana, 1; Nebraska, 1; Ohio, 1; Oklahoma, 1; Pennsylvania, 1; Washington, 1; Wisconsin, 1.
¹⁰ The total numbers of persons engaged—salaried officers and employees and wage earners—as reported for this industry, are as follows: For 1929, 12,701; 1927, 12,058; 1919, 14,903. No proprietors or firm members were reported.
¹¹ Arkansas, 2 establishments; Indiana, 1; Montana, 1; Texas, 1; West Virginia, 3.
¹² Arkansas, 3 establishments; Colorado, 4; Indiana, 2; Iowa, 1; New Jersey, 1; Pennsylvania, 3; Utah, 1; West Virginia, 3.

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; FOR THE INDUSTRIES

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
COPPER												
Prime movers and electric motors driven by purchased energy, aggregate.....	4,160	Horse-power 412,244	3,527	Horse-power 323,799	3,539	Horse-power 321,909	3,253	Horse-power 321,610	1,658	Horse-power 194,980	100.0	100.0
Prime movers, total.....	172	245,165	211	177,491	219	177,791	321	194,261	422	153,360	59.5	60.4
Steam, total.....	164	242,867	204	175,093	212	175,343	303	186,286	399	147,535	59.0	58.0
Engines.....	107	103,945	163	83,133	172	91,347	249	106,520	(1)	(1)	25.2	33.1
Turbines.....	57	138,922	41	91,960	40	83,996	54	79,706	(1)	(1)	33.8	24.9
Internal-combustion engines.....	4	458	3	558	3	558	9	425	10	825	0.1	0.1
Water wheels and water turbines.....	4	1,840	4	1,840	4	1,890	9	7,550	13	10,000	0.4	2.3
Electric motors driven by purchased energy.....	3,988	167,079	3,316	146,808	3,320	144,118	2,932	127,349	1,236	36,620	40.5	39.6
Electric motors, total.....	8,718	294,627	7,501	230,908	6,997	231,254	5,621	184,255	3,154	88,213	100.0	100.0
Driven by purchased energy.....	3,988	167,079	3,316	146,808	3,320	144,118	2,932	127,349	1,236	36,620	56.7	69.1
Driven by energy generated in establishments reporting.....	4,730	127,548	4,185	84,660	3,677	87,136	2,689	50,906	1,918	51,593	43.3	30.9
Electric generators.....	94	Kilowatts 124,031 Kilowatt-hours 603,280,375	119	Kilowatts 93,950	101	Kilowatts 96,134	(2)	(2)	(2)	(2)		
Electric energy purchased ¹				(1)		(1)		(2)		(2)		
LEAD												
Prime movers and electric motors driven by purchased energy, aggregate.....	2,265	Horse-power 59,936	1,624	Horse-power 48,268	1,366	Horse-power 47,219	925	Horse-power 49,668	447	Horse-power 29,734	100.0	100.0
Prime movers, total.....	39	13,462	40	13,239	54	18,457	69	25,339	71	20,532	22.5	51.0
Steam, total.....	38	13,422	39	13,199	54	18,457	65	24,905	68	20,387	22.4	50.1
Engines.....	31	8,586	32	8,116	47	13,374	57	17,880	(1)	(1)	14.3	36.0
Turbines.....	7	4,836	7	5,083	7	5,083	8	7,025	(2)	(1)	8.1	14.1
Internal-combustion engines.....	1	40	1	40			3	84	3	145	0.1	0.2
Water wheels and water turbines.....							1	350				0.7
Electric motors driven by purchased energy.....	2,226	46,474	1,584	35,059	1,312	28,762	856	24,329	376	9,202	77.5	49.0
Electric motors, total.....	2,600	51,132	2,146	41,948	1,758	33,795	1,100	32,535	842	19,737	100.0	100.0
Driven by purchased energy.....	2,226	46,474	1,584	35,059	1,312	28,762	856	24,329	376	9,202	90.9	74.8
Driven by energy generated in establishments reporting.....	434	4,658	562	6,889	446	5,033	244	8,206	466	10,535	9.1	25.2
Electric generators.....	15	Kilowatts 4,995 Kilowatt-hours 101,839,380	16	Kilowatts 6,479	22	Kilowatts 8,897	(2)	(2)	(2)	(2)		
Electric energy purchased ²				(1)		(1)		(2)		(2)		
ZINC												
Prime movers and electric motors driven by purchased energy, aggregate.....	2,344	Horse-power 123,901	1,216	Horse-power 93,067	1,070	Horse-power 86,368	887	Horse-power 73,604	221	Horse-power 36,705	100.0	100.0
Prime movers, total.....	142	58,879	146	60,237	172	61,675	245	60,090	181	35,615	47.5	81.6
Steam, total.....	123	57,589	128	59,050	149	59,244	202	56,832	154	33,564	46.5	77.2
Engines.....	84	17,244	91	20,390	104	28,405	163	28,802	(1)	(1)	13.9	39.1
Turbines.....	39	40,345	37	39,260	45	30,830	39	28,030	(1)	(1)	32.6	38.1
Internal-combustion engines.....	19	1,290	18	587	22	1,426	46	3,264	21	1,751	1.0	4.4
Water wheels and water turbines.....					1	1,005			6	300		
Electric motors driven by purchased energy.....	2,202	65,022	1,070	32,830	898	24,693	639	13,608	40	1,090	52.5	18.4
Electric motors, total.....	4,216	102,691	3,562	84,931	3,010	70,561	2,171	52,996	992	24,554	100.0	100.0
Driven by purchased energy.....	2,202	65,022	1,070	32,830	898	24,693	639	13,608	40	1,090	63.3	25.5
Driven by energy generated in establishments reporting.....	2,014	37,669	2,492	52,101	2,112	45,868	1,532	39,488	952	23,464	36.7	74.5
Electric generators.....	42	Kilowatts 33,579 Kilowatt-hours 600,599,169	51	Kilowatts 34,721	80	Kilowatts 74,828	(2)	(2)	(2)	(2)		
Electric energy purchased ³				(1)		(1)		(2)		(2)		

¹ Not called for separately on schedule.
² Not called for on schedule.

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

SMELTING AND REFINING, COPPER, LEAD, AND ZINC

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TABLE 4.—WAGE EARNERS, BY MONTHS, FOR THE INDUSTRIES, 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		
COPPER															
United States:															
1929	14,544	14,237	<i>14,169</i>	14,245	14,762	14,735	14,607	14,722	14,628	14,476	14,720	14,672	14,559	14,559	96.0
1925	15,588	15,439	<i>15,268</i>	15,760	15,639	15,755	15,464	15,750	15,909	15,506	15,872	15,365	15,200	15,200	96.0
1919	17,345	23,627	20,451	18,652	17,616	16,426	15,742	16,505	<i>15,551</i>	15,754	15,944	16,284	15,738	15,738	95.0
1914	17,731	20,778	19,867	20,381	20,811	20,725	20,837	20,502	16,233	15,568	13,435	<i>12,286</i>	13,340	13,340	89.0
1909	15,623	16,081	15,869	15,585	15,650	15,420	15,397	15,761	<i>14,839</i>	15,943	15,813	15,704	15,490	15,490	92.9
Arizona	8,711	<i>8,621</i>	8,632	8,734	8,822	8,784	8,737	8,687	8,747	8,749	8,705	8,654	8,659	8,659	94.7
New Jersey	3,730	3,566	3,519	<i>3,495</i>	3,663	3,817	3,891	3,994	3,876	3,682	3,763	3,761	3,762	3,762	87.7
LEAD															
United States:															
1929	4,819	4,803	<i>4,570</i>	4,624	4,834	4,810	4,884	5,098	4,869	4,853	4,970	4,810	4,704	4,704	90.9
1925	6,115	5,980	5,891	6,146	6,929	6,832	5,947	6,140	6,034	6,077	6,421	6,368	6,618	6,618	88.2
1919	6,438	8,084	7,551	6,441	6,402	6,353	6,001	5,988	6,011	5,725	6,170	6,255	6,307	6,307	71.1
1914	7,385	7,752	7,564	7,541	7,560	7,512	7,640	7,449	7,510	7,147	7,089	<i>6,779</i>	7,077	7,077	87.4
1909	7,424	7,651	7,785	7,761	7,671	7,100	7,468	7,415	<i>6,947</i>	7,476	7,121	7,290	7,451	7,451	84.2
Utah	1,468	<i>1,402</i>	<i>1,386</i>	1,434	1,456	1,467	1,446	1,480	1,499	1,527	1,525	1,506	1,405	1,405	90.7
ZINC															
United States:															
1929	11,618	11,481	11,481	11,629	11,725	11,689	11,748	11,658	11,751	11,716	11,868	11,480	<i>11,162</i>	11,162	94.3
1925	11,289	11,062	11,329	11,275	11,068	11,001	<i>10,678</i>	11,205	11,263	11,328	11,501	11,510	11,940	11,940	81.9
1919	13,796	16,169	15,464	14,339	13,815	13,469	<i>12,250</i>	12,691	13,572	13,807	13,095	13,034	13,857	13,857	75.8
1914	9,617	9,748	9,663	9,884	9,683	9,663	9,439	<i>8,207</i>	9,344	9,667	9,801	9,562	9,750	9,750	94.3
1909	6,655	6,684	6,339	6,232	6,513	6,597	6,591	6,736	<i>6,215</i>	6,825	6,968	6,983	7,159	7,159	86.8
Illinois	3,098	3,084	<i>3,031</i>	3,075	3,039	3,075	3,051	3,049	3,045	3,224	3,216	3,170	3,114	3,114	94.0
Kansas	544	535	562	553	543	537	542	550	541	541	555	546	525	525	93.4
Oklahoma	1,406	1,376	1,422	1,435	1,437	1,426	1,444	1,400	1,454	1,419	1,448	1,430	1,390	1,390	88.7
Pennsylvania	3,583	3,624	3,600	3,627	3,647	3,656	3,684	3,634	3,596	3,524	3,550	3,443	3,468	3,468	92.5

STAMPED WARE, ENAMELED WARE, AND METAL STAMPING, ENAMELING, JAPANING, AND LACQUERING

Description of the industry.—This industry classification embraces establishments engaged in the stamping of articles from sheet steel, tin, copper, and zinc, and, in many cases, the enameling of these articles. (Similar articles made from aluminum are classified in

the "Aluminum manufactures" industry.) The principal products are kitchen utensils, household and hospital ware, perforated metals, motor-vehicle parts and accessories, motor-vehicle license plates, metal seals, and bottle and can caps and stoppers.

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 ¹	Value added by manufacture ²	Horsepower
1929	582	40,000	\$50,091,700	\$87,639,495	\$204,306,134	\$116,666,639	98,184
1927	476	30,853	38,172,046	68,880,269	150,936,053	82,056,784	73,619
1925	465	31,254	38,276,937	79,736,661	160,991,786	81,255,125	68,121
1923	412	36,552	44,348,384	86,340,191	176,371,354	90,031,163	71,053
1921	388	24,807	27,879,075	49,292,541	103,105,530	53,812,989	(3)
1919	433	35,237	35,902,259	66,628,109	147,069,783	80,441,674	52,767
1914	382	30,273	16,041,418	33,536,328	67,668,207	34,131,879	36,276
1909	347	27,538	12,379,464	27,872,521	54,638,019	27,065,498	(4)
1904	298	23,523	9,490,517	17,919,208	38,274,391	20,355,183	17,628
1899	306	17,337	6,064,697	12,855,304	24,740,206	11,884,902	19,332
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929	22.3	29.6	31.2	27.2	35.4	42.2	33.4
1925-1927	2.4	-1.3	-3	-13.6	-6.2	1.0	8.1
1923-1925	12.0	-14.5	-13.7	-7.6	-8.7	-9.7	-4.1
1921-1923	6.2	47.3	59.1	75.2	71.1	67.3	-----
1919-1921	-10.4	-29.6	-22.3	-26.0	-29.9	-33.1	-----
1919-1929	34.4	29.6	39.5	31.5	38.9	45.0	86.1
1909-1919	24.8	28.0	190.0	139.0	167.7	197.2	-----
1899-1909	13.4	54.4	104.1	116.8	122.1	127.7	-----

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

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

³ Not called for on schedule.

⁴ No comparable statistics available.

STAMPED AND ENAMELED WARE, ETC.

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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	Cen- sus year	Num- ber of estab- lish- ments	Sal- aried offi- cers and em- ploy- ees ¹	Wage earn- ers (av- erage for the year)	HORSEPOWER (RATED CAPACITY) OF POWER EQUIPMENT			Salaries	Wages	COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY			Value of products ²	Value added by manu- facture ³
					Total	Prime movers	Motors run by pur- chased energy			Total	Materials	Fuel and purchased energy		
United States.....	1929	582	5,888	40,090	98,184	14,740	83,444	\$17,025,920	\$50,091,700	\$87,039,495	\$83,073,493	\$4,566,002	\$204,306,134	\$116,666,639
	1927	476	4,562	30,853	73,619	15,458	57,961	12,094,326	38,172,046	68,880,269	65,499,485	3,390,784	150,936,053	82,056,784
	1919	433	5,245	35,237	52,767	23,666	29,201	10,501,932	35,902,259	66,628,109	63,537,047	3,090,462	147,069,783	80,441,674
Individual States:														
California.....	1929	23	94	593	1,058	-----	1,058	275,364	759,308	1,240,532	1,186,044	54,488	3,123,202	1,882,670
	1927	20	96	518	1,022	-----	1,022	241,359	673,251	896,836	831,169	65,667	2,460,583	1,563,747
Connecticut.....	1929	22	240	1,882	2,922	541	2,381	721,687	2,047,224	3,357,842	3,250,115	107,727	7,580,336	4,222,494
	1927	24	260	1,881	2,619	417	2,202	643,650	1,999,027	2,804,912	2,672,150	132,762	6,990,923	4,156,011
Illinois.....	1929	84	679	4,760	10,609	713	9,896	2,504,160	6,252,915	11,724,885	11,141,756	583,129	28,396,852	16,671,967
	1927	70	606	3,510	8,444	857	7,587	1,725,087	4,607,860	9,934,240	9,488,999	446,241	20,850,282	10,916,042
Indiana.....	1929	19	187	1,867	4,049	1,215	2,834	537,057	2,130,467	3,344,742	3,079,294	265,448	7,831,123	4,486,381
Massachusetts.....	1929	43	273	1,409	5,662	411	5,251	944,086	1,922,411	2,621,331	2,447,835	173,496	7,173,392	4,552,061
	1927	33	211	1,155	4,643	270	4,373	616,533	1,699,881	2,638,122	1,917,485	120,637	5,455,448	3,417,326
Michigan.....	1929	53	513	3,799	9,514	40	9,474	1,668,401	5,623,366	7,865,823	7,386,876	418,947	20,153,220	12,347,397
	1927	34	233	1,623	3,589	-----	3,589	750,618	2,629,445	3,811,557	3,587,718	223,839	9,706,721	5,894,164
Minnesota.....	1929	5	9	53	82	-----	82	24,135	48,755	127,273	121,961	5,312	275,177	147,904
Missouri.....	1929	16	134	781	2,647	815	1,832	374,092	810,004	2,078,635	1,993,349	85,286	4,075,631	1,990,996
New Jersey.....	1929	40	361	2,780	3,718	1,185	2,533	1,040,867	3,395,497	4,998,061	4,732,161	265,900	12,900,676	7,902,615
	1927	36	280	2,123	3,082	1,097	1,985	728,768	2,751,977	2,738,550	2,573,462	165,088	8,028,308	5,289,758
New York.....	1929	90	1,081	5,611	16,555	2,890	13,665	3,103,493	7,169,059	13,851,067	13,216,289	635,378	30,948,029	17,096,362
	1927	76	1,021	5,684	12,962	3,447	9,515	2,667,581	7,296,828	14,808,415	14,211,905	656,510	30,496,430	15,631,024
Ohio.....	1929	77	816	6,959	13,763	1,220	12,543	2,600,914	9,112,601	14,356,209	13,583,543	802,666	33,003,649	18,617,440
	1927	64	520	4,747	14,738	1,655	13,083	1,428,701	6,933,622	9,521,364	8,970,598	550,766	20,606,353	11,060,989
Pennsylvania.....	1929	38	300	2,154	4,665	30	4,635	824,038	2,660,849	4,363,351	4,083,125	280,226	9,996,451	5,633,100
	1927	38	171	1,308	2,938	127	2,811	395,074	1,518,585	2,980,506	2,793,909	186,597	6,449,619	3,469,113
Rhode Island.....	1929	20	36	270	499	40	459	145,180	278,958	256,305	243,410	12,895	881,683	628,378
	1927	12	30	171	433	30	403	109,178	198,752	181,909	168,590	13,319	561,167	379,258
Tennessee.....	1929	3	35	499	1,025	75	950	90,953	693,184	792,099	646,950	146,149	1,837,383	1,086,284
West Virginia.....	1929	5	93	1,346	3,987	500	3,487	236,398	1,489,150	3,872,146	3,736,054	136,092	6,985,299	3,113,143
	1927	4	74	958	2,143	650	1,493	214,706	1,022,999	2,601,219	2,496,631	104,588	4,914,091	2,812,872
Wisconsin.....	1929	20	576	2,802	5,289	3,245	2,044	1,332,357	3,370,631	5,270,234	4,996,404	273,830	13,527,684	8,257,450
Groups of States:														
Ky., 3 est.; Md., 8; Va., 1.....	1929	12	425	2,279	11,256	1,775	9,481	1,107,197	2,163,004	7,151,675	6,847,831	303,844	14,839,421	7,687,746
Iowa, 2 est.; Kans., 2.....	1929	4	18	68	348	45	303	38,511	80,476	244,523	238,404	6,119	383,192	138,069
Colo., 1 est.; Oreg., 1; Utah, 1; Wash., 1.....	1929	4	9	28	116	-----	116	15,819	29,417	35,365	30,846	4,519	107,079	71,714
Other States (Del., 1 est.; La., 1; Me., 1; N. C., 1).....	1929	4	10	60	420	-----	420	40,211	54,524	116,797	111,246	5,551	236,665	119,868
States not shown sepa- rately.....	1927	65	1,070	7,170	17,066	7,108	9,898	2,573,011	7,840,329	16,502,639	15,776,869	725,770	34,442,119	17,939,480

¹ Not including proprietors and firm members, as follows: For 1929, 164; 1927, 200; 1919, 218. 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, 46,082; 1927, 35,615; 1919, 40,700.

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

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

⁴ California, 16 establishments; Colorado, 1; Connecticut, 26; Delaware, 1; Illinois, 34; Indiana, 8; Iowa, 1; Kansas, 1; Kentucky, 2; Louisiana, 1; Maryland, 10; Massachusetts, 30; Michigan, 28; Minnesota, 1; Missouri, 12; New Hampshire, 1; New Jersey, 38; New York, 95; Ohio, 55; Oregon, 1; Pennsylvania, 39; Rhode Island, 15; Tennessee, 3; Washington, 1; West Virginia, 5; Wisconsin, 8.

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 Georgia, 1 establishment; Indiana, 12; Iowa, 1; Kansas, 3; Kentucky, 2; Louisiana, 1; Maine, 1; Maryland, 8; Minnesota, 4; Missouri, 14; Tennessee, 3; Virginia, 1; Washington, 1; Wisconsin, 13.

CENSUS OF MANUFACTURES: 1929

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. Values of the specified products are given for each State which can be shown separately without disclosing data for individual establishments, and for the remaining States in groups. In some cases, however, certain States for which the figures are combined with those for others reported larger values than some of those shown separately]

KIND AND STATE	Value	KIND AND STATE	Value
1. Stamped and enameled ware industry, all products, total value.	\$204,306,134	Stamped and enameled ware—Continued:	
2. Stamped and enameled ware.....	182,721,838	Enameled ware, vitreous, total.....	\$35,017,903
3. Other products (not normally belonging to the industry).....	21,684,296	Kitchen and other household ware, total.....	23,500,948
4. Stamped and enameled ware made as secondary products in other industries, value.....	42,620,000	New York.....	1,801,208
Stamped and enameled ware, all industries, aggregate (sum of 2 and 4).....	225,341,838	Ohio.....	7,529,728
Stamped household ware other than vitreous enamel and aluminum, total.....	33,213,148	Wisconsin.....	9,028,545
Galvanized-iron ware, total.....	8,585,481	Calif., Mass., Mo., Tenn.....	465,017
New York.....	2,330,367	Ill., Ind., Mich.....	3,670,343
Calif., Ga., La., Minn.....	149,185	Md., N. J., Pa., W. Va.....	5,011,107
Conn., Md., Mass., N. J., Pa.....	2,299,471	Hospital ware, total.....	657,448
Ill., Mich., Mo., Ohio, Wis.....	3,806,458	Ill., Ind., Ohio, W. Va., Wis.....	567,598
Tinware, total.....	11,743,969	Mass., N. J., N. Y.....	89,850
New York.....	2,234,588	Other enameled ware, total.....	10,859,507
Calif., La., Wash.....	182,619	Illinois.....	1,809,786
Ill., Ind., Mich., Minn., Mo., Ohio, Wis.....	5,854,568	Indiana.....	1,062,906
Md., Mass., N. J., Pa.....	3,472,194	Michigan.....	629,369
Japanned, lacquered, and paint-enameled ware, total.....	4,421,370	Ohio.....	1,127,009
Massachusetts.....	87,380	Pennsylvania.....	1,128,837
New York.....	594,435	Calif., Wash.....	802,221
Calif., Ind.....	15,187	Conn., Mass., N. J., N. Y., R. I.....	2,018,814
Conn., Md., N. J., R. I.....	1,149,216	Md., Tenn., W. Va.....	1,648,927
Ill., Mich., Mo., Ohio, Wis.....	2,575,153	Mo., Wis.....	731,648
Other metal ware, total.....	8,462,328	Perforated metals, total.....	4,300,194
Indiana.....	123,511	Illinois.....	1,705,725
New Jersey.....	1,363,503	Ohio.....	88,000
New York.....	1,995,818	Calif., Kans., Mich., Mo., Wis.....	700,488
Ohio.....	669,169	Mass., N. J., N. Y., Pa., W. Va.....	1,805,381
Calif., Colo.....	183,084	Bottle caps, total.....	28,312,123
Conn., Ky., La., Mass., Pa., R. I.....	1,137,306	Illinois.....	6,845,921
Ill., Mich., Mo., Wis.....	2,989,997	New York.....	7,977,925
Stamped automotive parts and accessories, total.....	56,985,027	Calif., Ind., Md., Mo., N. J., Ohio, Pa., W. Va.....	13,488,277
Illinois.....	1,373,747	Amount received for custom work on materials furnished by others, total.....	11,675,044
Indiana.....	3,578,850	Custom stamping, total.....	4,568,890
Massachusetts.....	457,957	California.....	172,538
Michigan.....	27,003,082	Illinois.....	391,466
Ohio.....	12,488,696	New Jersey.....	124,806
Pennsylvania.....	1,042,251	New York.....	405,633
Wisconsin.....	2,512,470	Ohio.....	336,064
Calif., Colo., Conn., Ky., Minn., Mo., W. Va.....	2,245,715	Pennsylvania.....	143,986
N. J., N. Y.....	6,282,520	Wisconsin.....	33,832
Other stamped ware, total.....	55,838,390	Conn., Ind., Iowa, Mich., Minn., Mo., R. I.....	2,982,516
California.....	492,823	Vitreous enameling, total.....	4,698,891
Connecticut.....	8,910,359	Illinois.....	581,043
Illinois.....	6,062,401	Massachusetts.....	348,297
Indiana.....	807,705	Pennsylvania.....	622,789
Maryland.....	1,692,052	Calif., N. J., N. Y., R. I.....	636,924
Massachusetts.....	5,014,002	Ind., Mich., Ohio.....	1,822,728
Michigan.....	3,427,677	Ky., Mo., Tenn.....	687,110
Missouri.....	420,167	Japanning, lacquering, and paint enameling, total.....	2,417,263
New Jersey.....	4,362,355	California.....	45,311
New York.....	8,387,366	Illinois.....	762,901
Ohio.....	7,584,007	Massachusetts.....	411,512
Pennsylvania.....	4,310,940	New Jersey.....	118,098
Rhode Island.....	2,407,076	New York.....	225,373
Wisconsin.....	1,589,943	Ohio.....	155,556
Ala., Del., Iowa, Kans., Ky., Me., Minn., Nebr., N. C., Okla., Oreg., Va., Wash.....	729,726	Rhode Island.....	207,780
		Mich., Minn., Mo., Pa., Wis.....	495,732

STAMPED AND ENAMELED WARE, ETC.

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

[Costs of principal materials consumed were reported by only 381 of the 582 establishments in this industry. The combined value of products reported by these 381 establishments amounted to \$108,793,134, or 82.6 per cent of the aggregate value of the products of all establishments in 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 certain specified materials, whereas the others 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 "Other States" reported larger costs of the specified materials than some of the States shown separately]

KIND AND STATE	Cost	KIND AND STATE	Cost	KIND AND STATE	Cost
Iron and steel sheets and other forms, total.....	\$41,537,307	Aluminum sheets and other forms—Con.		Copper, brass, and bronze, all forms—Continued.	
Connecticut.....	470,326	Indiana.....	\$11,931	Wisconsin.....	\$338,417
Illinois.....	5,417,888	Massachusetts.....	79,021	Other States (Ind., Iowa, Me., Md., Minn., Mo., Va.).....	128,360
Indiana.....	1,518,021	Michigan.....	21,655	Other metals, all forms, total.....	5,045,927
Massachusetts.....	1,319,150	New York.....	75,684	Connecticut.....	360,688
Michigan.....	4,624,360	Ohio.....	213,012	Illinois.....	1,360,947
Missouri.....	822,899	Other States (Calif., La., Me., Md., Mo., N. J., Pa., R. I., Va., W. Va., Wis.).....	311,966	Massachusetts.....	94,474
New Jersey.....	3,101,944	Copper, brass, and bronze, all forms, total.....	5,595,559	Michigan.....	117,616
New York.....	3,520,852	California.....	18,943	New Jersey.....	152,686
Ohio.....	9,281,670	Connecticut.....	1,311,125	New York.....	1,623,264
Pennsylvania.....	1,927,406	Illinois.....	448,044	Ohio.....	235,050
Wisconsin.....	4,539,505	Massachusetts.....	310,099	Pennsylvania.....	407,165
Other States (Calif., Colo., Iowa, Kans., Me., Md., Minn., R. I., Tenn., Va., Wash., W. Va.).....	5,003,100	Michigan.....	559,376	Other States (Calif., Colo., La., Me., Md., Minn., R. I., Utah, Va., Wis.).....	688,055
Aluminum sheets and other forms, total.....	914,563	New Jersey.....	257,936		
Connecticut.....	30,497	New York.....	1,398,484		
Illinois.....	170,707	Ohio.....	500,222		
		Pennsylvania.....	239,785		
		Rhode Island.....	104,785		

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.....	12,012	98,184	7,705	73,619	6,852	68,121	3,402	52,767	1,333	36,276	100.0	100.0
Prime movers, total.....	111	14,740	117	15,658	113	16,168	187	23,566	259	24,549	15.0	44.7
Steam, total.....	89	13,454	79	14,345	78	14,340	136	21,004	176	21,371	13.7	39.8
Engines.....	80	12,780	72	13,695	71	13,757	130	20,604	(1)	(1)	13.0	28.9
Turbines.....	9	674	7	650	7	583	6	500	(1)	(1)	0.7	0.9
Internal-combustion engines.....	16	995	33	1,232	32	1,777	48	2,496	80	3,023	1.0	4.8
Water wheels and water turbines.....	6	291	5	81	3	51	3	64	3	155	0.3	0.1
Electric motors driven by purchased energy.....	11,901	83,444	7,688	57,961	6,720	51,953	3,215	29,201	1,074	11,727	85.0	55.3
Electric motors, total.....	13,064	92,166	8,568	67,491	8,303	63,624	4,121	38,213	2,109	22,105	100.0	100.0
Driven by purchased energy.....	11,901	83,444	7,588	57,961	6,739	51,953	3,215	29,201	1,074	11,727	90.5	76.4
Driven by energy generated in establishments reporting.....	1,163	8,722	980	9,530	1,564	11,671	906	9,012	1,035	10,378	9.5	23.6
Electric generators.....	59	Kilowatts 8,971 Kilowatt-hours	57	Kilowatts 8,905	59	Kilowatts 8,739	(?)	(?)	(?)	(?)		
Electric energy purchased ¹		97,703,556		(1)		(1)		(?)		(?)		

¹ Not called for separately on schedule.

² Not called for on schedule.

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

⁴ 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 is of maximum	
		January	February	March	April	May	June	July	August	September	October	November	December		
United States:															
1929.....	40,000	37,486	39,396	41,623	41,845	41,529	41,255	41,306	41,355	40,652	40,392	37,561	35,302	84.4	
1925.....	31,254	30,046	31,340	31,785	32,594	32,363	31,680	31,041	31,799	29,757	31,009	30,895	30,743	91.3	
1919.....	35,237	<i>32,191</i>	33,173	33,027	32,828	33,785	33,776	34,855	36,359	37,056	37,944	38,852	38,998	82.5	
1914 ¹	30,273	30,334	31,369	32,360	32,131	31,679	30,788	29,919	29,635	29,798	29,618	27,868	<i>27,767</i>	85.7	
California.....	593	576	587	620	649	586	612	610	592	585	563	578	564	86.7	
Connecticut.....	1,882	<i>1,716</i>	1,750	1,863	1,898	1,904	1,877	1,874	1,885	1,938	1,994	1,970	1,903	86.1	
Illinois.....	4,760	4,242	4,365	4,559	4,739	4,723	4,839	4,935	5,055	4,870	5,011	4,850	4,906	83.9	
Indiana.....	1,867	<i>1,698</i>	1,653	1,804	1,866	1,966	1,965	1,971	1,998	1,993	1,944	1,900	1,748	80.0	
Massachusetts.....	1,409	1,377	1,402	1,453	1,423	1,477	1,440	1,403	1,430	1,403	1,420	1,366	<i>1,307</i>	88.5	
Michigan.....	3,799	3,628	3,875	4,215	4,265	4,247	4,155	4,142	4,109	3,972	3,464	2,864	2,652	62.2	
Minnesota.....	53	<i>20</i>	25	25	34	38	53	92	80	95	91	51	28	21.1	
Missouri.....	781	758	756	753	762	776	819	832	834	830	821	773	<i>655</i>	78.6	
New Jersey.....	2,780	2,632	2,963	3,191	3,255	2,980	2,771	2,785	2,895	2,804	2,616	2,344	<i>2,120</i>	65.1	
New York.....	5,611	5,632	6,012	6,220	5,865	5,592	5,387	5,415	5,522	5,574	5,703	5,426	<i>4,984</i>	80.1	
Ohio.....	6,959	6,390	6,861	7,270	7,342	7,386	7,267	7,405	7,191	7,114	7,167	6,371	6,833	78.6	
Pennsylvania.....	2,154	1,905	1,979	2,163	2,266	2,258	2,445	2,287	2,322	2,280	2,100	1,907	<i>1,872</i>	76.6	
Rhode Island.....	270	275	303	305	273	278	270	264	261	267	261	<i>244</i>	<i>244</i>	80.0	
Tennessee.....	499	404	388	467	491	528	504	628	604	551	542	<i>337</i>	<i>357</i>	61.6	
West Virginia.....	1,346	1,301	1,304	1,366	1,395	1,422	1,452	1,356	1,375	1,343	1,304	1,306	<i>1,246</i>	85.8	
Wisconsin.....	2,802	2,755	2,834	2,944	2,857	2,847	2,846	2,806	2,775	2,771	2,874	2,759	<i>2,657</i>	86.9	

¹ No comparable statistics available for years prior to 1914.

TIN AND OTHER FOILS, NOT INCLUDING GOLD FOIL

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of tin, lead, aluminum, and composition foils. At former censuses the manufacture of these foils and that of collapsible tubes were covered by a single

industry classification, "Tin and other foils, not including gold and silver; collapsible tubes." The figures for 1927 and 1925 as given in this report have been adjusted so as to make them comparable with those for 1929.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1929, 1927, AND 1925

[No State figures can be given separately without disclosing data for individual establishments]

STATE	Census year	Number of establishments	Salaried officers and employees ¹	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials and containers	Fuel and purchased energy		
United States.....	1929 1927 1925	7 10 10	288 221 (*)	1,710 1,658 1,670	18,642 18,770 16,041	..... ..... 750	18,642 18,770 15,291	\$1,177,614 580,716 (*)	\$1,856,371 2,083,578 2,124,422	\$13,548,399 15,350,018 15,648,376	\$13,271,058 15,098,453 (*)	\$277,341 251,563 (*)	\$20,954,849 20,951,679 20,611,277	\$7,406,450 5,601,663 4,062,901

¹ No proprietors or firm members were reported for this industry.
² For 1929, manufacturers' sales (shipments or deliveries); for earlier years, production. See GENERAL EXPLANATIONS—Value of Products.
³ Value of products less cost of materials, containers for products, fuel, and purchased electric energy. See GENERAL EXPLANATIONS—Value Added by Manufacture.
⁴ Illinois, 1 establishment; Kentucky, 1; Missouri, 1; New York, 3; Virginia, 1.
⁵ Illinois, 2 establishments; Kentucky, 1; Missouri, 1; New York, 4; Virginia, 2.
⁶ Not tabulated separately. See final sentence of text, above.

TABLE 2.—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]

CLASS	1929		1927	
	Pounds	Value	Pounds	Value
1. "Tin and other foils, not including gold foil" industry, all products, total value.....	.....	\$20,954,849	.....	\$20,951,679
2. Tin and other foils.....	.....	19,582,506	.....	20,235,022
3. Other products, not normally belonging to the industry.....	.....	1,372,343	.....	716,657
4. Tin and other foils made as secondary products in other industries.....	.....	2,279,778	.....	2,436,383
Tin and other foils, not including gold foil, all industries: Total (sum of 2 and 4).....	96,188,082	21,862,284	97,879,499	22,671,405
Aluminum foil.....	9,921,671	6,009,601	4,885,246	4,237,369
Tin, lead, and composition foil ¹	86,266,411	15,852,683	92,994,253	18,434,036

¹ Combined to avoid disclosing data for individual establishments.

TABLE 3.—PRINCIPAL MATERIALS, BY KIND, QUANTITY, AND COST: 1929

[The difference between the sum of the costs of the 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]

KIND	Quantity (pounds)	Cost
Tin (Ill., Ky., Mo., N. Y., Va.).....	12,384,298	\$5,979,314
Lead (Ill., Ky., Mo., N. Y., Va.).....	65,014,432	4,229,802
Aluminum (Ill., Ky., N. Y.).....	4,762,369	2,342,870

TABLE 4.—POWER EQUIPMENT—ELECTRIC MOTORS, BY NUMBER AND RATED CAPACITY, 1929, 1927, AND 1925, AND QUANTITY OF ELECTRIC ENERGY PURCHASED, 1929

[No prime movers were reported for this industry except as specified in footnote 1]

	Number	Horsepower
Electric motors driven by purchased energy:		
1929.....	982	18,642
1927.....	914	18,770
1925 ¹	757	15,291
Electric energy purchased, ² 1929.....		Kilowatt-hours 12,550,770

¹ In addition, one steam engine of 750 horsepower, one electric generator with a capacity of 750 kilowatts, and 12 electric motors having a combined capacity of 190 horsepower, driven by energy generated in the same establishment, were reported for 1925.
² This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES: 1929

[No State statistics can be presented 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]

MONTH	Number employed on 15th day of month or nearest representative day	MONTH	Number employed on 15th day of month or nearest representative day
Average for year.....	1,710	August.....	1,871
January.....	1,544	September.....	1,909
February.....	1,638	October.....	1,845
March.....	1,682	November.....	1,554
April.....	1,719	December.....	1,430
May.....	1,701	Per cent minimum is	
June.....	1,779	of maximum.....	74.9
July.....	1,849		

Group 13.—MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT

THE GROUP AS A WHOLE

This group comprises those industries whose primary products are machinery (not including transportation equipment) and special castings or parts for use in the manufacture of machinery.

Group 13 differs from the corresponding one as constituted at the census for 1927, the changes being as follows:

(1) Establishments whose principal products were sewing-machine cases, cabinets, and tables, formerly classified in the "Sewing machines, cases, and attachments" industry, in this group, have been transferred to the "Furniture, including store and office fixtures" industry, in Group 3, and the title of the first-named industry has been changed to "Sewing machines and attachments."

(2) Establishments engaged primarily in the manufacture of carbon paper and inked ribbons, formerly classified in the "Typewriters and supplies" industry, in this group, have been classified separately under the

industry title "Carbon paper and inked ribbons" and transferred to Group 16; and the title of the former "Typewriters and supplies" industry has been changed to "Typewriters and parts."

(3) Establishments whose principal products are machine-tool accessories and small metal-working tools, some of which were formerly assigned to the "Foundry and machine-shop products, not elsewhere classified" industry, in this group, others to the "Machine tools" industry, also in this group, and still others to the "Tools, not including edge tools, machine tools, files, or saws" industry, in Group 11, are now classified in "Machine-tool accessories and small metal-working tools," a new industry in Group 13.

Summary statistics for the group as a whole and for each industry separately are presented in the table below; and detailed reports for the several industries, all of which have been published separately in pamphlet form, will be found on pages 1098 to 1188.

SUMMARY FOR GROUP 13.—MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT: 1914 TO 1929

[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, fuel, and purchased electric energy	Value of products	Value added by manufacture	Horsepower
Total for the group.....	1929	12,955	1,091,269	\$1,634,165,729	\$2,604,379,029	\$7,043,380,390	\$4,349,000,761	3,647,343
	1927	11,982	853,508	1,284,132,534	2,053,941,924	5,348,723,728	3,294,781,804	2,995,239
	1925	11,507	858,843	1,225,359,140	1,985,867,067	5,020,281,100	3,034,914,033	2,714,377
	1923	12,147	907,707	1,253,742,642	1,891,624,166	4,727,818,290	2,830,294,124	2,300,443
	1921	12,395	962,277	832,782,628	1,361,163,280	3,235,074,906	1,873,911,626	(¹)
	1919	14,821	998,484	1,240,480,844	1,973,457,622	4,703,673,395	2,795,215,873	2,060,325
	1914	13,457	618,737	412,406,274	662,900,670	1,582,408,404	919,441,834	1,256,908
Agricultural implements.....	1929	293	41,663	58,941,939	113,969,484	277,854,462	163,884,978	128,499
	1927	277	33,346	40,415,459	85,066,186	202,732,126	117,065,940	117,966
	1925	303	28,699	37,357,620	73,850,060	169,467,906	95,617,906	116,325
	1923	312	30,962	40,510,534	63,491,880	151,286,248	87,794,362	121,976
	1921	353	30,359	39,835,414	67,267,274	163,616,079	75,540,405	(¹)
	1919	521	54,368	66,704,434	144,571,943	304,661,265	169,389,322	128,249
	1914	601	48,459	34,593,325	73,508,645	164,080,835	90,578,190	121,256
Cash registers and adding, calculating, and card-tabulating machines.....	1929	46	16,840	29,745,865	10,766,013	110,000,986	99,234,973	28,257
	1927	41	14,372	21,766,094	11,132,191	106,844,069	95,712,778	21,954
	1925	41	13,296	21,142,430	11,165,658	98,353,010	87,218,252	17,616
	1923	37	14,971	22,776,197	12,483,128	95,105,570	82,622,442	(¹)
	1921	49	9,786	13,243,471	9,572,828	53,652,943	44,080,115	(¹)
	1919	65	16,544	22,537,265	10,889,998	83,539,025	72,649,027	14,645
	1914	52	8,956	6,110,271	3,992,076	30,519,587	26,527,511	10,619
Electrical machinery, apparatus, and supplies.....	1929	1,802	328,722	456,377,629	971,017,623	2,300,915,572	1,320,897,949	893,519
	1927	1,777	241,566	386,238,750	645,761,699	1,637,307,035	991,645,336	661,168
	1925	1,739	239,921	323,834,541	636,692,076	1,540,002,041	903,309,965	589,398
	1923	1,671	234,892	305,455,263	548,826,673	1,293,001,771	744,375,098	480,268
	1921	1,333	161,204	194,242,357	344,069,968	833,985,443	480,915,480	(¹)
	1919	1,404	212,374	238,188,852	425,098,211	997,968,119	572,869,908	438,082
	1914	1,030	118,078	73,806,329	154,728,076	385,170,194	180,442,118	226,320
Engines, turbines, tractors, and water wheels.....	1929	199	61,148	98,705,080	202,900,430	457,217,669	254,317,239	287,079
	1927	215	54,341	84,790,771	185,202,801	367,878,588	202,675,787	241,788
	1925	220	51,099	73,684,921	145,783,687	313,587,851	167,804,164	224,194
	1923	249	48,495	70,877,950	124,543,051	266,997,778	142,464,727	165,137
	1921	266	35,567	52,004,801	111,098,365	199,498,575	87,800,210	(¹)
	1919	370	77,617	105,435,455	217,550,771	464,774,735	247,223,964	190,005
	1914	448	29,657	21,420,737	31,460,227	72,121,112	40,660,885	62,106

See footnotes at end of summary.

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SUMMARY FOR GROUP 13.—MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT: 1914 TO 1929—Con.

[See note at head of this table]

INDUSTRY	Census year	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 ¹	Horsepower
Foundry and machine-shop products, not elsewhere classified ¹	1929	8,005	454,441	\$697,508,589	\$1,038,066,092	\$2,791,461,964	\$1,753,395,872	1,804,886
	² 1927	8,066	598,672	590,924,020	878,771,144	2,268,653,217	1,539,882,075	1,550,240
	1925	8,380	403,939	601,022,908	883,651,734	2,291,543,110	1,407,891,376	1,661,934
	1923	8,203	403,832	600,021,745	894,406,446	2,264,375,979	1,369,969,533	1,446,458
	1921	8,531	448,777	642,431,394	936,231,003	2,337,072,775	1,400,541,772	1,284,320
	1919	9,013	321,963	412,359,408	653,363,807	1,565,526,944	912,163,137	(³)
	1914	10,894	482,767	622,571,129	948,069,381	2,289,250,859	1,841,181,478	1,040,265
	1914	10,640	362,471	244,146,380	358,121,781	866,544,677	508,422,596	763,821
Gas machines, gas meters, and water and other liquid meters	1929	72	6,101	8,931,625	15,187,488	40,623,344	25,435,856	11,029
	1927	58	5,615	8,792,364	15,690,977	36,715,190	21,124,213	10,427
	1925	61	5,514	7,428,842	13,038,272	34,292,059	21,253,787	7,375
	1923	61	6,127	7,756,779	14,331,863	34,250,414	19,918,551	7,364
	1921	65	4,280	5,211,931	9,000,272	21,956,424	12,956,152	(³)
	1919	106	5,589	6,995,877	10,647,402	26,267,074	15,619,672	8,586
	1914	123	4,972	3,309,631	6,118,471	15,183,916	9,065,445	5,681
Machine-tool accessories and small metal-working tools, not elsewhere classified ⁴	1929	722	26,682	51,084,540	26,992,631	144,410,800	117,418,259	64,398
	1929	280	47,391	76,410,237	64,284,022	244,578,088	180,294,066	141,778
Machine tools	⁵ 1927	288	52,333	47,408,335	45,151,422	145,854,921	102,703,499	125,426
	1927	355	35,269	52,365,092	46,114,849	159,513,125	102,398,276	181,670
	1925	329	30,831	46,711,302	43,826,151	144,202,483	100,876,332	118,819
	1923	360	33,373	47,336,800	40,977,024	137,206,068	96,229,074	109,190
	1921	343	21,307	25,251,735	23,978,248	67,729,362	43,751,114	(³)
	⁶ 1919	403	53,111	66,178,969	59,634,308	212,400,153	153,365,850	100,294
	1914	322	23,106	34,920,261	66,802,372	164,009,397	97,207,025	82,403
Pumps (hand and power) and pumping equipment	1927	278	18,671	27,118,924	52,765,023	130,591,191	77,826,168	64,763
	1925	253	17,935	25,278,060	50,328,435	120,148,157	69,519,722	56,470
	1923	229	14,550	19,990,603	34,464,720	92,930,056	58,465,336	38,286
	1921	221	12,186	13,969,531	26,803,969	69,902,413	43,158,444	(³)
	1919	239	16,072	19,731,647	36,069,781	85,401,940	49,832,159	32,441
	1914	183	8,822	5,556,203	9,458,744	24,214,722	14,755,978	17,141
	Refrigerators, mechanical ⁶	1929	34	16,883	26,196,076	72,413,047	161,565,076	89,152,629	44,953
1927		22	11,285	17,712,006	42,651,262	96,513,649	53,862,887	432,551
Scales and balances	1929	69	4,118	5,995,475	7,438,190	30,281,424	22,043,234	9,738
	1927	60	3,906	5,460,742	7,453,927	24,656,442	17,201,515	8,766
	1925	71	4,292	5,782,660	7,348,704	27,237,181	19,888,477	9,771
	1923	65	4,245	5,600,035	6,594,483	24,156,982	17,562,499	9,615
	1921	65	3,720	4,427,986	4,716,313	15,884,770	11,168,457	(³)
	1919	79	5,432	6,533,978	6,993,682	20,641,038	13,647,350	7,441
	1914	83	4,467	2,933,696	3,174,467	9,733,721	6,559,254	6,187
Sewing machines and attachments ¹¹	1929	39	10,467	14,976,182	16,458,425	45,094,600	28,636,175	29,659
	1927	35	9,997	13,748,151	14,072,579	39,723,822	25,651,243	31,286
Textile machinery and parts	1929	376	27,019	37,836,406	26,556,299	122,438,514	85,882,215	66,539
	1927	367	26,154	36,481,196	26,180,659	116,921,130	80,740,441	64,532
	1925	379	27,869	37,463,681	39,036,868	121,653,224	82,616,456	61,738
	1923	423	35,672	46,022,545	49,705,554	140,661,858	90,955,804	56,295
	1921	421	31,025	38,830,600	44,963,788	128,934,866	84,031,108	(³)
	¹⁰ 1919	432	31,823	36,528,729	45,636,628	122,069,264	76,452,636	41,744
	1914	26	16,945	22,319,327	7,248,601	61,857,615	54,609,014	23,383
Typewriters and parts ¹²	1929	26	15,603	19,397,911	9,936,079	55,318,864	45,382,785	14,653
	1927	26	15,603	19,397,911	9,936,079	55,318,864	45,382,785	14,653
Washing machines, wringers, driers, and ironing machines, for household use	1929	65	8,189	12,071,916	40,707,373	82,329,924	41,622,551	26,732
	1927	75	7,789	10,950,046	34,528,335	70,244,407	43,716,072	20,697
	1925	82	7,077	9,989,875	32,748,312	69,608,205	36,519,894	18,028
	1923	85	6,144	7,839,171	25,741,775	50,372,616	24,630,741	11,415
	1921	96	4,147	4,898,188	16,621,634	30,198,569	13,670,332	(³)
	1919	105	5,956	6,431,378	23,388,925	40,771,285	17,882,360	8,816
	1914	111	2,302	1,220,882	4,148,481	7,599,802	3,451,821	4,893
Windmills and windmill towers	1929	15	1,554	2,144,582	3,571,539	8,640,265	5,068,726	4,491
	1927	16	1,355	1,881,520	3,233,593	7,514,149	4,280,556	3,608
	1925	15	1,361	1,830,232	3,375,582	7,964,005	4,608,423	3,732
	1923	16	1,101	1,436,671	2,592,015	6,311,038	3,719,023	2,378
	1921	24	1,383	1,580,988	3,459,495	6,529,604	3,070,109	(³)
	1919	31	1,932	2,145,301	4,960,426	9,932,585	4,972,159	4,686
	1914	31	1,955	1,252,330	2,555,121	5,496,591	2,941,470	3,987

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

² Revised. See notes 11 and 12.

³ Not called for on schedule.

⁴ Revised; revision not carried into total for group.

⁵ No comparable data.

⁶ The figures for "Refrigerators, mechanical" for years prior to 1927 are included in part in those for "Electrical machinery, apparatus, and supplies" and in part in those for "Foundry and machine-shop products, not elsewhere classified."

⁷ Includes "Metal-working machinery, other than machine tools," shown separately in reports for 1927 and 1925. The figures for 1914 are not strictly comparable with those for later years because of changes in classification.

⁸ The statistics for this industry for 1927 and earlier years are not strictly comparable with those for 1929. (See footnote 9.) The figures in italics have been adjusted for comparison with 1929.

⁹ At censuses prior to that for 1929 some of the establishments of the classes now covered by this industry designation were assigned to the "Foundry and machine-shop products, not elsewhere classified" industry, others to the "Machine tools" industry, and still others to the "Tools, not including edge tools, machine tools, files, or saws" industry, in Group 11.

¹⁰ No comparable figures available for earlier years.

¹¹ At the census for 1929 establishments engaged primarily in the manufacture of sewing-machine cases, cabinets, and tables, formerly classified in this industry, were transferred to the "Furniture, including store and office fixtures" industry, in Group 3. The 1927 figures for the "Sewing machines and attachments" industry have been adjusted by deducting the data for the establishments in question, but those for earlier years can not be so adjusted.

¹² At prior censuses this industry included the manufacture of typewriter supplies, but at the census for 1929 a new classification, "Carbon paper and inked ribbons," was established, in Group 16. The figures for 1927 have been adjusted by deducting the data for establishment engaged primarily in the manufacture of carbon paper and inked ribbons, but no similar adjustments can be made for earlier years.

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TABLE 2.—MACHINERY—VALUE OF PRODUCTION, BY PRINCIPAL CLASSES, BY STATES: 1929—Continued

CLASS AND STATE	Value	CLASS AND STATE	Value	CLASS AND STATE	Value
Blowers and exhaust and ventilating fans, total.....	\$25,242,929	Cement and concrete machinery—Con. Concrete mixers, total.....	\$11,404,923	Conveying and elevating machinery—Continued. Bucket type—Continued.	
Michigan.....	3,797,173	California.....	288,104	Indiana.....	\$302,742
Ohio.....	1,465,285	Michigan.....	558,401	Michigan.....	362,455
Pennsylvania.....	1,404,308	Pennsylvania.....	209,276	New York.....	758,832
Conn., Mass., N. H., N. J., N. Y., and R. I.....	11,850,078	Wisconsin.....	5,255,058	Ohio.....	531,628
Ga., Md., N. C., S. C., Va., and W. Va.....	178,570	Ill., Ind., Iowa, and Kans.....	697,746	Pennsylvania.....	992,308
Ill. and Ind.....	3,049,315	N. J., N. Y., and Ohio.....	4,883,330	Wisconsin.....	357,796
Kans., Mo., and Nebr.....	433,303	Other States (Ark., Mass., Tex., and Wash.).....	13,008	Ala. (Ga., Ky., and W. Va.).....	99,500
Minn. and Wis.....	2,079,999	Other cement and concrete machinery, total.....	2,984,778	Kans., Minn., Mo., and Nebr.....	17,451
Other States (Ark., Calif., Colo., Ky., Okla., Oreg., Tex., and Wash.).....	978,808	California.....	106,493	Other States (Ark., Colo., Mass., N. J., and Wash.).....	193,016
Bookbinding machinery, total.....	4,157,519	Illinois.....	90,915	Gravity, total.....	2,710,537
Illinois.....	459,998	Iowa.....	250,161	Ill. and Ind.....	107,190
Ohio.....	405,104	Ohio.....	330,186	N. Y., Ohio, and Pa.....	2,053,946
Conn. and R. I.....	571,780	Pennsylvania.....	54,018	Other States (Colo., Ky., Mass., Minn., and W. Va.).....	549,401
N. Y. and Pa.....	1,977,837	Wisconsin.....	801,026	Pneumatic (Ill., Ky., Mass., Mich., Minn., N. J., N. Y., and Ohio).....	1,779,515
Other States (Calif., Kans., Ky., Mich., Mo., and Wis.).....	682,800	Other States (Ark., Ind., Mass., Mich., Minn., N. J., Oreg., Tenn., and Tex.).....	1,361,979	Other conveying and elevating machinery, total.....	20,453,910
Bottling machinery, total.....	11,081,860	Check-writing machines (Ill., Mass., N. J., and Pa.).....	2,346,239	Illinois.....	3,378,005
Ohio.....	371,128	Clay-working machinery (brick, pottery, etc.), total.....	4,402,093	Michigan.....	3,648,793
Pennsylvania.....	604,284	New Jersey.....	378,183	New York.....	1,971,155
Conn., Md., and N. Y.....	2,475,965	Ohio.....	2,254,776	Ohio.....	4,188,993
Ill. and Mo.....	3,593,838	Pennsylvania.....	679,182	Pennsylvania.....	2,936,414
Mich. and Wis.....	3,033,543	Ill. and Mich.....	693,758	Ala., Ga., Kans., N. C., S. C., and Va.....	240,103
Other States (Calif., Del., Ga., Mass., and Va.).....	1,063,202	Ind. and Iowa.....	55,875	Calif. and Oreg.....	234,886
Calculating machines (Calif., Ill., Mich., Mo., N. J., and Wis.).....	11,610,947	Other States (Calif., Conn., Kans., La., Mo., N. H., and N. C.).....	340,319	Conn. and Mass.....	1,417,626
Canning machinery, total.....	8,535,101	Clothing-pressing machines, total.....	7,216,172	Iowa, Ky., and Mo.....	1,064,854
California.....	1,979,619	Ill. and Ohio.....	184,787	Minn. and Wis.....	470,854
Maryland.....	386,843	N. Y. and Ill.....	6,987,758	Other States (Colo., Ind., Me., N. J., and Wash.).....	893,227
New York.....	2,485,121	Other States (Colo., Md., Mo., and Pa.).....	43,627	Cotton gins, total.....	11,759,565
Ohio.....	315,824	Coffee roasting and grinding machines, food choppers and grinders, food and drink mixers, slicing machines, etc., total.....	11,503,444	Texas.....	4,641,112
Pennsylvania.....	115,528	Coffee roasting and grinding machines (Calif., Mich., Mo., N. Y., Ohio, and Pa.).....	1,575,532	Other States (Ala., Ark., Ga., La., N. C., and Okla.).....	7,118,453
Wisconsin.....	701,850	Food choppers and grinders (Calif., Conn., Idaho, Mass., N. J., N. Y., Ohio, and Pa.).....	2,793,216	Cranes (including hoists and derricks), total.....	57,839,874
Ill. and Mich.....	974,154	Slicing machines, total.....	4,507,326	Crawler, total.....	6,625,698
Me., Mass., and N. H.....	30,273	Ind., N. Y., and Ohio.....	3,562,530	Ohio.....	1,141,335
Other States (Del., Ga., Ind., Iowa, Miss., Mo., N. J., Oreg., and Wash.).....	1,545,883	Other States (Calif., Ill., Iowa, Mich., Mo., and Pa.).....	944,796	Calif., Oreg., and Wash.....	95,448
Cars and trucks (industrial and mining), total.....	26,885,875	Not reported separately as to kind.....	2,627,370	Ill., Ind., and Mich.....	1,614,951
Industrial, total.....	17,918,881	Condensers, total.....	4,386,004	Minn. and Wis.....	3,416,141
California.....	50,934	N. J., N. Y., and Pa.....	3,013,138	Other States (Iowa, Ky., Mass., N. Y., Pa., and Tex.).....	357,823
Illinois.....	673,184	Ill., Ky., and Wis.....	1,357,686	Locomotive, total.....	5,953,216
Indiana.....	247,738	Other States (Calif., Mo., Ohio, and Tex.).....	15,180	Ohio.....	2,357,855
Michigan.....	3,449,483	Confectionery and ice-cream machinery, total.....	3,673,804	Other States (Ala., Ill., Ind., Mich., Minn., N. Y., Pa., and Wis.).....	3,595,361
New York.....	970,019	Illinois.....	601,984	Overhead traveling, total.....	23,058,962
Ohio.....	6,017,207	New York.....	277,974	Ohio.....	8,202,555
Pennsylvania.....	2,218,259	Ohio.....	434,504	Pennsylvania.....	3,077,643
Conn., Mass., N. J., and Vt.....	1,708,083	Pennsylvania.....	358,714	Calif., Oreg., and Wash.....	641,725
Iowa, Minn., Mo., and Wis.....	682,782	Mass. and N. J.....	1,463,078	Ill. and Mich.....	3,970,211
Other States (Ga., Kans., Ky., La., Md., Oreg., Tenn., Tex., Va., and Wash.).....	1,001,192	Other States (Iowa, Mich., Minn., Tex., and Wis.).....	537,559	Other States (Ark., Idaho, Ind., Me., Md., Mass., Mo., N. J., N. Y., Vt., and Wis.).....	7,166,815
Mining, total.....	8,966,994	Conveying and elevating machinery, total.....	48,537,479	Stationary, total.....	22,201,998
Missouri.....	40,937	Belt type, total.....	14,206,127	Illinois.....	555,487
Pennsylvania.....	3,830,811	California.....	470,643	New Jersey.....	2,077,353
Calif., Oreg., Utah, and Wash.....	107,737	Illinois.....	2,640,038	Ohio.....	1,868,863
Colo., Idaho, and Mont.....	380,635	Indiana.....	249,850	Pennsylvania.....	2,596,766
Ill., Ind., Iowa, Mich., and Ohio.....	2,892,351	New York.....	906,884	Calif., Oreg., and Wash.....	3,095,591
Ky., Va., and W. Va.....	977,395	Ohio.....	1,285,462	Conn., Me., Mass., and N. Y.....	8,974,369
Other States (Ala., Ariz., Ark., Ga., Kans., Okla., Tenn., and Tex.).....	737,078	Pennsylvania.....	699,129	Ind., Mich., and Minn.....	5,289,042
Cash registers; card punching, sorting, and tabulating machines; change-making machines and coin counters; fare registers and fare boxes; taxicab meters; and ticket-counting machines (Ill., Ind., Mich., Mo., N. Y., Ohio, Pa., and Wis.).....	61,272,174	Wisconsin.....	1,770,017	Iowa, Kans., Mo., and Wis.....	940,923
Cement and concrete machinery, total.....	19,924,105	Ala., Ga., N. C., Va., and W. Va.....	43,830	Other States (Ala., Colo., Okla., Tenn., and Tex.).....	1,977,674
Cement-making machinery, total.....	4,387,383	Colo., Kans., and Okla.....	10,627	Dairy, cheese-factory, and butter-factory machinery, total.....	16,503,300
Pennsylvania.....	586,266	Mich., Minn., and Mo.....	2,489,756	Cream separators (Ill., Ind., Iowa, Mich., N. Y., Pa., Vt., and Wis.).....	7,695,511
Mich., N. J., N. Y., Ohio, and Wis.....	3,781,488	Other States (Ky., Me., Mass., N. H., N. J., and Wash.).....	3,679,891	Milking-machine units (Ill., Kans., Mich., Minn., N. Y., Pa., Wis.).....	1,778,210
Other States (Kans., Tex., and Wash.).....	19,620	Bucket type, total.....	9,387,390	Other dairy, cheese-factory, and butter-factory machinery, total.....	7,119,579
Cement and concrete block machines, total.....	1,147,021	California.....	255,332	Illinois.....	865,090
Michigan.....	624,616	Illinois.....	5,516,330	New York.....	705,390
Ohio.....	322,601			Ohio.....	109,931
N. J. and Pa.....	124,079			Conn., Md., and N. J.....	804,184
Other States (Calif., Ind., Minn., N. Y., Oreg., and Tex.).....	75,725			Ind., Ky., Mich., and Mo.....	602,282

*Combined to avoid disclosing production of individual establishments.

MACHINERY

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TABLE 1.—MACHINERY—PRODUCTION OF PRINCIPAL CLASSES, FOR THE UNITED STATES, BY NUMBER AND VALUE, 1929, AND BY VALUE, 1927 AND 1925—Continued

CLASS	1929		1927	1925
	Number	Value	Value	Value
Cash registers; card punching, sorting, and tabulating machines; change-making machines and coin counters; fare registers and fare boxes; taxicab meters; and ticket-counting machines ¹		\$61,272,174	\$49,526,693	(?)
Cement and concrete machinery, total		19,924,105	20,533,525	\$23,830,391
Cement-making machinery		4,387,393	4,619,269	4,146,083
Cement and concrete block machines, total		1,147,021	655,788	1,460,515
Reported with number				
Reported without number	2,106	918,467		
Concrete mixers, total		11,404,923	12,678,978	12,619,755
Reported with number				
Reported without number	16,145	8,809,519		
Other cement and concrete machinery		2,595,404	2,584,490	5,604,038
Reported without number		2,984,778		
Check-writing machines, total		2,346,239	1,779,717	2,092,566
Reported with number				
Reported without number	63,576	2,179,422		
Reported without number		166,817		
Clay-working machinery (brick, pottery, etc.)		4,402,093	4,307,910	5,298,340
Clothing-pressing machines	16,602	7,216,172	9,077,613	8,408,982
Coffee roasting and grinding machines, food choppers and grinders, food and drink mixers, slicing machines, etc., total		11,563,444	(?)	(?)
Coffee roasting and grinding machines		1,575,532	1,825,947	1,922,492
Food choppers and grinders, total		2,793,216	(?)	(?)
Reported with number				
Reported without number	93,509	1,928,048		
Reported without number		865,168		
Slicing machines, total		4,507,326	4,680,292	4,860,190
Reported with number				
Reported without number	19,084	3,695,312		
Reported without number		812,014		
Not reported separately as to kind		2,627,370		
Condensers		4,386,004	5,898,969	4,938,030
Confectionery and ice-cream machinery		3,673,804	5,682,001	5,143,470
Conveying and elevating machinery, total		48,537,479	33,528,080	30,688,471
Belt type		14,206,127	10,520,401	(?)
Bucket type		9,387,390	10,725,744	(?)
Gravity		2,710,537	(?)	(?)
Pneumatic		1,779,515	(?)	(?)
Other types		20,453,910	12,281,935	(?)
Cotton gins		11,759,565	9,542,824	12,807,969
Cranes (including hoists and derricks), total		57,839,874	44,453,900	43,935,663
Crawler		6,625,098		
Reported with number				
Reported without number	1,445	3,982,494	13,505,413	13,161,078
Reported without number		2,643,204		
Locomotive		5,953,216		
Reported with number	321	4,908,641		
Reported without number		1,044,575		
Overhead traveling		23,058,962	18,607,067	19,172,740
Reported with number				
Reported without number	13,661	20,124,515		
Reported without number		2,934,447		
Stationary		22,201,998	12,340,480	11,601,245
Reported with number				
Reported without number	36,781	10,104,592		
Reported without number		12,097,436		
Dairy, cheese-factory, and butter-factory machinery, total		16,593,300	16,536,241	15,176,930
Cream separators		7,695,511	8,098,308	7,838,900
Milking-machine units		1,778,210	1,339,474	1,117,762
Other dairy, cheese-factory, and butter-factory machinery		7,119,579	7,098,461	6,220,268
Reported without number		3,424,028	2,017,970	1,473,509
Dish-washing machines, total		7,033		
Reported with number				
Reported without number	7,033	2,310,628		
Reported without number		1,113,400		
Dredging, excavating, and road-building machinery, total		91,438,554	79,099,519	72,138,022
Dredging machinery, total		3,641,599	3,783,863	4,452,520
Hydraulic		1,358,349	1,380,890	2,684,219
Other dredging machinery		2,283,250	2,402,973	1,768,301
Excavating machinery, total		57,103,248	48,098,071	41,388,538
Power shovels, total		43,348,094	32,105,754	26,609,195
Reported with number				
Reported without number	3,359	41,094,550		
Reported without number		2,343,544		

¹ No comparable data.

² Combined to avoid disclosing production of individual establishments.

TABLE 1.—MACHINERY—PRODUCTION OF PRINCIPAL CLASSES, FOR THE UNITED STATES, BY NUMBER AND VALUE, 1929, AND BY VALUE, 1927 AND 1925—Continued

CLASS	1929		1927	1925
	Number	Value	Value	Value
Dredging, excavating, and road-building machinery—Continued.				
Excavating machinery—Continued.				
Drag lines and power scrapers, total.....		\$7,242,371	\$8,829,653	\$9,005,506
Reported with number.....	1,706	4,235,628		
Reported without number.....		3,006,743		
Trench excavators, total.....		2,427,017	3,511,647	3,129,920
Reported with number.....	247	1,673,062		
Reported without number.....		754,015		
Other excavating machinery.....		4,085,766	3,651,017	2,643,917
Road-building machinery, total.....		30,693,707	27,727,585	26,296,964
Road graders, total.....		15,754,483	15,554,177	12,737,625
Reported with number.....	14,865	13,338,302		
Reported without number.....		2,416,181		
Road rollers, total.....		3,892,100	4,261,656	4,581,644
Reported with number.....	1,090	3,426,116		
Reported without number.....		465,984		
Stone crushers, total.....		3,241,102	3,386,773	2,486,732
Reported with number.....	871	2,710,163		
Reported without number.....		530,939		
Other road-building machinery.....		7,805,962	4,524,579	6,540,963
Electrical machinery (generators, motors, and fans), total.....		253,593,926	203,994,818	202,146,129
Generators (including automotive generators), self-contained power and lighting outfits, and synchronous condensers and frequency changers.....		61,116,314	(?)	(?)
Motor-generator sets and dynamotors.....		13,397,153	6,764,299	8,264,118
Motors, including automotive starter-motors but not railway and vehicle power motors.....		168,884,101	(?)	(?)
Electric fans (ceiling, column, and desk types).....		10,196,353	10,352,366	10,654,208
Elevators and elevator machinery, total.....		44,044,399	43,152,220	47,429,964
Passenger, total.....		29,444,321	30,275,059	(?)
Reported with number.....	6,237	22,699,514		
Reported without number.....		6,744,807		
Freight, total.....		14,600,078	12,877,161	(?)
Reported with number.....	3,537	7,443,022		
Reported without number.....		7,157,056		
Engines (steam and internal-combustion), tractors, and water wheels.....		401,748,424	306,538,855	264,254,603
Flour-mill and grain-mill machinery.....		8,286,229	7,967,086	7,945,924
Foundry machinery, total.....		10,630,283	7,016,948	(?)
Molding machines, total.....		3,751,951	2,994,387	(?)
Reported with number.....	3,558	2,188,464		
Reported without number.....		1,563,487		
Sand-blast machines.....	772	1,475,630	1,102,874	(?)
Tumbling barrels.....	663	457,242	291,485	(?)
Other foundry machinery.....		4,954,460	2,628,202	(?)
Gas machines.....		5,407,846	5,081,837	6,241,888
Gas regulators and governors.....		4,416,189	1,177,301	1,285,976
Glass-making machinery.....		3,688,331	3,085,384	2,665,856
Hat-making machinery.....		787,201	704,383	622,284
Hydraulic machinery (other than for dredging).....		10,081,728	2,006,253	4,037,916
Incandescent-lamp-making machinery.....		3,091,623	2,730,577	4,255,464
Laundry machinery (for commercial laundries only).....		28,893,440	27,203,510	24,198,059
Lawn mowers, total.....		10,962,953	9,268,728	8,046,961
Hand.....	1,265,831	8,432,168	7,290,182	7,117,169
Power.....	16,527	2,520,785	1,978,546	929,792
Leather-working machinery (other than shoe machinery).....		1,249,081	2,000,401	2,222,168
Locomotives, total.....		82,908,858	70,508,360	58,359,274
Electric locomotives.....		17,705,490	9,857,881	10,331,139
Internal-combustion locomotives.....	700	2,398,252	2,335,097	1,726,782
Steam locomotives.....	995	62,805,107	58,315,382	46,301,353
Machine tools.....		180,060,949	105,554,013	91,469,403
Manifolding machines (mimeographs, multigraphs, etc.).....		3,488,745	3,778,842	3,883,803
Metal-working machinery, total.....		50,335,753	39,201,236	47,352,746
Rolling-mill machinery.....		19,617,419	14,308,624	15,001,162
Sheet-metal-working machinery.....		23,138,737	17,544,636	17,467,648
Wire-drawing machines.....		1,619,482	1,504,182	670,559
Rod and wire-working machinery.....		4,076,850		
Other metal-working machinery.....		1,883,285	5,843,794	14,213,477

¹ No comparable data.

² Revised.

³ Data for welding machines included with those for "Metal-working machinery" for 1925.

MACHINERY

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TABLE 1.—MACHINERY—PRODUCTION OF PRINCIPAL CLASSES, FOR THE UNITED STATES, BY NUMBER AND VALUE, 1929, AND BY VALUE, 1927 AND 1925—Continued

CLASS	1929		1927	1925
	Number	Value	Value	Value
Meters (gas, water and other liquid), total.....		\$25,694,279	\$24,977,542	\$24,501,846
Gas.....	1,310,574	12,402,071	12,497,432	9,462,122
Water and other liquid.....	768,874	12,733,221	11,854,000	12,614,910
Gas and water meters not separately reported by manufacturers.....		558,987	626,110	2,424,813
Mining machinery (not including oil-well machinery).....		40,325,223	35,259,263	34,827,448
Motorcycles and bicycles, total.....		13,726,635	13,804,123	15,906,223
Motorcycles.....		7,542,862	8,000,683	8,875,657
Bicycles.....		6,183,773	5,803,440	7,030,566
Motor vehicles, except motorcycles, total.....		3,412,055,752	2,540,714,211	2,940,821,212
Passenger vehicles (including public conveyances).....		2,825,700,405	2,175,544,770	2,527,575,450
Commercial vehicles.....		277,352,017	258,404,005	287,243,212
Government (Federal, State, county, and municipal) vehicles.....		10,156,108	11,521,291	10,486,267
Chassis (passenger, commercial, and bus).....		298,847,221	95,244,145	121,516,283
Oil-mill machinery (cottonseed and other).....		2,532,506	4,096,559	4,132,329
Oil-refinery machinery.....		30,210,006	(?)	(?)
Oil-well machinery, total.....		89,067,149	62,126,376	47,299,105
Drilling.....		47,941,025	(?)	(?)
Tools.....		41,126,124	(?)	(?)
Packaging machines.....		5,757,031	5,037,587	4,357,170
Packing-house machinery, total.....		6,662,706	5,576,730	5,370,212
Meat-packing.....		4,508,727	3,880,818	4,249,140
Other packing-house machinery.....		2,153,979	1,695,912	1,121,072
Paint-making machinery.....		994,687	947,630	1,212,683
Paper-box machines, total.....		4,552,854	4,305,146	4,044,800
Reported with number.....	1,736	3,749,300		
Reported without number.....		808,554		
Paper-mill and pulp-mill machinery.....		30,456,020	27,097,643	21,208,761
Pharmaceutical machinery.....		1,274,344	716,562	816,091
Photo-engraving machinery.....		1,847,212	584,986	507,057
Pneumatic machinery (not including pneumatic tools), total ⁶		41,374,404	30,186,024	30,682,112
Air compressors, total.....		39,683,109	29,318,067	29,472,634
Reported with number.....	66,004	33,225,968		
Reported without number.....		6,457,151		
Other pneumatic machinery.....		1,691,295	867,357	1,109,278
Printing machinery, total.....		64,856,911	63,240,424	68,055,179
Presses, total.....		36,051,750	33,826,968	34,872,974
Cylinder (flat-bed).....	2,220	10,547,914	(?)	(?)
Rotary, total.....		9,304,233	(?)	(?)
Reported with number.....	2,191	7,007,917		
Reported without number.....		2,296,316		
Web.....	443	7,002,853	(?)	(?)
Other presses.....		9,199,750	(?)	(?)
Typesetting machines.....		18,750,233	20,077,454	23,580,512
Other printing machinery.....		10,057,928	9,335,982	9,601,693
Pumps and pumping equipment, including parts and attachments.....		144,947,148	129,126,067	121,299,481
Refrigerating and ice-making machinery, total.....		167,149,139	112,141,120	62,592,687
Ice-making.....		26,578,777	21,681,605	15,295,634
Refrigerating machinery (other than ice-making).....		16,688,514	⁴ 9,435,505	47,297,063
Domestic electric refrigerators, total.....		114,674,820	81,024,110	
Units complete with cabinets, total.....		108,085,042	72,250,052	(?)
Reported with number.....	597,520	102,255,694	71,715,251	
Reported without number.....		829,448	534,801	
Units without cabinets.....	67,906	8,589,478	8,774,058	(?)
Ice-cream cabinets.....		8,819,935	(?)	(?)
Water coolers.....		3,387,393	(?)	(?)
Rubber-working machinery.....		13,551,792	9,950,559	10,164,497
Scales and balances.....		25,385,186	22,166,298	23,690,827
Sewing machines, total.....	791,608	37,378,210	⁴ 32,934,450	(?)
Household types, total.....	680,027	25,095,008	⁴ 21,794,174	(?)
Electric.....	323,474	16,481,823	⁴ 12,700,443	(?)
Foot and hand.....	345,553	8,613,185	9,098,731	(?)

¹ No comparable data.

² Revised.

³ Figures for 1929, but not those for 1927 and 1925, include data for air compressors manufactured by establishments classified under "Pumps and pumping equipment."

CENSUS OF MANUFACTURES: 1929

TABLE 1.—MACHINERY—PRODUCTION OF PRINCIPAL CLASSES, FOR THE UNITED STATES, BY NUMBER AND VALUE, 1929, AND BY VALUE, 1927 AND 1925—Continued

CLASS	1929		1927	1925
	Number	Value	Value	Value
Sewing machines—Continued.				
Industrial types, total.....	122,641	\$12,001,730	\$10,407,733	(?)
Electric.....	113,890	11,144,719	9,609,504	(?)
Other than electric.....	8,751	857,017	801,229	(?)
Sewing machines not reported as to type by manufacturers.....	2,080	281,496	732,543	(?)
Shoe machinery.....		12,317,414	12,334,053	\$11,700,137
Stokers, mechanical, total.....		14,053,940	10,212,753	9,410,786
Industrial, total.....		12,038,303	(?)	(?)
Reported with number.....	8,838	11,956,105		
Reported without number.....		982,198		
Domestic.....		1,115,637	(?)	(?)
Stone-working machinery.....		2,184,825	2,789,744	1,735,826
Sugar-mill machinery.....		5,045,932	6,600,530	8,643,232
Textile machinery and parts.....		115,525,123	102,199,800	109,354,126
Tobacco machinery (including cigar and cigarette).....		5,017,807	4,907,970	5,818,106
Transmission machinery.....		26,786,759	18,246,020	15,350,289
Typewriters, total.....		55,057,091	51,941,919	50,189,988
Portable and bookkeeping-billing ¹	372,118	21,483,204	18,616,352	48,309,379
Standard, including long-carriage.....	687,509	31,300,830	31,770,405	
Used and rebuilt.....		2,273,057	1,556,163	
Vacuum cleaners (electric).....		35,107,066	736,972,292	740,285,140
Vending machines.....		8,821,261	7,058,921	4,202,106
Washing machines, clothes wringers, driers, and ironing machines, for household use, total.....		79,010,823	69,139,718	70,761,240
Washing machines, electric.....		59,930,902	55,574,397	(?)
Washing machines, other than electric, including hand-power.....		11,457,242	7,669,854	(?)
Driers.....		484,772	565,214	(?)
Ironing machines.....		4,015,222	2,999,897	(?)
Wringers (electric, hand, and other power).....		3,122,085	2,330,356	(?)
Welding machines and apparatus, electric and other.....		13,582,949	7,000,517	(?)
Well-drilling machinery (other than oil-well machinery).....		1,403,018	1,545,195	1,842,821
Windmills and windmill towers.....		5,410,022	4,555,316	5,682,127
Wood-working machinery.....		35,150,807	29,569,427	39,019,736

¹ No comparable data.
² Combined to avoid disclosing production of individual establishments.
³ Revised.
⁴ Data for welding machines included with those for "Metal-working machinery" for 1925.
⁵ Includes value of vacuum cleaners other than electric.
⁶ Includes value of parts and accessories.

TABLE 2.—MACHINERY—VALUE OF PRODUCTION, BY PRINCIPAL CLASSES, BY STATES: 1929

This table presents, for those items for which State figures are given, separate statistics for all States for which it is possible to publish such statistics without disclosing the production reported by individual establishments, and in addition, gives combined figures for certain groups of States. In many cases one of the States shown in combination reported a larger value for the specified commodity than some of the States for which separate figures are given]

CLASS AND STATE	Value	CLASS AND STATE	Value	CLASS AND STATE	Value
Aggregate.....	\$6,395,552,858	Agricultural machinery, and attachments and parts—Continued.		Aircraft—Continued.	
Adding machines (Ill., Mich., N. J., N. Y., and Ohio).....	25,900,561	Machinery for preparing crops for market or for use—Continued.		Conn., Del., Mass., and R. I.....	\$4,210,269
Addressing and mailing machines (Calif., Conn., Ill., Mass., Minn., Mo., and N. Y.).....	10,537,012	Kans., Mo., and Nebr.....	\$471,102	Ind. and Wis.....	422,985
Agricultural machinery, and attachments and parts, total.....	167,673,051	Other States (Conn., Idaho, N. J., Tex., and Vt.).....	213,711	Iowa, Minn., and Nebr.....	365,549
Harvesting and haying machinery, total.....	106,424,575	Planting and fertilizing machinery, total.....	31,145,092	Other States (Ala., D. C., Ga., Wash., and W. Va.).....	5,080,804
New York.....	2,826,629	Georgia.....	251,693	Bakers' machinery and equipment, total.....	21,729,922
Calif. and Iowa.....	8,022,280	Illinois.....	10,755,190	Bake ovens, total.....	8,105,926
Ill. and Ind.....	63,285,267	New York.....	352,657	Illinois.....	2,856,328
Kans. and Nebr.....	485,272	Ind. and Ohio.....	10,825,492	Massachusetts.....	141,200
Ky., Minn., and Mo.....	9,716,597	Iowa and Nebr.....	6,675,582	Calif. and Wash.....	150,292
Mich. and Wis.....	20,930,158	Ky., N. C., and Wis.....	89,839	Conn., N. Y., and Vt.....	805,152
Other States (Colo., Idaho, La., Mass., N. C., Ohio, Pa., Tenn., Vt., and Wash.).....	1,158,372	Tenn. and Va.....		Md., N. J., Ohio, and Pa.....	211,091
Machinery for preparing crops for market or for use, total.....	30,103,384	Other States (Ala., Calif., Conn., Me., Mich., Minn., Mo., N. H., N. J., Ore., Pa., Tex., and Vt.).....	1,275,813	Other States (Mich., Minn., Mo., Tex., and Wis.).....	3,881,773
Illinois.....	8,218,307	Aircraft (airplanes, seaplanes, and amphibians), total.....	51,508,120	Other bakers' equipment, total.....	12,623,996
Indiana.....	3,252,778	California.....	3,626,330	Illinois.....	609,870
Iowa.....	2,112,947	Illinois.....	782,880	New York.....	1,387,535
Michigan.....	2,433,767	Kansas.....	5,477,001	Ohio.....	4,862,380
Minnesota.....	2,414,379	Maryland.....	504,450	Pennsylvania.....	1,443,168
New York.....	1,680,041	Michigan.....	7,635,763	Calif., Ore., and Wash.....	165,577
Ohio.....	1,792,195	Missouri.....	2,813,628	Conn. and Mass.....	119,933
Pennsylvania.....	629,248	New Jersey.....	2,275,254	Ind., Iowa, and Mo.....	721,636
Wisconsin.....	6,213,921	New York.....	11,989,166	Mich. and Wis.....	2,633,093
Calif., Colo., and Wash.....	188,357	Ohio.....	3,128,962	Other States (Md., N. H., and N. J.).....	1,040,754
Ga., N. C., Tenn., and Va.....	482,641	Oregon.....	52,250	Baling presses (other than hay presses), total.....	2,344,663
		Pennsylvania.....	1,450,826	Ala., Ga., and Tex.....	541,890
		Ark., Colo., and Okla.....	1,623,003	Ill., Ind., Iowa, Ohio, and Pa.....	160,536
				Mich. and Wis.....	1,013,354
				Other States (Minn., N. Y., N. C., Ore., Va., and Wash.).....	28,838

¹ In addition, machinery, kinds not specified, was reported to the value of \$158,701,165. (See report for "Foundry and machine-shop products, not elsewhere classified," Table 3, p. 1147.)

MACHINERY

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TABLE 2.—MACHINERY—VALUE OF PRODUCTION, BY PRINCIPAL CLASSES, BY STATES: 1929—Continued

CLASS AND STATE	Value	CLASS AND STATE	Value	CLASS AND STATE	Value
Blowers and exhaust and ventilating fans, total.....	\$25,242,929	Cement and concrete machinery—Con. Concrete mixers, total.....	\$11,404,923	Conveying and elevating machinery—Continued. Bucket type—Continued.	
Michigan.....	3,797,173	California.....	288,104	Indiana.....	\$302,742
Ohio.....	1,465,285	Michigan.....	558,401	Michigan.....	362,455
Pennsylvania.....	1,404,308	Pennsylvania.....	209,276	New York.....	758,832
Conn., Mass., N. H., N. J., N. Y., and R. I.....	11,850,078	Wisconsin.....	5,255,058	Ohio.....	531,628
Ga., Md., N. C., S. C., Va., and W. Va.....	178,570	Ill., Ind., Iowa, and Kans.....	697,746	Pennsylvania.....	992,308
Ill. and Ind.....	3,049,315	N. J., N. Y., and Ohio.....	4,883,330	Wisconsin.....	357,796
Kans., Mo., and Nebr.....	433,303	Other States (Ark., Mass., Tex., and Wash.).....	13,008	Ala., Ga., Ky., and W. Va.....	99,500
Minn. and Wis.....	2,079,999	Other cement and concrete machinery, total.....	2,984,778	Kans., Minn., Mo., and Nebr.....	17,451
Other States (Ark., Calif., Colo., Ky., Okla., Oreg., Tex., and Wash.).....	978,808	California.....	106,493	Other States (Ark., Colo., Mass., N. J., and Wash.).....	193,016
Bookbinding machinery, total.....	4,157,519	Illinois.....	90,915	Gravity, total.....	2,710,537
Illinois.....	459,998	Iowa.....	250,161	Ill. and Ind.....	107,190
Ohio.....	405,104	Ohio.....	330,186	N. Y., Ohio, and Pa.....	2,053,946
Conn. and R. I.....	571,780	Pennsylvania.....	54,018	Other States (Colo., Ky., Mass., Minn., and W. Va.).....	549,401
N. Y. and Pa.....	1,977,837	Wisconsin.....	801,026	Pneumatic (Ill., Ky., Mass., Mich., Minn., N. J., N. Y., and Ohio).....	1,779,515
Other States (Calif., Kans., Ky., Mich., Mo., and Wis.).....	682,800	Other States (Ark., Ind., Mass., Mich., Minn., N. J., Oreg., Tenn., and Tex.).....	1,361,979	Other conveying and elevating machinery, total.....	20,453,910
Bottling machinery, total.....	11,081,860	Check-writing machines (Ill., Mass., N. J., and Pa.).....	2,346,239	Illinois.....	3,378,005
Ohio.....	371,128	Clay-working machinery (brick, pottery, etc.), total.....	4,402,093	Michigan.....	3,648,793
Pennsylvania.....	604,284	New Jersey.....	378,183	New York.....	1,971,155
Conn., Md., and N. Y.....	2,475,965	Ohio.....	2,254,776	Ohio.....	4,188,993
Ill. and Mo.....	3,593,838	Pennsylvania.....	679,182	Pennsylvania.....	2,936,414
Mich. and Wis.....	3,033,543	Ill. and Mich.....	693,758	Ala., Ga., Kans., N. C., S. C., and Va.....	240,103
Other States (Calif., Del., Ga., Mass., and Va.).....	1,063,202	Ind. and Iowa.....	55,875	Calif. and Oreg.....	234,886
Calculating machines (Calif., Ill., Mich., Mo., N. J., and Wis.).....	11,610,947	Other States (Calif., Conn., Kans., La., Mo., N. H., and N. C.).....	340,319	Conn. and Mass.....	1,417,626
Canning machinery, total.....	8,535,101	Clothing-pressing machines, total.....	7,216,172	Iowa, Ky., and Mo.....	1,064,854
California.....	1,979,619	Ill. and Ohio.....	184,787	Minn. and Wis.....	470,854
Maryland.....	386,843	N. Y. and Ill.....	6,087,758	Other States (Colo., Ind., Me., N. J., and Wash.).....	893,227
New York.....	2,485,121	Other States (Colo., Md., Mo., and Pa.).....	43,627	Cotton gins, total.....	11,759,565
Ohio.....	315,824	Coffee roasting and grinding machines, food choppers and grinders, food and drink mixers, slicing machines, etc., total.....	11,503,444	Texas.....	4,641,112
Pennsylvania.....	115,528	Coffee roasting and grinding machines (Calif., Mich., Mo., N. Y., Ohio, and Pa.).....	1,575,532	Other States (Ala., Ark., Ga., La., N. C., and Okla.).....	7,118,453
Wisconsin.....	701,850	Food choppers and grinders (Calif., Conn., Idaho, Mass., N. J., N. Y., Ohio, and Pa.).....	2,793,216	Cranes (including hoists and derricks), total.....	57,839,874
Ill. and Mich.....	974,154	Slicing machines, total.....	4,507,326	Crawler, total.....	6,625,698
Me., Mass., and N. H.....	30,273	Ind., N. Y., and Ohio.....	3,562,530	Ohio.....	1,141,335
Other States (Del., Ga., Ind., Iowa, Miss., Mo., N. J., Oreg., and Wash.).....	1,545,883	Other States (Calif., Ill., Iowa, Mich., Mo., and Pa.).....	944,796	Calif., Oreg., and Wash.....	95,448
Cars and trucks (industrial and mining), total.....	26,885,875	Not reported separately as to kind.....	2,627,370	Ill., Ind., and Mich.....	1,614,951
Industrial, total.....	17,918,881	Condensers, total.....	4,386,004	Minn. and Wis.....	3,416,141
California.....	50,934	N. J., N. Y., and Pa.....	3,013,138	Other States (Iowa, Ky., Mass., N. Y., Pa., and Tex.).....	357,823
Illinois.....	673,184	Ill., Ky., and Wis.....	1,357,686	Locomotive, total.....	5,953,216
Indiana.....	247,738	Other States (Calif., Mo., Ohio, and Tex.).....	15,180	Ohio.....	2,357,865
Michigan.....	3,449,483	Confectionery and ice-cream machinery, total.....	3,673,804	Other States (Ala., Ill., Ind., Mich., Minn., N. Y., Pa., and Wis.).....	3,595,361
New York.....	970,019	Illinois.....	601,984	Overhead traveling, total.....	23,058,962
Ohio.....	6,017,207	New York.....	277,974	Ohio.....	8,202,555
Pennsylvania.....	2,218,259	Ohio.....	434,504	Pennsylvania.....	3,077,643
Conn., Mass., N. J., and Vt.....	1,708,083	Pennsylvania.....	358,714	Calif., Oreg., and Wash.....	641,725
Iowa, Minn., Mo., and Wis.....	682,782	Mass. and N. J.....	1,463,078	Ill. and Mich.....	3,970,211
Other States (Ga., Kans., Ky., La., Md., Oreg., Tenn., Tex., Va., and Wash.).....	1,001,192	Other States (Iowa, Mich., Minn., Tex., and Wis.).....	537,559	Other States (Ark., Idaho, Ind., Me., Md., Mass., Mo., N. J., N. Y., Vt., and Wis.).....	7,166,815
Mining, total.....	8,966,994	Conveying and elevating machinery, total.....	48,537,479	Stationary, total.....	22,201,998
Missouri.....	40,937	Belt type, total.....	14,206,127	Illinois.....	555,487
Pennsylvania.....	3,830,811	California.....	470,643	New Jersey.....	2,077,353
Calif., Oreg., Utah, and Wash.....	107,737	Illinois.....	2,640,038	Ohio.....	1,868,863
Colo., Idaho, and Mont.....	380,635	Indiana.....	249,850	Pennsylvania.....	2,595,706
Ill., Ind., Iowa, Mich., and Ohio.....	2,892,351	New York.....	906,884	Calif., Oreg., and Wash.....	3,095,581
Ky., Va., and W. Va.....	977,395	Ohio.....	1,285,462	Conn., Me., Mass., and N. Y.....	8,974,369
Other States (Ala., Ariz., Ark., Ga., Kans., Okla., Tenn., and Tex.).....	737,078	Pennsylvania.....	699,129	Ind., Mich., and Minn.....	5,289,042
Cash registers; card punching, sorting, and tabulating machines; change-making machines and coin counters; fare registers and fare boxes; taxicab meters; and ticket-counting machines (Ill., Ind., Mich., Mo., N. Y., Ohio, Pa., and Wis.).....	61,272,174	Wisconsin.....	1,770,017	Iowa, Kans., Mo., and Wis.....	940,923
Cement and concrete machinery, total.....	19,924,105	Ala., Ga., N. C., Va., and W. Va.....	43,830	Other States (Ala., Colo., Okla., Tenn., and Tex.).....	1,977,674
Cement-making machinery, total.....	4,387,383	Colo., Kans., and Okla.....	10,627	Dairy, cheese-factory, and butter-factory machinery, total.....	16,503,300
Pennsylvania.....	586,266	Mich., Minn., and Mo.....	2,489,756	Cream separators (Ill., Ind., Iowa, Mich., N. Y., Pa., Vt., and Wis.).....	7,695,511
Mich., N. J., N. Y., Ohio, and Wis.....	3,781,488	Other States (Ky., Me., Mass., N. H., N. J., and Wash.).....	3,679,891	Milking-machine units (Ill., Kans., Mich., Minn., N. Y., Pa., Wis.).....	1,778,210
Other States (Kans., Tex., and Wash.).....	19,620	Bucket type, total.....	9,387,390	Other dairy, cheese-factory, and butter-factory machinery, total.....	7,119,579
Cement and concrete block machines, total.....	1,147,021	California.....	255,332	Illinois.....	865,090
Michigan.....	624,616	Illinois.....	5,516,330	New York.....	705,390
Ohio.....	322,601			Ohio.....	109,931
N. J. and Pa.....	124,079			Conn., Md., and N. J.....	804,184
Other States (Calif., Ind., Minn., N. Y., Oreg., and Tex.).....	75,725			Ind., Ky., Mich., and Mo.....	602,282

*Combined to avoid disclosing production of individual establishments.

TABLE 2.—MACHINERY—VALUE OF PRODUCTION, BY PRINCIPAL CLASSES, BY STATES: 1929—Continued

CLASS AND STATE	Value	CLASS AND STATE	Value	CLASS AND STATE	Value
Dish-washing machines, total.....	\$3,424,028	Electrical machinery—Continued.		Hydraulic machinery (other than for dredging), total.....	\$10,081,728
Conn., N. J., and N. Y.....	1,198,594	Motor-generator sets and dynamotors.	\$13,397,158	California.....	182,697
Other States (Calif., Ill., Ind., Ohio, Pa., and Wis.).....	2,225,434	Motors, including automotive starter-motors but not railway or vehicle power motors.....	168,884,101	Illinois.....	433,639
Dredging, excavating, and road-building machinery, total.....	91,438,554	Electric fans (ceiling, column, and desk types).....	10,196,353	New Jersey.....	700,802
Dredging machinery, total.....	3,641,539	Elevators and elevator machinery, total.....	44,044,399	New York.....	1,332,455
Hydraulic, total.....	1,358,349	Passenger, total.....	29,444,321	Ohio.....	978,455
Ala., Fla., Ga., Md., and Va. Ill., Mich., Minn., Ohio, and Wis.....	807,730	California.....	1,891,421	Pennsylvania.....	3,668,814
N. Y. and Pa.....	292,406	Illinois.....	4,212,650	Texas.....	48,717
Other States (Calif., Iowa, Mo., and Tenn.).....	103,298	Minnesota.....	151,303	Ind., Kans., Mich., Minn., and Wis.....	1,566,417
Other dredging machinery (Calif., Ill., Ia., Mich., N. Y., Ohio, Pa., and Wis.).....	2,283,250	Ohio.....	2,190,947	Oreg. and Wash.....	30,500
Excavating machinery, total.....	57,103,248	Pennsylvania.....	893,888	Other States (Fla., Ga., Iowa, Ky., Mass., N. C., R. I., Tenn., and Va.).....	1,280,232
Power shovels, total.....	43,348,094	Wisconsin.....	290,941	Incandescent-lamp-making machinery (Ky., N. J., N. Y., and Ohio).....	3,091,623
Electric, total.....	12,649,295	Conn. and Mass.....	908,949	Laundry machinery, for commercial laundries, total.....	28,893,440
Ind., Mich., Ohio, Pa., and Wis. Other States (Ark., Ill., Iowa, N. Y., Tenn., and Tex.).....	12,363,374	Ind. and Mich.....	133,073	California.....	158,390
Other than electric, total.....	30,793,799	Md., N. C., and Va.....	525,171	Illinois.....	8,430,089
Ohio.....	11,062,669	N. J. and N. Y.....	17,458,041	Massachusetts.....	595,524
Wisconsin.....	10,895,402	Other States (Calif., Iowa, Ky., Mo., Tenn., and Wash.).....	781,037	Michigan.....	435,183
Ill., Iowa, and Mich.....	911,408	Freight, total.....	14,600,078	Missouri.....	717,106
Ind., Pa., and Vt.....	7,889,905	California.....	289,094	New York.....	9,448,814
Other States (Ark., Calif., and Oreg.).....	38,415	Illinois.....	2,998,086	Del., N. C., and Va.....	197,050
Drag lines and power scrapers, total.....	7,242,371	Michigan.....	319,671	Ind. and Minn.....	337,901
Illinois.....	2,741,105	Minnesota.....	139,322	N. J. and Pa.....	1,027,451
Ohio.....	552,000	Ohio.....	1,154,609	Ohio and Wis.....	7,302,670
Calif. and Wash.....	79,144	Pennsylvania.....	1,507,665	Other States (Colo., Conn., Iowa, Ky., Nebr., Okla., and Tex.).....	183,292
Other States (Idaho, Ind., Iowa, Mich., Minn., Mo., Tenn., and Wis.).....	3,870,122	Wisconsin.....	534,813	Lawn mowers, total.....	10,952,958
Trench excavators (Iowa, Mich., Ohio, and Wis.).....	2,427,017	Conn. and Mass.....	336,358	Hand, total.....	8,432,168
Other excavating machinery, total.....	4,085,766	Ky. and Mo.....	429,774	Indiana.....	4,081,382
Ill., Mich., and Wis.....	1,005,733	Md., N. C., and Va.....	409,992	Ill., Iowa, and Minn.....	882,955
Minn. and Nebr.....	744,618	Other States (Colo., Ind., Iowa, Nebr., N. J., N. Y., Oreg., Tenn., and Wash.).....	6,480,094	Mass. and N. H.....	764,711
Ohio and Pa.....	1,690,375	Engines (steam and internal-combustion), tractors, and water wheels.....	401,748,424	N. J. and N. Y.....	1,078,701
Other States (Calif., Ga., Iowa, Ky., N. J., N. Y., and Tex.).....	645,040	Flour-mill and grain-mill machinery, total.....	8,286,229	Ohio and Pa.....	1,624,419
Road-building machinery, total.....	30,693,707	California.....	118,762	Power, total.....	2,520,785
Road graders, total.....	15,764,483	Illinois.....	838,786	Ind., N. Y., and Pa.....	1,187,035
Illinois.....	3,720,788	Minnesota.....	1,552,872	Mich., Minn., Mo., Nebr., and Wis.....	1,353,760
Ind., Ohio, and Wis.....	7,703,743	Missouri.....	408,921	Leather-working machinery (other than shoe machinery), total.....	1,249,081
Mass., N. Y., and Pa.....	909,557	New York.....	1,314,149	Massachusetts.....	622,307
Minn., Mo., and Nebr.....	3,334,300	Ohio.....	875,087	New York.....	206,952
Other States (Calif., Ga., Kans., Md., Oreg., and Wash.).....	86,095	Pennsylvania.....	1,244,992	Other States (Del., Ill., Ind., N. J., Ohio, and Wis.).....	330,822
Road rollers, total.....	3,822,100	Colo. and Wyo.....	31,010	Locomotives.....	82,908,858
Ill. and Ohio.....	3,505,705	Conn., N. H., and N. J.....	22,863	Machine tools, total.....	186,000,949
Other States (Calif., Ind., N. Y., and Pa.).....	386,395	Kans. and Ky.....	1,047,091	Connecticut.....	18,315,601
Stone crushers, total.....	3,241,162	Other States (Ark., Oreg., Tenn., and Tex.).....	95,786	Illinois.....	16,288,217
Pennsylvania.....	473,654	Foundry machinery, total.....	10,630,283	Indiana.....	6,413,072
Conn. and N. Y.....	574,231	Molding machines, total.....	3,751,951	Iowa.....	2,634,403
Ill. and Wis.....	457,897	Ill., Ind., and Ohio.....	2,236,726	Massachusetts.....	14,705,242
Other States (Ala., Ark., Iowa, Minn., and Mo.).....	1,735,380	N. Y. and Pa.....	1,056,698	Michigan.....	6,796,685
Other road-building machinery, total.....	7,805,962	Other States (Iowa, Mich., Mo., N. C., and Wis.).....	459,137	New Jersey.....	3,058,538
California.....	1,270,397	Sand-blast machines, total.....	1,475,630	New York.....	12,580,776
New York.....	1,039,021	Conn. and Vt.....	29,044	Ohio.....	56,324,613
Ohio.....	2,253,216	N. J. and N. Y.....	38,177	Pennsylvania.....	11,650,543
Pennsylvania.....	865,941	Other States (Ill., Md., Minn., Ohio, and Wis.).....	1,408,409	Vermont.....	10,327,046
Ill. and Ind.....	1,020,327	Tumbling barrels (Conn., Ill., Ind., N. J., N. Y., and Ohio).....	457,242	Wisconsin.....	10,098,105
Mich., Minn., and Wis.....	789,433	Other foundry machinery, total.....	4,954,460	Calif. and Wash.....	314,901
Other States (Ala., Colo., Del., Iowa, Md., Mass., Nebr., Okla., Oreg., Tex., and Wash.).....	867,627	Illinois.....	1,503,107	Del., Me., Md., N. H., and R. I.....	13,984,694
Electrical machinery (generators, motors, and fans), total.....	253,593,926	Ohio.....	1,463,710	Other States (Ky., Ia., Minn., Mo., and S. Dak.).....	2,508,423
Generators (including automotive generators), self-contained power and lighting outfits, and synchronous condensers and frequency changers.....	61,116,314	N. J., N. Y., and Pa.....	1,504,417	Manifolding machines (mimeographs, multigraphs, etc.), total.....	8,488,745
		Other States (Calif., Conn., Iowa, Md., Mich., and Wis.).....	483,226	Conn., N. J., N. Y., and Ohio.....	1,518,606
		Gas machines (Ill., Kans., Md., Mich., N. J., Ohio, Pa., and Tex.).....	5,407,846	Other States (Ill., Mich., Mo., and Va.).....	1,970,139
		Gas regulators and governors (Calif., Conn., Ind., Mich., N. J., N. Y., Ohio, Okla., and Pa.).....	4,416,189	Metal-working machinery, total.....	50,335,753
		Glass-making machinery, total.....	3,688,331	Rod and wire-working machinery, total.....	4,076,830
		Ohio.....	2,219,029	Connecticut.....	1,667,241
		Pennsylvania.....	387,697	New York.....	70,278
		Other States (Calif., Conn., Ill., Ind., N. Y., and W. Va.).....	1,081,605	Ill., N. J., Ohio, and Pa.....	1,833,317
		Hat-making machinery, total.....	787,201	Other States (Calif., La., Mass., Minn., Oreg., and Wis.).....	455,994
		Connecticut.....	498,567	Rolling-mill machinery, total.....	19,617,419
		New York.....	247,795	Ohio.....	4,904,614
		Other States (Calif., Ill., N. J., and Pa.).....	40,839	Conn., Ill., and Ind.....	70,582
				Mass. and Pa.....	14,116,245
				Other States (Ky., Mich., N. Y., R. I., and Wash.).....	37,978

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TABLE 2.—MACHINERY—VALUE OF PRODUCTION, BY PRINCIPAL CLASSES, BY STATES: 1929—Continued

CLASS AND STATE	Value	CLASS AND STATE	Value	CLASS AND STATE	Value
Metal-working machinery—Contd.		Motor vehicles, etc.—Contd.		Paint-making machinery, total	\$994,657
Sheet-metal-working machinery, total	\$23,138,737	Passenger, etc.—Continued.		Conn., Mass., N. J., and N. Y.	273,391
Illinois	2,552,055	Other passenger vehicles, etc.—Con.		Ohio and Pa.	617,175
New York	8,225,968	Other States (Calif., Colo., Fla., Ga., Ill., Ind., Iowa, Ky., La., Md., Mass., Minn., Mo., Nebr., N. J., N. Y., N. C., Okla., Oreg., Pa., Tenn., Tex., Va., Wash., and Wis.)	\$16,896,392	Other States (Calif., Ill., and Ky.)	204,121
Ohio	5,107,507	Commercial vehicles, total	277,352,017	Paper-box machines, total	4,552,854
Calif., Oreg., and Wash.	2,231,670	California	16,543,019	Massachusetts	386,477
Conn., Mass., and Vt.	831,286	Illinois	11,489,147	New York	1,316,051
Other States (Colo., Ind., Iowa, Mich., Minn., Mo., N. J., Pa., Tenn., Va., and Wis.)	4,190,256	Indiana	13,220,987	Conn. and Ohio	79,847
Wire-drawing machines, total	1,610,482	Michigan	71,430,121	N. J. and Pa.	2,135,407
Massachusetts	478,930	New York	8,498,598	Other States (Calif., Colo., Ga., Ill., Ind., La., Minn., Mo., and N. H.)	685,072
New Jersey	49,273	Ohio	37,053,737	Paper-mill and pulp-mill machinery, total	20,456,020
Ill., Ohio, and Wis.	1,016,507	Pennsylvania	14,829,063	Maine	272,619
Other States (Conn., Mont., N. Y., and Pa.)	74,632	Wisconsin	6,995,609	Massachusetts	7,068,975
Other metal-working machinery (Conn., Ill., N. J., Ohio, and Pa.)	1,883,285	Other States (Colo., D. C., Fla., Ga., Iowa, Kans., Ky., La., Mo., Md., Mass., Minn., Mo., Nebr., N. H., N. J., N. C., Okla., Oreg., Tenn., Tex., Va., and Wash.)	97,380,726	New York	4,977,893
Meters (gas, water and other liquid), total	26,694,279	Government (Federal, State, county, and municipal) vehicles	10,156,108	Ohio	4,885,821
Gas (Calif., Conn., Ill., Md., Mass., N. Y., Ohio, and Pa.)	12,402,071	Chassis, total	268,847,221	Oregon	467,547
Water and other liquid (Calif., Ill., Mass., N. J., N. Y., Pa., R. I., and Wis.)	12,733,221	Illinois	9,265,906	Wisconsin	5,624,603
Gas and water meters not reported separately (Ill., N. Y., Ohio, Pa., and Wis.)	568,987	Indiana	13,573,801	Conn. and N. J.	2,029,550
Mining machinery (not including oil-well machinery), total	40,325,223	Michigan	55,224,827	N. H. and Vt.	434,076
California	1,664,809	New York	49,494,719	Other States (Calif., Del., Ill., Ind., La., Mich., Minn., Pa., and Wash.)	4,695,236
Colorado	4,818,628	Ohio	48,404,308	Pharmaceutical machinery (Mich., N. Y., and Pa.)	1,274,344
Missouri	603,032	Pennsylvania	25,732,223	Photo-engraving machinery (Ill., N. J., Ohio, and Pa.)	1,847,212
Pennsylvania	5,321,358	Wisconsin	19,004,967	Pneumatic machinery (other than pneumatic tools), total	41,374,404
Utah	26,636	Other States (Calif., Colo., Fla., Ga., Iowa, Ky., Mass., Minn., Mo., Nebr., N. J., N. C., Okla., Oreg., Tenn., Tex., Va., and Wash.)	87,206,470	Air compressors, total	39,683,109
Ala., Ky., and Tenn.	352,728	Oil-mill machinery (cottonseed and other), total	2,532,508	Illinois	1,679,316
Arlz., Idaho, Mont., Oreg., and Wash.	525,278	Ohio	1,309,763	Michigan	237,937
Fla., Ga., Okla., Tex., Va., and W. Va.	903,595	Other States (Calif., Ga., Mass., Mo., Tenn., Tex., and Va.)	1,222,745	Ohio	6,719,800
Ind. and Ohio	6,757,494	Oil-refinery machinery, total	30,210,008	Ind. and Wis.	1,622,722
Iowa and Kans.	1,232,152	California	6,392,387	Conn., Me., Md., Mass., N. H., N. J., N. Y., and Pa.	26,654,425
Other States (Ill., Mich., N. H., N. J., N. Y., and Wis.)	18,059,513	N. J. and N. Y.	6,670,334	Other States (Ala., Calif., Iowa, Kans., Mo., Oreg., and Tex.)	2,768,909
Motorcycles and bicycles (Ill., Ind., Mass., N. Y., Ohio, and Wis.)	13,726,635	Mass., Ohio, and Pa.	14,429,148	Other pneumatic machinery (Calif., Ill., Ind., Iowa, Me., Mich., Minn., Mo., N. J., N. Y., Ohio, Pa., and Wis.)	1,601,295
Motor vehicles, except motorcycles, total	3,412,055,752	Other States (Ala., Ill., Ind., Ky., Okla., Tex., and Utah)	2,718,139	Printing machinery, total	64,859,911
Passenger (including public conveyances), total	2,825,700,400	Oil-well machinery, total	80,067,149	Presses, total	36,051,750
Closed cars, total	2,537,349,561	California	27,742,698	Cylinder (Conn., Ill., Mass., Mich., N. H., N. J., N. Y., Ohio, Pa., and Tex.)	10,647,914
California	88,609,404	Illinois	1,011,532	Rotary, total	9,304,233
Indiana	155,101,478	Kansas	3,679,045	Calif., Oreg., and Wash.	81,582
Michigan	1,162,191,056	Ohio	7,936,050	Conn., N. J., N. Y., and Pa.	1,638,260
New York	153,750,275	Oklahoma	3,785,284	Ill., Ky., Mich., Mo., Ohio, and Wis.	7,102,466
Ohio	222,500,908	Pennsylvania	11,439,286	Mass. and N. H.	481,925
Wisconsin	173,050,088	Texas	22,190,017	Web, total	7,002,853
Other States (Calif., Del., Fla., Ga., Ill., Iowa, Ky., La., Mass., Minn., Mo., Nebr., N. J., N. C., Okla., Oreg., Pa., Tenn., Tex., Va., and Wash.)	582,146,292	Ark. and La.	1,163,085	Conn., N. J., and N. Y.	6,440,872
Open cars (including roadsters and runabouts), total	229,401,843	Colo., Wash., and Wyo.	16,968	Other States (Ind., Mass., N. H., and Ohio)	561,981
Indiana	7,786,247	Iowa, Mich., Minn., Mo., and Wis.	1,435,843	Other, total	9,196,750
Michigan	76,881,097	Ky., Tenn., and W. Va.	5,089,866	California	17,965
New York	8,662,775	Other States (Ind., N. J., and N. Y.)	3,517,475	Connecticut	837,251
Ohio	21,691,781	Packaging machines, total	5,787,061	New York	335,873
Wisconsin	6,366,960	Illinois	1,145,275	Pennsylvania	383,876
Other States (Calif., Colo., Del., Fla., Ga., Ill., Iowa, Ky., La., Mass., Minn., Mo., Nebr., N. J., N. C., Okla., Oreg., Pa., Tenn., Va., and Wash.)	108,032,977	Conn., N. H., N. J., and R. I.	211,378	Mass., N. H., and R. I.	74,325
Other passenger vehicles, including public conveyances (busses and taxicabs), total	58,940,002	Mass. and N. Y.	3,474,673	Other States (Ill., Ind., Md., N. J., Ohio, and Wash.)	7,547,760
Michigan	31,409,214	Mich. and Ohio	472,568	Typesetting machines (Calif., Ill., Iowa, N. Y., Ohio, and Pa.)	18,760,233
Ohio	10,643,396	Other States (Calif., Ky., Mo., and Pa.)	453,187	Other printing machinery, total	10,057,928
		Packing-house machinery, total	6,662,706	California	43,399
		Meat-packing, total	4,508,727	Illinois	1,699,364
		Pennsylvania	127,237	New Jersey	1,344,465
		Ill. and Ohio	3,741,747	Ohio	2,908,933
		N. J. and N. Y.	539,114	Me., Mass., and N. H.	673,629
		Other States (Calif., Mich., Oreg., and Tex.)	100,629	N. Y. and Pa.	2,792,159
		Other packing, total	2,153,979	Other States (Conn., Mich., Mo., Nebr., and Wis.)	795,979
		Calif. and Oreg.	1,471,141		
		N. Y., Ohio, and Pa.	159,916		
		Other States (Fla., Ga., Ill., Mich., and Va.)	522,922		

TABLE 2.—MACHINERY—VALUE OF PRODUCTION, BY PRINCIPAL CLASSES, BY STATES: 1929—Continued

CLASS AND STATE	Value	CLASS AND STATE	Value	CLASS AND STATE	Value
Pumps and pumping equipment, including parts and attachments.....	\$144,947,148	Stokers, mechanical, total.....	\$14,053,940	Vacuum cleaners (electric), total.....	\$35,107,606
Refrigerating and ice-making machinery, total.....	167,149,139	Industrial, total.....	12,938,303	Ohio.....	24,204,181
Ice-making, total.....	26,578,777	Illinois.....	558,262	Ill., Ind., Mich., and Wis.....	8,566,812
California.....	487,875	Indiana.....	511,379	Other States (Calif., Conn., Mass., N. J., and N. Y.).....	2,270,063
Illinois.....	771,714	Ohio.....	495,773	Vending machines, total.....	8,821,261
Conn., N. J., N. Y., and R. I.....	659,490	Pennsylvania.....	5,590,303	Illinois.....	5,571,741
Ind., Mich., Mo., Ohio, Pa., and Wis.....	24,012,037	Other States (Ky., Md., Mass., Mich., Minn., Mo., N. J., N. Y., Oreg., and Utah).....	5,782,586	New York.....	1,011,278
Oreg. and Wash.....	43,986	Domestic (Ill., Ind., Md., Minn., Mo., N. Y., Ohio, Oreg., Pa., Utah, and W. Va.).....	1,115,637	Ohio.....	287,258
Other States (Del., Ga., Kans., Ky., Nebr., S. C., and Tex.).....	603,675	Stone-working machinery, total.....	2,184,825	Calif., Oreg., and Wash.....	464,200
Other refrigerating, total.....	16,688,514	Missouri.....	22,301	Ind., Iowa, Mich., Minn., Mo., and Wis.....	1,201,411
California.....	1,181,541	New York.....	736,827	Other States (Ala., Md., Mass., and N. J.).....	275,367
Illinois.....	4,026,440	Vermont.....	855,476	Washing machines, clothes wringers, driers, and ironing machines, for household use, total.....	79,010,823
Conn., Mass., and Pa.....	2,465,579	Ind. and Wis.....	381,051	Washing machines, electric.....	59,930,902
Kans., Ky., and Nebr.....	2,029,628	Other States (Calif., Colo., Fla., Me., Mass., Minn., and Tenn.).....	189,170	California.....	334,291
Ind., Mich., and Ohio.....	435,440	Sugar-mill machinery, total.....	5,045,932	Illinois.....	14,538,099
Mo. and Wis.....	2,752,828	Ohio.....	286,154	Iowa.....	19,573,006
N. J. and N. Y.....	3,373,915	Pennsylvania.....	378,948	New York.....	11,395,490
Oreg. and Wash.....	398,993	Colo. and Utah.....	35,358	Ohio.....	6,108,195
Other States (Fla., Minn., and Okla.).....	24,150	Conn., Mass., N. J., and N. Y.....	2,187,325	Conn. and Pa.....	2,359,808
Domestic electric refrigerators, total.....	111,674,520	Other States (Ala., Calif., Ga., La., Mo., and Wis.).....	2,153,147	Ind., Mich., and Wis.....	4,853,337
Units complete with cabinets (Calif., Ill., Ind., Md., Mass., Mich., N. J., N. Y., Ohio, Oreg., Pa., and Wash.).....	103,035,042	Textile machinery and parts, total.....	115,525,123	Minn., Mo., and Nebr.....	753,076
Units without cabinets (Ill., Ind., Iowa, Mass., Mich., Mo., Nebr., N. J., N. Y., Ohio, and Wash.).....	8,589,478	Georgia.....	680,837	Washing machines, other power, including hand (Ill., Ind., Iowa, Mich., Minn., Mo., Nebr., N. Y., Ohio, Pa., Va., and W. Va.).....	11,457,242
Ice-cream cabinets (Mich., N. Y., Ohio, and Wash.).....	8,810,935	Massachusetts.....	38,323,003	Driers (Ind., N. Y., Ohio, Pa., and Wis.).....	484,772
Water coolers (Ind., Iowa, Mass., Mich., Nebr., N. Y., Ohio, and Wash.).....	3,387,393	New Hampshire.....	6,485,683	Ironing machines (Ill., Ind., Iowa, Mich., Mo., N. Y., Ohio, and Pa.).....	4,015,222
Rubber-working machinery, total.....	13,551,792	New Jersey.....	5,594,343	Wringers, electric, hand, and other power (Iowa, N. Y., Pa., and R. I.).....	3,122,685
California.....	89,314	New York.....	1,436,161	Welding machines and apparatus, electric and other.....	13,582,949
New Jersey.....	1,371,713	North Carolina.....	1,295,778	Well-drilling machinery (other than oil-well machinery), total.....	1,463,018
Ohio.....	6,248,515	Pennsylvania.....	29,007,879	Calif. and Oreg.....	164,522
Pennsylvania.....	266,791	Rhode Island.....	17,444,986	Iowa and Ohio.....	1,198,018
Other States (Conn., Ill., Mass., N. Y., R. I., and Wis.).....	5,575,469	South Carolina.....	901,266	Minn. and Wis.....	53,500
Scales and balances (Calif., Colo., Ill., Ind., Ky., Mass., Mich., Minn., Mo., N. J., N. Y., Ohio, Pa., Utah, Vt., and Wis.).....	25,385,186	Tennessee.....	77,481	Other States (La., Me., Mo., N. Y., Pa., and S. Dak.).....	40,978
Sewing machines, total.....	37,378,210	Conn. and Vt.....	4,381,928	Windmills and windmill towers (Ill., Ind., Kans., Nebr., Ohio, and Wis.).....	5,410,922
Household types, total.....	25,095,008	Other States (Ala., Del., Ill., Iowa, Ky., Me., Md., Mich., and Ohio).....	9,829,778	Wood-working machinery, total.....	35,150,807
Electric (Ill., Mass., Mo., N. J., and Ohio).....	16,481,823	Tobacco machinery, including cigar and cigarette (Md., Mich., N. J., N. Y., Ohio, and Va.).....	5,017,807	California.....	162,612
Foot and hand (Ill., Mass., N. J., and Ohio).....	8,613,185	Transmission machinery, total.....	26,786,759	Illinois.....	5,441,652
Industrial types, total.....	12,001,739	California.....	726,427	Indiana.....	1,203,337
Electric (Conn., Ill., Md., Mass., Mo., N. J., and N. Y.).....	11,144,719	Illinois.....	5,036,491	Michigan.....	3,244,811
Other than electric (Conn., Mass., Mo., N. Y., and Ohio).....	857,017	Massachusetts.....	99,164	Minnesota.....	656,131
Sewing machines not reported as to type by manufacturers (Ill. and R. I.).....	281,466	New York.....	1,415,807	New Jersey.....	1,049,118
Shoe machinery (Ill., Mass., Minn., Mo., N. H., N. Y., Ohio, and Wis.).....	12,317,414	Pennsylvania.....	3,811,960	New York.....	3,700,092
		Conn. and N. J.....	1,057,246	North Carolina.....	509,785
		Ind. and Ohio.....	5,896,305	Ohio.....	5,240,478
		Iowa, Mich., Minn., Mo., and Wis.....	7,829,715	Oregon.....	370,472
		Me., N. H., and R. I.....	74,849	Pennsylvania.....	2,062,825
		Other States (Colo., Ga., Kans., Md., Oreg., Tex., Va., and Wash.).....	839,205	Tennessee.....	683,273
		Typewriters, total.....	55,057,091	Washington.....	1,269,683
		Portable and bookkeeping-billing ¹ (Conn., Mich., N. J., N. Y., and Pa.).....	21,483,204	Wisconsin.....	6,256,393
		Standard, including long-carriage (Conn., Ill., N. Y., and Pa.).....	31,300,830	Ala. and Ky.....	98,515
		Used and rebuilt (Conn., Ill., and New York).....	2,273,057	Ark., La., Miss., and Tex.....	220,205
				Conn., Mass., and R. I.....	2,238,116
				Iowa and Mo.....	487,273
				Me., N. H., and Vt.....	137,862
				Other States (Fla., Ga., Md., S. C., and W. Va.).....	73,394

¹ Combined to avoid disclosing production of individual establishments.

AGRICULTURAL IMPLEMENTS; FARM EQUIPMENT

INTRODUCTION

The statistics in this section are shown under two heads, namely, "Agricultural implements" (following) and "Farm equipment" (pp. 1111-1119). The former refers to the manufacturing industry classified by the Census Bureau under that designation, which embraces only those establishments whose principal products fall into certain specified classes. (See "Description of the industry," p. 1108) The total value of products shown for this industry includes the value of various minor or secondary products other than agricultural implements, but does not include the value of agricultural implements made by establishments engaged primarily in the manufacture of other classes of products. (See GENERAL EXPLANATIONS—Classification of Establishments, also Value of Products, Primary and Secondary Products.)

The farm-equipment statistics, however, cover not only the machines and implements which constitute the principal products of establishments in the agricultural-implements industry, but also the output of the same classes of machines and implements made as secondary products by establishments engaged primarily in other industries. They also cover certain classes of machinery, implements, tools, etc., not treated by the Census Bureau as products of the agricultural-implements industry, namely, tractors, horse-drawn vehicles, and some of the items in the

"barn and barnyard equipment" and "miscellaneous" groups. (Tables 12 and 13, pp. 1117 and 1118.)

Thus the products of the agricultural-implements industry fall into two broad classes, namely, (1) machines and implements used exclusively or almost exclusively on the farm (not including farm tractors and some of the products in the "barn and barnyard equipment" and "miscellaneous" groups) and (2) a minor and relatively unimportant group of miscellaneous commodities made as secondary products and intended for use mainly elsewhere than on the farm; whereas "farm equipment," as the term is used in this report, comprises Group 1 of the products reported for the agricultural-implements industry (together with similar products made outside the industry), and in addition farm tractors, some of the "barn and barnyard equipment" and "miscellaneous" products, and certain classes of equipment used both on the farm and elsewhere—for example, horse-drawn vehicles, water pumps, and windmills. (See "Equipment for use elsewhere than on farms," p. 1111.)

Summary and general statistics only are given for the agricultural-implements industry. The statistics for farm equipment, on the other hand, relate only to the numbers and values of specified classes and kinds of products and the numbers of establishments reporting them (either as major or as minor products).

AGRICULTURAL IMPLEMENTS

Description of the industry.—This industry embraces those establishments which are engaged primarily in the manufacture of products falling into the following classes: (1) Plows and listers; (2) harrows, rollers, pulverizers, and stalk cutters; (3) planting and fertilizing machinery; (4) cultivators and weeders; (5) harvesting machinery; (6) haying machinery; (7) machines for preparing crops for market or for use; (8) miscellaneous agricultural implements, such as straw spreaders, seed-potato cutters, equalizers, hay carriers (forks and slings), tracks for hay carriers, etc. No detailed statistics of products are given for the industry separately, but the numbers and values of the machines and implements of classes 1 to 7, including those reported as minor products by establishments classified in other industries, are shown in Tables 3 to 9, page 1114 to 1116, and the production of

agricultural implements of class 8, as reported by establishments in all industries, together with that of tractors and numerous other items of farm equipment not treated as products of the agricultural-implements industry, is shown in Tables 10-13, pages 1117 to 1118.

The total value of products of the "Agricultural-implements" industry differs from the sum of the values of the machines and implements of classes 1 to 8, as given in the first seven and last items in Table 1 of the "Farm equipment" report (p. 1112), because the former amount includes the values of commodities other than agricultural implements, made as secondary products by establishments classified in the agricultural-implements industry, but does not include the values of agricultural implements made as secondary products by establishments classified 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, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²	Horsepower
1929.....	293	41,663	\$58,941,939	\$113,969,484	\$277,854,462	\$163,884,978	128,499
1927.....	277	33,346	46,415,459	85,066,180	202,732,126	117,065,940	117,968
1925.....	303	28,696	37,337,620	73,850,060	169,467,966	95,617,966	115,325
1923.....	312	30,962	40,510,534	68,491,886	151,286,248	87,794,362	121,975
1921.....	353	30,359	39,835,414	87,237,274	168,816,079	76,549,405	(3)
1919.....	521	54,368	66,704,434	144,571,943	304,961,265	160,389,322	128,249
1914.....	601	48,469	34,593,325	73,508,845	164,086,855	90,578,190	121,250
1909.....	640	50,551	28,608,615	60,306,519	146,329,298	86,022,749	100,401
1904.....	648	47,394	25,002,660	48,231,406	112,007,344	63,725,938	89,663
1899.....	715	46,582	22,450,880	43,944,628	101,207,428	57,262,800	76,386
PER CENT OF INCREASE OR DECREASE (—)							
1927-1929.....	5.8	24.9	27.0	33.0	37.1	40.0	8.9
1925-1927.....	-8.6	10.2	24.1	16.0	19.6	22.4	2.3
1923-1925.....	-2.9	-7.3	-7.7	16.3	12.0	8.0	-5.5
1921-1923.....	-11.6	2.0	-1.7	-27.2	-7.6	14.7	-----
1919-1921.....	-32.2	-44.2	-40.3	-39.6	-40.3	-52.3	-----
1919-1929.....	-43.8	-23.4	-11.6	-21.2	-8.9	2.2	0.2
1909-1919.....	-18.6	7.6	133.2	139.7	108.4	86.4	27.7
1899-1909.....	-10.5	8.5	27.4	37.2	44.6	50.2	42.7

¹ The figures for all census years refer to production, not sales. See GENERAL EXPLANATIONS—Value of Products.

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

³ Not called for on schedule.

AGRICULTURAL IMPLEMENTS

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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	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 ²	Value added by manufacture ³
					Total	Prime movers	Motors run by purchased energy			Total	Materials	Fuel and purchased energy		
United States	1929	293	5,853	41,063	128,499	54,118	74,381	\$13,399,184	\$58,941,939	\$113,969,481	\$109,335,398	\$4,634,176	\$277,854,462	\$163,884,978
	1927	277	5,224	33,346	117,966	57,482	60,484	11,217,674	46,415,459	85,669,186	82,683,468	3,582,718	262,732,126	117,065,940
	1919	521	12,488	54,368	128,219	80,407	47,842	21,925,743	66,704,434	144,371,933	139,593,431	5,638,512	304,991,295	160,389,322
Individual States:														
California	1929	18	235	1,138	3,462	135	3,327	517,453	1,321,756	3,147,162	3,084,401	62,761	7,924,367	4,777,295
	1927	16	177	1,067	3,323	135	3,188	650,827	1,377,336	3,047,638	2,985,982	61,856	7,464,311	4,420,473
	1919	34	676	1,578	4,668	711	3,957	1,174,016	1,996,168	3,717,102	3,592,172	124,950	9,499,109	5,773,067
Colorado	1929	5	5	17	83	—	83	9,570	29,329	45,437	44,575	862	106,477	61,040
	1927	(4)	(4)	(4)	(4)	—	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
	1919	5	7	19	57	5	52	10,350	25,834	57,956	56,126	1,830	122,050	64,094
Georgia	1929	7	62	515	1,699	80	1,610	109,089	310,654	593,832	554,883	38,949	1,834,283	1,240,451
	1927	7	50	476	1,630	126	1,504	98,398	301,648	706,979	677,655	29,921	1,387,833	680,854
	1919	13	77	892	2,072	767	1,305	185,737	653,900	1,813,042	1,755,002	58,040	3,475,705	1,622,063
Illinois	1929	42	2,578	22,748	67,675	31,594	36,081	5,484,866	33,746,827	63,806,041	61,113,509	2,692,532	143,678,378	79,872,237
	1927	46	2,264	17,811	67,190	33,770	33,420	4,532,483	26,337,328	48,268,988	46,021,177	2,187,811	102,200,815	53,997,827
	1919	68	3,980	22,548	54,608	33,296	21,312	7,340,883	28,342,271	65,159,820	62,863,409	2,260,411	128,284,716	63,124,896
Indiana	1929	18	549	3,070	8,045	4,492	3,553	1,335,303	5,074,503	7,506,445	7,163,509	342,936	22,766,973	15,260,508
	1927	16	556	3,580	9,247	7,675	1,672	1,275,313	4,601,035	6,490,232	6,355,356	335,356	20,480,688	13,685,100
	1919	29	1,006	5,533	10,864	9,296	1,568	2,531,312	7,401,107	12,614,022	12,167,498	447,424	31,823,733	19,208,811
Iowa	1929	18	135	671	2,201	58	2,143	356,096	969,933	1,790,066	1,720,248	70,728	5,539,573	3,748,007
	1927	22	285	643	2,368	458	1,910	438,294	803,721	2,196,580	2,133,138	63,442	5,282,735	3,086,155
	1919	26	215	906	2,396	404	1,992	484,633	1,682,273	2,822,197	2,740,546	81,651	5,959,129	3,136,932
Kansas	1929	10	38	125	388	40	348	127,316	133,219	289,601	277,434	12,470	887,925	598,021
	1927	10	29	114	326	40	286	72,862	111,470	304,697	283,727	10,970	646,423	341,726
	1919	14	30	129	268	63	205	67,399	117,451	453,003	446,101	6,902	769,914	316,911
Maine	1929	5	12	111	489	25	464	28,062	143,157	142,955	121,250	21,735	434,245	291,260
	1927	4	16	107	468	20	448	29,212	133,980	149,636	139,035	10,591	426,763	277,137
Nebraska	1929	4	21	94	188	—	188	44,531	121,591	275,748	261,281	14,467	662,255	386,597
	1927	4	23	78	203	—	203	43,475	94,236	248,634	237,326	11,508	711,923	463,089
	1919	8	6	66	185	81	104	5,875	69,319	206,780	197,167	9,613	349,828	143,048
New Jersey	1929	3	1	7	48	33	15	2,500	8,388	16,550	15,846	1,004	42,882	26,002
	1927	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
	1919	10	74	219	591	576	15	137,571	239,414	700,191	671,165	29,026	1,364,819	664,628
New York	1929	21	344	2,652	8,884	4,934	3,950	866,286	3,692,539	6,206,930	5,813,018	393,912	12,935,013	6,746,043
	1927	21	326	2,342	8,446	4,932	3,514	704,853	3,240,842	4,748,373	4,405,639	342,734	11,015,814	6,297,441
	1919	40	888	4,626	12,730	9,428	3,308	1,525,955	5,311,978	9,939,754	9,432,590	507,164	20,421,368	10,481,614
North Carolina	1929	11	27	213	698	150	548	102,490	297,797	236,643	224,502	12,141	850,586	613,943
	1927	12	31	163	478	106	372	62,529	164,538	280,111	260,190	10,921	714,574	434,463
	1919	17	25	230	431	149	282	72,052	243,718	319,548	304,307	15,241	876,814	557,266
Ohio	1929	10	277	1,674	5,052	2,245	3,707	561,991	2,165,926	4,487,130	4,320,817	166,313	11,424,585	6,937,455
	1927	24	310	1,771	6,524	2,780	3,744	577,726	2,176,426	4,605,461	4,448,180	157,281	10,419,678	5,814,217
	1919	46	1,033	4,031	10,470	7,388	3,082	2,677,250	5,675,451	12,966,735	12,611,928	354,807	26,556,031	13,589,296
Pennsylvania	1929	10	181	716	4,627	1,414	3,213	428,983	897,895	1,096,698	1,030,901	66,057	2,995,803	1,898,955
	1927	10	228	805	3,748	1,050	2,698	524,786	984,206	1,554,960	1,508,475	49,485	3,754,279	2,199,319
	1919	27	294	1,371	3,006	2,085	921	489,988	1,541,228	2,596,281	2,420,777	175,504	5,536,111	2,939,830
Virginia	1929	11	30	162	528	215	313	68,367	172,163	158,163	158,627	11,536	533,680	365,517
	1927	8	33	134	457	171	286	90,103	131,688	238,348	229,032	9,316	536,975	298,627
	1919	14	40	230	507	141	366	88,653	241,871	368,717	347,524	21,193	926,019	557,302
Washington	1929	4	6	21	65	—	65	19,711	24,662	97,933	96,375	1,558	270,464	172,531
	1927	4	7	21	73	—	73	22,215	28,097	143,209	141,226	1,983	245,591	102,382
	1919	9	23	146	320	—	320	51,651	178,460	445,754	433,953	11,769	912,946	467,192
Wisconsin	1929	21	568	2,413	7,349	4,753	2,596	1,388,995	3,633,103	8,595,358	8,316,954	278,404	27,513,669	18,918,311
	1927	17	485	2,037	4,372	3,490	2,882	1,186,325	3,014,579	6,483,387	6,354,749	128,638	23,483,944	17,000,557
	1919	34	2,083	5,237	10,673	8,491	2,182	3,569,908	7,582,321	18,485,591	17,990,671	494,920	43,623,368	25,137,777
Groups of States:														
Ala., 2 est.; La., 1; S. C., 1	1929	4	5	29	50	6	44	10,480	23,524	126,283	125,061	1,222	225,354	99,071
Conn., 2 est.; Mass., 2; N. H., 1; Vt., 1	1929	6	16	77	493	356	137	30,626	87,310	102,669	89,211	13,458	302,255	199,586
Idaho, 2 est.; Oreg., 2	1929	4	1	25	159	12	147	1,200	27,470	59,648	58,817	831	137,648	78,000
Ky., 3 est.; Tenn., 5	1929	8	212	1,173	4,201	1,052	3,149	521,977	1,207,703	2,920,097	2,799,808	120,289	7,687,483	4,767,386
Mich., 15 est.; Minn., 22	1929	37	460	2,841	9,785	2,054	7,731	1,186,697	4,274,438	8,295,832	8,007,092	288,830	21,798,884	13,503,052
Mo., 5 est.; Tex., 2	1929	7	81	571	1,430	470	960	196,634	687,582	3,960,490	3,939,270	21,211	7,283,080	3,322,590
States not shown separately	1927	56	404	2,167	9,013	2,729	6,284	894,273	2,674,344	5,953,207	5,782,995	179,062	13,910,780	7,966,573
	1910	127	1,422	5,698	14,397	7,526	6,871	2,112,480	6,031,670	11,904,550	11,472,463	432,087	24,468,605	12,564,053

¹ Not including proprietors and firm members, as follows: For 1929, 107; 1927, 91; 1919, 321. 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, 47,623; 1927, 35,661; 1919, 67,177.

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

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

⁴ Withheld from publication in order to avoid disclosing data for individual establishments.

⁵ Colorado, 2 establishments; Connecticut, 2; Florida, 2; Kentucky, 5; Massachusetts, 1; Michigan, 11; Minnesota, 15; Missouri, 4; New Hampshire, 1; New Jersey, 3; South Carolina, 1; Tennessee, 5; Texas, 1; Vermont, 3.

⁶ Alabama, 1 establishment; Arkansas, 3; Connecticut, 2; Florida, 3; Idaho, 2; Kentucky, 8; Louisiana, 3; Maine, 2; Maryland, 2; Massachusetts, 2; Michigan, 23; Minnesota, 16; Mississippi, 2; Missouri, 14; New Hampshire, 2; North Dakota, 1; Oklahoma, 2; Oregon, 1; South Carolina, 3; South Dakota, 4; Tennessee, 14; Texas, 5; Utah, 1; Vermont, 10; West Virginia, 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
		Horse-power		Horse-power		Horse-power		Horse-power		Horse-power		
Prime movers and electric motors driven by purchased energy, aggregate.....	7,871	128,499	5,642	117,966	5,146	115,325	5,168	128,249	3,437	121,256	100.0	100.0
Prime movers, total.....	238	54,118	269	57,482	306	62,471	574	80,407	823	90,492	42.1	62.7
Steam, total.....	180	49,943	198	52,562	222	57,629	334	60,942	470	70,688	38.9	54.5
Engines.....	155	35,166	168	34,340	191	40,188	303	51,107	(1)	(1)	27.4	39.8
Turbines.....	25	14,777	40	18,213	31	17,441	31	18,835	(1)	(1)	11.5	14.7
Internal-combustion engines.....	80	732	38	1,297	46	1,014	166	4,092	280	5,113	0.5	3.2
Water wheels and water turbines.....	28	3,443	33	3,623	38	3,828	74	6,373	73	5,691	2.7	5.0
Electric motors driven by purchased energy.....	7,633	74,381	5,373	60,484	4,840	52,854	4,504	47,842	2,614	30,764	57.0	37.3
Electric motors, total.....	10,879	115,311	8,292	99,966	7,553	96,242	7,903	100,263	5,789	83,117	100.0	100.0
Driven by purchased energy.....	7,633	74,381	5,373	60,484	4,840	52,854	4,504	47,842	2,614	30,764	64.5	47.7
Driven by energy generated in establishments reporting.....	3,246	40,930	2,919	39,482	2,743	43,388	3,399	52,421	3,175	52,353	35.5	52.3
Electric generators.....	80	Kilowatts 28,198 Kilowatt-hours	81	Kilowatts 27,698	110	Kilowatts 28,027	(2)	(2)	(2)	(2)		
Electric energy purchased ¹		81,925,874		(4)		(4)		(2)		(2)		

¹ Not called for separately on schedule.
² Not called for on schedule.

³ This item covers the consumption of purchased electric energy for all purposes—power, heat, light, etc.
⁴ 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.....	41,663	42,641	44,308	45,078	45,055	44,721	43,518	41,132	33,637	37,240	37,695	30,482	40,443	40,443	82.6
1925.....	28,696	28,636	30,038	30,778	30,426	29,406	28,459	<i>26,529</i>	26,003	27,029	27,484	28,777	29,582	29,582	86.2
1919.....	54,308	57,926	59,748	58,053	55,771	53,994	52,817	52,900	<i>49,483</i>	51,256	51,059	52,610	50,199	50,199	82.3
1914.....	48,459	61,746	61,900	58,143	54,305	49,904	46,990	45,109	37,340	35,208	39,536	44,219	47,048	47,048	56.9
1909.....	50,551	51,540	53,673	54,759	53,165	50,990	48,727	45,027	<i>44,906</i>	46,484	49,477	52,410	55,466	55,466	81.0
California.....	1,138	1,109	1,257	1,415	1,392	1,240	1,122	905	761	844	1,055	1,245	1,307	1,307	53.8
Colorado.....	17	<i>12</i>	17	17	18	15	15	19	21	22	15	15	13	13	54.5
Georgia.....	515	627	620	567	484	372	357	476	418	524	666	596	596	596	53.7
Illinois.....	22,748	23,311	23,892	23,853	23,913	24,328	23,662	22,129	21,314	20,790	21,101	22,024	22,655	22,655	85.5
Indiana.....	3,670	3,713	3,881	3,860	3,806	3,676	3,680	3,680	3,571	<i>3,241</i>	3,453	3,649	3,511	3,511	83.5
Iowa.....	671	644	658	727	762	811	843	801	549	549	565	564	577	577	65.1
Kansas.....	125	122	127	130	133	124	134	121	125	<i>115</i>	118	120	118	118	85.5
Maine.....	111	119	119	124	121	118	110	97	95	98	109	111	112	112	76.6
Nebraska.....	94	90	98	116	124	106	88	77	83	84	84	89	89	89	62.1
New Jersey.....	7	7	7	7	7	7	7	7	6	7	7	7	7	7	85.7
New York.....	2,652	2,701	2,837	2,900	2,794	2,653	2,562	2,507	2,450	2,453	2,551	2,777	2,842	2,842	81.1
North Carolina.....	213	211	222	230	224	223	214	190	182	210	224	212*	215	215	79.1
Ohio.....	1,674	1,832	1,892	1,875	1,786	1,603	1,550	1,546	1,558	1,592	1,649	1,646	<i>1,551</i>	1,551	80.9
Pennsylvania.....	716	750	725	730	721	723	720	722	715	699	699	689	700	700	91.9
Virginia.....	162	175	171	171	164	160	153	151	149	153	158	169	165	165	85.1
Washington.....	21	<i>16</i>	17	20	18	20	22	23	34	26	16	19	17	17	47.1
Wisconsin.....	2,413	2,493	2,654	2,881	2,887	2,952	2,785	2,753	2,293	1,882	1,741	<i>1,728</i>	1,913	1,913	58.5

MANUFACTURE AND SALE OF FARM EQUIPMENT: 1929

This special report is the tenth of an annual series which began with Department Circular 212, covering the year 1920, prepared and published by the Bureau of Public Roads, Department of Agriculture. The reports for subsequent years have been prepared and issued by the Bureau of the Census.

A preliminary report for 1929 on tractors, combines (harvester-threshers), and threshers was released to the press under date of April 23, one on farm wagons and trucks under date of May 15, and one on all farm equipment on June 11, 1930. The receipt of additional returns and the final analysis of the data have necessitated some changes in the figures. This report covers the production and the sales, both for domestic use and for export, of all classes of implements, tools, and other equipment used either exclusively or to a large extent on farms.

Equipment for use elsewhere than on farms.—Certain classes of commodities listed in this report, such as horse-drawn vehicles, engines, windmills, water pumps, domestic water systems, domestic electric lighting plants, etc., are not used exclusively by agriculturists, but the proportion used on farms is large enough to justify including them with the other products covered by this report.

Increase in production.—The total value of farm equipment manufactured in 1929 shows an increase of 15.7 per cent over that reported for 1928 and of 31.6 per cent over that for 1927. Increases for both the 1-year period 1928-29 and the 2-year period 1927-1929 appear for all groups except "Machines for preparing crops for market or for use" and "Horse-drawn vehicles." The increases in value of production by groups for 1929 over 1928 are as follows: "Plows and listers," 31.7 per cent; "Harrows, rollers, pulverizers, and stalk cutters," 14.5 per cent; "Planting and ferti-

lizing machinery," 17.5 per cent; "Cultivators and weeders," 44.1 per cent; "Harvesting machinery," 30.3 per cent; "Haying machinery," 16.5 per cent; "Tractors," 18.6 per cent; "Barn and barnyard equipment," 12.9 per cent; "Miscellaneous," 3.1 per cent.

Comparing 1929 with 1927, the following increases are recorded: "Plows and listers," 43.7 per cent; "Harrows, rollers, pulverizers, and stalk cutters," 21.2 per cent; "Planting and fertilizing machinery," 26.8 per cent; "Cultivators and weeders," 59.9 per cent; "Harvesting machinery," 53 per cent; "Haying machinery," 21.6 per cent; "Tractors," 42.7 per cent; "Barn and barnyard equipment," 11.8 per cent; "Miscellaneous," 14.9 per cent.

For the two groups which decreased, the rates are as follows: "Machines for preparing crops for market or for use"—1928-29, 10 per cent; 1927-1929, 6.9 per cent. "Horse-drawn vehicles"—1928-29, 11.6 per cent; 1927-1929, eight-tenths of 1 per cent.

Sales statistics.—The combined value of sales for domestic use and for export differs more or less from the total value of the year's production, chiefly for the reason that a part of the production reported for any one year is not sold until after the close of the year. In 1929 the total production exceeded the sales (domestic and export) by 6.2 per cent; and in 1928, by 5.3 per cent. In 1927, however, the sales exceeded the production by about six-tenths of 1 per cent. The total export sales for 1929 show an increase of 18.6 per cent over those for 1928 and of 56.9 per cent over those for 1927. Nine of the eleven groups show increases in the value of sales for export for 1929 as compared with both 1928 and 1927, the exceptions being "Machines for preparing crops for market or for use" and "Barn and barnyard equipment."

CENSUS OF MANUFACTURES: 1929

TABLE 1.—FARM EQUIPMENT MANUFACTURED AND SOLD—VALUE, BY CLASSES: 1929, 1928, AND 1927

[In making use of the sales statistics, it must be borne in mind that they refer only to sales by manufacturers and do not, therefore, cover sales by dealers to consumers. All figures include values of attachments and parts]

[Number of establishments reporting: 1929, 843; 1928, 810; 1927, 836]

CLASS	Manufactured	SOLD BY MANUFACTURERS—		CLASS	Manufactured	SOLD BY MANUFACTURERS—	
		For use in the United States	For export			For use in the United States	For export
Total:				Haying machinery (Table 8)—			
1929	\$606,621,812	\$458,091,248	\$112,870,455	1929	\$18,711,607	\$17,310,024	\$1,786,980
1928	524,255,416	402,872,036	95,158,470	1928	16,057,966	13,780,108	1,499,086
1927	460,881,111	391,868,822	71,946,128	1927	15,386,759	14,849,828	1,427,438
Plows and listers (Table 3)—				Machines for preparing crops for market or for use (Table 9)—			
1929	42,365,129	30,450,213	8,920,618	1929	30,103,384	24,824,844	3,160,867
1928	32,158,754	26,436,118	6,698,737	1928	33,465,668	25,148,776	5,987,439
1927	29,477,372	22,676,891	6,358,371	1927	32,328,555	28,947,937	5,311,066
Harrows, rollers, pulverizers, and stalk cutters (Table 4)—				Tractors (Table 10)—			
1929	16,813,081	13,399,536	2,445,065	1929	227,632,527	155,406,163	59,314,691
1928	14,687,293	12,869,854	2,626,430	1928	191,978,126	122,281,032	47,872,608
1927	13,867,839	12,327,240	1,444,118	1927	159,530,521	131,667,221	33,142,788
Planting and fertilizing machinery (Table 5)—				Horse-drawn vehicles (Table 11)—			
1929	31,145,092	24,811,493	3,689,795	1929	2,813,307	8,194,073	2,580,357
1928	26,504,967	21,386,730	2,286,077	1928	2,974,420	9,405,824	2,538,672
1927	24,596,375	22,882,361	1,477,239	1927	2,883,803	8,961,030	2,344,607
Cultivators and weeders (Table 6)—				Barn and barnyard equipment (Table 12)—			
1929	22,856,855	20,536,408	1,126,102	1929	10,269,150	10,019,855	37,002
1928	15,894,256	16,534,167	769,288	1928	9,066,326	8,950,025	41,390
1927	14,296,272	13,085,460	589,470	1927	9,188,353	9,157,490	70,664
Harvesting machinery (Table 7)—				Miscellaneous (Table 13)—			
1929	87,712,968	53,655,787	20,580,151	1929	110,198,712	99,481,952	11,229,121
1928	67,291,217	48,641,668	16,747,852	1928	107,176,423	94,457,804	10,692,891
1927	57,319,248	38,823,209	13,864,339	1927	90,042,034	88,491,137	7,916,080

¹ Revised.

² Includes values of attachments for converting wheeled horse-drawn vehicles into trucking vehicles, for use principally on sugar-cane plantations.

TABLE 2.—FARM EQUIPMENT MANUFACTURED—NUMBER AND VALUE OF MACHINES AND IMPLEMENTS, BY CLASS AND KIND: 1929 AND 1928

[This table covers only those items of farm equipment in regard to which comparable figures can be shown for 1929 and 1928. Production and sales statistics for 1929 for all items are given in Tables 3-13]

KIND	NUMBER		VALUE		KIND	NUMBER		VALUE	
	1929	1928	1929	1928		1929	1928	1929	1928
Plows and listers:					Harrows, rollers, pulverizers, and stalk cutters:				
Moldboard plows—					Harrows—				
Horse—					1-horse (spike-tooth and spring-tooth).....	30,885	24,172	\$161,749	\$126,023
Walking, 1-horse.....	242,186	208,809	\$1,420,854	\$1,202,560	Spike-tooth harrow sections.....	339,192	283,612	2,308,705	1,963,093
Walking, 2-horse and larger.....	204,545	183,436	2,645,143	2,340,460	Spring-tooth harrow sections.....	126,306	133,029	1,445,105	1,509,361
Sulky—					Disk harrows, horse.....	81,402	80,400	3,481,033	3,341,215
1-bottom.....	22,817	16,379	1,194,657	902,894	Disk harrows, tractor.....	57,447	53,637	5,230,068	4,149,398
2-bottom.....	30,503	28,646	2,767,983	2,635,233	Smooth land rollers.....	1,223	1,233	44,267	34,386
3-bottom and larger.....	3,146	1,187	404,376	112,110	Soil pulverizers and packers.....	18,831	18,499	879,747	884,754
Tractor—					Stalk cutters.....	11,696	10,456	439,361	398,270
1-bottom.....	5,115	5,540	181,214	209,455	Planting and fertilizing machinery:				
2-bottom.....	61,698	55,558	3,954,776	3,422,071	Corn planters—				
3-bottom.....	38,106	26,776	4,027,637	2,937,153	Hand.....	28,207	24,881	26,240	23,254
4-bottom and larger.....	17,978	7,642	2,907,715	1,238,128	Horse—				
Two-way—					1-row.....	19,355	14,530	335,235	239,316
Walking.....	23,294	10,506	268,662	124,411	2-row.....	55,393	45,033	3,089,606	2,535,596
Sulky.....	7,471	7,623	573,317	546,682	Cotton planters, 1-row.....	20,873	14,482	111,047	88,364
Disk plows—					Combination corn and cotton planters—				
Horse—					1-row.....	80,993	41,702	1,651,751	771,172
Single-disk.....	2,850	1,354	136,099	84,164	2-row.....	12,966	4,013	913,810	276,945
2-disk.....	3,225	2,454	259,101	197,718	Potato planters, horse.....	8,540	12,543	573,402	905,173
3-disk and larger.....	1,034	805	105,962	87,179	Transplanters, horse.....	4,629	4,032	304,407	272,084
Tractor—					Combined listers and drills.....	7,004	5,289	601,057	429,890
2-disk.....	3,603	5,936	356,323	543,804	Grain drills—				
3-disk.....	2,605	1,353	257,578	136,517	Horse.....	51,113	63,087	6,675,328	7,428,638
4-disk.....	1,945	1,615	242,755	192,805	Tractor.....	10,295	10,347	3,359,379	1,307,357
5-disk and larger.....	8,344	12,435	1,269,491	1,876,392	Broadcast seeders 2—				
Listers (middle listers)—					Wheel, horse.....	3,900	5,785	197,365	288,694
Horse—					End-gate.....	10,181	16,687	152,385	249,397
1-bottom.....	37,255	25,669	912,559	527,327	Fertilizer distributors, horse.....	92,741	63,154	719,744	610,273
2-bottom.....	8,355	5,580	754,827	554,957	Lime spreaders.....	12,265	12,751	345,881	429,162
Tractor 1—					Manure spreaders.....	61,000	62,659	7,189,568	7,364,143
3-bottom.....	2,966	2,378	417,331	239,869					
Plowstocks.....	190,806	142,150	322,954	222,984					

¹ No statistics for 2-bottom listers (tractor-drawn) can be given for 1929 without disclosing approximately the data for individual establishments. The figures for such listers are therefore included in those for "Other plows and listers," Table 3.

² No statistics for hand (wheelbarrow and other) broadcast seeders can be given for 1929 without disclosing approximately the data for individual establishments. The figures for such seeders are therefore included in those for "Other planting and fertilizing machinery," Table 5.

MANUFACTURE AND SALE OF FARM EQUIPMENT

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TABLE 2.—FARM EQUIPMENT MANUFACTURED—NUMBER AND VALUE OF MACHINES AND IMPLEMENTS, BY CLASS AND KIND: 1929 AND 1928—Continued

KIND	NUMBER		VALUE		KIND	NUMBER		VALUE	
	1929	1928	1929	1928		1929	1928	1929	1928
Cultivators and weeders:					Barn and barnyard equipment:				
Cultivators—					Overhead feed and litter carriers (box and gearing only).....	10,610	9,692	\$356,642	\$331,673
Horse-drawn, except disk—					Hay carriers.....	69,477	53,402	561,865	475,968
1-horse.....	202,755	159,173	\$978,817	\$834,151	Truck for carriers, feet.....	2,922,697	2,694,783	515,217	488,088
1-row, walking.....	51,694	37,401	1,667,293	1,225,300	Hayforks (harpoon, grapple, etc.)....	61,969	48,268	173,766	127,537
1-row, riding.....	115,254	91,978	4,238,834	3,595,291	Hay slings.....	51,338	51,871	141,154	144,561
2-row.....	54,695	37,567	4,486,705	3,190,742	Stanchions.....	479,619	448,631	1,407,910	1,335,049
Tractor-drawn.....	34,634	12,863	2,902,575	1,077,983	Manger partitions and fittings.....	27,940	27,666	69,463	67,818
Disk cultivators.....	6,957	4,890	305,982	206,517	Stalls and fittings (not including stanchions, etc.).....	227,254	206,702	1,378,386	1,219,788
Beet cultivators.....	4,496	2,966	231,021	139,029	Hog troughs.....	282,114	306,964	250,065	298,225
Hand cultivators (wheeled hoes).....	153,484	133,214	459,316	412,879	Stock tanks and waterers.....	361,026	353,883	2,087,035	2,021,850
Weeders.....	25,221	21,550	448,765	368,586	Miscellaneous:				
Harvesting machinery: ³					Beckkeepers' supplies.....			2,170,601	2,114,450
Grain binders.....	65,069	67,099	10,661,112	10,609,890	Cornerbins, portable.....	21,660	65,661	268,149	468,623
Combines (harvester-threshers)—					Grain bins, portable.....	10,656	12,053	917,106	966,894
Width of cut, 10 feet and less.....	6,605	9,682	8,078,727	10,103,600	Dairy machinery—				
Width of cut, over 10 feet.....	30,352	15,710	42,604,814	25,689,864	Milking machines (complete units).....	21,092	20,515	1,778,219	1,558,063
Corn binders.....	15,246	21,174	2,141,767	2,643,168	Cream separators—				
Potato-digging machines, elevator type.....	9,400	16,426	752,784	1,252,020	Hand.....	172,167	261,559	7,695,511	9,039,916
Potato diggers, plow type.....	3,307	3,504	36,738	37,764	Power.....	9,536	9,077	1,599,363	1,529,327
Pea and bean harvesters.....	2,645	3,756	125,066	115,033	Elevators, farm (portable).....	2,380	2,749	380,259	419,402
Beet lifters.....	1,900	1,156	92,637	59,661	Elevators, farm (stationary).....				
Haying machinery: ⁴					Engines, internal-combustion, under 20 horsepower.....	146,660	140,833	9,123,789	9,016,346
Mowers.....	126,360	121,035	7,059,062	6,503,255	Forks, rakes, hoes, spades, and shovels.....	17,446,385	16,743,795	13,161,088	12,382,605
Rakes, sulky (dump).....	58,134	48,298	1,783,862	1,457,460	Gates, farm.....	262,103	245,456	946,397	977,420
Rakes, sweep.....	18,273	17,193	706,591	585,679	Lawn mowers—				
Loaders.....	24,920	24,805	1,991,338	2,093,601	Hand.....	1,116,135	1,066,132	7,310,867	7,337,852
Stackers.....	6,276	5,409	528,056	421,322	Power (including horse-drawn).....	18,406	13,152	2,629,782	2,019,852
Machines for preparing crops for market or for use:					Lightning rod, feet.....	9,668,123	8,443,559	1,232,110	923,187
Grain threshers, wood—					Poultry-farm equipment—				
Width of rear, 46 inches and under.....	240	519	151,848	336,245	Brooders.....	292,618	309,959	2,660,352	3,576,168
Width of rear, 47 inches and over.....	15	70	17,525	70,425	Incubators—				
Grain threshers, steel—					Lamp type (1,000-egg and smaller).....	96,224	113,972	1,515,129	2,066,565
Width of rear, 46 inches and under.....	12,180	15,909	10,515,336	13,759,551	Commercial type (over 1,000-egg, total egg capacity.....	48,183,500	41,547,200	5,441,693	4,320,842
Width of rear, 47 inches and over.....	1,378	1,031	1,693,379	2,283,658	Water systems, pneumatic (domestic).....	139,768	132,700	9,067,509	8,907,139
Pea and bean threshers.....	200	229	206,404	148,753	Pumps, water—				
Ensilage cutters (silo fillers).....	8,065	9,817	1,694,859	1,988,880	Hand.....	544,503	567,823	2,668,324	2,163,859
Fodder cutters.....	3,465	4,923	73,513	109,953	Windmill.....	91,396	97,228	698,356	714,867
Corn shellers, hand.....	31,928	44,022	359,001	330,410	Pump jacks.....	42,236	42,068	353,812	355,081
Corn shellers, power—					Spraying outfits, complete—				
Cylinder (2, 4, 6, and 8 hole).....	3,298	2,897	445,365	382,557	Hand (with tank, barrel, knapsack, etc.).....	272,719	275,612	1,083,370	1,136,306
Spring.....	2,152	1,966	788,243	780,246	Power (not including engine).....	11,324	6,14,442	2,459,287	2,763,154
Corn huskers and shredders.....	972	1,423	460,232	710,465	Spray pumps (not included above)—				
Hay presses—					Hand (not including small spray pumps).....	130,427	143,677	322,123	311,595
Horse.....	1,288	1,721	262,362	279,983	Power.....	3,043	6,2,172	229,499	176,626
Engine.....	2,172	1,953	963,992	862,423	Pushcarts and hand trucks.....	36,401	33,131	360,090	226,658
Feed grinders and crushers—					Silos.....	5,516	4,694	2,262,318	2,041,723
Hand.....	48,486	54,634	136,152	149,399	Trucks, tongue.....	29,097	38,823	336,981	336,957
Power.....	53,106	47,301	3,084,587	2,390,148	Wheelbarrows—				
Grain cleaners and graders (for small grains only).....	11,635	10,120	645,666	417,953	Wooden.....	125,268	108,485	619,728	580,413
Cider mills.....	33,137	12,928	285,118	156,418	Steel (tubular).....	322,831	1,237,455	1,347,455	1,448,776
Tractors:					Windmills.....	96,474	99,139	4,063,411	4,124,560
Wheel type.....	195,680	152,266	141,653,219	113,875,862	Windmill towers.....	35,692	50,784	1,347,511	1,448,776
Tracklaying type, all sizes.....	27,101	10,203	55,601,569	48,210,559	Wood-sawing machines, circular.....	10,836	9,613	188,504	174,992
Garden tractors.....	5,895	4,465	907,755	821,700					
Horse-drawn vehicles:									
Wagons, farm.....	40,687	57,081	3,789,496	4,946,025					
Trucks, farm.....	60,969	62,889	2,518,180	2,521,278					
Buggies.....	2,689	4,269	221,907	403,140					

³ No statistics for grain headers can be given for 1929 without disclosing approximately the data for individual establishments. The figures for these machines are therefore included in those for "Other harvesting machinery," Table 7.

⁴ No statistics for side-delivery rakes can be given for 1929 for the reason that such rakes were not listed on the schedule. Combination side rakes and tedders were listed instead, and statistics on these are given in Table 8.

⁵ Combined in order to avoid disclosing data for individual establishments.

⁶ Revised.

⁷ The values of some of the sprayers include the values of built-in engines.

⁸ No statistics for drag wood-sawing machines can be given for 1929 without disclosing approximately the data for individual establishments. The figures for such machines are included in those for "Miscellaneous items," Table 13.

TABLE 3.—PLOWS AND LISTERS MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total.....			Dollars 42,365,129		Dollars 30,450,213		Dollars 8,920,618				Dollars		Dollars		Dollars
Plows and listers: Moldboard plows—															
Horse—															
Walking, 1-horse.....	42	242,186	1,420,854	160,790	927,563	75,643	449,419	11	1,034	105,962	442	45,261	720	76,473	
Walking, 2-horse and larger.....	50	204,545	2,045,143	133,969	1,806,407	63,400	745,830	13	3,603	356,323	2,552	254,186	679	67,891	
Sulky—								11	2,505	257,378	1,650	164,803	911	108,746	
1-bottom.....	22	22,817	1,194,657	15,919	822,327	4,612	271,204	9	1,945	242,755	1,022	135,885	900	113,907	
2-bottom.....	16	30,503	2,767,983	9,250	855,298	19,438	1,667,134	12	8,344	1,269,491	5,171	786,023	1,729	285,333	
3-bottom and larger.....	5	3,146	404,376	467	59,283	(1)	(1)	9	22,992	4,517,201	15,724	3,051,969	2,907	569,392	
Tractor—															
1-bottom ¹	11	5,115	181,214	4,395	119,478	(1)	(1)	7	3,255	912,559	35,997	954,770	1,257	36,593	
2-bottom.....	20	61,698	3,054,776	48,342	3,123,457	5,610	374,955	7	8,355	754,827	7,422	688,633	(1)	(1)	
3-bottom.....	14	38,106	4,027,637	26,841	2,921,854	3,248	341,370	8	2,966	417,381	2,875	362,475	(1)	(1)	
4-bottom.....	10	16,837	2,648,712	11,009	1,702,270	3,975	648,976	9	1,614	100,816	1,915	82,426	(1)	(1)	
5-bottom and larger.....	6	1,141	259,003	344	91,898	381	91,344	9	1,388	176,118	617	71,023	(1)	(1)	
2-way—															
Walking.....	7	23,294	268,662	5,465	62,084	17,044	197,628	25	15,620	850,136	13,729	772,339	42	2,669	
Sulky.....	10	7,471	673,317	6,543	509,903	(1)	(1)	12	196,806	322,954	182,601	298,910	1,696	2,559	
Disk plows—															
Horse—															
Single-disk.....	11	2,856	136,089	799	38,907	1,289	59,294	10	20,169,564	1,243,652	20,853,745	1,270,846	(1)	(1)	
2-disk.....	12	3,225	259,101	2,202	165,796	1,248	97,817	63		10,086,552		8,275,151		2,249,496	

¹ Omitted in order to avoid disclosing data for individual establishments. Difference between production and sales in the United States does not equal sales for export. (See "Sales statistics," p. 1111.)

² Includes data for small plows designed for use with garden tractors.

³ Brush and middle breakers, furrow openers, 4 and 5 bottom listers, row markers, hillers, ridgers, etc. Data for 2-bottom tractor-drawn listers are also included in order to avoid disclosing the production and sales of individual establishments.

TABLE 4.—HARROWS, ROLLERS, PULVERIZERS, AND STALK CUTTERS MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total.....			Dollars 16,813,081		Dollars 13,399,536		Dollars 2,445,065				Dollars		Dollars		Dollars
Harrows:															
1-horse (spike-tooth and spring-tooth).....	18	30,885	161,749	28,318	148,255	709	4,342	30	81,402	3,481,833	63,964	2,878,860	14,723	790,556	
Spike-tooth harrow sections.....	40	339,192	2,306,705	292,580	1,978,405	29,906	224,995	28	57,447	5,230,068	46,037	3,056,864	9,102	798,366	
Spring-tooth harrow sections.....	24	126,306	1,445,105	109,062	1,240,988	8,020	104,975	8	1,223	44,267	1,176	41,679	(1)	(1)	
Soil pulverizers and packers.....	20	18,831	879,747	15,240	730,953	1,722	101,328	20	18,831	879,747	15,240	730,953	1,722	101,328	
Stalk cutters.....	24	11,696	439,361	12,101	457,534	(1)	(1)	24	11,696	439,361	12,101	457,534	(1)	(1)	
Other harrows, rollers, etc. ¹	16	3,201	91,180	3,200	87,981	250	8,123	16	3,201	91,180	3,200	87,981	250	8,123	
Attachments and parts.....	50		2,732,966		2,179,017		411,065	50		2,732,966		2,179,017		411,065	

¹ Omitted in order to avoid disclosing data for exports of individual establishments. Difference between production and sales in the United States does not equal sales for export. (See "Sales statistics," p. 1111.)

² Boss, orchard, rotary, and side harrows, soil shredders, stubble shavers, etc.

MANUFACTURE AND SALE OF FARM EQUIPMENT

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TABLE 5.—PLANTING AND FERTILIZING MACHINERY MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total.....		Dollars		Dollars		Dollars				Dollars		Dollars		Dollars	
			31,145,092		24,811,493		3,689,795								
Corn planters:															
Hand.....	4	28,207	26,240	27,332	25,468	(1)	(1)	2-row.....	6	5,245	494,226	4,402	402,238	(1)	(1)
Horse—								Beet drills.....	4	1,628	104,616	1,545	103,324	(1)	(1)
1-row.....	16	19,355	335,235	17,302	301,534	1,503	24,353	Grain drills, horse.....	18	51,113	6,675,328	36,136	4,523,574	10,831	1,560,293
2-row.....	18	55,393	3,089,608	48,407	2,709,433	5,340	283,921	Grain drills, tractor.....	9	19,295	3,359,379	15,829	2,000,277	1,800	283,931
Cotton planters, 1-row.....	15	20,873	111,647	20,108	110,547	(1)	(1)	Broadcast seeders:							
Combination corn and cotton planters:								Wheel, horse.....	7	3,900	197,365	2,689	111,769	1,679	100,004
1-row.....	19	80,993	1,651,751	68,605	1,358,077	5,182	173,009	End-gate.....	7	10,181	152,385	10,775	158,806	(1)	(1)
2-row.....	13	12,968	913,810	10,099	715,031	(1)	(1)	Fertilizer distributors, horse.....	32	92,741	719,744	88,137	685,341	799	21,068
Potato planters, horse.....	12	8,540	573,402	5,040	350,021	1,000	75,204	Line spreaders.....	21	12,265	345,851	12,910	351,530	(1)	(1)
Transplanters, horse.....	5	4,629	304,407	3,537	232,179	(1)	(1)	Manure spreaders.....	19	61,000	7,189,588	53,371	6,857,033	(1)	(1)
Combined listers and drills:								Other planting and fertilizing machinery ¹	24	90,018	816,028	68,952	457,480	13,999	320,720
1-row.....	5	1,750	109,831	1,547	93,743	(1)	(1)	Attachments and parts.....	57		3,969,623		3,284,038		424,879

¹ Omitted in order to avoid disclosing data for exports of individual establishments. Difference between production and sales in United States does not equal sales for export. (See "Sales statistics," p. 1111.)
² Bean, beet, and peanut planters, hand fertilizer distributors, motor-drawn transplanters, 3-row lister-drills, etc. Data for 3-row and 4-row corn planters, garden or hand drills, and hand (wheelbarrow and other) broadcast seeders are included in these items in order to avoid disclosing the production and sales of individual establishments.

TABLE 6.—CULTIVATORS AND WEEDERS MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total.....		Dollars		Dollars		Dollars				Dollars		Dollars		Dollars	
			22,856,855		20,636,498		1,126,102								
Cultivators:								Cultivators—Contd.							
Horse-drawn, except disk—								Disk cultivators.....	14	6,957	395,982	6,695	275,714	245	13,847
1-horse.....	31	202,755	978,817	144,524	700,540	39,404	206,109	Beet cultivators.....	9	4,496	231,021	4,332	230,322	(1)	(1)
1-row, walking.....	24	51,694	1,667,293	47,808	1,544,971	682	20,158	Hand cultivators (wheeled hoes).....	16	153,434	459,316	146,029	427,771	(1)	(1)
1-row, riding.....	35	115,254	4,238,834	113,531	4,162,317	4,417	194,064	Rotary hoes.....	11	20,152	1,257,138	14,504	922,610	(1)	(1)
2-row.....	24	54,505	4,496,705	52,469	4,344,290	(1)	(1)	Weeders.....	23	25,221	448,765	23,464	399,599	(1)	(1)
Tractor-drawn.....	9	34,634	2,902,575	25,101	2,135,757	2,303	216,822	Cotton scrapers.....	6	3,132	20,864	2,412	6,981	(1)	(1)
								Other cultivators and weeders ¹	22	25,854	1,082,763	22,484	992,164	1,696	29,603
								Attachments and parts.....	54		4,776,777		4,403,372		264,394

¹ Omitted in order to avoid disclosing data for exports of individual establishments. Difference between production and sales in the United States does not equal sales for export. (See "Sales statistics," p. 1111.)
² Bean, cross-row, field, spring-tooth, 3-row, and universal cultivators; celery bankers; fallowators; horse hoes and potato hoes; lister-cultivators; shovel plows; etc.

TABLE 7.—HARVESTING MACHINERY MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total.....		Dollars		Dollars		Dollars				Dollars		Dollars		Dollars	
			87,712,963		53,655,787		20,530,151								
Grain binders.....	5	65,069	10,601,112	(1)	(1)	13,287	2,242,373	Self-rake reapers.....	4	2,353	183,067	(1)	(1)	1,566	118,453
Combines (harvester-threshers):								Potato-digging machines (elevator type).....	14	9,400	752,784	7,909	630,573	714	62,934
Width of cut, 10 feet and less.....	8	6,605	8,078,727	3,820	4,038,382	1,519	1,660,071	Potato diggers (plow type).....	10	3,367	36,738	2,992	29,334	(1)	(1)
Width of cut, over 10 feet.....	12	30,352	42,604,814	16,346	23,818,933	8,490	11,604,016	Pea and bean harvesters.....	11	2,645	125,966	2,628	127,655	(1)	(1)
Corn binders (row binders).....	5	15,246	2,141,797	17,253	2,372,249	(1)	(1)	Beet lifters.....	7	1,800	92,937	1,481	79,291	(1)	(1)
Corn harvesters (not binders).....	3	1,076	29,280	1,120	30,192	(1)	(1)	Other harvesting machinery ¹	15	15,940	2,328,478	50,700	8,051,182	6,224	1,227,337
Corn picker-huskers.....	8	8,620	2,640,592	9,853	3,068,727	(1)	(1)	Attachments and parts.....	53		18,038,676		11,409,269		3,628,605

¹ Omitted in order to avoid disclosing data for individual establishments. The sum of domestic and export sales is not equivalent to production. (See "Sales statistics," p. 1111.)
² Cane loaders, corn cutters, cotton pickers, kafir headers, potato planter and digger, potato picker and bagger, windrow harvester, pick-up attachment, etc. Data for grain headers, rice binders, and corn snappers are included in these items in order to avoid disclosing the production and sales of individual establishments.

CENSUS OF MANUFACTURES: 1929

TABLE 8.—HAYING MACHINERY MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total			Dollars 18,711,607		Dollars 17,310,924		Dollars 1,780,980	Tedders	5	1,365	Dollars 63,213	1,300	Dollars 59,410	(1)	Dollars (1)
Mowers	11	126,360	7,050,052	114,639	6,308,140	13,621	787,860	Loaders	11	24,920	1,991,338	26,340	2,116,889	(1)	(1)
Rakes, sulky (dump)	13	58,134	1,783,862	47,256	1,440,226	8,355	260,808	Stackers	10	6,276	528,056	6,131	514,890	(1)	(1)
Combination side-rakes and tedders	9	22,463	1,630,062	24,852	1,781,958	887	69,196	Other haying machinery ²	5	3,472	20,972	3,074	19,092	(1)	(1)
Rakes (sweep)	12	18,273	709,591	18,680	733,006	(1)	(1)	Attachments and parts	22		4,937,451		4,837,313		808,061

¹ Omitted in order to avoid disclosing data for individual establishments. Difference between production and sales in United States does not equal sales for export. (See "Sales Statistics," p. 1111.)
² Buckrakes, hay pick-ups, etc. Data for windrowers and bunchers are included in these items in order to avoid disclosing the production and sales of individual establishments.

TABLE 9.—MACHINES FOR PREPARING CROPS FOR MARKET OR FOR USE MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total			Dollars 30,103,384		Dollars 24,821,844		Dollars 3,160,567	Hay presses:	12		Dollars		Dollars		Dollars
Grain threshers (wood):								Horse	15	1,288	202,362	864	133,189	443	70,517
Width of rear, 46 inches and under	10	240	151,848	226	151,109	(1)	(1)	Engine	15	2,172	903,992	1,683	721,280	572	221,548
Width of rear, 47 inches and over	6	15	17,525	20	25,040			Feed grinders and crushers:							
Grain threshers (steel):								Hand	10	48,480	130,152	12,580	39,172	(1)	(1)
Width of rear, 46 inches and under	17	12,180	10,515,336	9,359	8,243,588	1,053	909,513	Power	41	53,106	3,084,587	46,797	2,800,366	3,571	103,080
Width of rear, 47 inches and over	12	1,378	1,069,379	1,239	1,518,419	240	370,945	Grain cleaners and graders (for small grains only)	15	11,635	645,666	9,930	501,727	1,562	105,234
Pea and bean threshers	9	260	206,404	257	210,373	(1)	(1)	Potato sorters and graders	6	1,972	111,879	1,897	107,671	(1)	(1)
Peanut threshers (pickers)	6	498	212,047	445	195,390	(1)	(1)	Cane mills (farm size)	6	2,523	115,408	547	25,137	(1)	(1)
Ensilage cutters (silo fillers)	25	8,065	1,094,859	7,807	1,590,590	581	122,011	Sirup evaporators:							
Fodder cutters	14	3,465	73,513	2,986	50,882	(1)	(1)	Cane	4	3,951	85,975	3,860	32,194	475	6,761
Corn shellers (hand)	16	34,928	360,001	21,438	190,877	12,513	161,640	Maple	5	663	120,206	662	125,966	(1)	(1)
Corn shellers (power):								Sirup-evaporator furnaces (maple)	5	553	67,094	552	66,894	(1)	(1)
Spring (2, 4, 6, and 8 hole)	13	3,298	445,365	1,780	272,222	(1)	(1)	Cider mills	11	33,137	285,118	31,767	279,205	(1)	(1)
Cylinder	12	2,152	768,243	1,877	649,205	305	95,580	Other machines for preparing crops for market or for use ²	41	54,204	1,095,860	53,371	1,104,875	315	66,441
Corn huskers and shredders	11	972	460,232	968	498,381	(1)	(1)	Attachments and parts	76		6,724,373		5,282,002		518,277

¹ Omitted in order to avoid disclosing data for individual establishments. Difference between production and sales in United States does not equal sales for export. (See "Sales Statistics," p. 1111.)
² Ensilage harvesters and blowers, hand hay presses, seed-corn driers, seed-corn drying racks, bean sorters, smut-treating machines, thresher recleaners, corn graders, fruit presses, onion topers, tobacco-barn equipment, root cutters, combination mills, hammer mills, pea hullers, etc. Data for rice threshers, clover hullers, and cane-sirup evaporator furnaces are also included in order to avoid disclosing the production and sales of individual establishments.

MANUFACTURE AND SALE OF FARM EQUIPMENT

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TABLE 10.—TRACTORS MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total.....		<i>Dollars</i> 227,632,527		<i>Dollars</i> 155,406,163		<i>Dollars</i> 59,314,691				<i>Dollars</i>		<i>Dollars</i>		<i>Dollars</i>	
Tractors:															
Wheel type (not including garden tractors or motor cultivator), total.....		195,980	141,653,219	136,310	95,777,829	51,318	37,851,479	Tractors—Contd.							
Belt horse-power—								Tracklaying type, all sizes.....	11	27,191	53,601,569	19,000	37,699,581	(1)	(1)
Under 30.....	18	128,360	81,228,583	99,105	62,485,367	27,850	18,011,183	Garden tractors.....	15	5,895	997,755	4,732	747,443	582	91,734
30-39.....	15	65,747	57,582,934	36,013	31,116,259	23,129	19,234,033	Attachments and parts ¹	33		31,469,984		21,181,310		7,784,011
40-49.....	7	1,543	2,242,293	899	1,489,859	339	575,463	Wheel type, total.....		195,980	141,653,219	136,310	95,777,829	51,318	37,851,479
50 and over.....	6	280	599,434	293	695,334	(1)	(1)	Plow pull—							
								1-plow.....		739	288,912	562	218,384	(1)	(1)
								2-plow.....		100,396	56,513,567	75,912	45,574,761	(1)	(1)
								3-plow.....		76,663	63,239,144	45,411	37,469,569	27,149	21,934,879
								4-plow.....		17,758	29,574,909	16,086	11,848,063	4,436	5,146,470
								Over 4-plow.....		421	736,747	399	667,112	(1)	(1)

¹ Omitted in order to avoid disclosing data for individual establishments. Difference between production and sales in United States does not equal sales for export. (See "Sales statistics," p. 1111.)
² The value of tracklaying attachments used to convert wheeled-type tractors into tracklaying type is included in these items in order to avoid disclosing data for individual establishments.
³ Includes data for 1,786 tractors reported as 2-3 plow pull.
⁴ Includes data for 9,321 tractors reported as 3-4 plow pull and 231 reported as 4-5 plow pull.
⁵ 205 tractors reported as 5-plow pull, 121 reported as 6-plow pull, 82 reported as 6-8 plow pull, and 13 reported as 6-10 plow pull.

TABLE 11.—HORSE-DRAWN VEHICLES MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total.....		<i>Dollars</i> 8,813,307		<i>Dollars</i> 8,194,073		<i>Dollars</i> 580,357				<i>Dollars</i>		<i>Dollars</i>		<i>Dollars</i>	
Wagons, farm.....	47	40,687	3,789,496	41,950	3,849,244	425	46,332	Buggies.....	10	2,589	221,907	2,588	221,822		
Trucks, farm.....	34	60,969	2,518,189	54,631	2,236,930	(1)	(1)	Carts (2-wheeled).....	13	1,643	64,649	1,033	35,786	(1)	(1)
Light spring vehicles, other than buggies.....	6	319	33,391	390	33,891	(1)	(1)	Bobsleds.....	11	3,493	101,706	3,193	94,206		
								Other horse-drawn vehicles ²	5	4,567	46,643	4,567	46,643		
								Attachments and parts.....	41		2,082,335		1,675,551		(1)

¹ Omitted in order to avoid disclosing data for individual establishments. Difference between production and sales in United States does not equal sales for exports. (See "Sales statistics," p. 1111.)
² Principally tobacco trucks.
³ The value of tracklaying attachments for wagons is included in this item in order to avoid disclosing the production and sales of individual establishments.

TABLE 12.—BARN AND BARNYARD EQUIPMENT MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total.....		<i>Dollars</i> 10,269,150		<i>Dollars</i> 10,019,855		<i>Dollars</i> 37,002				<i>Dollars</i>		<i>Dollars</i>		<i>Dollars</i>	
Feed and litter carriers, overhead (box and gearing only).....	19	10,010	350,642	9,758	346,337	(1)	(1)	Stock pens (steel).....	21		339,094		326,885		
Hay carriers.....	14	60,477	561,865	58,417	542,180	360	3,198	Hog troughs.....	46	282,114	250,005	279,585	250,585		
Track for carriers (feet).....	22	2,922,660	515,217	2,790,770	492,497	16,405	3,966	Stock tanks.....	57	102,494	1,141,394	102,251	1,127,593	(1)	(1)
Hayforks (harpoon, grapple, etc.).....	12	61,969	173,766	57,034	154,807	(1)	(1)	Stock-watering bowls.....	22	52,303	498,708	51,570	410,101	(1)	(1)
Hay slings.....	12	51,338	141,154	50,095	138,911	(1)	(1)	Individual drinking cups.....	19	206,229	536,933	200,790	520,671	(1)	(1)
Feed trucks.....	17	1,970	53,194	1,600	43,281	(1)	(1)	Feed cookers.....	19	5,774	63,945	5,702	62,609		
Stanchions.....	23	479,019	1,407,910	466,654	1,367,904	(1)	(1)	Stock feeders.....	15	18,023	398,625	18,050	398,765		
Manger partitions and fittings.....	19	27,940	69,463	27,363	67,893	(1)	(1)	Tank heaters.....	17	21,274	206,739	21,526	208,153		
Stalls and fittings (not including stanchions and manger divisions).....	24	227,254	1,378,386	218,552	1,326,736	(1)	(1)	Barn-door hangers and truck.....	5		616,333		595,378	(1)	(1)
								Other equipment ³	34		1,637,796		1,636,588		(1)
								Attachments and parts.....	6		11,981		11,981		

¹ Omitted in order to avoid disclosing data for exports of individual establishments. Difference between production and sales in United States does not equal sales for export. (See "Sales statistics," p. 1111.)
² Animal pokes, barn cupolas, ventilating systems, hoists, tanks for dipping, hauling, and storage, hog catchers, hog houses, hog oilers and scrapers, milking stools, etc., and miscellaneous undistributed barn equipment.

CENSUS OF MANUFACTURES : 1929

TABLE 13.—MISCELLANEOUS FARM EQUIPMENT MANUFACTURED AND SOLD—NUMBER AND VALUE, BY KIND: 1929

KIND	Number of establishments	SOLD BY MANUFACTURERS—						KIND	Number of establishments	SOLD BY MANUFACTURERS—					
		MANUFACTURED		For use in the United States		For export				MANUFACTURED		For use in the United States		For export	
		Number	Value	Number	Value	Number	Value			Number	Value	Number	Value	Number	Value
Total.....			Dollars 110,198,712		Dollars 99,481,952		Dollars 11,229,121				Dollars 241,200		Dollars 233,120		Dollars 8,080
Beekeepers' supplies.....	19		2,170,901		2,009,958		(1)								
Corncribs, portable.....	18	21,600	268,140	20,700	276,582										
Grain bins, portable.....	17	10,656	917,106	10,421	895,821	(1)	(1)								
Dairy machinery:															
Milking machines (complete units).....	14	24,092	1,778,210	21,261	1,638,761	1,226	73,683								
Cream separators, hand and power.....	15	172,157	7,695,511	161,800	7,157,457	11,845	680,382								
Butter-making equipment.....	5		359,555		349,134		(1)								
Attachments and parts.....	19		1,242,082		1,130,400		114,361								
Elevators, farm:															
Portable.....	18	9,536	1,589,363	8,852	1,545,450	103	8,836								
Stationary.....	12	2,380	380,259	2,167	338,361	(1)	(1)								
Attachments and parts.....	8		194,593		195,546		(1)								(1)
Eveners.....	9	22,290	67,772	20,941	62,637	(1)	(1)								
Singletrees, doubletrees, and neck yokes.....	13		657,523		654,236		(1)								
Gates, farm:															
Field.....	15	181,341	891,300	186,104	888,606	758	4,795								
Other.....	5	20,762	55,007	18,194	46,122										
Forks, rakes, hoes, spades, and shovels ¹	31	17,446,385	13,161,088	16,487,218	12,535,408	(1)	(1)								
Scythes.....	6	348,947	332,344	340,603	326,612	(1)	(1)								
Scythe snaths.....	5	535,152	469,425	472,530	434,737	85,442	45,681								
Engines, internal-combustion:															
Less than 5 hp. 5 or more, but under 10 hp.....	30	126,046	6,183,329	99,349	4,735,049	22,980	1,325,699								
10 or more, but under 15 hp.....	26	16,322	1,966,036	9,888	1,241,925	6,257	704,681								
15 or more, but under 20 hp.....	12	2,014	462,081	1,850	314,889	1,280	295,043								
Attachments and parts.....	9	1,708	522,336	1,256	375,785	208	71,008								
Lawn mowers:															
Hand.....	17		1,000,318		897,504		237,964								
Power (including horse-drawn).....	24	1,116,135	7,310,867	1,025,884	6,827,346	87,172	613,225								
Attachments and parts.....	15	19,406	2,629,782	17,211	2,477,413	707	103,852								
Lighting plants, electric residence, etc. (complete units).....	6		405,876		408,243		(1)								
Lightning rod (feet).....	16	30,118	7,830,535	25,883	6,278,080	4,174	1,343,474								
Poultry-farm equipment:															
Brooders.....	24	9,608,123	1,232,110	9,300,292	1,217,470	(1)	(1)								
Incubators—															
Lamp type (1,000-egg and smaller).....	37	232,648	2,660,352	260,737	2,988,322	(1)	(1)								
Commercial type (over 1,000-egg, total egg capacity).....	26	96,224	1,515,129	86,714	1,365,240	7,193	154,871								
Poultry feeders.....	9	48,183,500	5,441,693	48,525,770	5,515,096	(1)	(1)								
Poultry waterers.....	27	2,436,173	1,169,355	2,398,209	1,107,362	(1)	(1)								
Other poultry-farm equipment ²	27	1,716,585	889,687	1,704,608	876,116	(1)	(1)								
Attachments and parts ³	30		1,387,207		1,382,221		(1)								
Poultry-farm equipment—Continued.															
Attachments and parts.....	11		Dollars 241,200		Dollars 233,120		Dollars 8,080								
Water systems, pneumatic (domestic):															
Deep-well—															
3-hp. and smaller.....	40	20,401	1,760,971	19,440	1,705,427	881	64,968								
Over 3-hp.....	8	576	550,312	560	542,159										
Shallow-well—															
Under 250 gals. per hour.....	29	74,544	3,783,646	68,464	3,516,234	4,621	212,676								
250-499 gals. per hour.....	26	38,038	2,214,946	36,221	2,126,914	1,140	51,094								
500 gals. per hour and over.....	22	6,209	697,634	5,991	687,828	(1)	(1)								
Attachments and parts.....	13		216,164		211,274		(1)								(1)
Pumps, water:															
Hand—															
Pitcher.....	24	329,781	516,057	281,091	428,938	39,611	74,649								
Other hand pumps.....	35	214,722	1,682,267	175,688	1,339,800	34,922	261,394								
Power—															
Horizontal type, up to and including 75 gals. per minute, 100 lbs. pressure.....	17	36,488	1,713,683	32,110	1,494,225	3,025	219,497								
Windmill pumps.....	20	91,396	668,356	81,732	586,321	10,803	88,367								
Cylinders for sale separately.....	28	203,259	665,053	183,602	585,246	20,811	109,520								
Attachments and parts.....	12		440,465		423,743		(1)								
Pump jacks.....	34	42,236	353,812	38,800	319,653	4,050	40,962								
Spraying outfits, complete:															
Hand (with tank, barrel, knapsack, etc.).....	20	272,719	1,083,370	252,638	1,044,728	18,523	65,324								
Power (not including engine).....	31	11,324	2,459,287	10,687	2,334,978	548	143,725								
Spray pumps (not included above):															
Hand (not including small spray guns).....	12	130,427	322,123	113,596	204,181	9,365	41,288								
Power.....	10	3,043	229,499	2,371	184,928	434	29,386								
Attachments and parts.....	18		640,323		595,867		26,412								
Pushcarts and hand trucks.....	18	36,401	890,090	35,134	375,642	(1)	(1)								
Silos.....	20	5,516	2,292,318	5,577	2,300,884										
Stump pullers.....	5	898	216,401	625	123,306	208	92,086								
Trucks, tongue.....	7	29,097	336,981	26,333	313,145	5,007	56,949								
Wheelbarrows:															
Wooden.....	18	125,298	619,728	120,742	592,703	(1)	(1)								
Steel (tubular).....	12	322,831	1,297,455	260,408	1,060,155	61,041	228,563								
Windmills.....	26	96,474	4,063,411	66,379	2,518,679	27,651	1,430,338								
Windmill attachments and parts.....	14		521,881		327,081		(1)								
Windmill towers.....	23	35,692	1,347,511	19,905	707,037	15,989	587,989								
Wood-sawing machines (circular).....	34	10,836	188,504	10,665	187,205	89	2,050								
Miscellaneous items ⁴			2,998,076		2,934,134		95,317								
Attachments and parts ⁵			950,208		862,227		(1)								

¹ Omitted in order to avoid disclosing data for individual establishments. Difference between production and sales in United States does not equal sales for export. (See "Sales statistics," p. —.)

² Combined in order to avoid disclosing the production and sales of individual establishments.

³ Brood coops, brooder houses, bone cutters, nests, roosts, sprouters, and miscellaneous poultry-farm supplies, etc.

⁴ The values of some of the sprayers include the values of built-in engines.

⁵ Ditchers and graders, fence stretchers, hand weeders, implement tongues, brush rakes and burners, water sprinklers, well casing, terracing implements, corn and hay knives, grass hooks, husking pins, knife and tool grinders, stone boats, small garden tools, steel wheels, power transmitters, concrete mixers (for farm use), disk sharpeners, grain augers, grain tanks, post-hole riggers and diggers, sheep shears, farm ladders, farm scales, overhead irrigation systems, drag scrapers, shovel handles, milk cans and coolers, etc. Data for grain cradles and wood-sawing machines (drag) included in these items in order to avoid disclosing the production and sales of individual establishments.

⁶ Includes attachments and parts for lighting plants, lightning rods, saw machines, etc., and miscellaneous undistributed items.

MANUFACTURE AND SALE OF FARM EQUIPMENT

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TABLE 14.—FARM EQUIPMENT MANUFACTURED—VALUE, FOR PRINCIPAL GROUPS, BY STATES: 1929, 1928, AND 1927

[This table presents statistics for all States for which separate figures can be given without disclosing the production of individual establishments. Certain of the States shown in combination, however, reported greater values than some of the States shown separately]

KIND AND STATE	1929	1928	1927	KIND AND STATE	1929	1928	1927
Plows, harrows, cultivators, and other tillage implements.....	\$82,035,065	\$82,710,303	\$57,641,483	Machines for preparing crops for market or for use.....	\$30,103,384	\$33,465,668	\$32,328,555
Illinois.....	46,804,851	31,768,427	28,295,128	Illinois.....	8,218,307	8,809,216	8,063,120
Indiana and Kentucky ¹	14,671,078	12,627,225	13,163,449	Wisconsin.....	6,213,921	⁶ 10,011,394	5,488,269
New York.....	7,848,859	6,498,140	5,052,895	Indiana.....	3,252,778	3,317,664	2,265,831
Ohio.....	2,403,408	2,188,707	2,688,131	Michigan.....	2,433,757	(⁷)	(⁸)
Wisconsin.....	2,264,207	2,741,551	1,688,550	Minnesota.....	2,414,379	2,837,869	3,718,398
Tennessee.....	1,487,685	891,006	1,199,629	Iowa.....	2,112,947	3,083,377	2,695,669
Georgia, North Carolina, and South Carolina.....	1,419,144	1,111,174	1,097,662	Ohio.....	1,792,195	1,762,830	2,115,865
California.....	1,205,272	876,189	821,958	New York.....	1,680,041	1,596,442	1,623,123
Pennsylvania.....	1,010,210	941,805	955,804	Pennsylvania.....	629,248	806,670	1,067,701
Nebraska.....	630,049	576,338	547,605	Georgia, North Carolina, Tennessee, and Virginia.....	1,482,641	547,010	742,101
Virginia.....	473,910	547,900	466,711	Kansas, Missouri, and Nebraska.....	1,471,102	576,225	⁹ 78,738
Minnesota.....	302,123	370,593	308,270	California, Colorado, and Washington.....	188,357	(¹⁰)	(¹⁰)
Iowa.....	283,431	281,136	238,882	Other States.....	213,711	110,971	4,479,740
Other States.....	1,230,742	1,290,052	1,126,809				
Planting and fertilizing machinery.....	31,145,092	26,504,967	24,560,375	Tractors, including garden tractors and motor cultivators.....	227,632,627	191,978,126	159,530,521
Indiana and Ohio.....	¹ 10,826,492	¹ 9,317,472	² 5,208,098	Illinois.....	93,529,912	³ 73,694,218	⁴ 46,332,515
Illinois.....	10,755,190	8,760,509	8,838,171	Wisconsin.....	61,960,307	47,610,454	32,328,863
Kentucky, North Carolina, and Wisconsin.....	¹ 6,675,582	5,762,437	4,161,563	California and Iowa ¹	49,352,473	35,615,586	28,471,782
New York.....	852,657	1,059,892	807,991	New York and Ohio ¹	12,705,365	110,734,687	⁵ 6,194,764
Minnesota and Pennsylvania ¹	828,519	755,891	845,993	Indiana, Michigan, and Minnesota.....	¹ 9,540,383	¹⁰ 23,874,664	¹⁰ 50,987,784
Iowa and Nebraska.....	¹ 407,826	¹ 362,577	² 451,840	Other States.....	544,067	448,417	216,913
Georgia.....	251,693	169,374	154,746				
Tennessee and Virginia ¹	99,839	95,760	58,878				
Other States.....	447,264	231,055	4,033,095				
Harvesting and haying machinery.....	106,424,575	83,349,183	72,706,007				
Illinois and Indiana.....	¹ 63,285,267	¹ 54,697,708	⁴ 44,645,879				
Michigan and Wisconsin.....	¹ 20,930,158	¹ 12,480,528	(⁵)				
Kentucky, Minnesota, and Missouri ¹	9,716,597	4,671,414	2,228,326				
California and Iowa ¹	8,022,280	8,428,948	7,796,434				
New York.....	2,826,629	2,350,772	(⁵)				
Kansas and Nebraska ¹	485,272	322,528	264,865				
Other States.....	1,158,372	497,285	17,770,503				

¹ Combined in order to avoid disclosing the production of individual establishments.
² Ohio only.
³ Iowa only.
⁴ Illinois only.
⁵ Included in "Other States."
⁶ Includes data for Michigan.
⁷ Combined with Wisconsin.
⁸ Missouri only.
⁹ Includes data for Indiana.
¹⁰ Michigan and Minnesota only.