FILES

[A preliminary report for this industry was issued under date of December 18, 1928]

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

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	36	3,948	$5,144,987	$3,135,955	$12,973,734	$9,837,779	10,979
1925	38	4,209	5,393,274	3,517,726	13,540,953	10,023,227	11,534
1923	37	4,590	5,805,294	3,840,256	13,565,444	9,725,188	11,155
1921	39	3,595	3,174,612	2,309,087	7,647,252	5,338,165	(3)
1919	50	5,767	6,192,444	4,227,880	17,616,563	13,388,683	11,897
	PER CENT OF INCREASE OR DECREASE (−)						
1925–1927	(3)	−6.2	−4.6	−10.9	−4.2	−1.9	−4.8
1923–1925	(3)	−8.3	−7.1	−8.4	−.2	3.1	3.4
1923–1927	(3)	−14.0	−11.4	−18.3	−4.4	1.2	−1.6
1919–1927	(3)	−31.5	−16.9	−25.8	−26.4	−26.5	−7.7

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Per cent not computed where base is less than 100.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927 AND 1925

TYPE	1927		1925	
	Number	Capacity	Number	Capacity
		Horsepower		*Horsepower*
Prime movers, total	355	10,979	331	11,534
Steam engines	15	5,375	21	5,940
Water turbines	1	25	1	30
Electric motors driven by purchased current	339	5,579	309	5,564
Electric motors, total	353	5,654	319	5,720
Driven by purchased current	339	5,579	309	5,564
Driven by current generated in establishment reporting	14	75	10	156
		Kilowatts		*Kilowatts*
Electric generators	1	125	2	126

TABLE 3.—FILES—PRODUCTION, BY CLASS AND VALUE: 1927 AND 1925

CLASS	1927	1925
1. File and rasp industry, all products, total value	$12,973,734	$13,540,953
2. Files and rasps	12,346,529	13,175,156
3. Other products (not normally belonging to the industry) and receipts for repair work	627,205	365,797
4. Files and rasps made as secondary products in other industries	129,299	1,059,649
Files and rasps, all industries: Total value (sum of 2 and 4)	12,475,828	14,234,805
Metal-working files and rasps	11,854,620	14,234,805
Woodworking files and rasps	95,743	
Other files and rasps	525,465	

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	36	4,259	11	300	3,948	10,979
New York	5	292	1	27	264	710
Ohio	5	462	2	30	430	794
Pennsylvania	7	974	--------	57	917	2,851
Other States [1]	19	2,531	8	186	2,337	6,624

STATE	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
			Materials and supplies	Fuel and power		
United States	$848,927	$5,144,987	$2,681,985	$453,970	$12,973,734	$9,837,779
New York	71,814	316,298	112,584	21,853	723,487	589,050
Ohio	73,856	492,157	217,987	42,806	1,100,242	839,449
Pennsylvania	188,478	1,164,039	575,022	151,705	3,090,969	2,364,242
Other States [1]	514,779	3,172,493	1,776,392	237,606	8,059,036	6,045,038

[1] Connecticut, 2 establishments; Illinois, 2; Indiana, 2; Iowa, 1; Massachusetts, 1; Michigan, 1; New Jersey, 7; Rhode Island, 3.

[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

FIREARMS

[A preliminary report for this industry was issued under date of October 31, 1928]

Description of the industry.—The firearms industry, according to the census classification, consists in the manufacture of unmounted firearms—that is, firearms which are fired from the hand or from the shoulder—together with their parts and accessories. Commercial manufacturers only are classified in the firearms industry, no data having been collected from Government establishments.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	20	6,130	$7,933,639	$5,047,555	$19,452,372	$14,404,817	15,747
1925	20	4,470	5,583,907	3,174,446	15,179,363	12,004,917	14,580
1923	21	6,204	7,592,695	3,643,914	17,664,549	14,020,635	15,639
1921	20	4,726	5,730,487	2,696,085	12,883,842	10,187,757	(2)
1919	26	11,287	13,333,495	7,613,784	30,181,370	22,567,586	26,167
	PER CENT OF INCREASE OR DECREASE (—)						
1925-1927	(3)	37.1	42.1	59.0	28.2	20.0	8.0
1923-1925	(3)	—27.9	—26.5	—12.9	—14.1	—14.4	—6.7
1923-1927	(3)	—1.2	4.5	38.5	10.1	2.7	.7
1919-1927	(3)	—45.7	—40.5	—33.7	—35.5	—36.2	—39.8

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Per cent not computed where base is less than 100.

BLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
me movers, total	675	*Horse-power* 15,747	572	*Horse-power* 14,580	881	*Horse-power* 15,639
Steam engines	17	2,211	18	1,841	19	4,008
Steam turbines	2	2,350	9	2,789		
Internal-combustion engines	2	582	2	582	2	562
Water wheels and turbines	2	290	3	365	3	265
Electric motors driven by purchased current	652	10,314	540	9,003	857	10,804
ctric motors, total	1,317	13,200	1,398	11,809	1,117	13,693
Driven by purchased current	652	10,314	540	9,003	857	10,804
Driven by current generated in establishment reporting	665	2,886	858	2,806	260	2,889
ctric generators	4	*Kilowatts* 2,626	3	*Kilowatts* 1,941	(1)	*Kilowatts* (1)

Not called for on schedule.

ABLE 3.—PRODUCTS, BY CLASS, NUMBER, AND VALUE, FOR THE UNITED STATES: 1921 TO 1927

	1927	1925	1923	1921
Firearms industry, all products, total value	$19,452,372	$15,179,363	$17,664,549	$12,883,842
Firearms and accessories	16,499,157	14,105,977	15,822,150	11,961,539
Custom work and repairing	679,861	633,418	1,842,399	922,303
Other products (not normally belonging to the industry)	2,273,354	439,968		
Firearms and accessories made as secondary products in other industries	390,198	183,338	219,077	1,775,774
earms and accessories, all industries: Total value (sum of 2 and 5)	$16,889,355	$14,289,315	$16,041,227	$13,737,313
Firearms— Total value	$15,752,814	$13,035,273	$15,455,977	$13,085,753
Pistols and revolvers— Number	229,058	282,777	284,322	450,790
Value	$2,893,952	$3,261,861	$3,624,860	$6,204,426
Rifles— Number	415,621	323,100	380,397	127,481
Value	$4,436,131	$3,056,069	$3,708,874	$1,286,506
Shotguns— Number	622,686	422,962	484,917	293,792
Value	$8,422,731	$6,717,343	$8,122,243	$5,594,821
Accessories	[1] $1,136,541	[1] $1,254,042	$585,250	[2] $651,560

Includes value of a small quantity of ordnance and ordnance accessories.
Includes value of a small number of combination shotguns and rifles, carbines, shoulder and dart whale ns, and special guns for target practice.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	20	6,885	1	754	6,130	15,747
Connecticut	8	3,390	--------	372	3,018	7,567
Massachusetts	4	1,567	--------	178	1,389	3,024
New York	4	1,872	--------	193	1,679	5,055
Other States [1]	4	56	1	11	44	101

STATE	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
			Materials and supplies	Fuel and power		
United States	$1,679,624	$7,933,639	$4,576,194	$471,361	$19,452,372	$14,404,817
Connecticut	827,955	3,858,388	2,560,971	251,966	9,616,688	6,803,751
Massachusetts	431,038	1,765,032	774,531	99,662	4,792,474	3,918,281
New York	393,851	2,241,368	1,183,861	115,355	4,836,865	3,537,649
Other States [1]	26,780	68,851	56,831	4,378	206,345	145,136

[1] Colorado, 1 establishment; Michigan, 1; Oklahoma, 1; Pennsylvania, 1.
[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

HARDWARE, NOT ELSEWHERE CLASSIFIED

[A preliminary report for this industry was issued under date of February 20, 1929]

Description of the industry.—This industry title relates to a large and ill-defined group of metal commodities which do not belong specifically to any of the other industry classifications.

The term "hardware" is of so broad general application that its use in the schedule necessarily entails misunderstanding and difference in interpretation. Obviously it would be impracticable, in drafting the schedule, either to explain in detail just what commodities the word should be understood to cover, or to list all such commodities. Furthermore, it has been found that manufacturers of a general line of metal goods of whatever description do not, in many cases, keep their records in such form as to enable them to supply separate data on their output of classes of hardware which belong to different census classifications.

Moreover, it should be borne in mind that many commodities retailed and generally regarded as hardware are not covered by this industry title. Among the more important of such items are nails and spikes, wire and wire products, small machines such as grinders and lawn mowers, plumbers' supplies, tools and cutlery, screws and bolts, sporting and athletic goods, tinware, and stoves.

Considerable quantities of hardware normally belonging to this industry are made as secondary products by establishments in more or less related industries. In many cases, however, such products are not specifically reported as hardware but are merely listed as "Other products." The value of "Hardware, not elsewhere classified," made as secondary products in other industries, as given in Table 3, does not, therefore, cover the total production of hardware in other industries.

The production figures in this report should not, therefore, be regarded as representing the total output of the respective commodities.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	485	47,834	$60,827,474	$71,877,055	$208,253,586	$136,376,531	99,674
1925	476	52,349	65,561,817	77,502,839	225,052,644	147,549,805	98,278
1923	473	52,205	63,470,745	80,597,525	215,960,129	135,362,604	84,006
1921	456	35,228	36,240,193	41,520,050	120,599,728	79,079,678	([2])
1919	585	46,180	49,273,749	62,815,358	168,661,444	105,846,086	74,240
	PER CENT OF INCREASE OR DECREASE (—)						
1925–1927	1.9	—8.6	—7.2	—7.3	—7.5	—7.6	1.4
1923–1925	.6	.3	3.3	—3.8	4.2	9.0	17.0
1923–1927	2.5	—8.4	—4.2	—10.8	—3.6	.7	18.7
1919–1927	—17.1	3.6	23.4	14.4	23.5	28.8	34.3

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927 AND 1925

TYPE	1927		1925	
	Number	Capacity	Number	Capacity
		Horse-power		*Horse-power*
Prime movers, total	8,098	99,674	6,757	98,278
Steam engines	79	15,839	105	20,818
Steam turbines	23	18,568	23	18,345
Internal-combustion engines	18	597	33	1,368
Water wheels and turbines	11	525	19	907
Electric motors driven by purchased current	7,967	64,145	6,577	56,840
Electric motors, total	9,749	79,822	8,271	78,621
Driven by purchased current	7,967	64,145	6,577	56,840
Driven by current generated in establishment reporting	1,782	15,677	1,694	21,781
		Kilowatts		*Kilowatts*
Electric generators	58	20,073	99	24,940

TABLE 3.—HARDWARE—PRODUCTION, BY CLASS AND VALUE: 1927 AND 1925

CLASS	1927	1925
1. "Hardware, not elsewhere classified" industry, all products, total value	$208,253,586	$225,052,644
2. Hardware	189,411,970	195,778,918
3. Other products (not normally belonging to the industry) and receipts for repair work	18,841,616	29,273,726
4. Hardware, not elsewhere classified, made as secondary products in other industries, value	9,474,845	14,490,685
Hardware, not elsewhere classified,[1] all industries: Total value (sum of 2 and 4)	198,886,815	210,269,603
Builders' hardware (other than locks)	42,624,749	89,961,105
Locks	37,281,124	
Casket hardware	4,755,878	5,127,795
Furniture and cabinet hardware	10,693,783	14,268,669
Piano and organ hardware	1,232,370	1,702,729
Saddlery and harness hardware	5,510,458	6,618,220
Trunk and suitcase hardware	3,859,004	4,143,178
Vehicle hardware—		
Motor-vehicle	50,178,037	44,954,758
Other vehicle	666,327	
Other and undistributed [2]	42,085,085	43,493,149

[1] See "Description of the industry," p. 905.
[2] Includes insulated containers (vacuum bottles, jugs, etc.), valued at $5,053,690 in 1927 and $4,857,235 in 1925.

TABLE 4.—HARDWARE—PRODUCTION, BY CLASS AND VALUE, BY STATES: 1927

[This table presents separate statistics for all States for which they can be given without disclosing the output of individual establishments. Some of the States shown in combination, however, outranked some of those for which separate figures are given]

CLASS AND STATE	Value
Hardware, not elsewhere classified, aggregate value [1]	$198,886,815
Builders', other than locks, total	42,624,749
California	572,570
Connecticut	15,753,219
Illinois	10,562,238
Indiana, Iowa, and Minnesota	199,223
Massachusetts	314,057
Michigan	1,253,679
Missouri and Nebraska	963,554
New Hampshire, Vermont, and Washington	108,057
New Jersey	1,125,613
New York	2,475,157
Ohio	2,680,777
Pennsylvania	6,341,081
Wisconsin	275,524
Casket, total	4,755,878
California, Iowa, and Michigan	279,198
Connecticut	1,231,429
Illinois	1,719,303
Massachusetts	419,736
New York and Ohio	636,738
Pennsylvania	469,474
Furniture and cabinet, total	10,693,783
California and Missouri	238,031
Connecticut	2,737,992
Illinois	3,567,333
Massachusetts, New Hampshire, and Rhode Island	140,554
Michigan	2,071,430
New Jersey, Ohio, and Wisconsin	828,679
New York	775,874
Pennsylvania	333,890
Locks, total	37,281,124
California, Colorado, and Washington	195,267
Connecticut	23,144,989
Illinois	2,510,799
Indiana, Idaho, Kentucky, and Virginia	1,726,802
Massachusetts, Missouri, Rhode Island, and Wisconsin	1,130,220
Michigan	841,414
New Jersey	93,499
New York	1,723,596
Ohio	969,580
Pennsylvania	4,944,958
Piano and organ, total	1,232,370
Connecticut and Massachusetts	786,459
Illinois, Nebraska, and Ohio	83,889
New Jersey, New York, and Pennsylvania	362,022
Saddlery and harness, total	$5,510,458
Connecticut and New York	3,566,828
Illinois, Missouri, and Wisconsin	657,100
Indiana	408,915
New Jersey and Pennsylvania	136,376
Ohio	647,664
Other States	93,575
Trunk and suitcase, total	3,859,004
Connecticut	1,598,616
Illinois, Ohio, and Wisconsin	1,291,617
New Jersey, Pennsylvania, and Virginia	157,272
New York	743,254
Other States	68,245
Vehicle:	
Motor-vehicle, total	50,178,037
California, Colorado, and Missouri	13,779
Connecticut	3,405,921
Illinois	1,608,932
Indiana	1,056,140
Kentucky, New Jersey, and Pennsylvania	1,061,265
Massachusetts	790,261
Michigan	31,333,054
New York	4,226,607
Ohio	5,207,218
Wisconsin	1,474,860
Other vehicle, total	666,327
Connecticut, New Jersey, and New York	161,055
Iowa, Kentucky, and Missouri	478,709
Other States	26,563
Other and undistributed	42,085,085
Alabama, Florida, and Georgia	154,193
California	84,603
Connecticut	9,994,070
Illinois	6,430,510
Indiana, Iowa, and Kansas	2,165,748
Kentucky, Tennessee, and Texas	480,982
Maine and New Hampshire	1,021,303
Massachusetts	1,658,618
Michigan	2,059,360
Missouri	382,324
New Jersey	3,648,213
New York	4,961,035
Ohio	3,774,111
Pennsylvania	4,788,310
Rhode Island	239,664
Wisconsin	141,773
Other States	100,268

[1] This aggregate is the sum of all the items in the columns beneath except those which are underlined.

TABLE 5.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	485	55,050	188	7,028	47,834	99,674
California	18	284	16	49	219	464
Connecticut	57	21,261	9	3,051	18,201	36,510
Illinois	88	6,668	37	1,005	5,626	10,971
Indiana	13	685	4	71	610	2,224
Iowa	7	511	2	54	455	749
Kentucky	3	206	--------	23	183	194
Massachusetts	29	867	19	117	731	1,711
Michigan	30	7,201	10	624	6,567	15,044
Missouri	12	518	3	63	452	1,167
New Jersey	26	1,450	8	221	1,221	2,847
New York	73	4,062	29	330	3,703	7,223
Ohio	39	3,977	11	456	3,510	8,514
Pennsylvania	45	5,689	19	715	4,955	8,700
Rhode Island	6	76	5	16	55	80
Virginia	3	112	--------	7	105	149
Wisconsin	16	773	4	133	636	1,305
Other States [1]	20	710	12	93	605	1,822

STATE	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
			Materials and supplies	Fuel and power		
United States	$17,313,654	$60,827,474	$68,449,109	$3,427,946	$208,253,586	$136,376,531
California	82,388	328,212	241,775	11,781	880,883	627,327
Connecticut	6,319,059	22,298,701	19,912,500	1,261,220	68,012,785	46,839,065
Illinois	2,434,214	6,994,518	9,812,119	371,452	29,459,127	19,275,556
Indiana	165,959	663,125	1,602,653	41,499	3,380,867	1,736,715
Iowa	124,456	453,641	786,891	33,447	2,098,776	1,278,438
Kentucky	76,840	207,242	259,211	5,424	875,404	610,769
Massachusetts	246,459	926,109	1,098,665	84,786	3,079,725	1,896,274
Michigan	1,796,679	9,966,634	12,290,646	544,584	38,121,712	25,286,482
Missouri	244,573	505,661	734,193	40,494	1,909,631	1,134,944
New Jersey	622,930	1,537,115	2,281,508	85,305	6,251,015	3,884,202
New York	1,654,019	4,900,562	6,333,596	251,424	17,228,921	10,643,901
Ohio	1,313,530	4,543,301	5,012,616	297,890	13,917,382	8,606,876
Pennsylvania	1,617,366	5,858,173	6,084,432	269,628	17,273,763	10,919,703
Rhode Island	24,883	74,193	173,162	4,458	342,958	165,338
Virginia	49,841	81,339	95,545	5,574	281,756	180,637
Wisconsin	319,721	804,043	905,729	40,252	2,876,154	1,930,173
Other States [1]	220,737	684,905	823,868	78,728	2,262,727	1,360,131

[1] Alabama, 1 establishment; Colorado, 2; Florida, 1; Georgia, 1; Kansas, 1; Maine, 2; Minnesota, 2; Nebraska, 1; New Hampshire, 2; Oklahoma, 1; Tennessee, 1; Texas, 1; Vermont, 2; Washington, 2.

[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

IRON AND STEEL

Relationship of the industries.—A large part of the pig iron produced by blast furnaces is delivered, mostly in a molten state, to the steel departments of the same establishments, but for census purposes the blast-furnace departments are treated as separate units. A transfer value is assigned to the pig iron thus delivered, and this transfer value is included in the value of products for the blast furnaces and in the cost of materials for the steel works.

Duplication in combined cost of materials and combined value of products.—The combined cost of materials and the combined value of products for the two industries include a large amount of duplication resulting from the use of the products of blast furnaces as materials by steel works. In other words, if these industries were treated as one, the net cost of materials and the net value of products would be materially less than the combined totals for the respective items as they appear in the table below.

Combined power-equipment statistics.—Because of the close relationship of the "Blast furnace" and "Steel works and rolling mills" industries, and particularly because of the fact that in many cases the power for blast furnaces and rolling mills operated under a common ownership is generated in a central power plant, it is impossible to obtain complete data separately for the power equipment used in the two industries. At former censuses the data for power equipment in such central power plants were distributed between blast furnaces and rolling mills by means of estimates, but this practice has been abandoned, and the prime-mover statistics for the two industries are given only in combination in this report.

TABLE 1.—COMBINED SUMMARY FOR BLAST FURNACES AND STEEL WORKS AND ROLLING MILLS, FOR THE UNITED STATES: 1919 TO 1927

[For separate summary statistics for the two industries, see Table 1, p. 912, and Table 1, p. 923]

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture[1]	Horsepower
1927	602	389, 270	$645, 533, 998	$2, 269, 210, 331	$3, 488, 744, 476	$1, 219, 534, 145	6, 781, 058
1925	595	[2] 399, 914	[2] 660, 297, 150	2, 429, 378, 098	3, 711, 354, 460	1, 281, 976, 362	6, 143, 927
1923	658	424, 913	696, 760, 521	2, 872, 027, 903	4, 161, 938, 011	1, 289, 910, 108	5, 999, 941
1921	628	254, 213	354, 356, 924	1, 366, 174, 970	1, 901, 430, 596	535, 255, 626	([3])
1919	695	416, 748	711, 406, 825	2, 301, 862, 254	3, 623, 368, 934	1, 321, 506, 680	5, 399, 574
	PER CENT OF INCREASE OR DECREASE (−)						
1925-1927	1. 2	−2. 7	−2. 2	−6. 6	−6. 0	−4. 9	10. 4
1923-1925	−9. 6	−5. 9	−5. 2	−15. 4	−10. 8	−. 6	2. 4
1923-1927	−8. 5	−8. 4	−7. 4	−21. 0	−16. 2	−5. 5	13. 0
1919-1927	−13. 4	−6. 6	−9. 3	−1. 4	−3. 7	−7. 7	25. 6

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not strictly comparable with corresponding figure for 1927 and for years prior to 1925. (See footnote 2, Table 1, p. 912.)
[3] Not called for on schedule.

TABLE 2.—BLAST-FURNACE AND STEEL-WORKS AND ROLLING-MILL INDUSTRIES—COMBINED STATISTICS FOR PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

[Figures combined for the "Blast Furnace" and "Steel Works and Rolling Mills" industries, because of the fact that in many cases the power for blast furnaces and steel works is generated in a central power plant and separate power-equipment data can not be obtained]

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
		Horsepower		*Horsepower*		*Horsepower*
Prime movers, total	57,496	6,781,058	51,393	6,143,927	37,051	5,999,941
Steam engines	4,057	2,510,947	4,772	2,776,315	} 7,028	4,329,596
Steam turbines	996	1,793,740	1,035	1,339,718		
Internal-combustion engines	270	557,295	319	574,447	371	614,126
Water wheels and turbines	24	2,350	25	2,738	52	6,305
Electric motors driven by purchased current	52,149	1,916,726	45,242	1,450,709	29,600	1,049,914
Electric motors, total	147,336	5,229,206	128,510	4,143,914	110,540	3,799,588
Driven by purchased current	52,149	1,916,726	45,242	1,450,709	29,600	1,049,914
Driven by current generated in establishment reporting	95,187	3,312,480	83,268	2,693,205	80,940	2,749,674
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	996	1,497,374	1,091	1,274,856	(1)	(1)

[1] Not called for on schedule.

TABLE 3.—BLAST-FURNACE AND STEEL-WORKS AND ROLLING-MILL INDUSTRIES—COMBINED STATISTICS FOR PRIME MOVERS, BY RATED CAPACITY, BY STATES: 1927

STATE	Rated capacity (horsepower)	STATE	Rated capacity (horsepower)
United States	6,781,058	New Jersey	84,647
Alabama	301,947	New York	474,390
California	55,892	Ohio	1,446,240
Illinois	443,248	Pennsylvania	2,461,477
Indiana	608,379	Tennessee	17,411
Kentucky	76,687	West Virginia	160,639
Michigan	106,399	Wisconsin	49,270
Missouri	34,223	Other States	460,209

BLAST FURNACES

[A preliminary report for the industry was issued under date of April 8, 1929]

Description of the industry.—This classification covers the manufacture, from ore and scrap, of pig iron, ferro-alloys—spiegeleisen, ferromanganese, ferrophosphorus, ferrosilicon, etc.—and castings made direct from the furnace. (The manufacture of electric ferro-alloys is included in the "Chemicals" industry.) In many cases a single establishment operates both blast furnaces and steel works, but, as already explained ("Relationship of the industries," p. 909), the statistics for such establishments have been distributed so as to show figures for the blast-furnace operations separately.

Ferro-alloys.—At the census for 1914 the classification was the same as at that for 1921 but for 1919 the manufacture of ferro-alloys (blast-furnace and electric) was treated as a separate industry, and for this reason the statistics for 1919 are not strictly comparable with those for other years. In the statement following are given, for 1919, combined general statistics for the blast-furnace industry and the blast-furnace branch of the ferro-alloy industry as then classified. These figures are comparable with those shown in Table 1 for 1927, 1925, 1923, and 1921. The total production of ferro-alloys, by kind, manufactured in blast furnaces and in electric furnaces, is shown for 1925 and 1927 in Table 12, page 921.

Blast furnaces, including those classified in the ferro-alloys industry—General statistics: 1919

Number of establishments	209
Wage earners (average for the year)	43, 296
Wages	$76, 445, 616
Paid for contract work	$692, 293
Cost of materials, supplies, fuel, and power	$644, 021, 264
Value of products	$824, 383, 203
Value added by manufacture	$180, 361, 939

Charcoal furnaces (Tables 2 and 3).—The production of charcoal iron was at one time the most important branch of the industry, and in 1849 the amount of charcoal pig iron smelted was nearly equal to the production by all other fuels combined. Since that year, however, the relative importance of charcoal iron has decreased, until in 1927 it contributed less than one-half of 1 per cent of the total pig-iron output of blast furnaces.

Active and idle furnaces (Tables 8 and 9).—As explained in the headnotes to Tables 8 and 9, the statistics as to number and capacity of blast furnaces refer to all furnaces, including idle ones, in plants in which at least a part of the furnaces were in operation at some time within the census year. They do not, however, include data for plants in which no furnaces were in operation at any time within the census year. Thus the numbers of furnaces shown are somewhat larger than the numbers of active furnaces but are somewhat smaller than the total numbers of all furnaces, both active and idle, in existence.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6. For capacity of prime movers, see Table 2, p. 910; no separate statistics for blast furnaces]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]
1927	116	27,958	$44,258,499	$579,555,036	$708,904,238	$129,349,202
1925	122	[2] 29,188	[2] 45,312,168	617,416,880	765,286,229	147,869,349
1923	169	36,712	58,935,384	827,629,665	1,007,613,340	179,983,675
1921	134	18,698	29,369,685	361,049,516	419,771,244	58,721,728
1919	195	41,660	73,769,395	621,286,496	794,466,558	173,180,062
	PER CENT OF DECREASE					
1925-1927	−4.9	−4.2	−2.3	−6.1	−7.4	−12.5
1923-1925	−27.8	−20.5	−23.1	−25.4	−24.0	−17.8
1923-1927	−31.4	−23.8	−24.9	−30.0	−29.6	−28.1
1919-1927	−40.5	−32.9	−40.0	−6.7	−10.8	−25.3

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] The statistics for wage earners and wages for 1925 are not strictly comparable with those for 1927 and the years preceding 1925 for the reason that some of the blast-furnace operators did not include in their reports for 1925 data for wage earners engaged in relining blast furnaces, but did include them in reports for other census years.

TABLE 2.—SUMMARY FOR ESTABLISHMENTS PRODUCING CHARCOAL IRON, FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	8	437	$481,895	$3,429,809	$4,139,591	$709,782	4,293
1925	8	413	459,083	4,286,574	5,210,030	923,356	5,089
1923	14	657	758,423	6,627,306	7,738,427	1,111,121	7,007
1921	15	457	418,748	2,963,157	3,052,998	89,841	(2)
1919	19	1,440	1,797,007	9,152,805	11,587,066	2,434,261	9,458
	PER CENT OF INCREASE OR DECREASE (−)						
1925-1927	(3)	5.8	5.0	−20.0	−20.5	−23.1	−15.6
1923-1925	(3)	−37.1	−39.5	−35.3	−32.7	−16.9	−27.4
1923-1927	(3)	−33.5	−36.5	−48.2	−46.5	−36.1	−38.7
1919-1927	(3)	−69.7	−73.2	−62.5	−64.3	−70.8	−54.6

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Per cent not computed where base is less than 100.

TABLE 3.—PIG IRON—PRODUCTION, BY KIND OF SMELTING FUEL, FOR THE UNITED STATES: 1921 TO 1927

[No data are included in this table for ferro-alloys produced by the electric-furnace process, nor for ferro-alloys made as secondary products by establishments in other industries]

	1927	1925	1923	1921
Pig iron:				
Total tons (2,240 pounds)	36,230,420	36,495,562	40,162,855	16,618,493
Total value	$688,641,808	$744,733,899	$984,983,493	$408,581,533
Average per ton	$19.01	$20.41	$24.52	$24.59
Classified according to smelting fuel:				
Coke [1]—				
Tons	36,062,847	36,299,824	39,908,639	16,524,726
Value	$684,555,913	$739,584,978	$977,253,466	$405,530,979
Average per ton	$18.98	$20.37	$24.49	$24.54
Charcoal—				
Tons	167,573	195,738	254,216	93,767
Value	$4,085,895	$5,148,921	$7,730,027	$3,050,554
Average per ton	$24.38	$26.31	$30.40	$32.53

[1] Includes a small tonnage produced by a combination of coke and coal.

TABLE 4.—PIG IRON—PRODUCTION, FOR CONSUMPTION AND FOR SALE, FOR THE UNITED STATES: 1927, 1925, AND 1923

[No data are included in this table for ferro-alloys produced by the electric-furnace process, nor for ferro-alloys made as secondary products by establishments in other industries]

	1927	1925	1923	PER CENT DISTRIBUTION			PER CENT OF INCREASE OR DECREASE (−)	
				1927	1925	1923	1925–1927	1923–1925
Number of establishments, total	116	122	169	------	------	------	−4.9	−27.8
Producing for consumption (or for consumption and sale)	69	71	88	59.5	58.2	52.1	(1)	(1)
Producing for sale only	47	51	81	40.5	41.8	47.9	(1)	(1)
Pig-iron production, tons (2,240 pounds), total	36,230,420	36,495,562	40,162,855	100.0	100.0	100.0	−0.7	−9.1
For consumption in other plants of same company	26,855,811	27,715,651	29,559,662	74.1	75.9	73.6	−3.1	−6.2
For sale	9,374,609	8,779,911	10,603,193	25.9	24.1	26.4	6.8	−17.2

[1] Per cent not computed where base is less than 100.

TABLE 5.—PIG IRON AND FERRO-ALLOYS—PRODUCTION IN THE BLAST-FURNACE INDUSTRY, BY GRADES, FOR THE UNITED STATES: 1927, 1925, AND 1923

GRADE	TONS (2240 POUNDS)			PER CENT DISTRIBUTION			PER CENT OF INCREASE OR DECREASE (−)	
	1927	1925	1923	1927	1925	1923	1925–1927	1923–1925
Pig-iron and blast-furnace ferro-alloys, total	36,230,420	36,495,562	40,162,855	100.0	100.0	100.0	−0.7	−9.1
Basic	20,163,521	28,780,490	30,604,173	55.7	78.9	76.2	−2.5	−6.0
Bessemer	7,906,669			21.8				
Foundry	5,380,296	5,182,279	6,791,418	14.9	14.2	16.9	3.8	−23.7
Malleable	1,757,382	1,575,057	1,552,682	4.8	4.3	3.9	11.6	1.4
Low-phosphorus (below 0.04 per cent)	361,954	269,822	310,888	1.0	.8	.8	34.1	−13.2
Forge or mill	144,558	233,634	278,682	.4	.6	.7	−38.1	−16.2
White, mottled, and miscellaneous, and ferro-alloys [1]	481,141	409,783	549,952	1.3	1.1	1.4	17.4	−25.5
Direct castings	34,899	44,497	75,060	.1	.1	.2	−21.6	−40.7

[1] Not including ferro-alloys made in electric furnaces nor those made as secondary products by establishments in other industries. The total production of ferro-alloys in all industries during the last 3 census years was as follows: 1927, 678,324 long tons; 1925, 564,152 long tons; 1923, 607,947 long tons. (See Table 12, p. 921.)

TABLE 6.—PIG IRON—PRODUCTION, BY METHOD OF DELIVERY OR CASTING, FOR THE UNITED STATES AND FOR PENNSYLVANIA AND OHIO: 1927, 1925, AND 1923

[No data are included in this table for ferro-alloys produced by the electric-furnace process, nor for ferro-alloys made as secondary products by establishments in other industries]

METHOD AND STATE	NUMBER OF ESTABLISHMENTS			PRODUCTION, TONS (2240 POUNDS)			PER CENT DISTRIBUTION		
	1927	1925	1923	1927	1925	1923	1927	1925	1923
United States	116	122	169	36,230,420	36,495,562	40,162,855	100.0	100.0	100.0
Delivered molten	58	58	58	22,997,927	23,689,189	24,660,813	63.5	64.9	61.4
Machine cast	90	90	101	11,290,501	10,476,720	11,625,650	31.2	28.7	28.9
Sand cast	25	28	73	1,286,616	1,731,011	3,397,693	3.6	4.8	8.5
Chill cast	12	15	15	620,477	554,145	403,639	1.7	1.5	1.0
Direct castings	33	32	42	34,899	44,497	75,060	.1	.1	.2
Pennsylvania	33	36	53	11,787,957	12,450,103	14,739,162	100.0	100.0	100.0
Delivered molten	19	21	21	8,399,247	9,105,000	10,106,955	71.3	73.1	68.6
Machine cast	31	31	41	3,122,549	3,010,506	4,008,225	26.5	24.2	27.2
Sand and chill cast, and direct castings	15	16	29	266,161	334,597	623,982	2.2	2.7	4.2
Ohio	28	27	38	8,502,249	8,866,066	9,370,186	100.0	100.0	100.0
Delivered molten	18	17	16	5,247,140	5,729,822	5,736,023	61.7	64.6	61.2
Machine cast	26	25	27	3,145,509	3,029,482	3,123,017	37.0	34.2	33.3
Sand and chill cast, and direct castings	9	9	20	109,600	106,762	511,146	1.3	1.2	5.5
Other States	55	59	78	15,940,214	15,179,393	16,053,507	100.0	100.0	100.0
Delivered molten	21	20	21	9,351,540	8,854,367	8,817,835	58.7	58.4	54.9
Machine cast	33	34	33	5,022,443	4,436,732	4,494,408	31.5	29.2	28.0
Sand and chill cast, and direct castings	35	37	59	1,566,231	1,888,294	2,741,264	9.8	12.4	17.1

TABLE 7.—PIG IRON—PRODUCTION, BY STATES: 1921 TO 1927

[No data included in this table for establishments producing ferro-alloys by the electric-furnace process nor for establishments in other industries which make ferro-alloys as secondary products]

STATE	Census year	Number of active furnaces	PRODUCTION			Value
			Tons (2,240 pounds)	Per cent of total	Rank [1]	
United States	1927	255	36,230,420	100.0	--------	$688,641,808
	1925	285	36,495,562	100.0	--------	744,733,899
	1923	350	40,162,855	100.0	--------	984,983,493
	1921	251	16,618,493	100.0	--------	408,581,533
Pennsylvania	1927	84	11,787,957	32.5	1	239,415,692
	1925	100	12,450,103	34.1	1	268,864,529
	1923	127	14,739,162	36.7	1	367,539,202
	1921	91	6,261,998	37.7	1	161,336,441
Ohio	1927	52	8,502,249	23.5	2	154,949,757
	1925	57	8,866,066	24.3	2	174,153,680
	1923	69	9,370,186	23.3	2	227,492,537
	1921	53	3,799,643	22.9	2	90,983,785
Illinois	1927	21	3,588,813	9.9	3	68,457,394
	1925	23	3,604,255	9.9	3	74,135,025
	1923	23	3,839,055	9.6	3	97,714,396
	1921	17	1,612,620	9.7	4	38,572,937
Indiana	1927	17	3,451,003	9.5	4	65,649,319
	1925	17	3,353,217	9.2	4	64,716,341
	1923	16	3,022,227	7.5	4	70,736,528
	1921	13	1,650,733	9.9	3	36,100,354
Alabama	1927	25	2,778,302	7.7	5	48,702,154
	1925	29	2,830,016	7.8	5	53,545,229
	1923	32	2,791,976	7.0	5	62,985,991
	1921	23	1,210,596	7.3	5	28,482,713
New York	1927	20	2,388,490	6.6	6	41,238,557
	1925	20	2,087,896	5.7	6	37,987,217
	1923	24	2,652,412	6.6	6	61,649,356
	1921	16	866,748	5.2	6	20,635,223
Michigan	1927	10	751,518	2.1	8	14,975,847
	1925	10	767,142	2.1	8	16,983,195
	1923	13	794,059	2.0	7	20,608,124
	1921	9	219,168	1.3	11	6,647,847
Tennessee	1927	4	127,068	.3	12	3,536,051
	1925	4	104,261	.2	15	2,646,409
	1923	10	232,821	.6	14	6,647,530
	1921	4	13,718	.1	17	569,050
Other States	1927	[2] 22	2,855,020	7.9	--------	51,717,037
	1925	25	2,432,606	6.7	--------	51,702,274
	1923	36	2,720,957	6.8	--------	69,609,829
	1921	25	983,269	5.9	--------	25,253,183

[1] Statistics for Maryland, West Virginia, Colorado, Minnesota, Massachusetts, Wisconsin, Virginia, Utah, and Kentucky, which ranked in value seventh, ninth, tenth, eleventh, thirteenth, fourteenth, fifteenth, sixteenth, and seventeenth, respectively, for 1927, can not be given without disclosing the output of individual establishments.

[2] Colorado, 4 furnaces; Kentucky, 1; Maryland, 6; Massachusetts, 1; Minnesota, 2; Utah, 1; Virginia. 2; West Virginia, 3; Wisconsin, 2.

TABLE 8.—BLAST FURNACES REPORTED BY ACTIVE ESTABLISHMENTS—NUMBER, BY CAPACITY GROUPS, BY STATES: 1927, 1925, AND 1923

[Covers all furnaces, both active and idle, in plants in which any furnaces were operated during any part of the year. See "Active and idle furnaces," p. 911]

STATE	Census year	TOTAL		DAILY-CAPACITY GROUPS (TONS OF PIG IRON)					
		Number	Daily capacity	Less than 200	200 to 299	300 to 399	400 to 499	500 to 599	600 and over
United States:									
Number of furnaces	1927	292	------	18	20	34	48	75	97
	1925	310	------	25	28	44	51	115	47
	1923	368	------	51	52	58	55	139	13
Aggregate daily capacity, tons (2,240 pounds)	1927	------	142,016	1,910	4,805	11,367	20,830	39,037	64,067
	1925	------	136,086	3,104	6,702	14,540	22,408	59,964	29,368
	1923	------	141,555	5,776	12,487	19,221	24,042	72,132	7,897
Alabama	1927	27	8,410	3	9	7	6	2	------
	1925	31	9,370	4	12	8	2	5	------
	1923	36	10,466	6	16	6	2	6	------
Colorado	1927	5	2,150	------	1	------	4	------	------
	1925	5	2,150	------	1	------	4	------	------
	1923	5	1,600	------	1	4	------	------	------
Illinois	1927	25	14,697	------	1	------	5	4	15
	1925	25	13,700	------	1	1	5	5	13
	1923	26	13,205	1	1	2	3	15	4
Indiana	1927	18	11,845	------	------	------	------	1	17
	1925	17	10,320	------	------	------	------	3	14
	1923	16	8,680	------	------	------	------	15	1
Kentucky	1927	2	651	------	------	2	------	------	------
	1925	3	900	------	2	1	------	------	------
	1923	3	870	------	2	1	------	------	------
Maryland	1927	6	2,600	------	------	------	4	2	------
	1925	6	2,600	------	------	------	4	2	------
	1923	6	2,600	------	------	------	4	2	------
Massachusetts	1927	1	500	------	------	------	------	1	------
	1925	------	------	------	------	------	------	------	------
	1923	1	15	1	------	------	------	------	------
Michigan	1927	10	2,345	6	------	1	1	2	------
	1925	10	2,262	6	------	2	------	2	------
	1923	13	2,514	9	------	1	1	2	------
Minnesota	1927	3	1,275	------	------	1	2	------	------
	1925	3	1,275	------	------	1	2	------	------
	1923	3	1,150	------	------	1	2	------	------
New Jersey	1927	------	------	------	------	------	------	------	------
	1925	------	------	------	------	------	------	------	------
	1923	3	1,150	1	------	------	------	2	------
New York	1927	24	10,850	------	2	7	4	7	4
	1925	24	9,996	------	1	10	4	9	------
	1923	25	9,990	------	3	10	2	10	------
Ohio	1927	60	31,663	3	1	6	9	14	27
	1925	60	28,988	3	1	8	10	26	12
	1923	70	29,449	6	5	12	12	31	4
Pennsylvania	1927	98	51,265	2	3	6	13	42	32
	1925	108	50,027	5	6	9	18	63	7
	1923	132	53,903	12	16	17	28	56	3
Tennessee	1927	5	650	3	2	------	------	------	------
	1925	5	635	5	------	------	------	------	------
	1923	11	12,35	8	3	------	------	------	------
Utah	1927	1	350	------	------	1	------	------	------
	1925	1	350	------	------	1	------	------	------
	1923	------	------	------	------	------	------	------	------
Virginia	1927	2	315	1	1	------	------	------	------
	1925	5	860	2	3	------	------	------	------
	1923	8	1,600	4	4	------	------	------	------
West Virginia	1927	3	1,800	------	------	1	------	------	2
	1925	4	1,603	------	1	1	1	------	1
	1923	4	1,574	------	1	1	1	------	1
Wisconsin	1927	2	650	------	------	2	------	------	------
	1925	3	1,050	------	------	2	1	------	------
	1923	6	1,554	3	------	3	------	------	------

TABLE 9.—BLAST FURNACES REPORTED BY ACTIVE ESTABLISHMENTS—NUMBER, BY SIZE GROUP, BY STATES: 1927, 1925, AND 1923

[Covers all furnaces, both active and idle, in plants in which any furnaces were operated during any part of the year. See "Active and idle furnaces," p. 911]

STATE	Census year	TOTAL		SIZE GROUP (CAPACITY IN CUBIC FEET)												
		Number of furnaces	Capacity (cubic feet)	Less than 9,000	9,000 to 10,999	11,000 to 12,999	13,000 to 14,999	15,000 to 16,999	17,000 to 18,999	19,000 to 20,999	21,000 to 22,999	23,000 to 24,999	25,000 to 26,999	27,000 to 28,999	29,000 to 30,999	31,000 and over
United States:																
Total number of furnaces	1927	292		10	14	20	14	19	18	25	31	40	40	26	18	17
	1925	310		11	20	25	18	24	20	26	32	57	47	19	3	8
	1923	368		31	30	37	27	25	28	30	46	57	40	9	1	7
Total capacity	1927		6,261,345	48,769	142,076	242,125	196,250	304,231	321,162	497,423	682,799	963,802	1,031,205	730,579	536,119	564,805
	1925		6,251,553	61,434	203,530	301,043	248,199	383,086	358,545	516,589	704,169	1,370,292	1,211,585	532,235	90,367	270,479
	1923		6,719,561	164,132	299,787	447,174	371,284	398,114	501,949	600,648	1,020,209	1,369,785	1,028,587	249,208	30,550	238,134
Alabama	1927	27	460,719	1	1	5	5	6	1	3	1		1		1	2
	1925	31	482,099	2	2	7	7	5	1	2	1	1	2			1
	1923	36	522,020	4	4	8	7	5	1	2	1	2	1			1
Colorado	1927	5	97,561			1				1	3					
	1925	5	97,561			1				1	3					
	1923	5	87,833		1				2	1	1					
Illinois	1927	25	572,496	1				3	2	3		5	6	4	1	
	1925	25	560,705		1			4	2	3		4	8	3		
	1923	26	570,875		1			6	1	3		4	9	2		
Indiana	1927	18	471,648					1		2		2	4	7	1	1
	1925	17	431,186					1		2		3	5	5	1	
	1923	16	404,569						1	2		6	3	2		2
Kentucky	1927	2	21,394		2											
	1925	3	33,036		2	1										
	1923	3	33,392		2	1										
Maryland	1927	6	162,410						2				2			2
	1925 [1]	6	142,000					1	2				2			1
	1923 [1]	6	123,000						4				2			
Massachusetts	1927	1	20,000							1						
	1925															
	1923	1	1,484	1												

[1] Figures estimated in part for Maryland for 1925 and 1923.

TABLE 9.—BLAST FURNACES REPORTED BY ACTIVE ESTABLISHMENTS—NUMBER, BY SIZE GROUP, BY STATES: 1927, 1925, AND 1923—Con.

[Covers all furnaces, both active and idle, in plants in which any furnaces were operated during any part of the year. See "Active and idle furnaces," p. 911]

STATE	Census year	TOTAL		SIZE GROUP (CAPACITY IN CUBIC FEET)												
		Number of furnaces	Capacity (cubic feet)	Less than 9,000	9,000 to 10,999	11,000 to 12,999	13,000 to 14,999	15,000 to 16,999	17,000 to 18,999	19,000 to 20,999	21,000 to 22,999	23,000 to 24,999	25,000 to 26,999	27,000 to 28,999	29,000 to 30,999	31,000 and over
Michigan	1927	10	107,712	5	1		1		1				2			
	1925	10	113,726	5	1				2				2			
	1923	13	121,710	8	1			2					2			
Minnesota	1927	3	53,039		1						2					
	1925	3	53,039		1						2					
	1923	3	52,555		1						2					
New Jersey	1927															
	1925															
	1923	3	57,646			1					2					
New York	1927	24	485,791		1	1	1	2	6	2	2	4	2	1	2	
	1925	24	445,981		2	2		5	5	1	2	5	1	1		
	1923	25	443,202		3	2	2	4	4	1	6	3				
Ohio	1927	60	1,329,500	2	3	4	3	2	3	8	5	5	7	7	7	4
	1925	60	1,244,314	2	4	4	3	2	4	9	5	13	6	4	2	2
	1923	70	1,298,862	4	7	7	5	2	7	7	13	10	3	4	1	
Pennsylvania	1927	98	2,297,783		2	6	1	4	3	5	18	23	16	6	6	8
	1925	108	2,411,326		3	7	4	3	4	8	19	29	21	6		4
	1923	132	2,706,043	3	6	11	9	5	7	14	21	31	20	1		4
Tennessee	1927	5	55,140	1	1	1	2									
	1925	5	55,780	2	1			2								
	1923	11	78,428	7	1	3										
Utah	1927	1	15,565					1								
	1925	1	15,565					1								
	1923															
Virginia	1927	2	23,000		1		1									
	1925	5	59,452		2		3									
	1923	8	93,989	1	2	1	4									
West Virginia	1927	3	65,630			1						1		1		
	1925	4	70,075			2						2				
	1923	4	65,235			2			1			1				
Wisconsin	1927	2	21,957		1	1										
	1925	3	35,708		1	1	1									
	1923	6	58,718	3	1	1		1								

TABLE 10.—THE BLAST-FURNACE INDUSTRY—DETAILED STATISTICS OF PRODUCTION, FOR SELECTED STATES: 1927

[Ton, 2,240 pounds]

PRODUCT	United States	Alabama	Illinois	Indiana	Ohio	Pennsylvania
Number of establishments	116	12	6	3	28	33
PRODUCTS						
Total value	$708, 904, 238	$49, 455, 982	$70, 943, 000	$68, 506, 841	$159, 719, 253	$244, 501, 253
Pig iron (including ferro-alloys):						
Total tons	36, 230, 420	2, 778, 302	3, 588, 813	3, 451, 003	8, 502, 249	11, 787, 957
Total value	$688, 641, 808	$48, 702, 154	$68, 457, 394	$65, 649, 319	$154, 949, 757	$239, 415, 692
For consumption in other plants of same company—						
Tons	26, 855, 811	1, 440, 449	2, 402, 126	3, 451, 003	6, 441, 477	9, 484, 189
Assigned value	$495, 648, 872	$25, 050, 274	$45, 877, 576	$65, 649, 319	$116, 642, 580	$180, 759, 501
For sale—						
Tons	9, 374, 609	1, 337, 853	1, 186, 687		2, 060, 772	2, 303, 768
Value	$192, 992, 936	$23, 651, 880	$22, 579, 818		$38, 307, 177	$58, 656, 191
Blast-furnace gas used as fuel for steam boilers and for gas engines, coal equivalent, total tons (2,000 pounds)	10, 989, 100	1, 223, 391	1, 075, 971	1, 021, 286	2, 052, 715	3, 664, 359
Consumed by blast-furnace departments, tons	6, 677, 941	(1)	584, 969	(1)	1, 304, 373	2, 469, 038
Transferred to plants other than blast furnaces—						
Tons	4, 311, 159	(1)	491, 002	(1)	748, 342	1, 195, 321
Assigned value	$15, 747, 359	(1)	$2, 035, 633	(1)	$2, 750, 064	$3, 952, 250
Slag (granulated; slag for roofing, paving, etc.)	$2, 058, 812	$194, 414	(1)	----------	$1, 354, 123	$138, 113
Other products, value, and receipts for custom work	$2, 456, 259	(1)	(1)	----------	$665, 309	$995, 198
Pig iron (including ferro-alloys), classified by smelting fuel:						
Coke—						
Total tons	[2] 36, 062, 847	[3] 2, 778, 302	3, 588, 813	3, 451, 003	[2] 8, 502, 249	11, 787, 957
For consumption	26, 855, 708	1, 440, 449	2, 402, 126	$65, 649, 319	6, 441, 477	9, 484, 189
For sale	[2] 9, 207, 139	[3] 1, 337, 853	1, 186, 687		[2] 2, 060, 772	2, 303, 768
Value	$684, 555, 913	$48, 702, 154	$68, 457, 394		$154, 949, 757	$239, 415, 692
Charcoal—						
Tons	167, 573	(1)	----------	----------	----------	----------
Value	$4, 085, 895	(1)	----------	----------	----------	----------
Pig iron (including ferro-alloys made in blast-furnace industry), classified by grade, tons:						
Basic, total	20, 163, 521	1, 422, 571	1, 654, 131	3, 027, 258	4, 083, 741	7, 130, 305
For consumption	18, 212, 071	(1)	(1)	(1)	3, 534, 704	6, 366, 395
For sale	1, 951, 450	(1)	(1)	(1)	549, 037	763, 910
Bessemer, total	7, 906, 669	----------	(1)	(1)	2, 830, 344	3, 066, 215
For consumption	7, 656, 750	----------	(1)	(1)	2, 794, 751	(1)
For sale	249, 919	----------	(1)	(1)	35, 593	(1)
Foundry, total	5, 380, 296	1, 307, 970	(1)	----------	799, 611	918, 912
For consumption	554, 178	(1)	(1)	----------	5, 403	(1)
For sale	4, 826, 118	(1)	(1)	----------	794, 208	(1)
Malleable, total	1, 757, 382	----------	427, 100	----------	662, 124	75, 972
For consumption	197, 093	----------	(1)	----------	(1)	----------
For sale	1, 560, 289	----------	(1)	----------	(1)	75, 972
Low-phosphorus—						
For consumption and for sale	361, 954	----------	----------	----------	----------	214, 975

[1] Included in totals but not shown separately in order to avoid disclosing production of individual establishments.
[2] Includes a small tonnage produced by a combination of coke and coal.
[3] Includes charcoal pig iron in order to avoid disclosing production of individual establishments.

TABLE 10.—THE BLAST-FURNACE INDUSTRY—DETAILED STATISTICS OF PRODUCTION FOR SELECTED STATES: 1927—Continued

[Ton, 2,240 pounds]

PRODUCT	United States	Alabama	Illinois	Indiana	Ohio	Pennsylvania
PRODUCTS—contd.						
Pig iron—Contd.						
Malleable—Contd.						
Forge or mill—						
For consumption and for sale	144, 558	(1)	----------	----------	(1)	108, 612
White, mottled, and miscellaneous, and ferro-alloys—						
For consumption and for sale	481, 141	(1)	(1)	(1)	(1)	269, 561
Direct castings	34, 899	(1)	(1)	(1)	(1)	3, 399
Pig iron (including ferro-alloys made in blast-furnace industry), classified by method of delivery or casting:						
Delivered molten	22, 997, 927	(1)	2, 269, 195	3, 154, 832	5, 247, 140	8, 399, 247
Machine cast	11, 290, 501	495, 006	1, 317, 605	293, 518	3, 145, 509	3, 122, 549
Sand cast	1, 286, 616	881, 802	(1)	----------	(1)	9, 787
Chill cast	620, 477	(1)	----------	----------	----------	252, 975
Direct castings	34, 899	(1)	(1)	(1)	(1)	3, 399

[1] Included in totals but not shown separately in order to avoid disclosing production of individual establishments.

TABLE 11.—THE BLAST-FURNACE INDUSTRY—DETAILED STATISTICS OF EQUIPMENT, FOR SELECTED STATES: 1927

EQUIPMENT	United States	Alabama	Illinois	Indiana	Ohio	Pennsylvania
Number of establishments	116	12	6	3	28	33
EQUIPMENT—FURNACES IN ACTIVE ESTABLISHMENTS [1]						
Completed furnaces at end of year:						
Number	292	27	25	18	60	98
Daily capacity, tons	142, 016	8, 410	14, 697	11, 845	31, 663	51, 265
Active within the year—						
Total number	255	25	21	17	52	84
Daily capacity, total tons	124, 913	7, 845	12, 847	11, 160	28, 013	43, 607
Coke—						
Number	247	24	21	17	52	84
Daily capacity, tons	124, 293	7, 795	12, 847	11, 160	28, 013	43, 607
Charcoal—						
Number	8	1	----------	----------	----------	----------
Daily capacity, tons	620	50	----------	----------	----------	----------
Idle throughout the year [2] (all coke)—						
Number	37	2	4	1	8	14
Daily capacity	17, 103	565	1, 850	685	3, 650	7, 658
Banked or out for relining at end of year (all coke): [3]						
Number	37	2	2	1	5	19
Daily capacity, tons	18, 860	520	1, 415	685	2, 925	10, 215
In course of construction at end of year (coke):						
Number	1	----------	----------	----------	----------	----------
Daily capacity, tons	800	----------	----------	----------	----------	----------
New furnaces completed since 1925 (all coke):						
Number	9	----------	----------	1	4	1
Daily capacity, tons	5, 940	----------	----------	740	2, 750	500
Abandoned or dismantled since 1925:						
Number	13	1	----------	----------	2	7
Daily capacity, tons	4, 250	190	----------	----------	730	2, 330

[1] All establishments which operated one or more furnaces during any part of the year.
[2] Not including data for furnaces in plants in which no furnaces were in operation at any time within the year.
[3] Includes some furnaces out for rebuilding.

TABLE 12.—FERRO-ALLOYS—PRODUCTION IN BLAST FURNACES AND ELECTRIC FURNACES, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1927 AND 1925

KIND	NUMBER OF ESTABLISHMENTS		TONS (2,240 POUNDS)		VALUE	
	1927	1925	1927	1925	1927	1925
Total	28	31	678,324	564,152	$50,556,637	$47,697,164
Produced for sale	28	31	583,197	445,500	41,645,742	35,149,715
Produced for consumption in other plants of same company (assigned value)	4	5	95,127	118,652	8,910,895	12,547,449
Ferro-alloys made in blast furnaces [1]	12	12	502,052	430,098	33,507,587	32,441,673
Ferro-alloys made in electric furnaces	16	19	176,272	134,054	17,049,050	15,255,491
Ferromanganese and spiegeleisen	9	10	394,566	325,538	29,860,223	29,103,999
Ferrosilicon	8	10	241,358	202,253	11,280,625	9,038,734
Ferrochrome, ferrotungsten, and ferrovanadium	10	------	22,512	36,361	7,093,440	9,554,431
Other ferro-alloys	6	------	19,888		2,322,349	

[1] Includes ferro-alloys manufactured as secondary products in the zinc-smelting industry.

TABLE 13.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

[For capacity of prime movers, see Table 3, p. 910]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY			Salaries	Wages
		Total	Salaried officers and employees	Wage earners (average for the year)		
United States	116	30,514	2,556	27,958	$7,335,957	$44,258,499
Alabama	12	4,383	226	4,157	620,270	4,574,023
Illinois	6	2,881	365	2,516	904,623	4,085,482
Indiana	3	1,651	139	1,512	378,264	2,351,499
Michigan	8	1,150	81	1,069	240,822	1,638,796
New York	10	1,801	114	1,687	399,170	2,959,358
Ohio	28	7,092	596	6,496	1,781,891	11,553,615
Pennsylvania	33	9,155	825	8,330	2,486,825	14,018,331
Tennessee	4	379	40	339	67,748	347,824
Other States [1]	12	2,022	170	1,852	456,344	2,729,571

STATE	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
	Materials and supplies	Fuel and power		
United States	$381,622,775	$197,932,261	$708,904,238	$129,349,202
Alabama	26,023,131	9,530,057	49,455,982	13,897,794
Illinois	32,895,022	21,718,949	70,943,000	16,329,029
Indiana	30,249,635	20,454,319	68,506,841	17,802,887
Michigan	6,058,935	6,700,614	15,798,037	3,038,488
New York	19,410,179	15,229,925	42,840,769	8,200,665
Ohio	88,061,913	43,627,669	159,719,253	28,029,671
Pennsylvania	150,015,303	64,501,566	244,501,253	29,984,384
Tennessee	1,407,439	1,104,988	3,537,401	1,024,974
Other States [1]	27,496,218	15,064,174	53,601,702	11,041,310

Colorado, 1 establishment; Kentucky, 1; Maryland, 1; Massachusetts, 1; Minnesota, 2; Utah, 1; Virginia, 2; West Virginia, 2; and Wisconsin, 1.

[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

STEEL WORKS AND ROLLING MILLS

[A preliminary report for this industry was issued under date of April 8, 1929]

Description of the industry.—This industry consists in the conversion of pig iron and scrap into steel and the rolling of iron and steel. In many cases the processes of conversion and rolling are performed in the same plants, and in such cases the value of products represents only the finished products. Some establishments, however, manufacture crude steel or partly rolled steel which is used as a material by other rolling mills, and this causes some degree of duplication in the figures for value of products and cost of materials.

The amount of duplication in the total value of products for the industry can not be accurately determined, but it is equal to the sum of the value ($358,730,497) of the ingots and semifinished rolled products manufactured for sale and for transfer to other plants under the same ownership and a considerable but indeterminable part of the value ($127,877,465) of the "interplant transfer" of finished rolled products, forgings, and direct steel castings manufactured in certain plants and transferred to other plants under the same ownership for use as materials in further manufacture. All but a small portion of the ingots and semifinished rolled products manufactured for sale and for "interplant transfer," and in many instances the finished rolled products, forgings, and steel castings transferred to other plants, are used as materials within the industry, and therefore their values as finished products are again included in the total value of products. The tonnage produced and consumed in different departments of the same plant does not carry an assigned value, so no duplication arises from this source.

In many establishments the manufacturing processes are carried beyond the rolling stage. For example: Tin-dipping departments are operated by some of the black-plate rolling mills, wire-drawing departments by wire-rod mills, and pipe-and-tube departments by skelp mills. For this reason the industry overlaps a number of others, and the products include certain commodities identical in character with the primary products of other industries. (See table, p. 961; Table 4, p. 964; and Table 4, p. 929.)

Detailed statistics of products.—Statistics relating to individual products or classes of products are given in Tables 3 to 12, inclusive, arranged, in Table 3, under eight general headings, namely: Unrolled steel; semifinished rolled products; finished rolled products and forgings; scrap iron and steel; cinder and scale; miscellaneous products other than iron or steel; custom work and repairing; and products further manufactured from finished rolling-mill and foundry products.

Table 3 has been prepared in such form as to show separately the tonnage produced and consumed in the same works, the tonnage produced and transferred to other plants under the same ownership, and the tonnage produced for sale. The tonnage transferred to other plants under the same ownership carries an assigned value, but no value is assigned to the tonnage produced and consumed in different departments of the same works. The practice followed at censuses prior to that for 1925, of estimating values for tonnages produced and consumed in the same works, has been discontinued.

In many cases rolling mills operate departments for the conversion of rolling-mill products into pipes and tubes, bolts and nuts, cut nails and spikes, and other finished iron and steel products. These products, when manufactured in

plants other than departments of rolling mills, are classified in other industries. The total output of these products, by kind, quantity, and value, as reported for all industries, is shown, so far as practicable, in Table 4, p. 929.

Tin plate, terneplate, and wire are manufactured to a considerable extent in departments of rolling mills. Statistics showing the total output of these commodities will be found in separate sections of this report. (See Tin plate and Terneplate, p. 961, and Wire, p. 967.)

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6. For capacity of prime movers, see Table 2, p. 910; no separate statistics for steel works and rolling mills]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]
1927	486	361,312	$601,275,499	$1,689,655,295	$2,779,840,238	$1,090,184,943
1925	473	370,726	614,984,982	1,811,961,218	2,946,068,231	1,134,107,013
1923	489	388,201	637,825,137	2,044,398,238	3,154,324,671	1,109,926,433
1921	494	235,515	324,987,239	1,005,125,454	1,481,659,352	476,533,898
1919	500	375,088	637,637,430	1,680,575,758	2,828,902,376	1,148,326,618
	PER CENT OF INCREASE OR DECREASE (−)					
1925–1927	2.7	−2.5	−2.2	−6.7	−5.6	−3.9
1923–1925	−3.3	−4.5	−3.6	−11.4	−6.6	2.2
1923–1927	−.6	−6.9	−5.7	−17.4	−11.9	−1.8
1919–1927	−2.8	−3.7	−5.7	.5	−1.7	−5.1

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

TABLE 2.—VALUE OF PRODUCTS, BY CLASS AND NUMBER OF ESTABLISHMENTS, FOR THE UNITED STATES, 1921 TO 1927, AND FOR STATES, 1927

STATE AND CENSUS YEAR	Total	Establishments engaged both in producing steel and in rolling iron and steel	Establishments producing steel but not rolling	Establishments rolling iron and steel but not producing steel	PER CENT OF TOTAL: Steel works and rolling mills	Steel works only	Rolling mills only
United States:							
Establishments—							
1927	486	134	158	194	27.6	32.5	39.9
1925	473	133	127	213	28.1	26.8	45.0
1923	489	137	115	237	28.0	23.5	48.5
1921	494	148	121	225	30.0	24.5	45.5
Value of products—							
1927	$2,779,840,238	$1,855,925,744	$164,786,124	$759,128,370	66.8	5.9	27.3
1925	2,946,068,231	1,983,484,867	136,419,971	826,163,393	67.3	4.6	28.1
1923	3,154,324,671	2,057,117,146	161,466,877	935,740,648	65.2	5.1	29.7
1921	1,481,659,352	967,366,755	87,159,192	427,133,405	65.3	5.9	28.8
Pennsylvania:							
Establishments	165	48	40	77	29.1	24.2	46.7
Value of products	$1,012,297,366	$662,328,623	$56,077,519	$293,891,224	65.5	5.5	29.0
Ohio:							
Establishments	86	23	21	42	26.8	24.4	48.8
Value of products	$672,201,290	$451,823,750	$20,264,215	$200,113,325	67.2	3.0	29.8
Indiana:							
Establishments	24	6	6	12	25.0	25.0	50.0
Value of products	$288,719,078	$187,704,509	$9,245,437	$91,769,132	65.0	3.2	31.8
Illinois:							
Establishments	34	10	13	11	29.4	38.2	32.4
Value of products	$208,563,956	$138,533,978	$28,526,484	$41,503,494	66.4	13.7	19.9
New York:							
Establishments	27	9	8	10	33.3	29.6	37.1
Value of products	$112,859,480	$86,017,589	$10,176,500	$16,665,391	76.2	9.0	14.8
Other States:							
Establishments	150	38	70	42	25.3	46.7	28.0
Value of products	$485,199,068	$329,517,295	$40,495,969	$115,185,804	67.9	8.4	23.7

TABLE 3.—PRODUCTS, BY CLASS, KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1927, 1925, AND 1923

[See "Detailed statistics of products," p. 922] [Ton, 2,240 pounds]

CLASS AND KIND	1927	1925	1923
Total value	[1] $2,779,840,238	$2,946,068,231	$3,154,324,671
Unrolled steel, total tons	44,756,716	45,119,113	44,521,424
Ingots, total tons [2]	43,773,763	44,111,200	43,401,415
For sale—			
Tons	128,835	103,026	142,461
Value	$4,110,340	$3,593,447	$5,775,888
Transferred for consumption in other plants of same company—			
Tons	308,052	432,113	408,430
Assigned value	$8,568,902	$12,766,582	$13,109,030
Produced and consumed in same works, tons	43,336,876	43,576,061	42,850,524
Direct steel castings, total tons [2]	[1] 982,953	1,007,913	1,120,009
For sale—			
Tons	[1] 823,089	893,382	1,000,478
Value	$136,350,291	$138,048,935	$154,599,454
Transferred for consumption in other plants of same company—			
Tons	65,150	44,330	53,238
Assigned value	$8,734,901	$6,365,618	$8,011,272
Produced and consumed in same works, tons	[1] 94,714	70,201	66,293
Semifinished rolled products:			
For sale—			
Tons	5,217,381	5,760,512	5,997,078
Value	$181,141,261	$213,815,085	$249,051,912
Transferred for consumption in other plants of same company—			
Tons	5,089,926	5,627,223	5,437,341
Assigned value	$164,909,994	$191,596,437	$206,408,477
Produced and consumed in same works, tons	27,950,709	28,860,919	[3] 30,487,060
Blooms, billets, and slabs, steel, except for forging, total tons	30,462,286	32,326,135	[3] 34,577,185
For sale—			
Tons	2,076,540	2,146,040	2,464,886
Value	$73,602,722	$83,621,977	$104,739,522
Transferred for consumption in other plants of same company—			
Tons	4,084,476	4,681,777	4,668,254
Assigned value	$132,225,123	$159,711,552	$175,952,232
Produced and consumed in same works, tons	24,301,270	25,498,318	[3] 27,444,045
Rolled blooms and billets for forging, total tons	274,186	256,937	254,585
For sale—			
Tons	92,222	151,847	127,435
Value	$3,875,474	$7,194,979	$8,117,971
Transferred for consumption in other plants of same company—			
Tons	20,568	1,224	7,313
Assigned value	$814,387	$87,580	$403,724
Produced and consumed in same works, tons	161,396	103,866	119,837
Hammered charcoal blooms, billets, etc., total tons	28,987	68,778	103,873
For sale and interplant transfer—			
Tons	855	2,576	4,371
Value	$80,354	$271,666	$371,678
Produced and consumed in same works, tons	28,132	66,202	99,502

[1] In addition, 59,809 tons of steel castings, valued at $10,464,311, were produced in 1927 for sale by establishments classified in other industries; and 16,968 tons were reported as produced and consumed in the same works in further manufacture by establishments in the "Foundry and machine-shop products, not elsewhere classified" industry. Steel castings are also produced and consumed in further manufacture to some extent in other industries, but no data in regard to such production are collected.

[2] See Tables 8 and 9, pp. 935 and 936, for distribution by process.

[3] Not strictly comparable with figures for 1925 and 1927 because of duplication in reports of some establishments which reported the same tonnage both as blooms and as billets or slabs.

TABLE 3.—PRODUCTS, BY CLASS, KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1927, 1925, AND 1923—Continued

[See "Detailed statistics of products," p. 922] [Ton, 2,240 pounds]

CLASS AND KIND	1927	1925	1923
Semifinished rolled products—Continued.			
Sheet and tin-plate bars, total tons	7,120,666	7,135,999	6,333,068
For sale—			
Tons	3,036,261	3,440,521	3,351,558
Value	$102,962,937	$121,650,116	$132,556,524
Transferred for consumption in other plants of same company—			
Tons	948,937	910,326	711,689
Assigned value	$30,130,804	$30,105,066	$27,254,195
Produced and consumed in same works, tons	3,135,468	2,785,152	2,269,821
Muck and scrap bar, total tons	371,891	460,805	652,768
For sale and interplant transfer—			
Tons	47,448	53,424	98,913
Value	$2,359,454	$2,768,586	$6,064,543
Produced and consumed in same works, tons	324,443	407,381	553,855
Finished rolled products and forgings, total tons	32,154,094	32,646,847	[1] 34,451,787
For sale—			
Tons	21,388,659	22,379,394	23,065,884
Value	$1,132,645,597	$1,266,916,847	$1,421,583,794
Transferred for consumption in other plants of same company—			
Tons	2,349,819	2,122,713	2,310,646
Assigned value	$119,142,564	$106,132,545	$123,943,955
Produced and consumed in same works, tons	8,415,616	8,144,740	[1] 9,075,257
Rails, total tons	2,715,792	2,703,520	2,747,805
Establishments	16	15	17
For sale—			
Tons	2,688,839	2,677,940	2,720,816
Value	$113,989,714	$113,755,761	$113,423,790
Transferred for consumption in other plants of same company—			
Tons	14,305	15,420	6,799
Assigned value	$575,694	$578,614	$219,965
Produced and consumed in same works, tons	12,648	10,160	20,190
Rerolled or renewed rails (not including rails rolled by makers of ingots from new seconds, defective new rails, etc.), total tons	90,966	70,990	112,643
Establishments	8	4	6
For sale and interplant transfer—			
Tons	88,457	70,290	112,643
Value	$3,103,380	$2,652,161	$5,116,406
Produced and consumed in same works, tons	2,509	700	----------
Rail joints and fastenings, tie-plates, etc., total tons	893,342	818,096	771,794
Establishments	29	27	23
For sale and interplant transfer—			
Tons	892,903	814,708	768,431
Value	$50,394,036	$46,723,816	$43,192,852
Produced and consumed in same works, tons	439	3,388	3,363
Structural shapes (not assembled or fabricated), total tons	3,711,708	3,665,232	3,500,479
Establishments	42	38	36
Heavy (leg or web 3 inches and over), total tons	3,103,981	3,216,478	2,990,900
For sale—			
Tons	2,809,375	2,841,558	2,658,584
Value	$116,694,833	$126,253,506	$128,471,232
Transferred for consumption in other plants of same company—			
Tons	152,530	154,873	130,383
Assigned value	$6,272,331	$6,493,116	$6,018,570
Produced and consumed in same works, tons	142,076	220,047	201,933

[1] Not strictly comparable with figures for 1927 and 1925 because of duplication in reports of some establishments, which reported the tonnage "Produced and consumed in works" in two forms; for example, as bars, and as rail joints and fastenings; also because of the fact that the 1923 figure includes the tonnage of iron castings produced and consumed in works.

TABLE 3.—PRODUCTS, BY CLASS, KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1927, 1925, AND 1923—Continued

[See "Detailed statistics of products," p. 922] [Ton, 2,240 pounds]

CLASS AND KIND	1927	1925	1923
Finished rolled products and forgings—Continued.			
Structual shapes (not assembled or fabricated)—Continued.			
Light (leg or web less than 3 inches), total tons	607, 727	448, 754	509, 579
For sale—			
Tons	531, 889	411, 763	489, 090
Value	$25, 031, 707	$21, 852, 887	$26, 723, 300
Transferred for consumption in other plants of same company—			
Tons	8, 426	4, 901	12, 576
Assigned value	$339, 738	$214, 819	$536, 168
Produced and consumed in same works, tons	67, 412	32, 090	7, 913
Concrete-reinforcing bars (including twisted bars)—			
Establishments	53	40	43
For sale and interplant transfer—			
Tons	782, 671	708, 811	617, 245
Value	$35, 409, 930	$35, 077, 964	$32, 446, 455
Merchant bars, mill shafting, etc., total tons	4, 847, 463	5, 463, 743	6, 064, 384
Establishments	122	129	147
Steel bars, total tons	4, 629, 187	5, 193, 031	[4] 5, 653, 958
Open-hearth or Bessemer—			
For sale [5]—			
Tons	3, 835, 265	4, 731, 260	4, 903, 146
Value	$189, 962, 216	$260, 990, 497	$277, 461, 293
Transferred for consumption in other plants of same company—			
Tons	330, 585	92, 488	68, 830
Assigned value	$19, 187, 326	$4, 400, 186	$3, 589, 300
Electric-steel bars—			
For sale and interplant transfer [5]—			
Tons	76, 219	100, 590	80, 577
Value	$27, 905, 901	$31, 719, 551	$24, 172, 267
Crucible-steel bars—			
For sale and interplant transfer—			
Tons	6, 918	9, 087	23, 387
Value	$3, 413, 182	$4, 493, 837	$11, 294, 665
Produced and consumed in same works (open-hearth, Bessemer, electric-steel, and crucible-steel bars), tons [5]	380, 200	259, 606	[4] 578, 018
Iron bars (merchant, etc.), total tons	218, 276	270, 712	410, 426
For sale—			
Tons	188, 880	231, 613	383, 909
Value	$12, 899, 455	$15, 308, 075	$28, 716, 084
Transferred for consumption in other plants of same company—			
Tons	12, 698	23, 297	15, 761
Assigned value	$682, 854	$1, 587, 879	$703, 434
Produced and consumed in same works, tons	16, 698	15, 802	10, 756
Wire rods, total tons	2, 859, 223	2, 999, 551	3, 090, 924
Establishments	50	48	51
For sale—			
Tons	644, 227	692, 447	691, 236
Value	$28, 888, 668	$34, 525, 194	$35, 582, 791
Transferred for consumption in other plants of same company—			
Tons	379, 961	412, 810	544, 700
Assigned value	$17, 170, 111	$20, 188, 372	$26, 420, 258
Produced and consumed in same works, tons	1, 835, 035	1, 894, 294	1, 854, 988
Bolt and nut rods, spike and chain rods, etc., total tons	348, 042	380, 302	490, 420
Establishments	24	24	27
For sale and interplant transfer—			
Tons	94, 803	63, 330	91, 990
Value	$4, 380, 637	$3, 311, 743	$5, 237, 577
Produced and consumed in same works, tons	253, 239	316, 972	398, 430

[4] See footnote 4, p. 925.

[5] The 1923 and 1925 figures for the items "For sale" and "Produced and consumed in same works" are not strictly comparable with those for 1927, for the reason that the 1923 and 1925 "For sale" figures include data for a considerable tonnage of cold-rolled steel, whereas for 1927 the data for all the tonnage intended for cold rolling are included in the "Produced and consumed in same works" item. See Table 4, p. 931, for data in regard to cold-rolled steel.

TABLE 3.—PRODUCTS, BY CLASS, KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1927, 1925, AND 1923—Continued

[See "Detailed statistics of products," p. 922] [Ton, 2,240 pounds]

CLASS AND KIND	1927	1925	1923
Finished rolled products and forgings—Continued.			
Plates (No. 12 and thicker) not coated, total tons	3,863,684	3,952,646	4,305,608
Establishments	66	65	71
Crucible plate steel and saw plates, for sale and interplant transfer—			
Tons	5,068	9,598	10,910
Value	$1,762,837	$3,143,817	$3,013,268
Boiler and other plate, total tons	3,858,616	3,943,048	4,294,698
For sale—			
Tons	3,670,427	3,769,928	4,169,829
Value	$158,366,727	$173,998,319	$215,370,036
Transferred for consumption in other plants of same company—			
Tons	105,971	82,915	42,427
Assigned value	$4,383,533	$3,526,067	$2,071,043
Produced and consumed in same works, tons	82,218	90,205	82,442
Sheets (No. 13 and thinner) not coated, total tons	5,759,949	5,607,791	5,038,494
Establishments	96	93	93
For sale—			
Automobile-body—			
Tons	618,172		
Value	$58,411,679		
Black for tinning, or tin-mill black plate—			
Tons	59,313	2,741,434	2,485,931
Value	$4,381,146	$222,806,587	$230,260,304
Plain—			
Tons	2,101,602		
Value	$151,807,939		
Transferred for consumption in other plants of same company—			
Black for tinning or tin-mill black plate—			
Tons	----------	----------	128,420
Assigned value	----------	----------	$10,396,878
Plain—			
Tons	203,090	173,040	111,364
Assigned value	$13,081,908	$11,631,089	$8,432,571
Produced and consumed in same works—			
Black for tinning, or tin-mill black plate, tons	1,627,866	1,647,674	1,361,184
Plain, tons	1,149,906	1,045,643	951,595
Skelp, total tons	3,502,902	3,445,149	3,647,104
Establishments	40	44	37
For sale—			
Tons	541,753	499,657	566,952
Value	$21,696,045	$20,597,237	$26,879,050
Transferred for consumption in other plants of same company—			
Tons	699,222	780,631	815,652
Assigned value	$28,908,481	$33,833,547	$42,336,212
Produced and consumed in same works, tons	2,261,927	2,164,861	2,264,500
Cotton ties—			
Establishments	6	5	4
For sale—			
Tons	42,800	50,644	34,518
Value	$2,230,148	$2,780,266	$2,767,816
Hoops, bands, and strips, total tons	1,685,836	1,682,399	1,370,607
Establishments	41	36	41
Hoop band or scroll—			
For sale and interplant transfer [5]—			
Tons	778,102	767,751	722,737
Value	$41,191,606	$44,879,416	$55,106,500
Steel in strips and flat wire (not exceeding 5 inches in width or No. 15 wire gauge)—			
For sale and interplant transfer [5]—			
Tons	96,903	108,349	137,449
Value	$5,700,131	$6,381,967	$8,713,317
Other strips—			
For sale and interplant transfer [5]—			
Tons	347,359	508,545	420,111
Value	$17,229,299	$32,006,655	$36,009,736
Hoops, bands, and strips produced and consumed in same works, tons [5]	463,472	297,754	90,310

[5] The 1923 and 1925 figures for the items "For sale" and "Produced and consumed in same works" are not strictly comparable with those for 1927, for the reason that the 1923 and 1925 "For sale" figures include data for a considerable tonnage of cold-rolled steel, whereas for 1927 the data for all the tonnage intended for cold rolling are included in the "Produced and consumed in same work" item. See Table 4, p. 931, for data in regard to cold-rolled steel.

TABLE 3.—PRODUCTS, BY CLASS, KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1927, 1925, AND 1923—Continued

[See "Detailed statistics of products," p. 922] [Ton, 2,240 pounds]

CLASS AND KIND	1927	1925	1923
Finished rolled products and forgings—Continued.			
Nail and tack plate [6]—			
Produced and consumed in same works, tons	18,243	20,402	22,324
Axles, rolled or forged—			
Establishments	9	10	9
Car and locomotive—			
For sale and interplant trannsfer—			
Tons	86,477		
Value	$6,763,825		
Automobile—			
For sale and interplant transfer—			
Tons	32,726	134,717	196,942
Value	$3,972,964	$11,386,527	$15,407,967
Other—			
For sale and interplant transfer—			
Tons	----------		
Value	----------		
Car and locomotive wheels, rolled or forged—			
Establishments	8	8	9
For sale and interplant transfer—			
Tons	155,030	147,259	237,470
Value	$15,196,895	$15,344,886	$23,345,170
Armor plate and ordnance—			
Establishments	6	4	5
For sale—			
Tons	7,746	1,071	8,844
Value	$2,613,530	$424,208	$1,921,094
Rolled and forged iron and steel products, not elsewhere specified, total tons	749,494	794,524	[4] 2,194,182
For sale—			
Tons	407,134	422,090	723,926
Value	$42,023,422	$45,217,443	$80,887,071
Transferred for consumption in other plants of same company—			
Tons	240,632	247,292	242,945
Value	$15,764,333	$14,963,383	$13,283,309
Produced and consumed in same works, tons	101,728	125,142	[4] 1,227,311
Scrap iron and steel, total tons	13,262,602	13,317,433	11,300,134
For sale—			
Tons	1,612,287	1,500,629	1,382,984
Value	$23,961,710	$26,307,876	$25,297,333
Transferred for consumption in other plants of same company—			
Tons	835,937	718,081	835,351
Value	$11,787,893	$11,319,450	$11,802,632
Produced and consumed in same works, tons	10,814,378	11,098,723	9,081,799
Cinder and scale, total tons	2,411,486	----------	----------
For sale—			
Tons	328,240		
Value	$962,789		
Transferred for consumption in other plants of same company—		(7)	(7)
Tons	328,311		
Value	$906,458		
Produced and consumed in same works, tons	1,754,935	(8)	(8)
Miscellaneous products, other than iron and steel, value	$1,550,573	$2,686,811	$7,314,325
Receipts for custom work and repairing	$1,900,410	$3,036,656	$4,486,071
Value of further-manufactured products made in departments of steel works and rolling mills from finished rolling-mill and foundry products [9]	$983,166,555	$963,481,942	$922,940,528

[6] The "For sale" and "Interplant transfer" tonnages and values of nail and tack plate are included in the "For sale" and "Interplant transfer" tonnages and values shown for "Rolled and forged iron and steel products, not elsewhere specified" in order to avoid disclosing the output of an individual establishment.

[7] No comparable data. Included in figure for "Miscellaneous products, other than iron and steel" for 923 and 1925.

[8] No data.

[9] Tin plate and terneplate (see Table, p. 961); wire and wire products (see Tables 4 and 5, pp. 964 and 967); pipes and tubes: bolts, nuts, washers, and rivets; cut nails and spikes; galvanized plates and sheets; corrugated sheets; cold-rolled bars, rods, and strips; horseshoes; railroad spikes; and ball and roller bearings (see Table 4, p. 929).

TABLE 4.—PRINCIPAL MANUFACTURES FROM ROLLING-MILL PRODUCTS—PRODUCTION, BY CLASS, KIND, QUANTITY, AND VALUE, AND NUMBER OF ESTABLISHMENTS REPORTING, FOR THE UNITED STATES: 1927, 1925, AND 1923

[This table presents statistics showing the total production, in all industries, of certain specified classes of finished products made to a considerable extent in departments of steel works and rolling mills]

CLASS AND KIND	1927 [1]	1925	1923
Railroad spikes:			
Establishments	16	16	
Kegs (200 pounds)	1,856,904	1,875,175	
Value	$10,649,228	$10,804,572	$118,738,786
Bolts, nuts, rivets, washers, etc., all industries, total value	$95,893,944	$100,182,403	
Made in rolling mills—			
Establishments	27	28	
Value	$17,000,407	$23,320,025	[2] $43,484,063
Made in other industries—			
Establishments	158	162	142
Value	$78,893,537	$76,862,378	$75,254,723
Railroad bolts, nuts, rivets, washers, etc.—			
Reported with quantity—			
Kegs (200 pounds)	1,478,788	1,249,904	
Value	$14,956,180	$12,161,633	
Reported without quantity, value	$782,995		
Other bolts, nuts, rivets, washers, etc.—			(3)
Reported with quantity—			
Kegs (200 pounds)	5,055,408	$88,020,770	
Value	$62,416,312		
Reported without quantity, value	$17,738,457		
Cut and wrought nails and spikes, and tacks, all industries, total value [4]	$10,174,266	$7,404,006	(3)
Made in rolling mills (nails and spikes only)—			
Establishments	6	7	6
Kegs (100 pounds)	447,941	532,891	460,061
Value	$1,385,556	$1,785,290	$1,682,564
Made in other industries—			
Establishments	46	33	(3)
Value	$8,788,710	$5,618,716	
Cut nails and spikes, value	$155,904		
Horseshoe nails—			
Kegs (100 pounds)	111,045		
Value	$1,596,610		
Brads and tacks, except wire—		(3)	(3)
Reported with quantity—			
Pounds	40,725,633		
Value	$4,759,803		
Cut and wrought nails and spikes, tacks, etc., not reported separately, value	$2,276,393		
Galvanized plates, sheets, and strips:			
Establishments	32	(3)	
Plain—			
Tons (2,240 pounds)	922,384	885,268	
Value	$80,812,593	$81,655,778	
Corrugated or crimped—			(3)
Tons (2,240 pounds)	235,652		
Value	$21,655,659		
Corrugated or crimped sheets, not galvanized, made in rolling mills:		111,123	
Tons (2,240 pounds)	5,863	$10,211,651	
Value	$471,314		

[1] In addition to the manufactured products shown in this table, steel works and rolling mills reported the production of the following commodities: Fabricated structural steel, 222,218 tons, valued at $15,581,453; switches, frogs, and crossings, 68,714 tons, $11,917,500; grey-iron castings, 552,651 tons, $18,815,589; nonferrous-metal castings, 6,341 tons, $3,333,945; machinery, $10,952,827; pressed, stamped, and other shapes, not advanced beyond pressing, 26,480 tons, $2,241,375; miscellaneous products, which include steel springs, cast-iron car and locomotive wheels, malleable-iron castings, chain, fence posts, stay bolts, etc., $35,623,340. Figures on the total output of these products in all industries are not available, with the exception of those on steel springs, for which see Table 2, p. 948. For figures showing the production of tin plate and terneplate and wire and wire products, including those made in departments of steel works and rolling mills, see Table, p. 961, and Tables 4 and 5, pp. 964 and 967.

[2] Includes value of railroad spikes not reported separately.

[3] No comparable data.

[4] For the total production of wire nails and spikes, see Table 5, p. 967.

TABLE 4.—PRINCIPAL MANUFACTURES FROM ROLLING-MILL PRODUCTS—PRODUCTION, BY CLASS, KIND, QUANTITY, AND VALUE, AND NUMBER OF ESTABLISHMENTS REPORTING, FOR THE UNITED STATES: 1927, 1925, AND 1923—Con.

[See note at head of this table, p. 929]

CLASS AND KIND	1927 [1]	1925	1923
Wrought pipes and tubes, all industries, total value [5]	$397, 753, 830	$359, 054, 254	$369, 142, 221
Wrought welded—			
Boiler tubes, all industries—			
Establishments	8	8	7
Tons (2,240 pounds)	45, 119	62, 750	[6] 80, 161
Value	$4, 857, 092	$7, 252, 169	[6] $11, 012, 020
Oil-country casing, tubing, and pipe, made in rolling mills—			
Establishments	11	9	10
Tons (2,240 pounds)	1, 113, 745	938, 819	1, 224, 357
Value	$88, 463, 823	$82, 444, 399	$108, 424, 017
Other black pipe, made in rolling mills—			
Establishments	17	15	16
Tons (2,240 pounds)	945, 523	968, 049	1, 080, 752
Value	$74, 948, 435	$81, 272, 157	$87, 948, 585
Galvanized pipe, made in rolling mills—			
Establishments	11	11	10
Tons (2,240 pounds)	332, 275	383, 744	334, 056
Value	$33, 694, 735	$39, 182, 283	$34, 400, 176
Oil-country casing, tubing, and pipe, not made in rolling mills—			
Establishments	10		
Tons (2,240 pounds)	219, 088		
Value	$19, 186, 479		
Other black pipe, not made in rolling mills—			
Establishments	22		
Tons (2,240 pounds)	457, 692	$60, 972, 473	
Value	$47, 272, 189		
Mechanical tubing, not made in rolling mills—			[7] $82, 250, 917
Establishments	9		
Tons (2,240 pounds)	15, 412		
Value	$3, 888, 660		
Galvanized pipe, not made in rolling mills—			
Establishments	10	5	
Tons (2,240 pounds)	158, 998	150, 120	
Value	$18, 620, 417	$15, 157, 716	
Heavy riveted and lock-joint, all industries, value	$8, 255, 351	$4, 509, 143	
Seamless, made in rolling mills—			
Boiler tubes—			
Establishments	8		
Tons (2,240 pounds)	152, 104		
Value	$17, 237, 816		
Oil-country casing, tubing, and pipe—			
Establishments	11		
Tons (2,240 pounds)	560, 379		
Value	$55, 373, 307	20	11
Other black pipe and galvanized pipe—		533, 364	302, 815
Establishments	7	$68, 263, 914	$45, 106, 506
Tons (2,240 pounds)	17, 034		
Value	$2, 108, 785		
Mechanical tubing—			
Establishments	11		
Tons (2,240 pounds)	143, 327		
Value	$23, 846, 741		
Horse and mule shoes:			
Establishments	12	15	16
Kegs (100 pounds)	795, 368	812, 730	1, 274, 530
Value	$4, 811, 937	$4, 217, 604	$7, 379, 393
Horse and mule shoe calks:			
Establishments	11	11	13
Value	$869, 784	$1, 108, 599	$1, 290, 217

[1] See footnote 1, p. 929.
[5] Not including couplings and nipples reported separately.
[6] These figures refer only to boiler tubes made in rolling mills. Wrought-welded boiler tubes made in other industries were not reported separately for 1923, but their value is included in the $82,250,917 item to which footnote 7 is indexed.
[7] Includes value of wrought-welded boiler tubes not made in rolling mills.

TABLE 4.—PRINCIPAL MANUFACTURES FROM ROLLING-MILL PRODUCTS—PRODUCTION, BY CLASS, KIND, QUANTITY, AND VALUE, AND NUMBER OF ESTABLISHMENTS REPORTING, FOR THE UNITED STATES: 1927, 1925, AND 1923—Con.

[See note at head of this table, p. 929]

CLASS AND KIND	1927 [1]	1925	1923
Cold-rolled and drawn steel, all industries, total value [3]	$89,645,891	(3)	(3)
Made in rolling mills—			
Establishments	22		
Rods—			
Tons (2,240 pounds)	11,592		
Value	$3,993,105		
Bars, shafting, etc.—			
Tons (2,240 pounds)	172,118		
Value	$13,129,524		
Strips—			
Tons (2,240 pounds)	327,050		
Value	$30,328,392		
Made in other industries—			
Establishments	36		
Reported with quantity—		(3)	(3)
Cold-rolled steel bars—			
Tons (2,240 pounds)	117,717		
Value	$8,708,348		
Cold-rolled steel strips—			
Tons (2,240 pounds)	88,646		
Value	$8,755,314		
Cold-drawn steel bars—			
Tons (2,240 pounds)	173,965		
Value	$14,528,211		
Reported without quantity—			
Cold-rolled steel bars, value	$427,527		
Cold-rolled steel strips, value	$6,349,586		
Cold-drawn steel bars, value	$3,425,884		
Bearings, ball and roller:			
Establishments	73	51	(3)
Value	$99,848,765	$99,418,137	

[1] See footnote 1, p. 929.
[3] No comparable data.
[8] Not including cold-rolled flat wire, which is shown in Table 4, p. 964.

TABLE 5.—FINISHED ROLLED PRODUCTS AND FORGINGS—DISPOSITION (CONSUMPTION, TRANSFER, OR SALE), BY CLASS AND TONNAGE, FOR THE UNITED STATES: 1927

[Ton, 2,240 pounds]

CLASS	Total tonnage	PRODUCED AND CONSUMED IN SAME WORKS		FOR TRANSFER TO OTHER PLANTS OF SAME COMPANY		FOR SALE	
		Tonnage	Per cent of class total	Tonnage	Per cent of class total	Tonnage	Per cent of class total
All finished rolled products and forgings:							
1927	32,154,094	8,415,616	26.2	2,349,819	7.3	21,388,659	66.5
1925	32,646,847	8,144,740	24.9	2,122,713	6.5	22,379,394	68.6
1923	[1] 34,451,787	[1] 9,075,257	26.3	2,310,646	6.7	23,065,884	67.0
1921	15,110,318	4,416,311	29.2	1,143,529	7.6	9,550,478	63.2
Rails	2,715,792	12,648	.5	14,305	.5	2,688,839	99.0
Rerolled or renewed rails	90,966	2,509	2.8	(2)	------	(2)	------
Rail joints and fastenings, tie-plates, etc	893,342	439	(3)	(2)	------	(2)	------
Structural shapes (not assembled or fabricated)	3,711,708	209,488	5.7	160,956	4.3	3,341,264	90.0
Concrete-reinforcing bars (including twisted bars)	782,774	103	(3)	(2)	------	(2)	------
Merchant bars, mill shafting, etc	4,847,463	396,898	8.2	350,997	7.2	4,099,568	84.6
Wire rods	2,859,223	1,835,035	64.2	379,961	13.3	644,227	22.5
Bolt and nut rods, spike and chain rods, etc	348,042	253,239	72.8	(2)	------	(2)	------
Plates (No. 12 and thicker)	3,863,684	82,218	2.1	106,530	2.8	3,674,936	95.1
Sheets, automobile-body	618,172	------	------	------	------	618,172	100.0
Sheets, plain (No. 13 and thinner)	3,454,598	1,149,906	33.3	203,090	5.9	2,101,602	60.8
Sheets, black, for tinning	1,687,179	1,627,866	96.5	------	------	59,313	3.5
Skelp	3,502,902	2,261,927	64.6	699,222	20.0	541,753	15.4
Hoops, bands, and strips	1,685,836	463,472	27.5	(2)	------	(2)	------
Cotton ties	42,800	------	------	------	------	42,800	100.0
Axles, rolled or forged	120,231	1,028	.9	(2)	------	(2)	------
Car and locomotive wheels, rolled or forged	155,030	------	------	(2)	------	(2)	------
Armor plate and ordnance (gun forgings, shells, projectiles, etc.)	7,781	35	.4	------	------	7,746	99.6
Other	766,571	118,805	15.5	240,632	31.4	407,134	53.1

[1] Not strictly comparable with figures for 1927 and 1925 because of duplication in reports of some establishments, which reported the tonnage "Produced and consumed in works" in two forms; for example, as bars and as rail joints and fastenings; also because of the fact that the 1923 figure includes the tonnage of iron castings produced and consumed in works.

[2] Included in totals but not shown separately in order to avoid disclosing the output of individual establishments. (See Table 3, p. 924, for combined figures for the "For sale" and "Interplant" tonnages.)

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

TABLE 6.—FINISHED ROLLED PRODUCTS AND FORGINGS—PRODUCTION, BY STATES: 1921 TO 1927

[Ton, 2,240 pounds]

STATE	1927	1925	1923	1921	PER CENT DISTRIBUTION			
					1927	1925	1923	1921
United States	32,154,094	32,646,847	[1] 34,451,787	15,110,318	100.0	100.0	100.0	100.0
Pennsylvania	11,867,968	12,146,669	14,881,089	6,470,077	36.9	37.2	43.2	42.8
Ohio	6,879,999	7,635,021	7,279,505	3,080,996	21.4	23.4	21.1	20.4
Indiana	4,203,508	4,067,053	3,829,694	2,087,179	13.1	12.5	11.1	13.8
Illinois	2,540,531	2,555,038	2,610,421	1,129,337	7.9	7.8	7.6	7.5
New York	1,498,913	1,322,194	1,584,356	514,387	4.6	4.1	4.6	3.4
West Virginia [2]	923,498	960,887	900,714	382,836	2.9	2.9	2.6	2.5
Other States [2]	4,239,677	3,959,985	3,366,008	1,445,506	13.2	12.1	9.8	9.6

[1] Includes a small amount of duplication, because of the reporting of some tonnage in two forms.

[2] In order of rank, 1927: Alabama (which outranks West Virginia), Maryland, Colorado, Kentucky, California, Missouri, Michigan, New Jersey, Minnesota, Massachusetts, Connecticut, Delaware, Washington, Georgia, Wisconsin, Tennessee, Rhode Island, Virginia, Texas, Maine, and Utah.

TABLE 7.—ESTABLISHMENTS MANUFACTURING SPECIFIED PRODUCTS—NUMBER, BY STATES: 1927

DIVISION AND STATE	Total number of establishments	Rails	Rerolled or renewed rails	Rail fastenings, tie plates, etc.	Structural shapes	Merchant bars, etc.	Concrete-reinforcing bars	Bolt, nut, spike, and chain rods	Wire rods	Plates	Automobile sheets	Plain sheets	Black sheets for tinning	Skelp	Hoops, bands, strips, and cotton ties	Axles	Nail and tack plate	Armor plate and ordnance	Muck and scrap bar	Steel	Steel ingots	Steel castings
United States:																						
1927	486	16	8	29	42	122	53	24	50	66	14	84	26	40	42	9	5	6	49	292	137	204
1925	473	15	4	27	38	129	40	24	48	65	(1)	91	25	44	36	10	6	4	59	260	135	164
1923	489	17	6	23	36	147	43	27	51		118		34	37	41	9	7	5	61	252	141	152
1921	494	18	7	21	30	135	36	(2)	46		119		41	37	38	7	6	8	55	250	136	158
NEW ENGLAND:																						
Maine	1					1	1	1												10	1	10
Massachusetts	11					1			1						1					1	1	
Rhode Island	1					1			1						2					2	1	
Connecticut	3																					
MIDDLE ATLANTIC:																						
New York	27	1		2	2	11	3	3	7	3	1	3		1	2	1			5	17	10	10
New Jersey	17			1		8	1	1	3	1					2			1	3	10	5	7
Pennsylvania	165	4	3	6	14	50	11	7	13	27	2	22	10	17	11	6	3	4	23	88	51	53
EAST NORTH CENTRAL:																						
Ohio	86	1	1	3	5	13	6	2	11	18	8	34	5	14	10	1			4	44	23	26
Indiana	24	2		3	2	7	4	2	2	4		6	3	3	2	1			5	12	6	8
Illinois	34	1	1	4	4	8	4	1	5	3		1	1	2	4				2	23	10	16
Michigan	11					1	1				1									9	1	9
Wisconsin	19	1		1	1	1						1								16	1	16
WEST NORTH CENTRAL:																						
Minnesota	5				1	1	1		1											5	1	5
Iowa	2																			2		2
Missouri	7			2	2	2	2	2		1		1							3	4	2	4
SOUTH ATLANTIC:																						
Delaware	3									1										3	1	2
Maryland	4	1			1	1			1	2	1	1	2	1					1	1	1	1
Virginia	2			1		1		1										1	1	1	1	1
West Virginia	16	1	1	1			1			1		9	5	2	1		2			6	3	3
Georgia	1				1	1	1		1						1					1	1	

See footnotes at end of table.

TABLE 7.—ESTABLISHMENTS MANUFACTURING SPECIFIED PRODUCTS—NUMBER, BY STATES: 1927—Continued

DIVISION AND STATE	Total number of establishments	Rails	Rerolled or renewed rails	Rail fastenings, tie plates, etc.	Structural	Merchant bars, etc.	Concrete-reinforcing bars	Bolts, nut, spike, and chain rods	Wire rods	Plates	Automobile sheets	Plain sheets	Black sheets for tinning	Skelp	Hoops, bands, strips, and cotton ties	Axles	Nail and tack plate	Armor plate and ordnance	Muck and scrap bar	Steel	Steel ingots	Steel castings
EAST SOUTH CENTRAL:																						
Kentucky	5					1					1	3							1	2	2	
Tennessee	2		1		1	1	1												1	1		1
Alabama	9	3		2	3	4	6		2	3		1			2					3	3	2
WEST SOUTH CENTRAL:																						
Louisiana	2																			2		2
Oklahoma	1																			1		1
Texas	1						1													1	1	1
MOUNTAIN AND PACIFIC:																						
Colorado	2	1		1	1	1	1	1	1											2	1	2
Utah	2		1			1	1								1					2	1	1
Washington	7			1	1	1	2	1		1					1					7	2	5
Oregon	2																			2		2
California	14			1	3	5	5	2	1	1		2			2					14	7	13

[1] Not reported separately. Included with "Plain sheets."
[2] No data.

TABLE 8.—STEEL—PRODUCTION, BY QUANTITY AND BY PROCESS, FOR THE UNITED STATES: 1921 TO 1927

[Ton, 2,240 pounds]

PROCESS	1927	1925	1923	1921
Total tons	44,756,716	45,119,113	44,521,424	19,279,48[illegible]
Open-hearth	38,005,244	37,909,746	36,124,153	15,188,25[illegible]
Basic	37,126,725	37,055,831	35,011,015	14,779,70[illegible]
Acid	878,519	853,915	1,113,138	408,55[illegible]
Bessemer	6,179,602	6,701,873	7,937,386	3,947,981
Electric or electrically refined	559,507	488,051	420,468	137,881
Crucible	12,363	19,443	39,417	5,867
Ingots	43,773,763	44,111,200	43,401,415	18,864,516
Open-hearth	37,258,560	37,108,918	35,193,944	14,848,436
Basic	36,777,647	36,642,832	34,565,192	14,603,772
Acid	480,913	466,086	628,752	244,664
Bessemer	6,153,703	6,670,127	7,899,795	3,920,862
Electric or electrically refined	350,287	313,584	269,176	89,599
Crucible	11,213	18,571	38,500	5,619
Direct steel castings	982,953	1,007,913	1,120,009	414,966
Open-hearth	746,684	800,828	930,209	339,817
Basic	349,078	412,999	445,823	175,929
Acid	397,606	387,829	484,386	163,888
Bessemer	25,899	31,746	37,591	27,119
Electric or electrically refined	209,220	174,467	151,292	47,782
Crucible	1,150	872	917	248

PROCESS	PER CENT OF INCREASE OR DECREASE (—)			PER CENT DISTRIBUTION			
	1925–1927	1923–1925	1921–1923	1927	1925	1923	1921
Total tons	0.8	1.3	130.9	100.0	100.0	100.0	100.0
Open-hearth	.3	4.9	137.8	84.9	84.0	81.1	78.8
Basic	.2	5.8	136.9	83.0	82.1	78.6	76.7
Acid	2.9	—23.3	172.5	2.0	1.9	2.5	2.1
Bessemer	—7.8	—15.6	101.0	13.8	14.9	17.8	20.5
Electric or electrically refined	14.6	16.1	206.1	1.3	1.1	.9	.7
Crucible	—36.4	—50.7	571.8	(1)	(1)	.1	(1)
Ingots	—.8	1.6	130.1	100.0	100.0	100.0	100.0
Open-hearth	.4	5.4	137.0	85.1	84.1	81.1	78.7
Basic	.4	6.0	136.7	84.0	83.1	79.6	77.4
Acid	3.2	—25.9	157.0	1.1	1.1	1.4	1.3
Bessemer	—7.7	—15.6	101.5	14.1	15.1	18.2	20.8
Electric or electrically refined	11.7	16.5	200.4	.8	.7	.6	.5
Crucible	—39.6	—51.8	585.2	(1)	.1	.1	(1)
Direct steel castings	—2.5	—10.0	169.9	100.0	100.0	100.0	100.0
Open-hearth	—6.8	—13.9	173.7	76.0	79.5	83.1	81.9
Basic	—15.5	—7.4	153.4	35.5	41.0	39.8	42.4
Acid	2.5	—19.9	195.6	40.5	38.5	43.2	39.5
Bessemer	—18.4	—15.5	38.6	2.6	3.1	3.4	6.5
Electric or electrically refined	19.9	15.3	216.6	21.3	17.3	13.5	11.5
Crucible	31.9	—4.9	269.8	.1	(1)	.1	.1

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

TABLE 9.—STEEL—PRODUCTION, BY QUANTITY, BY PROCESS, AND BY STATES: 1921 TO 1927

[Ton, 2,240 pounds]

STATE	ALL PROCESSES, TONS			
	1927	1925	1923	1921
Total	[1] 44,756,716	45,119,113	44,521,424	19,279,482
California [2]	339,412	311,932	222,030	97,048
Illinois	3,654,829	3,620,761	3,568,864	1,599,205
Indiana	5,529,233	5,256,977	4,570,772	2,348,526
Michigan [2]	205,357	17,989	19,625	6,363
New Jersey [2]	128,618	144,072	187,869	79,848
New York	1,956,917	1,717,258	1,906,616	590,898
Ohio	10,872,479	11,853,043	11,299,900	4,727,258
Pennsylvania	15,931,022	16,481,017	17,716,499	8,074,149
Washington [2]	102,229	74,911	76,522	(3)
Wisconsin [2]	60,703	45,906	47,261	19,475
Other States	[4] 5,975,917	5,595,247	4,905,466	1,736,712
Open-hearth	38,005,244	37,909,746	36,124,153	15,188,253
California [2]	314,300	294,112	201,289	87,832
Illinois	2,742,333	2,817,644	2,458,214	1,057,860
Indiana	5,122,946	4,983,294	4,328,490	2,311,793
New York	1,895,961	1,608,583	1,771,476	569,618
Ohio	8,265,417	8,770,702	8,156,636	3,099,006
Pennsylvania	13,712,112	13,990,897	14,488,819	6,371,913
Other States	5,952,175	5,444,514	4,719,229	1,690,231
Bessemer	6,179,602	6,701,873	7,937,386	3,947,981
Ohio	2,438,219	2,954,896	3,032,540	1,580,007
Pennsylvania	2,108,375	2,360,131	3,112,601	1,660,759
Other States	1,633,008	1,386,846	1,792,245	707,215
Electric and crucible	571,870	507,494	459,885	143,248
California	25,112	17,820	20,454	7,800
Illinois	79,472	66,806	56,955	10,127
Massachusetts [2]	5,935	5,587	2,533	390
Michigan	22,496	8,547	7,241	2,212
New York	60,956	85,779	89,969	8,434
Ohio	168,843	127,445	110,724	48,245
Pennsylvania	110,535	129,989	115,079	41,477
Wisconsin	35,089	(3)	(3)	(3)
Other States	63,432	65,521	56,930	24,563

[1] See footnote 1, Table 3, p. 924, for the production of steel castings in other industries.
[2] This State is outranked for 1927 by one or more of the "Other States." See footnote 4.
[3] No data.
[4] Alabama, Maryland, West Virginia, Colorado, Kentucky, Minnesota, Missouri, Delaware, Connecticut, Massachusetts, Georgia, Rhode Island, Utah, Texas, Oregon, Iowa, Oklahoma, Louisiana, Tennessee, and Virginia (named in order of rank according to tonnage for 1927). Some of these States outranked some of those shown separately.

TABLE 10.—STEEL—PRODUCTION FOR CONSUMPTION AND FOR SALE, BY QUANTITY AND BY PROCESS, FOR THE UNITED STATES: 1921 TO 1927

[Ton, 2,240 pounds]

PROCESS	Census year	Total tons	FOR CONSUMPTION BY PRODUCING COMPANY—			For sale
			Total	In works where produced	In other works of same company	
Total	1927	[1] 44,756,716	43,804,792	43,431,590	373,202	951,924
	1925	45,119,113	44,122,705	43,646,262	476,443	996,408
	1923	44,521,424	43,378,485	42,916,817	461,668	1,142,939
	1921	19,279,482	18,820,211	18,552,776	267,435	459,271
Open-hearth	1927	38,005,244	37,256,206	36,959,056	297,150	749,038
	1925	37,909,746	37,112,022	36,715,686	396,336	797,724
	1923	36,124,153	35,164,982	34,817,779	347,203	959,171
	1921	15,188,253	14,803,837	14,656,004	147,833	384,416
Basic	1927	37,126,725	36,688,376	36,429,735	258,641	438,349
	1925	37,055,831	36,574,398	36,218,618	355,780	481,433
	1923	35,011,015	34,468,701	34,174,704	293,997	542,314
	1921	14,779,701	14,543,176	14,410,177	132,999	236,525
Acid	1927	878,519	567,830	529,321	38,509	310,689
	1925	853,915	537,624	497,068	40,556	316,291
	1923	1,113,138	696,281	643,075	53,206	416,857
	1921	408,552	260,661	245,827	14,834	147,891
Bessemer	1927	6,179,602	6,155,748	6,107,878	47,870	23,854
	1925	6,701,873	6,670,607	6,605,800	64,807	31,266
	1923	7,937,386	7,899,666	7,790,466	109,200	37,720
	1921	3,947,981	3,921,406	3,803,362	118,044	26,575
Electric or electrically refined.	1927	559,507	381,625	353,924	27,701	177,882
	1925	488,051	321,911	307,573	14,338	166,140
	1923	420,468	276,038	271,083	4,955	144,430
	1921	137,381	90,002	88,576	1,426	47,379
Crucible	1927	12,363	11,213	10,732	481	1,150
	1925	19,443	18,165	17,203	962	1,278
	1923	39,417	37,799	37,489	310	1,618
	1921	5,867	4,966	4,834	132	901

[1] Includes data for duplex steel (semifinished in Bessemer converters and finished in open-hearth or electric furnaces), 1,992,615 tons, and alloy steel (see Table 11), 2,238,692 tons. See footnote 1 of Table 3, p. 924, for the production of steel castings in other industries.

TABLE 11.—ALLOY STEEL—PRODUCTION, BY QUANTITY AND BY PROCESS, FOR THE UNITED STATES: 1921 TO 1927

[Ton, 2,240 pounds]

PROCESS	1927	1925	1923	1921	PER CENT DISTRIBUTION			
					1927	1925	1923	1921
Number of establishments	128	98	71	66	------	------	------	------
Production, tons	2,238,692	2,125,036	1,270,929	482,715	100.0	100.0	100.0	100.0
Open-hearth	1,928,069	1,837,371	1,129,781	424,386	86.1	86.5	88.9	87.9
Basic	1,828,666	1,753,102	1,011,221	386,675	81.7	82.5	79.6	80.1
Acid	99,403	84,269	118,560	37,711	4.4	4.0	9.3	7.8
Bessemer	45,298	35,297	28,256	11,562	2.0	1.6	2.2	2.4
Crucible and electric	265,325	252,368	112,892	46,767	11.9	11.9	8.9	9.7
Ingots	2,123,340	2,038,598	1,187,989	460,693	94.8	95.9	93.5	95.4
Castings	115,352	86,438	82,940	22,022	5.2	4.1	6.5	4.6

TABLE 12.—STEEL-FURNACE CAPACITY (ACTIVE ESTABLISHMENTS) AND OUTPUT, FOR THE UNITED STATES, 1921 TO 1927, AND FOR STATES, 1927

[Ton, 2,240 pounds]

STATE	Daily capacity (24 hours), tons	Production during year, tons	PER CENT DISTRIBUTION	
			Capacity	Production
United States:				
1927	214,228	44,756,716	100.0	100.0
1925	212,034	45,119,113		
1923	193,247	44,521,424		
1921	194,062	19,279,482		
Pennsylvania	79,178	15,931,022	37.0	35.6
Ohio	46,511	10,872,479	21.7	24.3
Indiana	23,347	5,529,233	10.9	12.4
Illinois	19,222	3,654,829	9.0	8.2
New York	10,732	1,956,917	5.0	4.4
Alabama	9,310	(1)	4.3	
Maryland	5,090	(1)	2.4	
West Virginia	4,129	(1)	1.9	
Kentucky	2,700	(1)	1.3	
Michigan	1,808	205,357	.8	.5
California	1,766	339,412	.8	.8
Colorado	1,640	(1)	.8	
Minnesota	1,578	(1)	.7	
New Jersey	1,418	128,618	.7	.2
Missouri	1,207	(1)	.6	
Delaware	1,030	(1)	.5	
Massachusetts	1,029	(1)	.5	
Wisconsin	694	60,703	.3	.1
Washington	492	102,229	.2	.2
Georgia	450	(1)	.2	
Connecticut	353	(1)	.1	
Rhode Island	180	(1)	.1	
Utah	153	(1)	.1	
Other States	211	[2] 5,975,917	.1	13.3

[1] Included in figure for "Other States" to avoid disclosing the output of individual establishments.
[2] Includes data for the production of States indexed to footnote 1. Some of the States outranked some of those shown separately. (See footnote 4, Table 9, p. 936.)

TABLE 13.—METAL MIXERS—NUMBER AND CAPACITY, BY STATES: 1927, 1925, AND 1923

[Ton, 2,240 pounds]

STATE	1927		1925		1923	
	Number	Capacity, tons	Number	Capacity, tons	Number	Capacity, tons
Total	88	48,038	90	44,611	90	43,660
Alabama	3	1,850	2	850	2	850
Colorado	4	1,200	4	850	4	850
Illinois	9	3,150	9	3,250	9	3,250
Indiana	7	3,900	7	3,900	7	3,950
Kentucky	1	700				
Maryland	4	3,200	3	2,550	3	2,550
Minnesota	1	600	1	600	1	600
New York	4	1,750	5	2,150	5	2,350
Ohio	19	10,020	19	7,875	18	7,450
Pennsylvania	35	20,368	38	21,036	39	20,260
West Virginia	1	1,300	2	1,550	2	1,550

TABLE 14.—CONVERTERS (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, BY CLASS, 1927 AND 1925, AND BY STATES, 1927

[Ton, 2,240 pounds]

CLASS, STATE, AND CENSUS YEAR	Number of establishments	Number of converters	Daily capacity (24 hours), tons
United States, total:			
1927	45	95	48,667
1925	47	102	55,289
Bessemer:			
1927	28	71	48,179
1925	34	81	54,950
Tropenas:			
1927	9	15	212
1925	8	14	167
Other: [1]			
1927	8	9	276
1925	5	7	172
Total, by States, 1927			
Pennsylvania	13	33	14,446
Ohio	13	22	13,863
Total, by States, 1927—Continued			
Illinois	3	8	6,700
Indiana	2	4	5,250
Alabama	1	3	3,150
New York	1	4	2,500
Maryland	1	3	1,500
West Virginia	1	2	900
New Jersey	1	2	150
California	1	2	80
Michigan	1	2	50
Wisconsin	2	2	30
Louisiana	1	2	12
Missouri	1	1	12
Delaware	1	2	10
Massachusetts	1	2	10
Oregon	1	1	4

[1] Bretand, Deemer, Stoughton, Whiting, and 1 unclassified.

TABLE 15.—STEEL FURNACES, OPEN-HEARTH (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, BY PROCESS, 1927 AND 1925, AND BY STATES, 1927

[Ton, 2,240 pounds]

PROCESS, STATE, AND CENSUS YEAR	Number of establishments	Number of furnaces	Daily capacity (24 hours), tons
United States:			
1927	162	1,150	159,908
1925	158	1,141	151,894
Basic:			
1927	112	982	151,020
1925	110	987	143,196
Acid:			
1927	68	168	8,888
1925	63	154	8,698
Total, by States, 1927			
Pennsylvania	62	510	63,365
Ohio	27	204	31,612
Indiana	9	94	18,025
Illinois	12	81	11,625
New York	10	54	7,645
Alabama	3	23	6,130
Maryland	1	17	3,590
West Virginia	3	16	3,200
Total, by States, 1927—Continued			
Kentucky	2	16	2,700
Colorado	1	16	1,600
Michigan	3	11	1,586
Minnesota	2	12	1,504
California	5	20	1,377
Missouri	2	14	1,155
New Jersey	5	19	1,091
Delaware	1	6	1,000
Massachusetts	4	14	958
Georgia	1	3	450
Connecticut	1	3	350
Washington	1	4	300
Wisconsin	3	6	285
Rhode Island	1	3	180
Utah	1	2	143
Tennessee	1	1	24
Iowa	1	1	18

TABLE 16.—CRUCIBLE-STEEL FURNACES (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, BY STATES: 1927

[Ton, 2,240 pounds]

STATE AND CENSUS YEAR	Number of establishments	Number of furnaces	Number of pots	Daily capacity (24 hours), tons
United States:				
1927	21	55	1,150	296
1925	23	70	1,334	390
States: 1927				
Pennsylvania	9	21	658	167
New York	3	11	282	75
Illinois	1	2	60	15
Michigan	1	6	24	15
New Jersey	2	3	50	11
Massachusetts	3	6	36	6
Indiana	1	4	32	4
Connecticut	1	2	8	3

TABLE 17.—ELECTRIC-STEEL FURNACES (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, BY STATES: 1927

[Ton, 2,240 pounds]

State and census year	Number of establishments	Number of furnaces	Daily capacity (24 hours), tons
United States:			
1927	137	[1] 219	5,357
1925	111	178	4,461
States: 1927			
Pennsylvania	37	57	1,200
Ohio	17	28	1,036
Illinois	10	20	882
New York	9	23	512
Wisconsin	12	16	379
California	10	15	309
Washington	6	7	192
New Jersey	4	9	166
Michigan	7	11	157
Minnesota	3	6	74
States: 1927—Continued			
Indiana	3	3	86
Massachusetts	4	4	60
Oregon	2	3	46
Colorado	1	2	40
Missouri	1	2	40
Virginia	1	2	35
Iowa	2	2	32
Alabama	1	1	30
West Virginia	2	2	29
Delaware	1	1	20
Oklahoma	1	1	18
Texas	1	1	16
Utah	1	2	10
Louisiana	1	1	6

[1] 107 Heroult furnaces, of 3,047 tons; 51 Moore, 1,156 tons; 12 Snyder, 218 tons; 6 Ludlum, 140 tons; 7 Greaves-Etchells, 109 tons; 6 Greene, 71 tons; 2 Swindell, 75 tons; 4 Industrial, 70 tons; 2 Booth-Hall, 40 tons; 3 Rennerfelt, 40 tons; 2 Webb, 35 tons; 1 Von Baur, 30 tons; 1 Rockwell, 20 tons; 1 Universal, 20 tons; 1 Gronwall-Dixon, 15 tons; 1 Ajax, 3 tons; and 12 not specified by type, with a combined capacity of 268 tons.

TABLE 18.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

[For capacity of prime movers, see Table 3, p. 910]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Salaries	Wages
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)		
United States	486	397,347	16	36,019	361,312	$97,199,644	$601,275,499
California	14	5,183	-------	468	4,715	1,461,360	7,678,377
Illinois	34	27,625	-------	3,024	24,601	8,579,462	41,902,441
Indiana	24	32,564	-------	2,466	30,098	6,436,990	50,832,415
Kentucky	5	4,848	-------	306	4,542	1,002,496	6,639,791
Michigan	11	4,574	2	273	4,299	967,121	8,205,876
Missouri	7	2,919	-------	290	2,629	843,043	3,907,512
New Jersey	17	8,778	-------	1,221	7,557	2,903,400	10,852,455
New York	27	17,196	1	1,795	15,400	4,713,641	24,930,532
Ohio	86	88,389	1	6,826	81,562	19,381,064	143,947,323
Pennsylvania	165	152,170	8	14,594	137,568	38,880,797	223,629,312
West Virginia	16	12,532	-------	844	11,688	2,186,332	20,909,028
Wisconsin	19	5,465	3	655	4,807	1,674,417	7,380,876
Other States [1]	61	35,104	1	3,257	31,846	8,169,521	50,459,561

STATE	Cost of materials, supplies, fuel and power		Value of products	Value added by manufacture [2]
	Materials and supplies	Fuel and power		
United States	$1,507,273,331	$182,381,964	$2,779,840,238	$1,090,184,943
California	10,827,968	1,893,641	24,527,552	11,805,943
Illinois	96,807,734	16,840,203	208,563,956	94,916,019
Indiana	151,351,703	21,275,130	288,719,078	116,092,245
Kentucky	22,544,660	1,994,098	35,987,067	11,448,309
Michigan	10,704,500	1,623,330	24,647,088	12,319,258
Missouri	5,673,989	1,048,501	13,953,455	7,230,965
New Jersey	21,958,024	3,161,204	43,512,683	18,393,455
New York	51,712,346	8,948,611	112,859,480	52,198,523
Ohio	385,599,203	44,830,534	672,201,290	241,771,553
Pennsylvania	576,617,098	55,280,292	1,012,297,366	380,399,976
West Virginia	49,141,256	4,298,823	87,872,862	34,432,783
Wisconsin	10,237,679	1,569,382	23,895,617	12,088,556
Other States [1]	114,097,171	19,618,215	230,802,744	97,087,358

[1] Alabama, 9 establishments; Colorado, 2; Connecticut, 3; Delaware, 3; Georgia, 1; Iowa, 2; Louisiana, 2; Maine, 1; Maryland, 4; Massachusetts, 11; Minnesota, 5; Oklahoma, 1; Oregon, 2; Rhode Island, 1; Tennessee, 2; Texas, 1; Utah, 2; Virginia, 2; and Washington, 7.

[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

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

[A preliminary report for this industry was issued under date of March 25, 1929]

Description of the industry.—This industry embraces establishments whose principal products are porcelain-enameled sanitary ware (bathtubs, laundry tubs, lavatories, sinks), plumbers' brass goods, plumbers' woodwork, galvanized-iron and copper range boilers, and miscellaneous bathroom and other fixtures closely related to plumbing work. The manufacture of vitreous-china plumbing fixtures is included in the "Pottery" industry.

Detailed statistics of products.—A special schedule, calling for data on the different classes of products manufactured by establishments classified in this industry, was used for the first time at the census for 1927. For this reason the product statistics in Table 3 can not be given in as great detail for 1925 as for 1927.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	231	29,245	$40,212,198	$55,633,327	$148,878,970	$93,245,643	90,293
1925	239	33,280	46,953,808	63,610,253	167,878,414	104,268,161	84,534
1923	234	27,201	38,046,537	51,469,378	132,664,774	81,195,396	59,973
1921	220	16,670	20,396,947	25,759,927	69,118,794	43,358,867	(2)
1919	214	13,592	15,962,517	27,797,007	60,055,265	32,258,258	29,695
	PER CENT OF INCREASE OR DECREASE (—)						
1925–1927	—3.3	—12.1	—14.4	—12.5	—11.3	—10.6	6.8
1923–1925	2.1	22.3	23.4	23.6	26.5	28.4	41.0
1923–1927	—1.3	7.5	5.7	8.1	12.2	14.8	50.6
1919–1927	7.9	115.2	151.9	100.1	147.9	189.1	204.1

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927 AND 1925

TYPE	1927		1925	
	Number	Capacity	Number	Capacity
		Horsepower		*Horsepower*
Prime movers, total	6,388	90,293	5,057	84,534
Steam engines	79	19,580	84	22,103
Steam turbines	3	2,170	3	2,670
Internal-combustion engines	10	739	15	1,386
Water wheels and turbines	8	2,520	5	2,275
Electric motors driven by purchased current	6,288	65,284	4,950	56,100
Electric motors, total	8,176	80,255	6,434	68,801
Driven by purchased current	6,288	65,284	4,950	56,100
Driven by current generated in establishment reporting	1,888	14,971	1,484	12,701
		Kilowatts		*Kilowatts*
Electric generators	44	12,101	55	14,248

TABLE 3.—PRODUCTS, BY CLASS, NUMBER, AND VALUE: 1927 AND 1925

CLASS	1927		1925	
	Number	Value	Number	Value
1. "Plumbers' supplies, not including pipe or vitreous-china sanitary ware" industry, all products, total value		$148,878,970		$167,878,414
2. Plumbers' supplies		136,945,746		158,267,471
3. Other products (not normally belonging to the industry)		11,933,224		9,610,943
4. Plumbers' supplies made as secondary products in other industries		17,614,575		17,538,792
Plumbers' supplies, all industries: Aggregate value (sum of 2 and 4)		154,560,321		175,806,263
Porcelain-enameled ware, total value		67,303,685		[1] 78,497,314
Bathtubs	1,163,001	32,945,589	(2)	38,010,059
Laundry tubs	175,258	3,719,389	(2)	2,687,875
Lavatories	1,322,425	11,781,361	(2)	37,798,780
Sinks	1,402,269	18,857,346		
Bathtubs, laundry tubs, lavatories, and sinks, other than porcelain-enameled (not including vitreous-china)		1,282,794		(3)
Range boilers, total[4]	892,190	6,430,880	(2)	97,308,949
Galvanized iron	866,161	5,598,607		
Copper	26,029	832,273		
Plumbers' brass goods, total value		55,760,529		
Valves, faucets, and spigots reported separately		26,567,987		
Other plumbers' brass goods, including valves, faucets, and spigots not reported separately		29,192,542		
Other plumbers' supplies		23,782,433		

[1] Includes value of bathtubs, laundry tubs, lavatories, and sinks, other than porcelain-enameled.
[2] Quantity not reported for 1925.
[3] See footnote 1 above and "Detailed statistics of products" on opposite page.
[4] For water heaters see "Stoves and ranges," Table 3, p. 953.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [1]
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)				Materials and supplies	Fuel and power		
United States	231	33,125	111	3,769	29,245	90,293	$9,360,875	$40,212,198	$51,605,819	$4,027,508	$148,878,970	$93,245,643
California	11	1,485	4	146	1,335	5,826	354,302	2,077,411	2,590,272	208,518	6,535,721	3,736,931
Connecticut	8	1,073	1	146	926	1,888	365,979	1,201,375	1,900,205	63,639	4,453,661	2,489,817
Illinois	28	4,531	10	711	3,810	9,716	1,851,397	4,752,715	5,676,273	374,031	16,996,889	10,946,585
Indiana	7	756	5	59	692	2,173	170,770	746,090	1,306,332	97,505	2,880,420	1,476,583
Maryland	6	1,181	------	96	1,085	6,803	228,321	1,438,633	1,946,452	126,971	5,046,447	2,973,024
Massachusetts	16	677	11	103	563	1,502	275,385	740,903	1,914,245	50,147	4,099,685	2,135,293
Michigan	13	1,362	2	195	1,165	3,668	489,646	1,606,126	2,535,696	131,680	6,490,017	3,822,641
Missouri	4	233	------	31	202	671	71,821	266,168	222,611	20,820	668,970	425,539
New Jersey	13	1,777	4	215	1,558	4,740	732,140	2,001,667	2,627,463	207,454	6,575,808	3,740,891
New York	30	981	7	152	822	6,167	417,593	1,121,868	2,484,668	94,664	5,360,933	2,781,601
Ohio	43	3,246	3	404	2,839	6,271	1,161,342	3,895,537	4,940,115	312,806	13,272,395	8,019,474
Pennsylvania	24	6,168	21	563	5,584	19,730	1,468,848	8,510,414	10,135,694	1,040,859	29,582,576	18,406,023
Other States [2]	28	9,655	43	948	8,664	21,138	1,773,331	11,853,291	13,325,793	1,298,414	46,915,448	32,291,241

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

[2] 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.

SAWS

[A preliminary report for this industry was issued under date of December 18, 1928]

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 bucksaws, 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: 1919 TO 1927

Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	77	4,182	$5,753,856	$7,674,394	$22,627,990	$14,953,596	14,526
1925	71	4,710	5,873,393	8,224,443	24,709,211	16,484,768	14,287
1923	80	5,420	6,730,442	9,739,996	30,786,858	21,046,862	13,298
1921	79	3,788	4,086,840	6,479,913	18,185,297	11,705,384	(2)
1919	112	5,510	6,280,807	11,792,224	31,460,557	19,668,333	15,046
	PER CENT OF INCREASE OR DECREASE (—)						
1925–1927	(3)	—11.2	—2.0	—6.7	—8.4	—9.3	1.7
1923–1925	(3)	—13.1	—12.7	—15.6	—19.7	—21.7	7.4
1923–1927	(3)	—22.8	—14.5	—21.2	—26.5	—29.0	9.2
1919–1927	—31.3	—24.1	—8.4	—34.9	—28.1	—24.0	—3.5

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Per cent not computed where base is less than 100.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927 AND 1925

TYPE	1927		1925	
	Number	Capacity	Number	Capacity
		Horsepower		*Horsepower*
Prime movers, total	1,279	14,526	974	14,287
Steam engines	7	2,375	20	3,365
Internal-combustion engines	1	25	2	105
Electric motors driven by purchased current	1,271	12,126	952	10,817
Electric motors, total	1,371	13,376	1,012	12,417
Driven by purchased current	1,271	12,126	952	10,817
Driven by current generated in establishment reporting	100	1,250	60	1,600
		Kilowatts		*Kilowatts*
Electric generators	2	775	15	1,125

TABLE 3.—SAWS—PRODUCTION, BY CLASS AND VALUE: 1927 [1]

CLASS	Value
1. Saw industry, all products, total value	$22, 627, 990
2. Saws	18, 392, 850
3. Other products (not normally belonging to the industry) and receipts for repair work	4, 235, 140
4. Saws made as secondary products in other industries, value	1, 145, 599
Saws, all industries: Total value (sum of 2 and 4)	19, 538, 449
Woodworking saws—	
Power-saw blades, circular	4, 014, 495
Power-saw blades, other than circular	3, 629, 006
Handsaws (all types)	6, 870, 300
Metal-working saws—	
Power-saw blades	1, 459, 858
Hand-hack-saw blades	2, 812, 116
Other types, and undistributed	752, 674

[1] No comparable data for earlier census years.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horse power
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	77	5, 179	45	952	4, 182	14, 526
Massachusetts	11	720	9	113	598	3, 092
Michigan	6	52	6	14	32	105
New York	11	266	3	54	209	792
Ohio	8	156	5	50	101	628
Other States [1]	41	3, 985	22	721	3, 242	9, 909

STATE	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
			Materials and supplies	Fuel and power		
United States	$2, 118, 981	$5, 753, 856	$7, 229, 715	$444, 679	$22, 627, 990	$14, 953, 596
Massachusetts	197, 252	803, 514	1, 100, 153	78, 447	3, 144, 490	1, 965, 890
Michigan	41, 833	56, 996	95, 333	3, 500	307, 747	208, 914
New York	180, 988	276, 287	411, 632	31, 696	1, 450, 003	1, 006, 675
Ohio	103, 007	153, 973	154, 349	17, 166	414, 375	242, 860
Other States [1]	1, 595, 901	4, 463, 086	5, 468, 248	313, 870	17, 311, 375	11, 529, 257

[1] Alabama, 1 establishment; California, 2; Connecticut, 4; Georgia, 4; Illinois, 9; Indiana, 2; Louisiana, 1; Maryland, 1; Mississippi, 1; New Hampshire, 1; New Jersey, 1; Oregon, 2; Pennsylvania, 8; Rhode Island, 1; South Carolina, 1; Tennessee, 2; Washington, 1; Wisconsin, 2.

[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

SPRINGS, STEEL: RAILWAY, VEHICLE, HEAVY MACHINE, ETC., NOT MADE IN ROLLING MILLS

Description of the industry.—This industry comprises establishments engaged primarily in the manufacture of heavy steel springs of all kinds (flat, coiled, spiral, elliptical, etc.) for use in motor vehicles, tractors, railway equipment, carriages and wagons, and heavy machinery. Wire springs are products of the "Wirework, not elsewhere classified" industry.

For the total production of steel springs in all industries (including rolling mills) see Table 2, on next page.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1919 TO 1927, AND FOR STATES: 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
United States							
1927	94	5,753	[2] $8,912,961	$24,598,568	[2] $43,820,633	$19,222,065	22,263
1925	98	5,897	8,988,669	23,609,007	[2] 44,469,221	20,860,214	22,492
1923	114	8,634	12,782,130	31,748,019	[2] 59,392,180	27,644,161	25,393
1921	126	5,358	6,779,358	16,007,255	[2] 31,750,373	15,743,118	(3)
1919	112	8,981	11,157,874	28,019,180	[2] 51,479,535	23,460,355	16,560
States, 1927							
California	13	169	282,234	544,725	1,220,794	676,069	395
Connecticut	5	1,024	1,399,581	1,912,059	4,663,558	2,751,499	2,661
Illinois	10	591	971,100	1,446,146	4,000,206	2,554,060	2,367
Indiana	4	207	269,012	687,270	1,412,501	725,231	1,106
Massachusetts	4	28	44,146	67,034	183,668	116,634	57
Michigan	5	871	1,538,937	7,005,842	9,561,973	2,556,131	3,636
Missouri	4	108	133,627	325,535	812,218	486,683	256
New York	10	261	390,821	685,476	1,560,727	875,251	1,017
Pennsylvania	17	1,590	2,398,028	6,446,770	11,303,098	4,856,328	6,986
Other States [4]	22	904	1,485,475	5,477,711	9,101,890	3,624,179	3,782

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] For the total production of steel springs in 1927 and 1925 in all industries (including rolling mills), see Table 2, p. 948. No comparable data for 1923, 1921, and 1919.
[3] Not called for on schedule.
[4] Florida, 1 establishment; Kentucky, 1; Minnesota, 2; New Jersey, 2; Ohio, 4; Oklahoma, 1; Oregon, 2; Rhode Island, 1; Texas, 1; Utah, 1; Washington, 3; Wisconsin, 3.

TABLE 2.—PRODUCTS, BY CLASS AND VALUE, FOR THE UNITED STATES: 1927 AND 1925

[Wire springs are made principally in the "Wirework, not elsewhere classified" industry. For combined production in all industries, see Table 5, p. 967]

CLASS	1927	1925
1. "Springs, steel: Railway, vehicle, heavy machine, etc., not made in rolling mills" industry, all products, total value	$43, 820, 633	$44, 469, 221
2. Steel springs—railway, vehicle, heavy machine, etc.	36, 915, 181	38, 328, 566
3. Other product (not normally belonging to the industry)	6, 905, 452	6, 140, 655
4. Steel springs—railway, vehicle, etc.—made as secondary products in rolling mills and by establishments in other industries	8, 061, 951	11, 489, 131
Steel springs, all industries: Total (sum of 2 and 4)	[1] 44, 977, 132	49, 817, 697
Carriage and wagon springs	152, 946	221, 086
Railway springs	7, 740, 700	7, 866, 861
Motor-vehicle springs	34, 324, 939	37, 080, 224
Heavy machine and other springs	2, 758, 547	4, 649, 526

[1] Does not include data for automobile bumpers.

STOVES AND RANGES, HEATING APPARATUS, AND STEAM FITTINGS

[A preliminary report for these industries was issued under date of February 4, 1929]

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. Those of the second are stoves, ranges, heaters, and burners of all kinds (except industrial) 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. At prior censuses the manufacture of gas and oil stoves and appliances and the manufacture of stoves (other than gas, oil, or electric) and warm-air furnaces were treated as separate industries. The manufacture of electric stoves, ranges, and heating appliances is treated for census purposes as part of the "Electrical machinery, apparatus, and supplies" industry. The number and the value of the several classes of electric stoves, ranges, and heating appliances manufactured in 1927 are shown in Table 3, but none of the other tables in this report includes data for establishments engaged in the manufacture of this class of products.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
THE INDUSTRIES AS A GROUP							
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	320,003,253	203,439
1923	824	93,953	133,138,023	185,865,213	490,216,026	304,350,813	178,749
1921	786	63,259	78,904,276	112,430,530	271,652,356	159,221,826	(2)
1919	849	80,119	99,642,488	151,291,679	361,795,480	210,503,801	128,192
Per cent of increase or decrease (—):							
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	.6	5.1	13.8
1923–1927	—3.4	—6.3	—3.0	—8.6	—1.4	3.0	30.2
1919–1927	—6.2	9.9	29.6	12.3	33.6	48.9	81.5
STEAM FITTINGS AND STEAM AND HOT-WATER HEATING APPARATUS							
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	138,657,034	91,085
1921	274	30,808	39,596,053	50,213,402	127,366,887	77,153,485	(2)
1919	261	36,686	45,742,525	72,016,393	160,285,488	88,269,095	67,494
Per cent of increase or decrease (—):							
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	9.3	20.0
1923–1927	—1.7	—2.8	.1	—7.8	1.4	7.0	45.7
1919–1927	—11.1	16.9	41.8	6.7	40.5	68.0	96.6
STOVES AND RANGES (OTHER THAN ELECTRIC) AND WARM-AIR FURNACES							
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	95,872,779	264,302,952	168,430,173	94,126
1923	588	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	(2)
1919	588	43,433	53,899,963	79,275,286	201,509,992	122,234,706	60,698
Per cent of increase or decrease (—):							
1925–1927	------	—2.9	—3.0	—2.9	—2.3	—1.9	6.2
1923–1925	—4.1	—6.6	—3.0	—6.5	—1.5	1.7	7.4
1923–1927	—4.1	—9.3	—5.9	—9.2	—3.7	—.3	14.1
1919–1927	—4.1	4.0	19.3	17.4	28.2	35.1	64.8

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
THE INDUSTRIES AS A GROUP		*Horse-power*		*Horse-power*		*Horse-power*
Prime movers, total	19,757	232,732	15,592	203,439	13,640	178,749
Steam engines	215	35,110	247	39,433	260	43,961
Steam turbines	12	9,690	10	7,439		
Internal-combustion engines	39	3,908	30	3,473	42	3,300
Water wheels and turbines	1	18	3	125	2	70
Electric motors driven by purchased current	19,490	184,006	15,302	152,969	13,336	131,418
Electric motors, total	22,733	216,615	18,367	184,608	15,303	153,675
Driven by purchased current	19,490	184,006	15,302	152,969	13,336	131,418
Driven by current generated in establishment reporting	3,243	32,609	3,065	31,639	1,967	22,257
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	158	23,713	190	24,359	(1)	(1)
STEAM FITTINGS AND STEAM AND HOT-WATER HEATING APPARATUS		*Horse-power*		*Horse-power*		*Horse-power*
Prime movers, total	9,881	132,723	7,252	109,313	6,519	91,085
Steam engines	102	18,292	111	20,408	107	19,847
Steam turbines	9	8,125	8	6,127		
Internal-combustion engines	11	468	5	260	7	329
Water wheels and turbines			1	40	1	60
Electric motors driven by purchased current	9,759	105,838	7,127	82,478	6,404	70,849
Electric motors, total	11,517	125,046	8,714	100,330	7,285	83,385
Driven by purchased current	9,759	105,838	7,127	82,478	6,404	70,849
Driven by current generated in establishment reporting	1,758	19,208	1,587	17,852	881	12,536
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	86	12,854	92	10,875	(1)	(1)
STOVES AND RANGES (OTHER THAN ELECTRIC) AND WARM-AIR FURNACES		*Horse-power*		*Horse-power*		*Horse-power*
Prime movers, total	9,876	100,009	8,340	94,126	7,121	87,664
Steam engines	113	16,818	136	19,025	153	24,114
Steam turbines	3	1,565	2	1,312		
Internal-combustion engines	28	3,440	25	3,213	35	2,971
Water wheels and turbines	1	18	2	85	1	10
Electric motors driven by purchased current	9,731	78,168	8,175	70,491	6,932	60,569
Electric motors, total	11,216	91,569	9,653	84,278	8,018	70,290
Driven by purchased current	9,731	78,168	8,175	70,491	6,932	60,569
Driven by current generated in establishment reporting	1,485	13,401	1,478	13,787	1,086	9,721
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	72	10,859	98	13,484	(1)	(1)

[1] Not called for on schedule.

TABLE 3.—PRODUCTS, BY KIND, NUMBER, AND VALUE, BY STATES: 1927 AND 1925

[This table presents statistics for all States for which separate figures can be given without disclosing the output of individual establishments. Certain of the "Other States," however, reported larger production than some of the States shown separately]

KIND AND STATE	1927		1925	
	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 value		$483, 444, 219		$493, 232, 937
2. Stoves, ranges, heating apparatus, and steam fittings		465, 209, 508		465, 973, 866
3. Other products (not normally belonging to the industries)		18, 234, 711		[1] 27, 259, 071
4. Stoves, ranges, heating apparatus, and steam fittings made as secondary products in other industries and electric heating apparatus made as primary products in the "Electrical machinery, apparatus, and supplies" industry, value		30, 140, 941		21, 539, 981
Stoves, ranges, heating apparatus, and steam fittings, all industries: Aggregate value (sum of 2 and 4)		495, 350, 449		487, 513, 847
Steam and hot-water heating apparatus, total	(2)	110, 154, 748	(2)	116, 332, 171
Cast-iron steam and hot-water heating boilers, total	(2)	46, 071, 714	(2)	52, 416, 466
New York	(2)	20, 839, 231	(2)	21, 881, 173
Pennsylvania	(2)	4, 120, 296	(2)	5, 943, 747
Other States	(2)	21, 112, 187	(2)	24, 591, 546
Steel steam and hot-water heating boilers	(2)	6, 813, 095	(2)	8, 275, 815
Radiators, total	(2)	57, 269, 939	(2)	55, 639, 890
New York	(2)	13, 296, 070	(2)	14, 868, 246
Pennsylvania	(2)	11, 386, 508	(2)	11, 179, 636
Other States	(2)	32, 587, 361	(2)	29, 592, 008
Warm-air furnaces, total	444, 652	43, 189, 321	511, 445	47, 423, 130
California [3]	13, 829	778, 248	17, 254	1, 010, 884
Illinois	32, 316	3, 039, 751	41, 915	4, 008, 721
Indiana [3]	7, 316	754, 382	8, 107	866, 490
Iowa	33, 514	4, 579, 185	35, 715	4, 247, 568
Massachusetts [3]	5, 876	434, 794	10, 227	834, 537
Michigan	94, 651	13, 068, 518	113, 663	12, 792, 730
Minnesota [3] and Wisconsin [3]	14, 902	1, 184, 016	(4)	(4)
Missouri [3]	12, 973	1, 212, 747	17, 520	1, 729, 194
New York	38, 007	3, 319, 451	43, 404	3, 389, 806
Ohio	124, 910	8, 423, 366	128, 699	10, 646, 960
Oregon [3]	3, 108	338, 052	(4)	(4)
Pennsylvania	21, 242	3, 112, 516	22, 161	1, 970, 866
Washington [3]	3, 766	337, 785	3, 629	467, 269
Other States	38, 242	2, 606, 510	69, 151	5, 458, 105

See footnotes at end of table.

TABLE 3.—PRODUCTS, BY KIND, NUMBER, AND VALUE, BY STATES: 1927 AND 1925—Continued

[See note at head of this table]

KIND AND STATE	1927		1925	
	Number	Value	Number	Value
Stoves, ranges, heating apparatus, and steam fittings—Continued.				
Stoves and ranges, total	7,885,817	$184,317,487	8,254,889	$179,800,548
Coal and wood, total	2,243,990	64,061,012	2,446,959	68,601,454
Cooking stoves and ranges, total	853,801	38,015,067		
Porcelain-enameled, total	335,258	21,834,610		
Alabama [3] and Georgia [3]	42,558	691,500		
Illinois	28,960	2,215,517		
Indiana	22,392	1,320,682		
Massachusetts	13,090	1,325,155		
Michigan	15,825	1,339,992		
Minnesota and Wisconsin	17,240	1,433,379		
Missouri	56,496	5,134,162		
New York [3]	11,301	1,168,965		
Ohio [3]	20,724	973,922		
Pennsylvania	40,962	3,225,559		
Other States	65,710	3,005,777	[5] 1,067,085	[5] 48,922,793
Other, total	518,543	16,180,457		
Alabama [3]	46,442	644,115		
California [3]	2,852	163,666		
Illinois	61,492	1,965,785		
Indiana	22,539	737,288		
Maine [3]	3,147	222,262		
Massachusetts	34,224	2,048,307		
Michigan [3]	9,903	491,051		
Missouri	23,424	1,510,233		
New York [3]	11,165	528,213		
Ohio	52,512	1,377,142		
Pennsylvania [3]	24,074	720,799		
Tennessee	121,623	3,066,214		
Other States	105,146	2,705,382		
Heating stoves (all types), total	1,273,909	24,337,076		
Porcelain-enameled, total	324,910	13,767,645		
Alabama and Georgia	72,225	848,768		
Illinois	61,785	2,953,660		
Indiana	33,385	1,928,171		
Michigan	12,457	713,859		
Missouri	17,915	824,349		
New York	5,151	309,901		
Ohio	74,579	3,803,693		
Pennsylvania	7,952	386,488		
Tennessee	25,209	1,420,481		
Other States	14,252	578,275		
Other, total	948,999	10,569,431	[5] 1,251,196	[5] 18,045,390
Alabama	38,275	654,981		
California [3]	10,783	137,857		
Illinois	233,762	2,066,560		
Indiana [3]	12,577	221,614		
Kentucky	47,455	761,851		
Maine [3]	1,814	43,960		
Massachusetts [3]	8,009	232,877		
Michigan	13,526	609,918		
Missouri	95,450	763,594		
New York [3]	9,731	114,948		
Ohio	91,251	1,264,375		
Pennsylvania	53,681	679,829		
Tennessee	178,415	1,542,481		
Washington [3]	35,550	189,072		
Other States	118,720	1,285,514		
Water heaters (domestic supply), total [6]	116,280	1,708,869	128,678	1,633,271
Illinois	30,482	303,645		
New Jersey and New York	31,131	851,125	(7)	(7)
Other States	54,667	554,099		

See footnotes at end of table.

TABLE 3.—PRODUCTS, BY KIND, NUMBER, AND VALUE, BY STATES: 1927 AND 1925—Continued

[See note at head of this table, p. 952]

KIND AND STATE	1927		1925	
	Number	Value	Number	Value
Stoves, ranges, heating apparatus, and steam fittings—Continued.				
Stoves and ranges—Continued.				
Gas, total	3,272,417	$82,154,680	2,924,135	$76,322,480
Cooking stoves and ranges, total	1,559,918	56,760,064		
Porcelain-enameled, total	998,136	41,621,176		
California	36,804	1,558,818		
Illinois	162,240	7,619,683		
Indiana	20,570	1,305,091		
Maryland and New Jersey	59,267	2,412,336		
Michigan	239,655	9,320,525		
Missouri	38,385	1,865,029		
New York	61,649	2,485,347		
Ohio	193,385	8,177,558		
Pennsylvania	118,453	3,933,883	[5] 1,406,039	[5] 51,692,387
Other States	67,728	2,942,906		
Other, total	561,782	15,138,888		
California	48,671	1,551,858		
Illinois	90,302	3,008,273		
Massachusetts [3]	25,149	793,828		
Missouri [3]	26,548	1,113,211		
New York [3]	7,799	337,245		
Ohio	106,570	3,205,127		
Pennsylvania	108,653	2,251,838		
Other States	148,090	2,877,508		
Room heaters (all types), total	851,977	8,550,305	612,113	6,608,841
California [3]	67,586	1,096,546	35,146	694,477
New York [3]	103,237	511,678	22,117	266,606
Ohio	202,342	2,393,918	141,829	1,643,104
Pennsylvania [3]	218,256	1,636,529	199,624	1,360,730
West Virginia [3]	45,625	272,538	51,986	203,702
Other States	214,931	2,639,096	161,411	2,440,222
Water heaters (domestic supply), total	860,522	16,844,311	905,983	18,021,252
California	49,943	1,308,913	77,386	2,231,206
Illinois [3]	10,544	333,525	5,109	221,984
Indiana, Kentucky, and Missouri	50,073	1,917,435	(4)	(4)
Michigan	68,278	2,047,422	(4)	(4)
Ohio	466,913	3,319,246	407,818	2,766,539
Pennsylvania	179,850	6,720,416	198,924	7,063,824
Other States	34,921	1,197,354	216,746	5,737,699
Kerosene, total	1,133,725	15,270,702	[5] 1,707,098	[5] 21,227,933
Cooking stoves and ranges, total	886,576	13,406,256		
Porcelain-enameled, total	155,052	3,785,267		
Michigan	51,343	1,582,123		
Other States	103,709	2,203,144	[5] 1,155,801	[5] 17,626,920
Other, total	731,524	9,620,989		
Illinois and Wisconsin	272,662	4,209,208		
Ohio	400,004	4,856,736		
Other States	58,858	555,045		
Room heaters (all types)	210,007	1,173,825	[5] 412,904	[5] 2,155,632
Water heaters (domestic supply)	37,142	690,621	[5] 138,393	[5] 1,445,381
Gasoline cooking stoves and ranges, total	188,419	4,056,498		
Porcelain-enameled	127,571	3,235,032	(5)	(5)
Other	60,848	821,466		

See footnotes at end of table.

TABLE 3.—PRODUCTS, BY KIND, NUMBER, AND VALUE, BY STATES: 1927 AND 1925—Continued

[See note at head of this table, p. 952]

KIND AND STATE	1927		1925	
	Number	Value	Number	Value
Stoves, ranges, heating apparatus, and steam fittings—Continued.				
Stoves and ranges—Continued.				
Electric stoves, ranges, grills, hot plates, and heaters, total	[9] 999,012	[9] $15,654,415	1,060,692	$11,275,117
Air heaters—				
Convector type	86,619	568,568	99,297	374,367
Radiant type	231,232	869,955	396,318	1,653,327
Grills	196,688	320,750	209,318	577,628
Disk stoves, hot plates, and ranges, under 2½ kw	255,587	983,845	216,559	1,123,823
Domestic ranges, 2½ kw. and over	112,972	11,135,286	85,158	6,776,963
Water heaters, over 660 watts	33,636	953,471	54,042	769,009
Other electric cooking and heating equipment	82,278	822,540	(7)	(7)
Other stoves and ranges [10]	48,254	3,120,180	116,005	2,373,564
Domestic fuel-oil burners, total	67,325	11,501,819	(2)	7,260,383
Mechanical (forced) draft for furnaces, stoves, and ranges	46,949	10,716,739		
Atmospheric (natural) draft, total	20,376	785,080		
For furnaces	8,358	587,161		
For stoves and ranges	12,018	197,919		
Portable ovens	717,082	1,910,613	(7)	(7)
Steam tables	1,847	1,279,926	(7)	(7)
Other heating and cooking apparatus and supplies	----------	14,584,424	----------	5,772,367
Parts and fittings	----------	24,294,001	----------	[11] 23,095,322
Steam fittings	----------	104,118,110	----------	[12] 107,829,926

[1] Includes value of steam tables, portable ovens, and other heating and cooking apparatus and supplies not specifically reported.
[2] Data incomplete, as manufacturers did not in all cases report number.
[3] This State is outranked by one or more "Other States."
[4] Included in figure for "Other States" for 1925.
[5] Porcelain-enameled and other types of stoves not reported separately for 1925; no data for States.
[6] For range boilers see "Plumbers' supplies," Table 3, p. 943.
[7] No comparable data.
[8] Kerosene and gasoline stoves not reported separately for 1925.
[9] The same figures are given in the "Electrical machinery, apparatus, and supplies" report.
[10] Hotel, restaurant, French, marine, rotisserie, and coal-and-gas combination ranges, laundry stoves, etc.
[11] Excludes value of parts and fittings for steam and hot-water heating boilers and radiators.
[12] Includes value of parts for steam and hot-water heating boilers and radiators.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [1]
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)				Materials and supplies	Fuel and power		
THE COMBINED INDUSTRIES												
United States	796	103,058	209	14,776	88,073	232,732	$38,144,002	$129,178,554	$162,415,694	$7,515,544	$483,444,219	$313,512,981
Georgia	5	494	-------	35	459	562	109,860	525,536	367,229	18,251	1,548,151	1,162,671
Illinois	100	20,734	21	3,265	17,448	57,015	8,935,515	26,311,052	31,785,873	1,680,939	91,389,726	57,922,914
Indiana	32	3,074	3	444	2,627	6,842	1,195,908	3,693,345	4,969,482	240,856	14,604,390	9,394,052
Kentucky	8	692	3	123	566	1,047	267,466	650,812	975,237	25,389	2,638,042	1,637,416
Maine	4	207	1	23	183	1,958	71,436	239,134	205,845	8,427	631,759	417,487
Massachusetts	44	6,249	4	892	5,353	11,476	2,057,343	7,872,949	6,780,486	502,001	24,656,125	17,373,638
Michigan	38	7,154	18	972	6,164	15,314	2,667,359	9,605,064	13,305,306	645,637	44,338,755	30,887,812
New Jersey	23	4,088	2	559	3,527	9,867	1,494,514	5,870,092	8,412,171	316,385	25,045,400	16,316,844
New York	73	10,740	15	1,166	9,559	30,666	2,856,141	15,865,967	17,815,763	812,413	52,712,126	34,083,950
Ohio	112	15,366	25	2,350	12,991	30,432	5,742,569	18,483,358	25,604,134	965,206	69,157,256	42,587,916
Oregon	7	253	11	27	215	553	65,571	279,442	198,020	6,297	859,864	655,547
Pennsylvania	104	12,670	45	1,805	10,820	25,147	4,503,903	15,429,370	18,924,229	897,967	55,528,209	35,706,013
West Virginia	5	147	-------	14	133	155	55,295	153,213	167,901	8,714	478,046	301,431
Wisconsin	17	2,904	-------	489	2,415	5,721	1,196,326	3,036,256	4,137,483	230,101	13,639,518	9,271,934
Other States [2]	224	18,286	61	2,612	15,613	35,977	6,924,796	21,162,964	28,766,535	1,156,961	85,716,852	55,793,356
STEAM FITTINGS AND STEAM AND HOT-WATER HEATING APPARATUS												
United States	232	49,599	38	6,668	42,893	132,723	17,012,494	64,851,149	72,893,738	3,941,529	225,158,390	148,323,123
Connecticut	9	2,901	-------	388	2,513	8,629	941,690	3,536,371	2,683,191	217,108	10,432,237	7,531,938
Illinois	27	13,174	3	2,007	11,164	44,511	5,677,282	17,630,011	19,784,959	1,224,899	57,608,342	36,598,484
Indiana	9	1,410	-------	207	1,203	2,825	511,165	1,642,788	2,060,559	127,416	6,587,360	4,399,385
Massachusetts	24	3,902	2	580	3,320	6,992	1,247,331	4,905,332	4,165,253	365,526	14,806,729	10,275,950

Michigan	9	1,764	1	188	1,575	3,656	433,111	2,276,017	2,279,657	142,563	8,612,275	6,190,055
New Jersey	12	2,441	-------	258	2,183	5,309	637,291	3,548,834	5,714,830	176,690	15,047,751	9,156,231
New York	39	7,864	9	764	7,091	24,407	1,837,215	12,074,735	13,818,178	585,850	41,164,062	26,760,034
Ohio	22	3,850	4	496	3,350	9,363	1,179,978	4,644,893	5,232,577	266,608	15,507,596	10,008,411
Pennsylvania	41	7,791	13	1,062	6,716	16,628	2,555,265	9,463,660	9,203,416	510,360	30,830,463	21,116,687
Rhode Island	4	176	-------	31	145	296	108,832	182,593	559,167	11,434	1,438,771	868,170
Wisconsin	4	656	-------	160	496	988	361,618	661,666	1,079,152	39,725	3,087,126	1,968,249
Other States [3]	32	3,670	6	527	3,137	9,119	1,521,716	4,284,249	6,312,799	273,350	20,035,678	13,449,529
STOVES AND RANGES (OTHER THAN ELECTRIC) AND WARM-AIR FURNACES												
United States	564	53,459	171	8,108	45,180	100,009	21,131,508	64,327,405	89,521,956	3,574,015	258,285,829	165,189,858
Alabama	8	964	4	83	877	1,075	189,410	949,436	897,878	44,652	2,960,689	2,018,159
California	56	1,891	34	321	1,536	2,184	804,827	2,340,032	4,299,476	71,187	9,811,347	5,440,684
Georgia	5	494	-------	35	459	562	109,860	525,536	367,229	18,251	1,548,151	1,162,671
Illinois	73	7,560	18	1,258	6,284	12,504	3,258,233	8,681,041	12,000,914	456,040	33,781,384	21,324,430
Indiana	23	1,664	3	237	1,424	4,017	684,743	2,050,557	2,908,923	113,440	8,017,030	4,994,667
Iowa	10	610	-------	133	477	1,472	434,673	700,006	1,246,020	38,157	5,456,812	4,172,635
Kentucky	8	692	3	123	566	1,047	267,466	650,812	975,237	25,389	2,638,042	1,637,416
Maine	4	207	1	23	183	1,958	71,436	239,134	205,845	8,427	631,759	417,487
Maryland	7	663	-------	129	534	988	275,942	713,252	1,474,293	69,231	3,257,093	1,713,569
Massachusetts	20	2,347	2	312	2,033	4,484	810,012	2,967,617	2,615,233	136,475	9,849,396	7,097,688
Michigan	29	5,390	17	784	4,589	11,658	2,234,248	7,329,047	11,025,649	503,074	36,226,480	24,697,757
Minnesota	16	886	4	139	743	1,471	403,756	845,121	1,465,382	67,516	3,716,540	2,183,642
Missouri	30	2,837	5	469	2,363	5,551	1,374,882	3,640,398	5,352,282	202,249	15,084,215	9,529,684
New Jersey	11	1,647	2	301	1,344	4,558	857,223	2,321,258	2,697,341	139,695	9,997,649	7,160,613
New York	34	2,876	6	402	2,468	6,259	1,018,926	3,791,232	3,997,585	226,563	11,548,064	7,323,916
Ohio	90	11,516	21	1,854	9,641	21,069	4,562,591	13,838,465	20,371,557	698,598	53,649,660	32,579,505
Oregon	7	253	11	27	215	553	65,571	279,442	198,020	6,297	859,864	655,547
Pennsylvania	63	4,879	32	743	4,104	8,519	1,948,638	5,965,710	9,720,813	387,607	24,697,746	14,589,326
Tennessee	14	2,364	2	180	2,182	3,523	346,231	2,498,945	2,847,743	98,720	8,612,622	5,666,159
Virginia	4	278	-------	32	246	372	104,505	291,214	258,727	19,274	1,018,030	740,029
Washington	13	342	4	50	288	436	103,404	354,707	425,289	10,533	1,232,685	796,863
West Virginia	5	147	-------	14	133	155	55,295	153,213	167,901	8,714	478,046	301,431
Wisconsin	13	2,248	-------	329	1,919	4,733	834,708	2,374,590	3,058,331	190,376	10,552,392	7,303,685
Other States [4]	21	704	2	130	572	861	314,928	826,640	944,288	33,550	2,660,133	1,682,295

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

[2] Alabama, 10 establishments; Arkansas, 1; California, 63; Colorado, 3; Connecticut, 11; Delaware, 1; Iowa, 12; Kansas, 1; Louisiana, 1; Maryland, 9; Minnesota, 21; Missouri, 37; Nebraska, 1; New Hampshire, 2; North Carolina, 1; Oklahoma, 3; Rhode Island, 7; Tennessee, 15; Texas, 4; Vermont, 1; Virginia, 5; Washington, 15.

[3] 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.

[4] 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.

TIN CANS AND OTHER TINWARE, NOT ELSEWHERE CLASSIFIED

[A preliminary report for this industry was issued under date of February 8, 1929]

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. The industry also includes the tin-can departments operated by establishments which manufacture tin cans for use as containers for their own products.

Detailed statistics of products.—A special schedule, calling for detailed data on the several classes of products manufactured by establishments classified in this industry, was used for the first time at the census for 1927.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927 [2]	236	29,721	$35,000,822	$169,421,340	$253,478,691	$84,057,351	64,005
1925 [2]	221	29,901	34,391,598	175,778,593	260,359,961	84,581,368	48,728
1923 [2]	241	30,511	32,816,010	135,980,053	215,971,256	79,991,203	41,252
1921 [2]	244	22,711	24,595,432	108,747,954	168,304,813	59,556,859	(3)
1919 [2]	301	34,386	34,493,399	165,170,736	233,964,000	68,793,264	30,234
	PER CENT OF INCREASE OR DECREASE (—)						
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
1923–1927	—2.1	—2.6	6.7	24.6	17.4	5.1	55.1
1919–1927	—21.6	—13.6	1.5	2.6	8.3	22.2	111.7

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Because of a change in classification, the statistics for 1919 and 1921 are not strictly comparable with those for subsequent years.
[3] Not called for on schedule.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927 AND 1925

TYPE	1927		1925	
	Number	Capacity	Number	Capacity
		Horsepower		*Horsepower*
Prime movers, total	10,950	64,005	6,753	48,728
Steam engines	84	12,586	89	13,770
Steam turbines	3	1,125	8	2,371
Internal-combustion engines	14	422	14	403
Electric motors driven by purchased current	10,849	49,872	6,642	32,184
Electric motors, total	14,323	62,215	10,080	46,588
Driven by purchased current	10,849	49,872	6,642	32,184
Driven by current generated in establishment reporting	3,474	12,343	3,438	14,404
		Kilowatts		*Kilowatts*
Electric generators	65	8,833	70	[1] 10,422

[1] Revised.

TABLE 3.—PRODUCTS, BY CLASS, NUMBER, AND VALUE: 1927 AND 1925

CLASS	1927		1925	
	Number	Value	Number	Value
1. "Tin cans and other tinware, not elsewhere classified" industry, all products, total value		$253,478,691		$260,359,961
2. Tin cans, utensils, etc.		247,132,963		247,966,461
3. Other products (not normally belonging to the industry)		6,345,728		12,393,500
4. Tin cans, utensils, etc., made as secondary products in other industries, value		4,651,683		3,770,873
Tin cans, utensils, etc., all industries: Total value (sum of 2 and 4)		251,784,646		251,737,334
Hole-top cans, including cans for condensed and evaporated milk	1,180,693,414	17,751,566	(1)	238,913,186
Sanitary cans	4,286,711,908	97,742,906		
General-line cans and packages—				
Reported with quantity	2,594,688,868	95,588,448		
Reported without quantity		23,183,681		
Ice-cream cans	694,244	1,285,522	(1)	4,559,873
Milk cans	1,175,433	4,251,153		
Tinware, stamped		4,112,338		(2)
Other tinware		7,869,032		8,264,275

[1] Number not reported. [2] Not reported separately.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture[1]
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)				Materials and supplies	Fuel and power		
United States	236	33,118	62	3,335	29,721	64,005	$7,399,133	$35,000,822	$167,028,113	$2,393,227	$253,478,691	$84,057,351
California	17	2,857	6	215	2,636	7,201	386,011	3,582,341	24,709,774	176,809	35,481,795	10,595,212
Illinois	32	5,820	2	626	5,192	12,104	1,353,686	6,578,787	32,179,055	503,256	49,416,023	16,733,712
Maryland	20	4,809	4	486	4,319	6,986	1,163,692	4,265,855	21,534,699	250,092	33,195,975	11,411,184
Massachusetts	8	687	2	104	581	535	225,494	734,324	1,605,765	34,858	3,211,972	1,571,349
Michigan	3	554	------	86	468	1,156	222,577	610,546	1,292,599	55,739	2,516,234	1,167,896
Missouri	9	1,333	2	98	1,233	4,416	233,860	1,288,642	3,471,132	89,867	6,045,444	2,484,445
New Jersey	10	2,312	7	245	2,060	3,467	601,230	2,624,366	8,817,854	145,815	14,163,040	5,199,371
New York	49	5,232	14	583	4,635	9,457	1,239,958	6,034,943	19,101,768	451,237	31,795,258	12,242,253
Ohio	17	2,774	1	253	2,520	5,461	662,179	2,927,454	12,144,348	172,235	18,714,492	6,397,909
Pennsylvania	26	1,867	19	222	1,626	2,389	465,253	1,754,022	8,770,997	104,945	12,560,639	3,684,697
Virginia	4	480	------	66	414	570	108,268	383,672	2,022,362	17,388	3,280,678	1,240,928
Washington	7	465	1	47	417	1,572	90,884	487,927	5,064,677	51,933	6,727,078	1,610,468
Wisconsin	4	242	1	11	230	290	29,476	243,958	3,833,634	16,992	4,205,640	355,014
Other States[2]	30	3,686	3	293	3,390	8,401	616,565	3,483,985	22,479,449	322,061	32,164,423	9,362,913

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Connecticut, 1 establishment; 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; West Virginia, 4.

TIN PLATE AND TERNEPLATE

[A preliminary report for this industry was issued under date of February 20, 1929]

Description of the industry.—This industry, for census purposes, consists of the coating of black plates with tin or with terne mixture, the latter being an alloy of tin and lead, in the different grades of which the proportion of tin varies. The manufacture of black plates is a rolling-mill operation, and 28 of the 30 tin-plate and terneplate establishments which reported for 1927 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 "general statistics"—those on 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.

The increase in the number of establishments for 1927 as compared with 1925 is due to the fact that one company reported for the first time and that four other companies which manufacture only a relatively small quantity of tin plate and terneplate failed to report their products in detail for 1925.

TIN PLATE AND TERNEPLATE—PRODUCTS, BY CLASS, KIND, QUANTITY, VALUE, AND EQUIPMENT, BY NUMBER OF SETS AND CAPACITY, FOR THE UNITED STATES: 1921 TO 1927

	1927	1925	1923	1921
Number of establishments	30	25	28	(1)
PRODUCTS				
Total value	$193,894,382	$190,917,778	$165,587,376	$99,128,817
Tin plate and terneplate:				
Total pounds	3,753,474,411	3,661,837,667	3,296,551,763	1,725,781,116
Total value	$190,426,776	$188,610,849	$162,476,076	$96,181,449
Other products, including tin dross, scruff, scrap, etc., value	$3,467,606	$2,306,929	$3,111,300	$2,947,368
Tin plate—				
Total pounds	3,560,417,694	3,480,401,286	3,159,250,830	1,638,373,059
Total value	$180,410,038	$179,381,673	$154,636,231	$90,530,976
Coke plate—				
Pounds	3,499,540,357	3,424,407,663	3,083,383,143	1,605,957,939
Value	$176,432,417	$175,626,381	$149,769,050	$88,263,204
Charcoal plate—				
Pounds	60,877,337	55,993,623	75,867,687	32,415,120
Value	$3,977,621	$3,755,292	$4,867,181	$2,267,772
Terneplate, including long terne—				
Pounds	193,056,717	181,436,381	137,300,933	87,408,057
Value	$10,016,738	$9,229,176	$7,839,845	$5,650,473
EQUIPMENT				
Number of dipping sets at end of year, total	517	568	813	903
Tin plate—				
Mechanical	356	525	765	852
Hand-fed	119			
Terneplate	42	43	48	51
Daily capacity (24-hour basis)[2] total pounds	19,225,305	6,933,568	6,188,700	6,085,459
Tin plate	17,857,789	6,544,700	5,851,500	5,542,799
Terneplate	1,367,516	388,868	337,200	542,660
Number of sets building	9			

[1] No data. [2] Daily capacity reported on single turn basis for census periods prior to 1927.

WIRE, DRAWN FROM PURCHASED BARS OR RODS

[A preliminary report for this industry was issued under date of May 14, 1929]

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, and 9 relate only to the wire industry proper, but the detailed figures given in Tables 3–8, inclusive, 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 iron and steel wire 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.)

Wire production, all industries.—Tables 3 and 4 show the production of wire by all establishments reporting it, regardless of industry classification. The quantities and values of fabricated-wire products manufactured by establishments in the wire industry and by the wire departments of rolling mills are included, but fabricated-wire products made in other industries are not included.

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." Table 5 has been prepared to show the total production of wire and of fabricated-wire products in all industries.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
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	(2)
1919	66	19,741	29,289,667	102,813,591	162,151,236	59,337,645	119,301
	PER CENT OF INCREASE OR DECREASE (—)						
1925–1927	(3)	7.1	11.6	0.7	3.4	9.4	10.5
1923–1925	(3)	—13.0	—9.8	—5.0	—6.1	—8.4	11.5
1923–1927	(3)	—6.8	.6	—4.3	—2.9	.2	23.1
1919–1927	(3)	.6	2.6	24.6	17.6	5.5	27.9

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Per cent not computed where base is less than 100.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
		Horse-power		*Horse-power*		*Horse-power*
Prime movers, total	6,934	152,574	4,569	138,115	3,596	123,923
Steam engines	59	27,415	83	38,601	102	48,644
Steam turbines	17	19,345	19	16,042		
Internal-combustion engines	4	1,622	3	405	4	1,836
Water wheels and turbines	13	940	12	1,146	16	1,635
Electric motors driven by purchased current	6,841	103,252	4,452	81,921	3,474	71,808
Electric motors, total	9,389	141,111	6,623	[1] 117,152	5,157	103,602
Driven by purchased current	6,841	103,252	4,452	81,921	3,474	71,808
Driven by current generated in establishment reporting	2,548	37,859	2,171	[1] 35,231	1,683	31,794
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	48	21,692	59	[1] 20,022	([2])	([2])

[1] Revised.
[2] Not called for on schedule.

TABLE 3.—WIRE-DRAWING PLANTS, ALL INDUSTRIES—NUMBER, AND VALUE OF PRODUCTS, FOR THE UNITED STATES: 1927, 1925, AND 1923

	NUMBER OF ESTABLISHMENTS			VALUE OF PRODUCTS				
	1927	1925	1923	1927	1925	1923	Per cent of increase or decrease (—) 1925–1927	1923–1925
Total	132	124	126	$478,638,020	$456,396,074	$486,654,126	4.9	—6.2
Wire and wire products, total	-----	-----	-----	462,142,821	441,908,472	473,857,015	4.6	—6.7
Products of—								
Wire industry (from purchased rods and bars)	73	68	64	183,731,487	176,917,862	190,568,171	3.9	—7.2
Wire departments of steel works and rolling mills	38	35	32	184,515,604	201,459,482	217,844,264	—8.4	—7.5
Wire departments of brass and copper rolling mills and other establishments [1]	21	21	30	93,895,730	63,531,128	65,444,580	47.8	—2.9
Products other than wire and wire products	-----	-----	-----	16,495,199	14,487,602	12,797,111	13.9	13.2

[1] Not including fabricated-wire products of establishments which use purchased wire as material. (See footnote 4, Table 4, p. 965.)

TABLE 4.—WIRE AND WIRE PRODUCTS—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, ALL WIRE-DRAWING PLANTS, FOR THE UNITED STATES: 1927, 1925, AND 1923

[For total output of wire products, all industries, see Table 5, p. 967]

[Ton, 2,000 pounds]

CLASS	1927			1925	1923
	Total	Products of wire industry (from purchased bars and rods)	Products of wire-drawing departments of rolling mills and other establishments	Total	Total
Total value	$478,638,020	$190,709,790	$287,928,230	$456,396,074	$486,654,126
Wire and wire products	462,142,821	183,731,487	278,411,334	[1] 441,908,472	[1] 473,857,015
Other products, and receipts for custom work and repairing	16,495,199	6,978,303	9,516,896	14,487,602	12,797,111
WIRE					
Iron and steel wire:					
Plain wire (all iron and steel wire, including that subsequently galvanized, otherwise coated, and cold-rolled), total tons	2,865,223	789,151	2,076,072	2,963,236	3,124,649
For sale—					
Tons	801,045	228,514	572,531	794,476	837,003
Value	$59,553,429	$20,706,516	$38,846,913	$61,435,981	$67,323,062
Transferred for consumption in other plants of same company—					
Tons	106,044	36,658	69,386	111,767	75,111
Assigned value	$8,065,414	$3,658,058	$4,407,356	$10,406,233	$6,675,666
Produced and consumed in same works, tons	1,958,134	523,979	1,434,155	2,056,993	2,212,535
Galvanized wire, production, total tons	827,249	200,968	626,281	803,728	952,498
For sale—					
Tons	211,158	50,767	160,391	194,295	273,884
Value	$14,284,326	$4,851,876	$9,432,450	$13,158,402	$18,811,473
Transferred for consumption in other plants of same company—					
Tons	38,513	10,674	27,839	54,837	57,017
Assigned value	$2,750,624	$1,024,262	$1,726,362	$4,087,769	$4,200,015
Produced and consumed in same works, tons	577,578	139,527	438,051	554,596	621,597
Other coated wire, production, total tons	46,753	34,911	11,842	43,130	95,932
For sale—					
Tons	44,119	34,048	10,071	39,807	53,002
Value	$6,268,231	$5,298,808	$969,423	$4,973,874	$6,259,996
Transferred for consumption in other plants of same company—					
Tons	805	386	419	2,068	987
Assigned value	$99,916	$59,275	$40,641	$224,397	$123,081
Produced and consumed in same works, tons	1,829	477	1,352	1,255	41,943
Cold-rolled flat wire, production, total tons	152,077	61,887	90,190	155,378	141,799
For sale—					
Tons	135,518	45,667	89,851	141,930	135,118
Value	$16,852,786	$8,249,616	$8,603,170	$17,672,894	$18,947,251
Transferred to other works of same company—					
Tons	14,285	13,990	295	9,002	4,905
Assigned value	$1,690,864	$1,666,158	$24,706	$1,185,734	$746,451
Produced and consumed in same works, tons	2,274	2,230	44	4,446	1,776

[1] For 1925: Wire industry, $176,917,862; wire departments of rolling mills and other establishments, $264,990,610. For 1923: Wire industry, $190,568,171; wire departments of rolling mills and other establishments, $283,288,844.

TABLE 4.—WIRE AND WIRE PRODUCTS—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, ALL WIRE-DRAWING PLANTS, FOR THE UNITED STATES: 1927, 1925, AND 1923—Continued

[For total output of wire products, all industries, see Table 5, p. 967]

[Ton, 2,000 pounds]

CLASS	1927			1925	1923
	Total	Products of wire industry (from purchased bars and rods)	Products of wire-drawing departments of rolling mills and other establishments	Total	Total
WIRE—continued					
Copper wire, total production, pounds	786, 563, 653	432, 212, 115	354, 351, 538	(2)	(2)
For sale—					
Pounds	457, 705, 764	280, 622, 494	211, 196, 372	479, 103, 788	452, 134, 000
Value	$71, 924, 701	$43, 319, 918	$33, 770, 422	$81, 216, 080	$78, 525, 195
Transferred for consumption in other plants of same company—					
Pounds	34, 113, 102			25, 325, 290	35, 266, 000
Assigned value	$5, 165, 639			$4, 291, 320	$6, 261, 114
Produced and consumed in same works, pounds	294, 744, 787	151, 589, 621	143, 155, 166	(2)	(2)
Brass wire, total production, pounds	63, 929, 247	6, 737, 011	57, 192, 236	(2)	(2)
For sale—					
Pounds	56, 534, 689	6, 421, 576	50, 113, 113	63, 897, 360	67, 788, 684
Value	$10, 907, 363	$1, 439, 883	$9, 417, 480	$12, 187, 994	$16, 416, 811
Transferred for consumption in other plants of same company—					
Pounds	4, 308, 879	310, 185	3, 998, 694	241, 471	249, 289
Assigned value	$785, 762	$46, 838	$738, 924	$39, 782	$42, 759
Produced and consumed in same works, pounds	3, 085, 679	5, 250	3, 080, 429	(2)	(2)
Other wire, total production, pounds [3]	41, 325, 539	2, 796, 176	38, 529, 363	(2)	(2)
For sale and interplant transfer—					
Pounds	34, 116, 973	2, 306, 176	31, 810, 797	45, 589, 038	29, 460, 647
Value	$12, 009, 276	$2, 294, 513	$9, 714, 763	$13, 682, 389	$9, 903, 209
Produced and consumed in same works, pounds	7, 208, 566	490, 000	6, 718, 566	(2)	(2)
WIRE PRODUCTS [4]					
Total value	$251, 784, 490	$91, 065, 766	$160, 718, 724	$217, 345, 623	$239, 620, 932
Wire products, except insulated wire and cable, total value	$153, 707, 210	$46, 089, 075	$107, 618, 135	$155, 365, 146	$175, 529, 103
Iron and steel wire products—					
Nails and spikes—					
Kegs (100 pounds)	14, 268, 928	2, 338, 582	11, 930, 346	15, 234, 100	17, 375, 606
Value	$45, 890, 377	$8, 231, 139	$37, 659, 238	$51, 125, 810	$61, 973, 011
Brads and tacks—					
Pounds	5, 563, 401	(5)	(5)	5, 235, 675	3, 494, 540
Value	$530, 031	(5)	(5)	$576, 692	$379, 706
Staples—					
Pounds	47, 579, 527	(5)	(5)	51, 489, 371	62, 617, 610
Value	$1, 471, 753	(5)	(5)	$1, 755, 285	$2, 278, 076
Barbed wire, plain and coated—					
Tons	196, 174	32, 630	163, 544	241, 286	253, 950
Value	$12, 567, 287	$2, 220, 377	$10, 346, 910	$16, 156, 691	$19, 123, 346
Rope, cable, and strand—					
Tons	118, 806	74, 995	43, 811	114, 515	114, 420
Value	$30, 622, 041	$18, 070, 606	$12, 551, 435	$30, 467, 709	$29, 427, 120

[2] Data incomplete.
[3] Alloys of nickel, aluminum, nickel-silver, zinc, etc.
[4] Not including those made by establishments manufacturing wire products from purchased wire. For total output of these products in all industries (both plants drawing wire and plants manufacturing wire products from purchased wire), see Table 5, p. 967.
[5] Not shown separately in order to avoid disclosing the output of individual establishments.

TABLE 4.—WIRE AND WIRE PRODUCTS—PRODUCTION, BY CLASS, QUANTITY, AND VALUE, ALL WIRE-DRAWING PLANTS, FOR THE UNITED STATES: 1927, 1925, AND 1923—Continued

[For total output of wire products, all industries, see Table 5, p. 967]

[Ton, 2,000 pounds]

CLASS	1927			1925	1923
	Total	Products of wire industry (from purchased bars and rods)	Products of wire-drawing departments of rolling mills and other establishments	Total	Total
WIRE PRODUCTS—continued					
Wire products, except insulated wire and cable—Continued.					
Iron and steel wire products—Con.					
Woven-wire fence and poultry netting, plain and coated—					
Tons	389,778	97,859	291,919	325,020	413,212
Value	$32,009,467	$9,366,338	$22,643,129	$27,576,443	$37,363,824
Wire cloth—					
Pounds	25,947,592	(5)	(5)		
Value	$3,282,428	(5)	(5)	86,232,000	29,972,000
Other woven wire—				$6,361,327	$5,403,037
Pounds					
Value					
Bale ties—					
Pounds	95,103,719	(5)	(5)		
Value	$3,210,471	(5)	(5)		
Wire springs—					
Pounds	37,046,320	(5)	(5)	261,460,000	217,194,000
Value	$3,447,744	(5)	(5)	$12,462,187	$11,364,773
Other fabricated iron and steel wire products—					
Pounds	174,924,546	79,559,405	95,365,141		
Value	$6,877,167	$2,977,882	$3,899,285		
Copper-wire products—					
Wire cloth—					
Pounds	1,499,560	1,499,560			
Value	$430,677	$430,677			
Rope, cable, and strand, except insulated, value	$5,620,785		$5,620,785	$8,365,656	$6,368,380
Other fabricated copper-wire products, except insulated wire, value	$4,935,003		$4,935,003		
Brass-wire products, not including wire cloth—					
Pounds	2,846,883		2,846,883		
Value	$1,820,171		$1,820,171		
Other (bronze and other alloys except brass) wire products, not including wire cloth—					
Pounds	131,056		131,056	[6] $517,346	[6] $1,847,830
Value	$143,376		$143,376		
Wire cloth of brass, bronze, and other alloys—					
Pounds	2,390,000	(5)	(5)		
Value	$842,432	(5)	(5)		
Insulated wire and cable, total value	$98,077,280	$44,976,691	$53,100,589	$61,980,477	$64,091,829

[5] Not shown separately in order to avoid disclosing the output of individual establishments.
[6] Not strictly comparable with figures for 1927 because of the fact that data for wire products made in wire departments classified in other industries were not included in this item for 1925 and 1923. For comparable figures see Table 5, p. 967.

TABLE 5.—WIRE AND WIRE PRODUCTS, ALL INDUSTRIES—PRODUCTION: 1927 AND 1925

[Statistics on the production of wire and wire products in all industries have been assembled in this table in order to show, as far as practicable, the total production of all classes of wire products]

[Ton, 2,000 pounds]

	1927		1925	
	Quantity	Value	Quantity	Value
Wire and wire products, total value [1]		$697,684,133		$702,038,644
Products of wire-drawing establishments		462,142,821		441,908,472
Products of establishments that use purchased wire as material		235,541,312		260,130,172
Bare wire, for sale and for interplant transfer, value (for detail see Table 4)		210,358,331		224,562,849
Wire products, total value		487,325,802		477,475,795
Iron and steel wire products, total value		252,221,556		243,539,028
Nails and spikes (kegs of 100 pounds) [2]	14,819,159	48,002,203	15,977,435	53,623,415
Brads and tacks, pounds [3]	7,134,501	690,796	7,349,953	808,907
Staples, pounds	49,379,225	1,596,600	53,426,527	1,853,007
Barbed wire, plain and coated, tons	201,708	12,973,239	247,970	16,658,737
Rope, cable, and strand—				
Reported with quantity, tons	160,783	43,642,992	165,315	46,684,334
Reported without quantity		3,273,240		
Woven-wire fence and poultry netting, plain and coated—				
Reported with quantity, tons	493,566	41,764,331	492,661	41,969,462
Reported without quantity		2,021,450		
Wire cloth—				
Reported with quantity, pounds	68,754,115	10,752,609		
Reported without quantity		3,472,684		
Other woven wire—			(4)	24,188,517
Reported with quantity, tons	34,233	3,631,369		
Reported without quantity		1,764,050		
Bale ties, pounds	129,828,911	4,580,426		
Wire springs—				
Reported with quantity, pounds	73,563,813	8,110,249	(4)	57,752,649
Reported without quantity		24,076,721		
Other fabricated iron and steel wire products [5]		41,868,597		
Copper-wire products:				
Wire cloth—				
Reported with quantity, pounds	4,940,480	1,668,433		
Reported without quantity		544,506		
Rope, cable, and strand, except insulated		5,908,675	(4)	8,941,704
Other fabricated copper-wire products, except insulated wire		5,062,303		
Brass-wire products, not including wire cloth:				
Reported with quantity, pounds	3,817,866	2,689,101		
Reported without quantity		939,535		
Other metal (bronze and other alloys except brass) wire products, not including wire cloth		224,756	(4)	14,377,753
Wire cloth of brass, bronze, and other alloys:				
Reported with quantity, pounds	6,990,688	3,593,562		
Reported without quantity		2,989,576		
Fabricated-wire products not distributed by classes shown above		1,435,852		
Insulated wire and cable, total value		210,047,947		210,617,310
Insulated wire and cable reported by kind of insulation:				
Rubber-insulated—				
Lighting and power circuit—				
Braided		46,538,829		(6)
Leaded		13,103,230		(6)
Telephone		8,863,029		(6)
Flexible cords (rubber insulation, cotton and silk covered)		11,461,221		(6)
Rubber-insulated, not distributed by classes shown above		3,956,362		(6)

[1] Includes a considerable but indeterminable amount of duplication because of the use of plain wire made in wire-drawing plants as material by plants engaged in the manufacture of insulated wire or other products made from wire.

[2] For cut nails and spikes, see Table 4, p. 929.

[3] For the production of cut brads and tacks, iron and steel, see Table 4, p. 929.

[4] No comparable data.

[5] Some of the more important miscellaneous fabricated-wire products included in this item are tire chains, wire guards, partitions and grille work, kitchen utensils, garment hangers, florists' designs, lamp-shade frames, belt hooks, baskets, bolts and rivets, etc.

[6] Because of the fact that considerable quantities of wire and cable were not reported by kind of insulation for 1925, no comparable figures can be given for that year.

TABLE 5.—WIRE AND WIRE PRODUCTS, ALL INDUSTRIES—PRODUCTION: 1927 AND 1925—Continued

[Ton, 2,000 pounds]

	1927		1925	
	Quantity	Value	Quantity	Value
Insulated wire and cable reported by kind of insulation—Continued.				
Cotton-insulated—				
Weatherproof and nonweatherproof		$27,071,556		(6)
Slow-burning		2,494,479		(6)
Paper-insulated—				
Lighting and power circuit and telephone and telegraph cable (including submarine)		59,624,158		(6)
Varnished-cambric insulated		9,373,242		(6)
Magnet—				
Cotton and silk covered		14,093,786		(6)
Enameled		6,132,838		(6)
Insulated wire and cable not distributed by kind of insulation [7]		7,335,217		(6)

[6] Because of the fact that considerable quantities of wire and cable were not reported by kind of insulation for 1925, no comparable figures can be given for that year.
[7] Asbestos-insulated wire included in order to avoid disclosing the output of individual establishments

TABLE 6.—WIRE-DRAWING PLANTS—NUMBER REPORTING SPECIFIED CLASSES OF WIRE AND WIRE PRODUCTS, BY INDUSTRIES, 1927, 1925, AND 1923, AND BY STATES, 1927

STATE	Total number of establishments	Wire mills	Wire departments of rolling mills and other establishments	IRON AND STEEL								COPPER			Brass wire	Wire of other metals and alloys
				Wire, plain	Wire, galvanized	Other coated wire	Wire nails and spikes	Wire brads, tacks, and staples	Barbed wire, plain and coated	Wire rope, cable, and strand	Woven-wire fence and poultry netting	Wire, plain	Insulated wire	Woven-wire products		
United States:																
1927	132	73	59	96	49	30	40	29	31	21	28	34	19	3	17	32
1925	124	68	56	88	43	22	43	31	29	16	28	33	17	2	19	19
1923	126	64	62	84	45	26	41	29	28	16	30	33	17	2	24	20
Wire mills—																
1927	73	73	----	57	21	22	14	7	7	11	9	20	12	3	7	7
1925	68	68	----	53	18	14	19	10	8	9	9	18	10	2	8	6
1923	64	64	----	51	20	17	17	10	8	9	11	15	8	2	8	8
Wire departments of rolling mills and other establishments—																
1927	59	----	59	39	28	8	26	22	24	10	19	14	7	----	10	25
1925	56	----	56	35	25	8	24	21	21	7	19	15	7	----	11	13
1923	62	----	62	33	25	9	24	19	20	7	19	18	9	----	16	12
Alabama	2	----	2	2	2	----	2	2	2	1	2	----	----	----	----	----
California	1	----	1	1	1	----	1	1	1	----	----	1	----	----	----	----
Colorado	1	----	1	1	1	1	1	1	1	1	1	----	----	----	----	1
Connecticut	12	5	7	6	2	3	1	----	----	1	1	5	2	1	7	9
Georgia	1	----	1	1	1	----	1	----	1	----	1	----	----	----	----	----
Illinois	16	11	5	12	7	3	8	5	7	1	7	5	4	1	----	2
Indiana	5	2	3	4	4	2	3	3	4	1	4	1	1	----	----	----
Maryland	1	----	1	1	1	----	1	1	1	----	----	----	----	----	----	----
Massachusetts	17	15	2	16	6	8	1	2	----	3	1	3	1	----	2	1
Michigan	3	1	2	----	----	----	----	----	----	----	----	2	1	----	1	2
Minnesota	1	----	1	1	1	----	1	1	1	----	1	----	----	----	----	----
Missouri	1	1	----	----	----	----	----	----	----	----	----	1	1	----	----	----
Montana	1	----	1	----	----	----	----	----	----	----	----	1	----	----	----	1
New Jersey	14	10	4	9	1	2	1	----	----	4	----	5	4	----	5	5
New York	11	6	5	5	4	3	2	1	1	1	1	5	2	1	1	5
Ohio	14	6	8	13	8	6	6	4	4	2	2	----	----	----	----	1
Pennsylvania	24	11	13	20	9	2	9	7	8	5	7	2	1	----	----	4
Rhode Island	3	2	1	1	----	----	----	----	----	----	----	2	2	----	----	----
Wisconsin	4	3	1	3	1	----	2	1	----	1	----	1	----	----	1	1

TABLE 7.—WIRE-DRAWING PLANTS—EQUIPMENT, BY NUMBER AND CAPACITY: 1927 AND 1925

[The statistics in this table cover all establishments reporting wire equipment, regardless of the industry classification]

[Ton, 2,000 pounds]

KIND	TOTAL			WIRE INDUSTRY		WIRE DEPARTMENTS OF ROLLING MILLS AND OTHER ESTABLISHMENTS	
	1927	1925	Per cent of increase or decrease (—)	1927	1925	1927	1925
Wire-drawing blocks:							
Number	47,823	57,438	—16.7	25,478	28,073	22,345	29,365
Rod	11,839	12,278	—3.6	3,323	3,369	8,516	8,909
Redrawing	11,387	11,451	—.6	7,806	7,715	3,581	3,736
Fine wire (below No. 20)	24,597	33,709	—27.0	14,349	16,989	10,248	16,720
Annual capacity, tons	5,173,848	5,087,307	1.7	1,479,134	1,391,592	3,694,714	3,695,715
Wire-nail machines:							
Number	6,137	6,277	—2.2	1,200	1,332	4,937	4,945
Annual capacity (kegs of 100 pounds)	25,947,973	[1]25,762,250	.7	4,398,473	4,803,050	21,549,500	[1]20,959,200
Barbed-wire machines:							
Number	1,408	1,463	—3.8	284	294	1,124	1,169
Annual capacity, tons	723,400	751,400	—3.7	136,800	158,300	586,600	593,100
Woven-wire-fence machines:							
Number	480	485	—1.0	103	134	377	351
Annual capacity, tons	822,844	793,101	3.8	158,844	168,501	664,000	624,600
Poultry-netting machines:							
Number	224	200	12.0	123	109	101	91
Annual capacity, tons	55,578	45,488	22.2	40,278	32,178	15,300	13,310
Stands of cold-rolling machines:							
Number	1,003	904	11.0	670	534	333	370
Annual capacity, tons	224,154	193,795	15.7	86,804	65,295	137,350	128,500

[1] Revised.

TABLE 8.—WIRE-DRAWING PLANTS—EQUIPMENT, BY NUMBER AND CAPACITY, BY STATES: 1927

[The statistics in this table cover all establishments reporting wire equipment, regardless of the industry classification]

[Ton, 2,000 pounds]

STATE	WIRE-DRAWING BLOCKS				WIRE-NAIL MACHINES	
	NUMBER			Annual capacity, tons	Number	Annual capacity, kegs (100 pounds)
	Rod	Redrawing	Fine (below No. 20)			
United States	11,839	11,387	24,597	5,173,848	6,137	25,947,973
Pennsylvania	2,806	1,016	303	1,598,214	1,873	9,468,100
Illinois	1,321	964	3,024	864,210	749	3,425,200
Ohio	1,331	1,472	4,774	762,700	1,632	5,570,000
Indiana	385	136	630	303,000	276	1,566,000
New Jersey	2,799	714	1,626	280,751	32	29,555
Alabama	481	128	----------	268,000	428	2,520,000
Massachusetts	1,065	3,605	9,039	263,134	69	140,000
New York	418	1,486	3,427	213,632	285	181,200
Connecticut	383	1,251	1,083	167,075	4	4,500
Colorado	284	153	38	100,000	258	1,000,000
Other States	566	462	653	353,132	531	2,043,418

TABLE 8.—WIRE-DRAWING PLANTS—EQUIPMENT, BY NUMBER AND CAPACITY, BY STATES: 1927—Continued

[Ton, 2,000 pounds]

STATE	BARBED-WIRE MACHINES		WOVEN-WIRE-FENCE MACHINES		POULTRY-NETTING MACHINES		COLD-ROLLING MACHINES, STANDS	
	Number	Annual capacity, tons	Number	Annual capacity, tons	Number	Annual capacity, tons	Number	Annual capacity, tons
United States	1,408	723,400	480	822,844	224	55,578	1,003	224,154
Pennsylvania	548	276,200	166	290,100	35	6,500	67	2,100
Illinois	316	164,400	143	253,500	75	23,803	14	1,000
Ohio	164	105,100	26	72,500			205	138,675
Indiana	95	48,300	47	47,075	9	4,165		
New Jersey							275	30,050
Alabama	125	56,000	58	105,400				
Massachusetts					13	6,500	339	43,719
New York	6	1,200			53	3,600	77	6,300
Connecticut			3	269	26	5,810	4	200
Colorado	65	25,400	20	12,000	11	2,200		
Other States	89	46,800	17	42,000	2	3,000	22	2,110

TABLE 9.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	73	22,222	9	2,347	19,866	152,574
Connecticut	5	1,014		120	894	7,555
Illinois	11	4,264		506	3,758	20,671
Massachusetts	15	4,273	4	464	3,805	29,787
New Jersey	10	3,042	3	216	2,823	29,425
New York	6	2,693		295	2,398	13,881
Ohio	6	1,966		146	1,820	9,096
Pennsylvania	11	2,396	2	384	2,010	18,060
Other States [1]	9	2,574		216	2,358	24,099

STATE	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
			Materials and supplies	Fuel and power		
United States	$6,201,089	$30,038,299	$122,763,816	$5,328,598	$190,709,790	$62,617,376
Connecticut	375,881	1,395,091	3,390,262	209,698	7,289,823	3,689,863
Illinois	1,328,750	5,639,963	26,078,065	934,993	38,011,648	10,998,590
Massachusetts	1,083,517	6,241,921	10,017,569	1,273,981	22,881,881	11,590,331
New Jersey	702,934	3,958,621	28,446,788	809,507	39,156,228	9,899,933
New York	820,761	3,648,990	19,524,653	578,461	27,883,539	7,780,425
Ohio	418,127	2,922,792	7,152,265	433,502	11,329,664	3,743,897
Pennsylvania	891,447	2,940,873	9,889,483	507,683	15,787,174	5,390,008
Other States [1]	579,672	3,290,048	18,264,731	580,773	28,369,833	9,524,329

[1] Indiana, 2 establishments; Michigan, 1; Missouri, 1; Rhode Island, 2; and Wisconsin, 3.
[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

WIREWORK, NOT ELSEWHERE CLASSIFIED

[A preliminary report for fabricated-wire products was issued under date of May 14, 1929]

Description of the industry.—This classification embraces establishments engaged in the manufacture, from purchased wire, of commodities such as woven-wire fencing, wire cloth and netting, 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 include plants manufacturing insulated wire, which is treated, for census purposes, as a product of 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. In order that the statistics may show the total output of products manufactured from wire, data covering the production as reported by establishments classified in all industries have been assembled and are presented in detail in Table 5, page 967. (See report for the industry, "Wire, drawn from purchased bars or rods," p. 962.)

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
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	47,968,500	31,617
1921	413	11,485	13,314,017	37,039,301	66,384,507	29,345,206	(2)
1919	558	15,224	15,505,992	50,754,070	90,549,245	39,795,175	29,036
	PER CENT OF INCREASE OR DECREASE (—)						
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
1923–1927	15.6	29.3	36.7	20.7	28.2	36.4	45.0
1919–1927	—8.2	42.5	70.5	24.3	42.0	64.4	57.9

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
		Horse-power		*Horse-power*		*Horse-power*
Prime movers, total	6,073	45,858	4,811	35,943	3,597	31,617
Steam engines	37	5,249	33	4,675	42	6,002
Steam turbines	4	340				
Internal-combustion engines	19	334	23	509	24	431
Water wheels and turbines	5	220	4	151	5	201
Electric motors driven by purchased current	6,008	39,715	4,751	30,608	3,526	24,983
Electric motors, total	6,715	43,205	5,248	33,594	4,233	28,048
Driven by purchased current	6,008	39,715	4,751	30,608	3,526	24,983
Driven by current generated in establishment reporting	707	3,490	497	2,986	707	3,065
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	26	2,877	39	2,803	(1)	(1)

[1] Not called for on schedule.

TABLE 3.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horse-power
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	512	25,448	274	3,477	21,697	45,858
California	33	943	29	103	811	3,020
Connecticut	21	1,147	5	191	951	1,894
Illinois	60	2,275	38	319	1,918	2,369
Indiana	13	681	3	88	590	1,068
Iowa	10	319	6	69	244	567
Kentucky	4	19	2	2	15	14
Maryland	14	302	13	32	257	221
Massachusetts	29	1,843	8	259	1,576	1,760
Michigan	38	5,965	10	570	5,385	9,361
Minnesota	6	97	1	20	76	91
Missouri	10	1,066	8	223	835	2,713
Nebraska	5	46	5	7	34	54
New Jersey	32	1,543	6	274	1,263	3,073
New York	92	2,258	55	344	1,859	2,543
Ohio	42	2,793	15	451	2,327	7,088
Oklahoma	3	26	2		24	22
Pennsylvania	49	3,217	25	401	2,791	8,514
Rhode Island	5	99	3	12	84	108
Texas	5	49	3	10	36	25
Washington	5	95	1	16	78	253
Wisconsin	15	414	25	48	341	602
Other States [1]	21	251	11	38	202	498

See footnotes at end of table.

TABLE 3.—GENERAL STATISTICS, BY STATES: 1927—Continued

[See note at head of this table]

STATE	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
			Materials and supplies	Fuel and power		
United States	$9,436,300	$26,439,144	$61,339,488	$1,753,733	$128,535,783	$65,442,562
California	398,529	1,044,633	3,755,216	59,570	6,392,774	2,577,988
Connecticut	536,415	1,134,933	1,673,508	71,853	4,725,814	2,980,453
Illinois	795,035	2,255,143	5,063,564	130,020	11,026,546	5,832,962
Indiana	226,538	529,539	1,943,728	32,361	3,186,753	1,210,664
Iowa	137,690	266,550	936,060	26,686	1,587,636	624,890
Kentucky	4,500	12,105	9,140	401	37,309	27,768
Maryland	70,277	195,017	246,014	8,110	667,638	413,514
Massachusetts	491,743	1,922,065	3,251,496	105,528	7,197,823	3,840,799
Michigan	1,931,218	6,003,293	12,910,707	308,511	26,115,750	12,896,532
Minnesota	44,990	73,935	146,667	4,637	333,354	182,050
Missouri	536,047	913,638	4,510,336	70,702	8,679,481	4,098,443
Nebraska	12,850	39,708	72,249	1,378	192,773	119,146
New Jersey	628,063	1,728,813	3,625,747	164,541	7,969,403	4,179,115
New York	1,078,436	2,284,679	3,296,612	109,494	8,864,905	5,458,799
Ohio	1,300,430	3,933,754	6,281,721	225,354	14,845,028	8,337,953
Oklahoma		33,476	56,949	535	120,203	62,719
Pennsylvania	940,018	3,181,718	11,070,151	382,516	21,922,699	10,470,032
Rhode Island	27,059	66,926	126,709	4,655	286,113	154,749
Texas	14,180	43,199	84,134	1,045	189,711	104,532
Washington	39,605	119,884	731,692	9,657	1,178,828	437,479
Wisconsin	141,920	426,446	705,619	23,478	1,603,797	874,700
Other States [1]	80,757	229,690	841,469	12,701	1,411,445	557,275

[1] Alabama, 2 establishments; Colorado, 3; Florida, 1; Kansas, 4; North Carolina, 1; Oregon, 2; Tennessee, 3; Utah, 1; Vermont, 2; Virginia, 1; and West Virginia, 1.

[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

SUMMARY FOR INDUSTRIES IN GROUP 11 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES

[This table presents summary statistics for the industries in Group 11 other than those for which separate reports are given on pp. 893-973. More detailed statistics for 1927 are given, for the United States as a whole, in Table II, p. 1316; and summaries for States and large cities, carrying statistics for these industries, in comparison with those for other industries, appear in Tables III and IV, pp. 1330 and 1416. See "General explanations," pp. 3-12; in particular, "Limitation of statistics to establishments reporting products valued at $5,000 or more," p. 6, "Power equipment," p. 7, "Cost of materials," etc., p. 8, "Value added by manufacture," p. 9, and "State and city statistics," p. 11]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
BOLTS, NUTS, WASHERS, AND RIVETS, NOT MADE IN ROLLING MILLS							
[*Principal products:* Bolts, nuts, rivets, lock washers, plate washers, riveting burrs, turnbuckles, toggle bolts, stay bolts, grip-lock nuts, expansion screws, expansion shields, etc.]							
United States							
1927	115	13,614	$17,324,418	$38,301,814	[1] $75,876,170	$37,574,356	69,403
1925	127	13,907	17,942,305	38,506,711	[1] 75,925,784	37,419,073	59,767
1923	126	15,962	20,207,049	41,873,677	[1] 84,431,047	42,557,370	48,036
1921	125	10,148	10,269,344	18,547,629	[1] 35,773,454	17,225,825	(2)
1919	144	17,967	20,973,834	44,277,117	[1] 89,743,882	45,466,765	49,959
States, 1927							
California	4	87	109,499	206,076	440,632	234,556	364
Connecticut	9	222	294,871	496,714	1,248,018	751,304	967
Illinois	15	992	1,252,369	3,006,376	6,525,007	3,518,631	3,174
Indiana	6	841	1,005,977	3,034,981	5,516,200	2,481,219	5,041
Massachusetts	7	1,342	1,744,491	1,614,279	4,522,812	2,908,533	2,604
Michigan	6	197	288,543	706,053	1,296,318	590,265	1,190
New Jersey	6	341	528,994	1,453,463	3,128,674	1,675,211	938
Ohio	21	4,619	5,604,837	12,886,981	24,886,148	11,999,167	18,755
Pennsylvania	18	2,831	3,588,339	8,416,584	16,272,426	7,855,842	27,043
Rhode Island	5	761	882,225	1,279,221	2,740,388	1,461,167	2,361
Other States [3]	18	1,381	2,024,273	5,201,086	9,299,547	4,098,461	6,966

[1] For total production of bolts, nuts, washers, rivets, etc., reported for 1927, 1925, and 1923 by all plants (including rolling mills) see Table 4, p. 929. No comparable data for 1921 and 1919.
[2] Not called for on schedule.
[3] Alabama, 2 establishments; Iowa, 1; Maryland, 1; Minnesota, 2; Missouri, 1; New York, 6; Oregon, 1; Washington, 1; Wisconsin, 3.

DOORS, SHUTTERS, AND WINDOW SASH AND FRAMES, METAL

[*Principal products:* Sheet-metal, metal-covered, and hollow metal elevator and vault doors; fire-retardant doors for buildings and for mines; steel shutters; metal and metal-covered window frames, moldings, and sash]

United States							
1927	117	8,050	$15,564,458	$25,602,238	[1] $65,279,973	$39,677,735	20,626
1925	92	6,791	12,899,071	21,627,746	50,078,034	28,450,288	16,699
1923	37	2,429	4,332,767	5,604,210	15,367,111	9,762,901	3,981
1921	45	1,782	2,880,909	4,289,274	12,466,701	8,177,427	(2)
1919	57	2,077	2,729,774	4,577,934	10,877,001	6,299,067	4,013
States, 1927							
California	11	326	604,511	783,960	2,188,543	1,404,583	833
Illinois	15	726	1,250,132	1,971,129	4,781,901	2,810,772	1,212
Massachusetts	3	57	95,218	169,377	318,544	149,167	217
Minnesota	3	140	176,876	295,096	714,069	418,973	185
Missouri	8	197	299,725	469,179	1,149,546	680,367	407
New Jersey	3	178	338,546	422,909	1,122,227	699,318	732
New York	46	2,767	6,514,862	6,931,670	20,723,400	13,791,730	5,426
Ohio	4	601	807,222	1,456,969	4,477,565	3,020,596	961
Other States [3]	24	3,058	5,477,366	13,101,949	29,804,178	16,702,229	10,653

[1] Includes values of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of iron and steel doors, shutters, and window sash and frames, but does not include the values of iron and steel doors, shutters, and window sash and frames made as secondary products by establishments classified in other industries. The total value of iron and steel doors, shutters, and window sash and frames manufactured in 1927, regardless of the industry classification of the establishments in which manufactured, so far as separately reported to the Bureau of the Census, was $56,217,788.
[2] Not called for on schedule.
[3] Connecticut, 1 establishment; Georgia, 1; Indiana, 4; Iowa, 1; Kentucky, 1; Louisiana, 1; Maryland, 1; Michigan, 5; Pennsylvania, 5; Tennessee, 1; Virginia, 1; Wisconsin, 2.

SUMMARY FOR INDUSTRIES IN GROUP 11 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES—Continued

[See note at head of this table]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
FORGINGS, IRON AND STEEL, NOT MADE IN STEEL WORKS OR ROLLING MILLS							
[*Principal products:* Light and heavy drop and steam-hammer forgings. These include such commodities as parts for automobiles, engines, and agricultural implements; car axles, wheels, frogs and switches, anchors; anvils; vises; wrenches; chain; and general miscellaneous forgings]							
United States							
1927	209	15,399	$23,257,687	$51,635,286	[1] $103,672,231	$52,036,945	126,887
1925	218	20,290	31,312,956	68,081,206	[1] 134,510,582	66,429,376	120,014
1923	234	27,468	40,207,057	92,853,222	[1] 179,011,217	86,157,995	136,922
1921	240	16,740	20,635,787	44,336,717	[1] 83,151,126	38,814,409	(2)
1919	241	28,391	39,772,553	82,024,492	[1] 173,752,104	91,727,612	100,996
States, 1927							
California	10	136	204,062	620,442	1,195,083	574,641	975
Connecticut	13	902	1,377,548	1,814,980	4,432,342	2,617,362	4,783
Illinois	22	1,923	3,480,817	9,365,102	18,672,992	9,307,890	19,707
Indiana	6	857	1,427,806	4,098,233	6,364,730	2,266,497	9,110
Massachusetts	11	1,157	1,823,213	3,128,556	6,926,664	3,798,108	7,726
Michigan	18	1,011	1,690,559	3,474,473	6,912,962	3,438,489	6,396
New Jersey	11	468	687,697	1,140,775	2,386,454	1,245,679	2,921
New York	21	1,464	2,170,512	6,169,622	11,063,005	4,893,383	11,792
Ohio	34	4,408	5,965,520	12,343,266	25,871,051	13,527,785	32,664
Pennsylvania	40	2,316	3,263,442	6,281,604	13,884,531	7,602,927	22,912
Washington	6	130	183,700	414,263	779,967	365,704	914
Wisconsin	5	346	633,712	1,263,872	2,494,779	1,230,907	3,154
Other States [3]	12	281	349,099	1,520,098	2,687,671	1,167,573	3,833

[1] Includes values of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of forgings from purchased iron and steel: 1927, $2,879,654; 1925, $5,300,291; corresponding amounts for earlier years not calculated. Iron and steel forgings are produced to a great extent in other industries, but are not separately reported. The total production for the United States can not, therefore, be shown.

[2] Not called for on schedule.

[3] Alabama, 3 establishments; Colorado, 1; Iowa, 1; Kentucky, 2; Maryland, 2; Oregon, 1; Tennessee, 1; Virginia, 1.

GALVANIZING AND OTHER COATING, NOT DONE IN ROLLING MILLS

[The coating of sheet iron with zinc (galvanizing or sherardizing), aluminum, lead, etc., and retinning. Retinning is included with these processes as an operation distinct from the manufacture of tin plate and terneplate. The establishments in this industry are engaged principally in contract work on materials owned by other establishments. (See "Contract Work," p. 8.) For the production of galvanized sheets and plates, see Table 4, p. 929, and of galvanized wire in the wire industry and in the wire departments of rolling mills, see Table 4, p. 964]

United States							
1927	59	953	$1,448,940	$3,722,411	[1] $6,950,855	$3,228,444	2,657
1925	54	804	1,127,862	2,891,944	[1] 5,933,158	3,041,214	1,881
1923	51	877	1,183,464	3,363,069	[1] 6,327,338	2,964,269	1,856
1921	51	685	843,620	2,161,406	[1] 4,017,820	1,856,414	(2)
1919	52	1,665	2,247,953	10,532,288	[1] 14,475,682	3,943,394	1,571
States, 1927							
California	5	54	90,190	134,671	332,907	198,236	138
Illinois	8	145	233,180	551,813	1,097,880	546,067	160
New York	8	128	197,162	335,000	722,485	387,485	157
Ohio	10	77	132,681	286,042	666,189	380,147	379
Pennsylvania	8	199	295,097	626,517	1,227,184	600,667	496
Other States [3]	20	350	500,630	1,788,368	2,904,210	1,115,842	1,327

[1] Consists principally of amounts received for custom and contract work on materials furnished by others. Does not include receipts for galvanizing and other coating by establishments other than those in the "Galvanizing and other coating" industry or done in rolling mills, as follows: 1927, $505,039; 1925, $554,478; 1923, $371,466; 1921, $125,263; 1919, $281,512.

[2] Not called for on schedule.

[3] Alabama, 1 establishment; Connecticut, 1; Georgia, 1; Indiana, 1; Louisiana, 1; Maryland, 1; Massachusetts, 2; Michigan, 1; Minnesota, 1; Missouri, 1; New Jersey, 2; Oklahoma, 1; Oregon, 1; Washington, 1; West Virginia, 1; Wisconsin, 3.

Summary for Industries in Group 11 Which Are Not Covered by Separate Reports, by States—Continued

[See note at head of this table, p. 974]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
HORSESHOES, NOT MADE IN ROLLING MILLS							
[*Principal products:* Horse shoes, mule shoes, and calks. This classification covers establishments, other than rolling mills, which manufacture these commodities as their principal products. The production of horseshoes in rolling mills, however, greatly exceeds that in the horseshoe industry (see footnote 3)]							
United States [1]							
1927	[2] 10	195	$281,864	$466,709	[3] $1,363,488	$896,779	1,088
1925	9	193	274,950	496,289	[3] 1,408,042	911,753	1,042
1923	10	255	332,271	737,306	[3] 1,813,495	1,076,189	1,341
1921	12	207	314,352	954,778	[3] 1,931,812	977,034	(4)
1919	20	744	830,249	1,536,619	[3] 3,367,001	1,830,382	3,874

[1] Statistics for States can not be given without disclosing operations of individual establishments.
[2] Connecticut, 2 establishments; Illinois, 2; Massachusetts, 1; Minnesota, 2; New Jersey, 1; Pennsylvania, 1; Wisconsin, 1.
[3] For the total production of horseshoes in 1927, 1925, and 1923 by all plants (including rolling mills) see Table 4, p. 930. No comparable data for 1921 and 1919.
[4] Not called for on schedule.

IRON AND STEEL, PROCESSED							
[The establishments classified under this head are those engaged primarily in "heat treating"—hardening, tempering, annealing, etc.—or otherwise treating iron and steel, chiefly on a contract or custom basis. Prior to 1925 this industry, as classified for census purposes, embraced establishments engaged in job welding, but such establishments are not included for 1925 and 1927. If operated in connection with machine shops, they are classified in the "Foundry and machine-shop products, not elsewhere classified" industry]							
United States							
1927	33	231	$392,273	$509,690	$1,443,289	$933,599	1,716
1925	26	306	556,638	642,699	2,113,770	1,471,071	1,870
States, 1927							
Illinois	4	44	62,956	77,585	222,770	145,185	177
Massachusetts	5	33	49,188	82,158	192,889	110,731	461
Ohio	8	42	72,515	78,301	281,879	203,578	465
Other States [1]	16	112	207,614	271,646	745,751	474,105	613

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

SUMMARY FOR INDUSTRIES IN GROUP 11 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES—Continued

[See note at head of this table, p. 974]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
NAILS, SPIKES, ETC., NOT MADE IN ROLLING MILLS							
[*Principal products:* Wire nails and spikes, cut nails and spikes, tacks, shoe nails and tacks, horseshoe nails, saddle nails, glaziers' points, wire-furring staples, boat spikes, etc. Wire nails and spikes are made chiefly in wire mills and wire-drawing departments of rolling mills (Table 5, p. 967), and cut and wrought nails are made principally in steel works and rolling mills (Table 4, p. 929)]							
United States							
1927	56	2,100	$2,670,016	$5,156,906	[1] $11,753,468	$6,596,562	8,073
1925	58	2,227	2,609,773	5,645,626	[1] 12,318,494	6,672,868	8,102
1923	61	2,849	3,235,142	7,005,168	[1] 13,299,740	6,294,572	10,275
1921	56	2,412	2,575,961	5,670,025	[1] 10,976,307	5,306,282	(2)
1919	65	3,355	3,397,562	8,874,747	[1] 17,583,344	8,708,597	8,971
States, 1927							
Illinois	6	44	63,749	221,454	425,904	204,450	147
Indiana	4	121	96,701	317,268	573,562	256,294	498
Massachusetts	22	849	1,094,020	1,969,823	4,444,419	2,474,596	2,832
New York	4	185	306,849	552,594	1,348,337	795,743	958
Ohio	3	118	124,585	398,476	812,563	414,087	439
Pennsylvania	5	152	185,610	383,195	779,178	395,983	894
Other States [3]	12	631	798,502	1,314,096	3,369,505	2,055,409	2,305

[1] For the total production of wire nails, spikes, etc., in 1927 and 1925, by all plants, including wire mills and wire-drawing departments of rolling mills, see Table 5, p. 967; for the total production of cut and wrought nails, spikes, etc., by all plants, see Table 4, p. 929. No comparable data for other years.
[2] Not called for on schedule.
[3] California, 2 establishments; Connecticut, 3; Maryland, 2; Missouri, 1; New Hampshire, 1; New Jersey, 1; Rhode Island, 1; Wisconsin, 1.

PENS, STEEL AND BRASS							
[*Principal products:* Writing pens (points) of steel, brass, or other metal, except gold]							
United States [1]							
1927	[2] 6	534	$593,738	$292,838	[3] $1,657,855	$1,365,017	307
1925	5	487	498,361	265,089	[3] 1,445,573	1,180,484	273
1923	5	475	414,648	176,935	[3] 1,171,070	994,135	266
1921	4	372	308,797	173,109	[3] 846,277	673,168	(4)
1919	4	807	679,405	398,383	[3] 1,679,541	1,281,158	305

[1] Statistics for States can not be given without disclosing operations of individual establishments.
[2] Connecticut, 2 establishments; Michigan, 1; New Jersey, 2; Pennsylvania, 1.
[3] Includes values of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of steel and brass pens: 1927, $461,698; 1925, $232,800; corresponding amounts for earlier years not calculated. The production of steel and brass pens can not be shown without disclosing the data for individual establishments.
[4] Not called for on schedule.

SUMMARY FOR INDUSTRIES IN GROUP 11 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES—Continued

[See note at head of this table, p. 974]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
SAFES AND VAULTS							
[*Principal products:* Fireproof and burglar-proof safes and vaults for banks, offices, and residences; money chests; safe-deposit boxes; and safe locks]							
United States							
1927	25	3,386	$4,494,497	$7,226,295	$18,439,550	$11,213,255	9,688
1925 [1]	35	3,865	5,398,297	8,266,131	23,043,708	14,777,577	10,054
1923	34	3,476	4,694,281	7,085,544	19,101,314	12,015,770	7,690
1921	34	3,547	4,792,613	7,440,040	19,725,452	12,285,412	(2)
1919	38	2,949	3,233,318	6,608,680	15,293,927	8,685,247	5,342
States, 1927							
New York	3	145	170,129	353,689	748,452	394,763	350
Ohio	11	2,102	2,780,938	4,404,424	12,096,941	7,692,517	6,419
Other States [3]	11	1,139	1,543,430	2,468,182	5,594,157	3,125,975	2,919

[1] The figures for 1925 and preceding census years are not strictly comparable with those for 1927 because of the inclusion in the earlier figures and the exclusion from the figures for 1927 of data for establishments which reported metal burial vaults as their principal products. (Such establishments are now classified in the "Caskets, coffins, burial cases, and morticians' goods" industry.) The figures for 1925, as given in this table, include data for 8 establishments, with a combined value of products amounting to $2,767,044, which made steel burial vaults as their principal products.

[2] Not called for on schedule.

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

SCREW-MACHINE PRODUCTS							
[*Principal products:* Machine screws and a great variety of special parts (many of which are threaded) made on screw machines]							
[For production by States see "Screw-machine products—Production, for the United States, 1927 and 1925, and for States," 1927 p. 982]							
United States							
1927	205	9,967	$13,778,310	$20,895,128	[1] $48,137,867	$27,242,739	31,835
1925	193	8,987	12,668,564	18,788,275	43,779,284	24,991,009	30,514
1923	180	9,126	11,919,164	15,795,461	39,238,582	23,443,121	28,954
1921	160	5,911	6,547,522	7,576,843	18,365,242	10,788,399	(2)
1919	143	10,262	12,104,780	14,983,868	40,015,460	25,031,592	23,517
States, 1927							
California	7	70	92,330	79,660	277,263	197,603	237
Connecticut	14	852	1,068,673	1,985,981	4,111,306	2,125,325	2,367
Illinois	32	1,394	2,159,624	3,088,915	7,623,701	4,534,786	4,213
Indiana	6	200	309,152	295,505	742,386	446,881	576
Massachusetts	24	448	624,509	742,445	1,887,725	1,145,280	1,610
Michigan	38	2,663	3,470,748	5,935,703	12,436,948	6,501,245	7,777
New Jersey	7	172	340,449	423,063	907,119	484,056	446
New York	16	356	489,792	525,161	1,994,083	1,468,922	1,166
Ohio	33	2,990	4,151,564	6,438,143	14,532,438	8,094,295	10,752
Pennsylvania	16	508	676,747	835,772	2,236,062	1,400,290	1,517
Wisconsin	4	125	177,929	288,976	627,787	338,811	491
Other States [3]	8	189	216,793	255,804	761,049	505,245	683

[1] For total production screw-machine products, regardless of industry classification, see p. 982.

[2] Not called for on schedule.

[3] Maryland, 1 establishment; Minnesota, 2; Missouri, 3; Rhode Island, 2.

SUMMARY FOR INDUSTRIES IN GROUP 11 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES—Continued

[See note at head of this table, p. 974]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
SCREWS, WOOD							
[*Principal products:* Steel and brass screws for use in wood. (Bolts, nuts, rivets, machine screws, and screw-machine products were reported as secondary products]							
[For production by States, see "Wood screws—Production, for the United States, 1927 and 1925, and for States, 1927," p. 983]							
United States							
1927	13	3,723	$4,276,785	$5,015,095	$11,882,394	$6,867,299	11,633
1925	12	5,084	5,525,105	6,288,103	15,835,610	9,547,507	11,970
1923	10	4,108	5,024,198	5,769,393	13,707,296	7,937,503	8,550
1921	8	2,742	2,797,031	2,462,145	7,418,489	4,956,344	(1)
1919	11	4,889	4,864,613	5,551,563	15,459,582	9,908,019	7,764
States, 1927							
Connecticut	5	1,636	1,548,185	1,561,121	4,195,694	2,634,573	3,678
Other States [2]	8	2,087	2,728,600	3,453,974	7,686,700	4,232,726	7,955

[1] Not called for on schedule.
[2] Illinois, 2 establishments; Massachusetts, 2; New Hampshire, 1; Ohio, 1; Pennsylvania, 1; Rhode Island, 1.

STEEL BARRELS, KEGS, AND DRUMS							
[*Principal products:* Steel barrels, kegs, and drums manufactured for use as shipping containers]							
United States							
1927	39	2,853	$3,985,629	$14,735,518	[1] $24,104,669	$9,369,151	11,229
1925	33	2,021	2,914,381	12,743,280	19,928,094	7,184,814	7,739
1923	39	2,668	3,363,374	14,818,038	23,248,707	8,430,669	7,907
1921	31	2,013	2,322,503	9,266,744	14,525,010	5,258,266	(2)
1919	33	3,322	4,435,444	15,151,210	24,942,650	9,791,440	10,554
States, 1927							
California	5	428	617,952	1,798,964	3,256,987	1,458,023	1,532
Ohio	13	951	1,346,132	6,018,770	8,928,339	2,909,569	3,829
Pennsylvania	5	177	240,648	1,061,154	1,559,483	498,329	805
Other States [3]	16	1,297	1,780,897	5,856,630	10,359,860	4,503,230	5,063

[1] Includes $5,089,293, the value of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of steel barrels, kegs, and drums. Does not include the value of steel barrels, kegs, and drums made as secondary products by establishments classified in other industries. The total value of steel barrels, kegs, and drums manufactured in 1927, so far as separately reported, regardless of the industry classification of the establishments in which they were manufactured, was $27,274,648.
[2] Not called for on schedule.
[3] Illinois, 3 establishments; Indiana, 1; Louisiana, 1; Minnesota, 3; Missouri, 2; New Jersey, 1; New York, 2; Texas, 2; Wisconsin, 1.

Summary for Industries in Group 11 Which Are Not Covered by Separate Reports, by States—Continued

[See note at head of this table, p. 974]

STRUCTURAL AND ORNAMENTAL IRON AND STEEL WORK, NOT MADE IN ROLLING MILLS

[*Principal products:* Balconies, bank fixtures, beams, coal chutes, columns, crane girders, elevator inclosures, elevator cars, expanded metal for plaster and concrete work, fences, fire escapes, fireproof moving-picture booths, gratings, girders, portable steel buildings, and other structural and ornamental iron and steel work]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
United States							
1927	1,284	52,392	$84,578,048	$243,446,072	[1] $440,376,360	$196,930,288	251,670
1925	1,136	48,341	77,411,499	237,652,611	[1] 420,997,579	183,344,968	211,732
1923	1,056	51,591	80,832,875	225,487,217	[1] 406,117,279	180,630,062	205,518
1921	1,021	32,897	47,455,082	151,010,906	[1] 250,085,446	99,074,540	(2)
1919	1,146	43,962	59,920,132	168,800,715	[1] 294,962,419	126,161,704	165,179
States, 1927							
Alabama	11	698	863,231	4,559,436	7,251,992	2,692,556	5,303
California	114	2,374	3,922,857	6,955,844	14,660,509	7,704,665	6,889
Colorado	11	195	255,771	1,048,845	1,886,543	837,698	721
Connecticut	19	389	649,042	1,439,641	3,110,720	1,671,079	1,432
Delaware	3	15	25,837	29,297	96,980	67,683	28
District of Columbia	11	224	318,144	615,251	1,355,669	740,418	762
Florida	10	103	167,646	263,989	584,372	320,383	333
Georgia	5	143	200,514	262,876	683,094	420,218	129
Illinois	132	5,525	9,229,803	27,687,460	47,826,604	20,139,144	26,604
Indiana	28	1,779	2,856,727	9,546,965	16,356,091	6,809,126	16,061
Iowa	9	422	521,353	2,092,038	5,003,680	2,911,642	1,309
Kansas	10	625	884,495	3,274,349	5,717,398	2,443,049	2,785
Kentucky	10	398	444,870	944,933	2,082,837	1,137,904	1,198
Maryland	17	608	798,378	3,459,301	6,618,081	3,158,780	1,395
Massachusetts	71	1,394	2,273,572	5,101,016	11,239,420	6,138,404	5,591
Michigan	46	1,969	3,674,577	9,337,145	19,331,448	9,994,303	8,709
Minnesota	14	769	1,129,418	2,154,972	4,978,134	2,823,162	1,819
Missouri	41	1,118	1,641,625	4,270,746	8,791,728	4,520,982	4,662
Nebraska	9	203	247,322	620,315	1,280,415	660,100	915
New Jersey	70	2,676	4,577,391	14,638,042	23,858,472	9,220,430	9,744
New York	270	5,646	11,555,131	26,182,622	54,129,221	27,946,599	17,239
North Carolina	7	268	401,562	1,283,690	2,321,222	1,037,532	811
Ohio	96	7,964	12,666,274	35,007,260	62,918,317	27,911,057	39,846
Oklahoma	7	471	607,082	2,564,131	3,988,461	1,424,330	785
Oregon	6	224	294,290	719,288	1,282,256	562,968	1,064
Pennsylvania	127	10,687	16,357,499	54,305,434	90,711,633	36,406,199	71,892
Rhode Island	6	177	259,298	578,785	1,329,302	750,517	638
Tennessee	10	446	504,204	1,905,556	3,374,233	1,468,677	1,987
Texas	24	1,456	1,887,178	6,030,223	9,877,073	3,846,850	4,222
Utah	3	40	57,645	234,877	476,408	241,531	426
Virginia	11	754	1,217,466	4,070,128	6,397,647	2,327,519	4,024
Washington	16	546	845,348	1,944,052	3,407,399	1,463,347	5,159
West Virginia	7	222	324,950	1,828,382	2,767,371	938,989	1,696
Wisconsin	30	1,470	2,391,496	6,686,597	11,673,315	4,986,718	4,017
Other States [3]	23	394	526,062	1,802,586	3,008,315	1,205,729	1,475

[1] Includes values of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of structural and ornamental iron and steel work: 1927, $14,524,370; 1925, $10,178,973; corresponding amounts for earlier years not calculated. Does not include the following values of structural and ornamental iron and steel work made as secondary products by establishments classified in other industries: 1927, $19,542,021; 1925, $24,975,000; 1923, $23,624,883; 1921, $18,863,376; 1919, $17,776,690.

[2] Not called for on schedule.

[3] Arizona, 2 establishments; Arkansas, 1; Louisiana, 7; Maine, 4; Montana, 1; New Hampshire, 3; South Carolina, 2; South Dakota, 1; Vermont, 1; Wyoming, 1.

SUMMARY FOR INDUSTRIES IN GROUP 11 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES—Continued

[See note at head of this table, p. 974]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
TOOLS, NOT INCLUDING EDGE TOOLS, MACHINE TOOLS, FILES, OR SAWS							
[*Principal products:* Plumbers' and tinners' tools, stonecutters' tools, drills (for both hand and power drilling appliances), reamers, wrenches, punches, pliers, calking tools, nail pullers, and other mechanical hand tools, except edge tools, files, and saws; other hand tools and implements, such as shovels, scoops, hoes, rakes, forks, etc.]							
United States							
1927	657	25,232	$34,464,964	$37,056,684	[1] $117,430,624	$80,373,940	85,963
1925	663	25,340	34,294,113	39,023,373	[1] 121,263,093	82,239,720	78,686
1923	700	29,100	37,168,834	43,205,844	123,158,303	79,952,459	75,248
1921	714	19,453	22,643,499	25,550,113	70,523,416	44,973,303	(2)
1919	1,125	35,585	43,836,069	45,796,967	144,201,668	98,404,701	67,730
States, 1927							
California	17	160	268,100	205,691	757,220	551,529	510
Connecticut	49	2,830	3,733,710	4,111,637	11,586,068	7,474,431	6,914
Illinois	88	2,216	3,412,224	5,318,903	13,022,578	7,703,675	6,222
Indiana	19	569	642,775	1,053,425	2,328,805	1,275,380	2,609
Iowa	8	303	462,321	688,254	2,046,815	1,358,561	1,514
Maryland	6	88	104,694	145,778	366,219	220,441	200
Massachusetts	72	4,589	5,837,813	5,061,123	19,113,050	14,051,927	17,154
Michigan	47	2,832	4,294,899	3,039,933	11,840,048	8,800,115	7,560
Minnesota	8	65	85,821	64,407	465,766	401,359	260
Missouri	14	227	313,020	371,948	1,017,913	645,965	602
New Hampshire	5	98	94,075	109,891	337,626	227,735	128
New Jersey	40	1,006	1,498,086	854,689	3,622,563	2,767,874	2,200
New York	78	2,215	3,058,389	2,816,104	9,504,875	6,688,771	8,563
Ohio	70	3,870	5,529,146	6,206,947	21,987,339	15,780,392	14,690
Oklahoma	3	17	24,972	29,863	84,216	54,353	102
Pennsylvania	65	2,407	2,989,346	3,824,500	10,519,646	6,695,146	9,890
Rhode Island	12	174	248,187	126,196	520,553	394,357	462
Tennessee	5	184	197,841	492,903	906,950	414,047	1,087
Vermont	9	459	474,356	813,860	1,933,124	1,119,264	2,474
Washington	6	26	41,086	28,381	99,621	71,240	73
Wisconsin	18	472	669,459	884,249	3,456,172	2,571,923	790
Other States [3]	18	425	484,644	808,002	1,913,457	1,105,455	1,959

[1] Includes values of miscellaneous products, normally belonging to other industries, made as secondary products by establishments classified in this industry, but does not include value of tools made as secondary products by establishments classified in other industries. The total value of tools, not including edge tools, machine tools, files, or saws, regardless of the industry classification of the establishments in which manufactured, so far as separately reported to the Bureau of the Census, was, for 1927, $117,321,435; for 1925, $119,889,818. Of the $117,321,435 reported for 1927, $63,605,954 was reported in detail as follows: Hammers and sledges, $3,792,107; wrenches and pliers, $11,747,080; drills, bits, reamers, and taps (metal working), $15,818,772; shovels, spades, scoops, forks, rakes, and hoes, $15,115,681; carpenters' tools except those included above, $4,973,839; plumbers' tools except those included above, $4,385,294; machinists' hand tools except those included above, $7,773,181. The remainder, $53,715,481, is made up in part of the value of the same classes of tools not reported separately, and in part of the value of tools of other classes not reported specifically.

[2] Not called for on schedule.

[3] Colorado, 1 establishment; Delaware, 2; Georgia, 1; Maine, 2; Mississippi, 1; Montana, 1; North Carolina, 1; Oregon, 3; Texas, 2; Virginia, 1; West Virginia, 3.

SUMMARY FOR INDUSTRIES IN GROUP 11 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES—Continued

[See note at head of this table, p. 974]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
WROUGHT PIPE, WELDED AND HEAVY RIVETED, NOT MADE IN ROLLING MILLS							
[*Principal products:* Boiler tubes, oil-country casing, tubing, and pipe, mechanical tubing and other black pipe, 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]							
United States							
1927	44	11,083	$16,066,001	$55,778,864	[1] $98,186,341	$42,407,477	53,938
1925	42	10,871	17,156,545	59,142,447	[1] 94,695,553	35,553,106	41,306
1923	53	10,633	17,704,699	57,965,845	[1] 90,823,189	32,857,344	40,912
1921	57	8,728	11,234,413	37,093,041	[1] 56,662,278	19,569,237	(2)
1919	50	10,426	14,919,676	51,155,653	[1] 81,869,115	30,713,462	23,925
States, 1927							
California	12	1,622	1,961,156	7,012,357	13,638,900	6,626,543	10,970
Illinois	4	1,117	1,883,878	7,299,281	14,027,121	6,727,840	6,776
New Jersey	3	90	144,258	296,347	525,450	229,103	977
New York	3	372	480,082	1,474,850	2,678,276	1,203,426	1,701
Ohio	5	2,388	3,794,014	11,101,003	20,084,924	8,983,921	8,528
Pennsylvania	9	5,128	7,270,605	27,299,250	44,564,127	17,264,877	22,776
Other States [3]	8	366	332,008	1,295,776	2,667,543	1,371,767	2,210

[1] For the total production of wrought pipe in 1927, 1925, and 1923, by all plants (including rolling mills) see Table 4, p. 930. No comparable data for 1921 and 1919.
[2] Not called for on schedule.
[3] Arizona, 2 establishments; Colorado, 1; Indiana, 1; Michigan, 3; Washington, 1.

SCREW-MACHINE PRODUCTS—PRODUCTION, FOR THE UNITED STATES, 1927 AND 1925, AND FOR STATES, 1927

[See "Screw-machine products," p. 978]

	1927	1925
1. "Screw-machine products" industry, all products	$48,137,867	$43,779,284
2. Screw-machine products	42,975,689	41,995,652
3. Other products	5,162,178	1,783,632
4. Screw-machine products made as secondary products in other industries	8,070,776	13,056,950
Screw-machine products: Total value (sum of 2 and 4)	51,046,465	55,052,602

	1927
United States, total value	$51,046,465
California	251,577
Connecticut	6,952,267
Illinois	7,613,777
Indiana	723,247
Maryland and New Jersey	1,183,725
Massachusetts	2,810,063
Michigan	12,166,519
Minnesota and Missouri	870,451
New York	2,079,723
Ohio	12,752,583
Pennsylvania	2,266,629
Rhode Island	728,117
Wisconsin	647,787

SUMMARY FOR INDUSTRIES IN GROUP 11 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES—Continued

[See note at head of this table, p. 974]

WOOD SCREWS—PRODUCTION, FOR THE UNITED STATES, 1927 AND 1925, AND FOR STATES, 1927

[See "Screws, wood," p. 979]

	1927	1925
1. Wood-screws industry, all products, total value	$11,882,394	$15,835,610
2. Wood screws	7,034,294	11,245,300
3. Other products	4,848,100	4,590,310
4. Wood screws made as secondary products by establishments in other industries	1,840,204	3,531,237
Wood screws: Total value (sum of 2 and 4)	$8,874,498	$11,245,300

	1927	
	Quantity (gross)	Value
United States, total value		$8,874,498
Connecticut	12,566,171	2,325,499
Illinois and Ohio—		
Quantity reported	6,527,623	1,105,196
Quantity not reported		987,610
Other States [1]	29,547,605	4,456,193

[1] Massachusetts, Michigan, New Hampshire, New York, Pennsylvania, and Rhode Island.

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 the "Iron and steel and their products, not including machinery," and "Miscellaneous industries" groups also manufacture various classes of machinery, tools, and other 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 is a considerable amount of duplication in the total cost of materials and the total value of products for the group as a whole. (See "Duplication in cost of materials and value of products," p. 10.)

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.

The former industry classifications "Gas and electric fixtures, not including lamps and reflectors" and "Lamps and reflectors, not including electric bulbs" have been combined under the title "Gas and electric fixtures; lamps, lanterns, and reflectors."

Summary statistics for the group as a whole, by subgroups and by separate industries, are given on page 985. On pages 988 to 1028 are presented detailed reports for those industries in Group 12 for which statistics have been published separately in pamphlet form; and following these reports (pp. 1029 to 1032) are given brief descriptions and summary statistics for the 7 industries in this group, for which separate reports have not been prepared.

SUMMARY FOR GROUP 12.—NONFERROUS METALS AND THEIR PRODUCTS: 1921 TO 1927

[See "Regrouping of industries and renumbering of groups," p. 19]

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
				Expressed in thousands of dollars [1]				
Total	1927	6,658	207,545	380,365	1,780,358	2,668,697	878,339	1,219,598
	1925	6,924	275,292	380,781	1,946,777	2,833,770	886,993	1,158,486
	1923	7,433	296,911	394.024	1,767,072	2,634,032	866,959	1,168,656
	1921	7,801	212,354	256,252	885,836	1,406,875	521,038	(2)
Metals	1927	1,336	80,721	116,243	458,029	705,126	247,097	483,832
	1925	1,267	79,488	113,574	486,301	721,386	235,085	431,605
	1923	1,266	83,359	111,866	448,267	679,182	230,915	372,603
	1921	1,125	51,668	60,085	186,949	297,455	110,506	(2)
Aluminum manufactures	1927	139	14,798	20,892	79,839	123,557	43,719	71,907
	1925	127	14,353	19,753	84,985	127,831	42,846	62,366
	1923	119	16,288	19,844	66,660	106,930	40,271	58,272
	1921	87	9,584	10,836	25,953	45,822	19,870	(2)
Babbitt metal, white metal, type metal, and solder.	1927	64	1,087	1,534	36,784	44,673	7,889	3,597
	1925	67	1,465	2,221	44,081	50,650	6,569	3,907
	1923	83	1,497	1,969	33,964	41,487	7,523	4,004
	1921	98	1,372	1,880	22,355	26,255	3,900	(2)
Brass, bronze, and other nonferrous alloys, and manufactures of these alloys and of copper, not specifically classified.	[3] 1927	1,106	64,187	92,894	327,605	519,892	192,288	404,512
	[3] 1925	1,044	62,942	90,613	337,641	519,725	182,084	361,242
	1923	1,035	64,713	88,839	331,757	511,470	179,713	305,839
	1921	911	39,830	46,260	130,627	214,904	84,277	(2)
Lead: Bar, pipe, and sheet	1927	27	649	923	13,802	17,003	3,202	3,816
	1925	29	728	986	19,594	23,180	3,586	4,090
	1923	29	861	1,215	15,887	19,295	3,407	4,488
	1921	29	882	1,109	8,014	10,474	2,460	(2)
Smelting and refining	1927	228	34,087	50,515	935,014	1,086,153	151,138	481,441
	1925	238	37,194	54,793	1,070,193	1,244,506	174,313	479,412
	1923	205	37,634	55,095	924,228	1,060,440	136,213	460,321
	1921	222	20,999	27,807	419,419	491,156	71,737	(2)
Primary	1927	69	30,510	44,800	807,242	942,735	135,493	465,164
	1925	71	32,992	47,948	912,064	1,067,125	155,061	[4] 455,496
	1923	84	34,889	51,123	825,549	947,352	121,803	444,903
	1921	80	18,580	24,401	364,277	422,972	58,694	(2)
Copper	1927	26	13,924	20,582	527,764	609,299	81,535	323,799
	1925	26	15,588	22,642	573,190	665,177	91,986	[4] 321,909
	1923	29	16,777	25,459	554,100	625,433	71,333	332,943
	1921	28	8,293	11,199	205,904	234,895	28,991	(2)
Lead	1927	18	5,398	7,690	202,859	225,138	22,279	48,298
	1925	17	6,115	9,002	254,881	283,043	28,162	47,219
	1923	20	6,194	8,768	207,315	227,735	20,421	42,377
	1921	23	4,509	5,958	134,061	150,594	16,533	(2)
Zinc	1927	25	11,188	16,528	76,619	108,298	31,679	93,067
	1925	28	11,289	16,305	83,992	118,906	34,913	86,368
	1923	35	11,918	16,896	64,134	94,184	30,050	69,583
	1921	29	5,778	7,244	24,312	37,483	13,170	(2)
Secondary	1927	159	3,577	5,715	127,772	143,418	15,646	16,277
	1925	167	4,202	6,845	158,130	177,381	19,251	23,916
	1923	121	2,745	3,972	98,679	113,088	14,409	15,418
	1921	142	2,419	3,406	55,142	68,184	13,043	(2)
Gold, silver, and platinum, reducing and refining, not from the ore.	1927	57	801	1,435	58,877	62,647	3,770	4,288
	1925	65	1,258	2,166	88,867	95,243	6,376	9,676
	1923	76	901	1,361	65,089	71,921	6,832	4,620
	1921	77	785	1,131	41,056	45,974	4,918	(2)
Metals, other than gold, silver, or platinum, not from the ore.	1927	102	2,776	4,280	68,894	80,771	11,876	11,989
	1925	102	2,944	4,680	69,263	82,138	12,875	14,240
	1923	41	1,587	2,224	29,049	35,786	6,736	9,654
	1921	60	1,200	1,528	10,031	15,150	5,119	(2)
Metals, not elsewhere classified.[5]	1923	4	257	387	4,541	5,382	841	1,144
	1921	5	434	748	4,055	7,060	3,006	(2)

See footnotes at end of table.

SUMMARY FOR GROUP 12.—NONFERROUS METALS AND THEIR PRODUCTS: 1921 TO 1927—Continued

[See "Regrouping of industries and renumbering of groups," p. 19]

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
				Expressed in thousands of dollars [1]				
Manufactures of metals	1927	5,094	155,737	213,608	387,315	877,418	490,103	254,325
	1925	5,419	158,610	212,415	390,283	867,878	477,595	242,869
	1923	5,961	171,960	221,202	401,978	882,975	480,997	235,789
	1921	6,454	139,687	168,359	279,469	618,264	338,795	(2)
Bells [6]	1923	9	218	226	328	792	465	426
	1921	9	203	200	277	645	368	(2)
Clocks, time-recording devices, and clock movements.	1927	52	9,865	11,751	10,063	38,196	28,133	9,510
	1925	45	7,945	9,238	8,920	29,379	20,459	8,614
	1923	38	9,359	9,879	8,173	28,554	20,381	8,285
	1921	37	6,535	6,558	6,591	17,750	11,159	(2)
Copper, tin, and sheet-iron work, including galvanized-iron work, not elsewhere classified.	1927	1,981	24,527	38,668	98,386	191,129	92,743	35,880
	1925	2,107	24,996	37,825	84,080	175,043	90,963	35,273
	1923	2,524	28,852	42,446	93,507	188,908	95,401	34,243
	1921	3,105	25,172	36,562	75,896	148,776	72,880	(2)
Fire extinguishers, chemical	1927	26	832	1,192	4,010	8,035	4,025	1,564
	1925	26	842	1,131	4,122	8,037	3,915	1,440
	1923	26	762	847	3,366	6,152	2,786	1,235
	1921	31	580	626	2,081	4,254	2,173	(2)
Gas and electric fixtures; lamps, lanterns, and reflectors.[7]	1927	481	21,030	29,261	55,609	127,802	72,194	31,291
	1925	517	22,334	31,072	57,771	129,698	71,928	30,038
	1923	535	22,919	29,097	52,640	118,979	66,339	30,534
	1921	465	15,866	18,523	32,802	72,054	39,253	(2)
Gold and silver, leaf and foil	1927	77	1,146	1,120	1,721	3,571	1,850	346
	1925	84	1,148	1,113	1,839	3,746	1,907	326
	1923	64	918	934	1,897	3,562	1,665	281
	1921	72	1,104	1,042	4,995	7,014	2,020	(2)
Jewelry	1927	1,367	24,116	36,766	76,915	164,865	87,950	17,070
	1925	1,468	23,837	35,177	79,886	166,816	86,931	17,296
	1923	1,622	26,354	36,424	83,983	174,034	90,050	16,851
	1921	1,671	23,482	29,938	58,059	127,231	69,171	(2)
Needles, pins, hooks and eyes, and snap fasteners.	1927	45	5,606	6,098	5,923	20,325	14,402	7,250
	1925	48	5,850	5,856	5,926	18,174	12,248	7,603
	1923	49	6,834	6,703	7,796	22,147	14,351	10,367
	1921	68	6,542	5,542	6,163	18,896	12,733	(2)
Pens, gold	1927	8	137	198	444	732	288	80
	1925	13	226	299	589	1,115	526	121
	1923	15	428	658	1,257	2,320	1,063	191
	1921	12	289	376	632	1,335	704	(2)
Plated ware	1927	94	11,752	16,142	20,212	56,720	36,508	27,712
	1925	90	11,290	15,236	20,071	54,330	34,259	23,914
	1923	83	12,118	15,641	19,814	53,899	34,085	22,390
	1921	66	9,535	10,664	12,409	33,944	21,535	(2)
Silversmithing and silverware.	1927	84	4,967	7,803	11,165	30,704	19,539	7,499
	1925	93	5,587	8,607	13,106	32,532	19,425	7,770
	1923	98	4,972	7,330	10,859	27,207	16,348	7,284
	1921	103	5,287	7,151	8,965	24,411	15,446	(2)
Stamped and enameled ware, not elsewhere classified.	1927	365	28,594	35,155	65,581	141,793	76,212	66,726
	1925	370	29,704	36,107	77,487	154,096	76,609	64,346
	1923	329	35,237	42,636	84,518	170,923	86,405	68,326
	1921	324	24,192	26,862	48,233	100,585	52,353	(2)
Tin and other foils, not including gold and silver; collapsible tubes.	1927	27	3,642	4,002	22,454	32,302	9,848	21,619
	1925	26	3,618	4,001	21,342	30,060	8,718	18,712
	1923	24	3,323	3,523	14,515	23,465	8,950	12,595
	1921	22	2,178	2,557	9,265	14,037	4,772	(2)

See footnotes at end of table.

SUMMARY FOR GROUP 12.—NONFERROUS METALS AND THEIR PRODUCTS: 1921 TO 1927—Continued

[See "Regrouping of industries and renumbering of groups," p. 19]

INDUSTRY	Census year	Number of establishments	Wage (earners average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
				Expressed in thousands of dollars [1]				
Watch and clock materials and parts, except watchcases.	1927	17	415	407	315	1,309	994	210
	1925	25	501	480	376	1,363	987	219
	1923	25	396	380	379	1,289	910	170
	1921	23	390	375	357	1,086	730	(2)
Watchcases	1927	40	3,360	4,326	5,311	13,725	8,414	4,121
	1925	45	3,480	4,463	6,050	14,793	8,743	4,106
	1923	57	4,325	5,414	7,499	17,817	10,318	5,710
	1921	37	3,698	4,217	5,625	13,806	8,181	(2)
Watches and watch movements.	1927	11	12,192	15,090	5,871	32,278	26,407	9,357
	1925	13	13,915	16,557	6,178	36,254	30,076	12,348
	1923	17	11,571	13,870	8,836	30,630	21,794	7,396
	1921	17	12,174	13,602	5,161	24,397	19,236	(2)
Electroplating	1927	419	3,556	5,629	3,335	13,930	10,595	14,090
	1925	449	3,337	5,254	2,541	12,441	9,899	10,743
	1923	446	3,374	5,195	2,613	12,297	9,685	9,505
	1921	392	2,460	3,563	1,960	8,041	6,081	(2)

[1] Each total is the sum, expressed to the nearest thousand, of the indivldual items expressed in units. For this reason the totals in some cases may differ slightly from the sums of the items as here given.
[2] Not called for on schedule.
[3] Includes data for bells, treated as a separate industry under "Manufactures of metals" prior to 1925. (See "Bells," below.)
[4] Revised; revision not carried to group total.
[5] No establishments were classified in this industry at the censuses for 1925 or 1927.
[6] Abandoned as a separate industry classification; statistics for 1927 and 1925 included with those for "Brass, bronze, and other nonferrous alloys, and manufactures of these alloys and of copper, not specifically classified."
[7] Formerly classified as two industries: "Gas and electric fixtures, not including lamps and reflectors" and "Lamps and reflectors, not including electric bulbs."

ALUMINUM MANUFACTURES

[A preliminary report for this industry was issued under date of December 6, 1928]

Description of the industry.—This industry classification 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 989.

Products.—A special schedule, providing for detailed data for specified classes of aluminum products, was first used at the census for 1925. For this reason no comparative commodity statistics can be given for earlier census years.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	139	14,798	$20,891,843	$79,838,509	$123,557,112	$43,718,603	71,907
1925	127	14,353	19,753,349	84,984,923	127,830,756	42,845,833	62,366
1923	119	16,288	19,843,546	66,659,519	106,930,367	40,270,848	58,272
1921	87	9,584	10,835,597	25,952,529	45,822,161	19,869,632	(2)
1919	83	11,402	13,327,306	49,271,861	75,277,948	26,006,087	30,280
	PER CENT OF INCREASE OR DECREASE (—)						
1925-1927	9.4	3.1	5.8	—6.1	—3.3	2.0	15.3
1923-1925	6.7	—11.9	—.5	27.5	19.5	6.4	7.0
1923-1927	16.8	—9.1	5.3	19.8	15.5	8.6	23.4
1919-1927	67.4	29.8	56.8	62.0	64.1	68.1	137.5

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
		Horse-power		*Horse-power*		*Horse-power*
Prime movers, total	4,497	71,907	2,941	62,366	2,496	58,272
Steam engines	9	3,940	12	4,690	42	16,675
Steam turbines	8	9,775	7	8,083		
Internal-combustion engines	5	795	6	855	4	125
Electric motors driven by purchased current	4,475	57,397	2,916	48,738	2,450	41,472
Electric motors, total	5,713	79,185	4,036	63,713	3,480	61,110
Driven by purchased current	4,475	57,397	2,916	48,738	2,450	41,472
Driven by current generated in establishment reporting	1,238	21,788	1,120	14,975	1,030	19,638
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	14	8,692	16	9,007	(1)	(1)

[1] Not called for on schedule.

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

CLASS	1927	1925
1. Aluminum-manufactures industry, all products, total value	$123,557,112	$127,830,756
2. Aluminum manufactures	117,440,843	122,036,577
3. Other products (not normally belonging to the industry) and receipts for custom work and repairing	6,116,269	5,794,179
4. Aluminum products made as secondary products in other industries, value	21,352,976	19,254,769
Aluminum manufactures, all industries: Aggregate (sum of 2 and 4)	138,793,819	141,291,346
Ware (principally cooking utensils and household articles)	28,988,768	32,052,179
Motor-vehicle parts (chiefly castings)	16,272,132	9,404,048
Castings, other than motor-vehicle	21,059,409	29,339,957
Ingots produced for sale [1]	8,273,534	10,444,685
Other aluminum manufactures, including rolled forms, (bars, plates, and sheets)	64,200,036	60,050,477

[1] Includes ingots recast from pig aluminum and ingots made from scrap aluminum.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	139	16,945	54	2,093	14,798	71,907
California	7	111	5	19	87	151
Connecticut	6	228	1	35	192	705
Illinois	15	780	6	103	671	2,002
Indiana	5	102	4	10	88	329
Massachusetts	9	181	7	35	139	2,981
Missouri	7	113	3	20	90	202
Ohio	24	2,532	9	377	2,146	8,720
Wisconsin	6	3,443	6	414	3,023	11,916
Other States [1]	50	9,455	13	1,080	8,362	44,901

STATE	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
			Materials and supplies	Fuel and power		
United States	$5,117,524	$20,891,843	$77,246,473	$2,592,036	$123,557,112	$43,718,603
California	36,818	134,041	156,004	8,451	462,401	297,946
Connecticut	111,574	300,629	985,479	40,515	1,620,902	594,908
Illinois	334,687	1,182,651	2,637,375	81,977	5,399,197	2,679,845
Indiana	32,630	115,072	276,910	12,664	513,832	224,258
Massachusetts	88,335	179,611	653,873	59,733	1,110,682	397,076
Missouri	53,267	129,773	389,144	14,194	720,338	317,000
Ohio	916,844	3,274,626	9,315,635	317,744	16,193,032	6,559,653
Wisconsin	925,165	3,217,762	8,732,662	299,273	19,408,904	10,376,969
Other States [1]	2,618,204	12,357,678	54,099,391	1,757,485	78,127,824	22,270,948

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

[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

CLOCKS, WATCHES, AND PARTS

[A preliminary report for these industries was issued under date of December 6, 1928]

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 UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
THE GROUP AS A WHOLE							
1927	120	25,832	$31,574,587	$21,560,309	$85,508,171	$63,947,862	23,198
1925	128	25,841	30,736,750	21,524,186	81,789,729	60,265,543	25,287
1923	137	25,651	29,542,894	24,885,640	78,289,759	53,404,119	21,561
1921	114	22,797	24,751,988	17,733,535	57,038,977	39,305,442	(2)
1919	124	28,622	28,874,054	22,325,650	76,384,959	54,059,309	18,681
Per cent of increase or decrease (—):							
1925–1927	—6.3	(3)	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
1923–1927	—12.4	.7	6.9	—13.4	9.2	19.7	7.6
1919–1927	—3.2	—9.7	9.4	—3.4	11.9	18.3	24.2
CLOCKS, TIME-RECORDING DEVICES, AND CLOCK MOVEMENTS							
1927	52	9,865	$11,750,620	$10,062,765	$38,195,803	$28,133,038	9,510
1925	45	7,945	9,237,716	8,920,104	29,379,164	20,459,060	8,614
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	6,590,966	17,750,060	11,159,094	(2)
1919	46	8,252	7,861,611	7,177,813	23,380,190	16,202,377	6,952
Per cent of increase or decrease (—):							
1925–1927	(4)	24.1	27.2	12.8	30.0	37.5	10.4
1923–1925	(4)	—15.1	—6.5	9.1	2.9	.4	4.0
1923–1927	(4)	5.4	18.9	23.1	33.8	38.0	14.8
1919–1927	(4)	19.5	49.5	40.2	63.4	73.6	36.8
WATCHES AND WATCH MOVEMENTS							
1927	11	12,192	$15,090,229	$5,871,384	$32,278,362	$26,406,978	9,357
1925	13	13,915	16,556,685	6,178,017	36,254,110	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	24,396,516	19,235,674	(2)
1919	18	15,888	16,598,896	6,392,562	32,044,299	25,651,737	7,202
Per cent of increase or decrease (—):							
1925–1927	(4)	—12.4	—8.9	—5.0	—11.0	—12.2	—24.2
1923–1925	(4)	20.3	19.4	—30.1	18.4	38.0	67.0
1923–1927	(4)	5.3	8.8	—33.5	7.0	21.2	26.5
1919–1927	(4)	—23.3	—9.1	—8.2	.7	2.9	29.9

See footnotes at end of table.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927—Continued

[See note at head of this table, p. 991]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
WATCHCASES							
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	(2)
1919	33	3,900	4,000,727	8,205,754	19,618,773	11,413,019	4,275
Per cent of increase or decrease (—):							
1925–1927	(4)	—3.4	—3.1	—12.2	—7.2	—3.8	0.4
1923–1925	(4)	—19.5	—17.6	—19.3	—17.0	—15.3	—28.1
1923–1927	(4)	—22.3	—20.1	—29.2	—23.0	—18.5	—27.8
1919–1927	(4)	—13.8	8.1	—35.3	—30.0	—26.3	—3.6
WATCH AND CLOCK MATERIALS AND PARTS, EXCEPT WATCHCASES							
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	(2)
1919	27	582	412,820	549,521	1,341,697	792,176	252
Per cent of increase or decrease (—):							
1925–1927	(4)	—17.2	—15.1	—16.1	—4.0	0.7	—4.1
1923–1925	(4)	26.5	26.2	—.6	5.8	8.4	28.8
1923–1927	(4)	4.8	7.2	—16.7	1.6	9.2	23.5
1919–1927	(4)	28.7	—1.3	—42.6	—2.4	25.5	16.7

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Less than one-tenth of 1 per cent decrease.
[4] Per cent not computed where base is less than 100.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
THE GROUP AS A WHOLE						
Prime movers, total	2,044	*Horsepower* 23,198	1,567	*Horsepower* 25,287	1,509	*Horsepower* 21,561
Steam engines	34	13,225	48	15,929	59	15,450
Steam turbines	2	1,635	2	2,168		
Internal-combustion engines	10	841	10	970	7	516
Water wheels and turbines	2	130	3	170	4	216
Electric motors driven by purchased current	1,996	7,367	1,504	6,050	1,439	5,379
Electric motors, total	5,469	19,355	4,401	18,299	4,344	15,378
Driven by purchased current	1,996	7,367	1,504	6,050	1,439	5,379
Driven by current generated in establishment reporting	3,473	11,988	2,897	12,249	2,905	9,999
Electric generators	36	*Kilowatts* 10,702	57	*Kilowatts* 12,630	(1)	*Kilowatts* (1)

[1] Not called for on schedule.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923—Continued

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
CLOCKS, TIME-RECORDING DEVICES, AND CLOCK MOVEMENTS						
Prime movers, total	738	*Horse-power* 9,510	452	*Horse-power* 8,614	378	*Horse-power* 8,285
Steam engines	10	5,150	14	6,265	21	5,739
Steam turbines						
Internal-combustion engines	2	49	2	50	3	56
Water wheels and turbines	2	130	3	170	3	210
Electric motors driven by purchased current	724	4,181	433	2,129	351	2,280
Electric motors, total	2,887	9,742	2,216	8,199	1,812	7,041
Driven by purchased current	724	4,181	433	2,129	351	2,280
Driven by current generated in establishment reporting	2,163	5,561	1,783	6,070	1,461	4,761
Electric generators	9	*Kilowatts* 3,992	13	*Kilowatts* 4,121	(1)	*Kilowatts* (1)
WATCHES AND WATCH MOVEMENTS						
Prime movers, total	621	*Horse-power* 9,357	570	*Horse-power* 12,348	356	*Horse-power* 7,396
Steam engines	19	5,725	29	7,314	27	6,151
Steam turbines	1	1,600	1	2,133		
Internal-combustion engines	3	435	3	435	3	435
Electric motors driven by purchased current	598	1,597	537	2,466	326	810
Electric motors, total	1,403	5,892	1,142	6,512	1,327	4,081
Driven by purchased current	598	1,597	537	2,466	326	810
Driven by current generated in establishment reporting	805	4,295	605	4,046	1,001	3,271
Electric generators	15	*Kilowatts* 4,540	32	*Kilowatts* 6,339	(1)	*Kilowatts* (1)
WATCHCASES						
Prime movers, total	627	*Horse-power* 4,121	479	*Horse-power* 4,106	710	*Horse-power* 5,710
Steam engines	5	2,350	5	2,350	11	3,560
Steam turbines	1	35	1	35		
Internal-combustion engines	4	332	4	460		
Electric motors driven by purchased current	617	1,404	469	1,261	699	2,150
Electric motors, total	1,126	3,537	978	3,394	1,142	4,117
Driven by purchased current	617	1,404	469	1,261	699	2,150
Driven by current generated in establishment reporting	509	2,133	509	2,133	443	1,967
Electric generators	12	*Kilowatts* 2,170	12	*Kilowatts* 2,170	(1)	*Kilowatts* (1)
WATCH AND CLOCK MATERIALS AND PARTS, EXCEPT WATCHCASES						
Prime movers, total	58	*Horse-power* 210	66	*Horse-power* 219	65	*Horse-power* 170
Internal-combustion engines	1	25	1	25	1	25
Water wheels and turbines					1	6
Electric motors driven by purchased current	57	185	65	194	63	139
Electric motors, total	57	185	65	194	63	139
Driven by purchased current	57	185	65	194	63	139

[1] Not called for on schedule.

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

[The figures for the several items for 1925, as given in this table, may not in some cases be strictly comparable with those for 1927. This lack of comparability, if it exists, is due wholly or mainly to the fact that the schedule for 1925 did not call for the same amount of detail as that for 1927]

CLASS	1927	1925
1. Clocks, watches, and parts industries, all products, total value	$85,508,171	$81,789,729
2. Clocks, watches, and parts	80,707,175	75,948,484
3. Other products (not normally belonging to the industries)	3,151,999	4,981,718
4. Receipts for custom work and repairing	1,648,997	859,527
5. Clocks, watches, and parts made as secondary products in other industries, value	1,806,584	1,589,344
Clocks, watches, and parts, all industries: Total value (sum of 2 and 5)	$82,513,759	$77,537,828
Clocks and clock parts—		
Clocks, complete, except alarm and electric clocks—		
With domestic movements—		
Number of establishments	23	
Number	2,295,912	
Value	$13,032,993	
With imported movements—		
Number of establishments	6	
Number	107,885	
Value	$934,138	
Alarm clocks, complete—		38
Number of establishments	9	10,972,594
Number	10,520,317	$22,904,050
Value	$13,120,007	
Electric clocks—		
Number of establishments	18	
Number	87,333	
Value	$1,621,212	
Clock movements—		
Number of establishments	8	8
Number	622,560	591,728
Value	$777,451	$1,098,173
Clock mechanisms for driving recording, time-switch, and other devices—		
Number of establishments	18	[1] 12
Number	280,645	[1] 40,381
Value	$4,711,445	[1] $2,745,579
Clock materials and parts, including cases—		
Number of establishments	20	18
Value	$804,181	$628,571
Watches (nonjeweled), complete—		
Number of establishments	6	6
Number	8,891,633	9,213,138
Value	$7,895,794	$10,141,593
Watch movements (jeweled only)—		
Number of establishments	10	10
Number	2,281,303	2,199,334
Value	$21,948,842	$22,980,888
Watchcases for sale separately—		
Number of establishments	45	46
Number	5,805,085	4,720,689
Value	$15,471,078	$15,135,049
Watch materials and parts—		
Number of establishments	24	25
Value	$2,196,618	$1,903,925

[1] Reported as "Time-recording devices, including watchmen's clocks."

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [1]
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)				Materials and supplies	Fuel and power		
THE GROUP AS A WHOLE												
United States	120	28,714	44	2,838	25,832	23,198	$6,610,307	$31,574,587	$20,840,849	$719,460	[2] $85,508,171	$63,947,862
Illinois	15	9,563	6	792	8,765	7,958	1,749,247	10,518,609	5,407,263	203,234	27,872,616	22,262,119
New Jersey	9	925	-------	178	747	2,343	440,945	996,521	1,013,381	24,181	3,241,907	2,204,345
New York	43	2,402	24	356	2,022	1,592	949,361	2,914,025	3,143,857	78,102	9,784,538	6,562,579
Ohio	11	784	1	96	687	742	243,671	992,261	1,205,338	31,160	3,058,433	1,821,935
Other States [3]	42	15,040	13	1,416	13,611	10,563	3,227,083	16,153,171	10,071,010	382,783	41,550,677	31,096,884
CLOCKS, TIME-RECORDING DEVICES, AND CLOCK MOVEMENTS												
United States	52	11,268	7	1,396	9,865	9,510	3,507,361	11,750,620	9,733,421	329,344	38,195,803	28,133,038
Connecticut	9	5,385	1	493	4,891	3,673	1,316,513	5,751,214	3,934,333	166,197	16,166,207	12,065,677
Massachusetts	6	580	1	186	393	237	462,692	520,110	476,051	15,289	2,179,257	1,687,917
New Jersey	4	78	-------	15	63	85	40,925	82,708	68,561	2,136	282,779	212,082
New York	11	1,675	3	226	1,446	1,230	576,242	1,927,904	1,687,628	47,491	6,051,890	4,316,771
Ohio	7	360	1	54	305	424	102,910	407,236	476,450	14,417	1,618,211	1,127,344
Other States [4]	15	3,190	1	422	2,767	3,861	1,008,079	3,061,448	3,090,398	83,814	11,897,459	8,723,247
WATCHES AND WATCH MOVEMENTS												
United States [5]	11	12,985	3	790	12,192	9,357	1,519,979	15,090,229	5,616,870	254,514	32,278,362	26,406,978

See footnotes at end of table.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927—Continued

[See note at head of this table, p. 995]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [1]
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)				Materials and supplies	Fuel and power		
WATCHCASES												
United States	40	3,966	22	584	3,360	4,121	$1,472,544	$4,326,393	$5,188,091	$122,583	$13,724,703	$8,414,029
New York	29	688	18	120	550	345	357,138	949,542	1,410,110	29,271	3,468,066	2,028,685
Other States [6]	11	3,278	4	464	2,810	3,776	1,115,406	3,376,851	3,777,981	93,312	10,256,637	6,385,344
WATCH AND CLOCK MATERIALS AND PARTS, EXCEPT WATCHCASES												
United States	17	495	12	68	415	210	110,423	407,345	302,467	13,019	1,309,303	993,817
Massachusetts	6	164	6	24	134	87	37,448	157,859	63,121	5,203	366,883	298,559
Other States [7]	11	331	6	44	281	123	72,975	249,486	239,346	7,816	942,420	695,258

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] See Table 3.
[3] California, 1 establishment; Connecticut, 13; Indiana, 2; Kentucky, 1; Maryland, 1; Massachusetts, 14; Michigan, 3; Minnesota, 1; Pennsylvania, 4; Rhode Island, 2.
[4] California, 1 establishment; Illinois, 8; Indiana, 1; Maryland, 1; Michigan, 2; Pennsylvania, 2.
[5] Connecticut, 2 establishments; Illinois, 2; Indiana, 1; Massachusetts, 2; New Jersey, 1; Ohio, 2; Pennsylvania, 1.
[6] Illinois, 2 establishments; Kentucky, 1; Michigan, 1; Minnesota, 1; New Jersey, 2; Ohio, 2; Rhode Island, 2.
[7] Connecticut, 2 establishments; Illinois, 3; New Jersey, 2; New York, 3; Pennsylvania, 1.

GOLD AND SILVER, LEAF AND FOIL

[A preliminary report for this industry was issued under date of December 21, 1928]

Description of the industry.—This industry embraces establishments engaged primarily in beating gold and silver into thin sheets for use in sign painting, decorating, bookbinding, etc. The products are reported in packs of 500 sheets.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
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	3,561,856	1,665,050	281
1921	72	1,104	1,042,028	4,994,718	7,014,496	2,019,778	(2)
1919	87	950	983,600	2,655,335	4,461,568	1,806,233	408
	PER CENT OF INCREASE OR DECREASE (—)						
1925-1927	(3)	0.2	0.7	—6.4	—4.7	—3.0	6.1
1923-1925	(3)	25.1	19.2	—3.1	5.2	14.5	16.0
1923-1927	(3)	24.8	20.0	—9.3	.3	11.1	23.1
1919-1927	(3)	20.6	13.9	—35.2	—20.0	2.4	—15.2

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Per cent not computed where base is less than 100.

TABLE 2.—PRIME MOVERS AND MOTORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
		Horsepower		*Horsepower*		*Horsepower*
Prime movers, total	146	346	109	326	95	281
Steam engines					2	13
Internal-combustion engines	3	8	5	18	5	20
Electric motors driven by purchased current	143	338	104	308	88	248
Electric motors, total	143	338	104	308	88	248
Driven by purchased current	143	338	104	308	88	248

TABLE 3.—GOLD LEAF[1]—PRODUCTION, IN ALL INDUSTRIES, BY QUANTITY AND VALUE, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data for individual establishments. Some of the "Other States," however, reported larger values of gold leaf than some of the States shown separately]

[Quantity, number of packs of 500 sheets]

United States:		Massachusetts:	
Total packs	236, 229	Packs	27, 535
Total value	[2] $2, 739, 602	Value	$327, 955
California:		New Jersey:	
Packs	5, 674	Packs	23, 348
Value	$65, 798	Value	$253, 803
Illinois:		New York:	
Packs	24, 276	Packs	61, 118
Value	$283, 603	Value	$679, 236
		Other States:	
		Packs	94, 278
		Value	$1, 129, 207

[1] Only an insignificant quantity of leaf other than gold leaf was reported.
[2] This value differs from the total value of products given in Tables 1 and 4 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 values of products as given in Tables 1 and 4 refer to 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.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	77	1, 302	84	72	1, 146	346
California	6	24	6	--------	18	1
Illinois	7	118	5	6	107	21
Massachusetts	18	168	17	9	142	40
New Jersey	11	145	14	7	124	26
New York	24	287	29	12	246	85
Other States [1]	11	560	13	38	509	173

State	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
			Materials and supplies	Fuel and power		
United States	$177, 403	$1, 120, 434	$1, 692, 742	$28, 432	$3, 571, 190	$1, 850, 016
California	--------	21, 624	23, 776	209	65, 798	41, 813
Illinois	13, 977	134, 776	106, 720	1, 731	283, 603	175, 152
Massachusetts	20, 559	145, 075	254, 110	4, 339	540, 015	281, 566
New Jersey	2, 625	98, 748	105, 136	2, 069	253, 803	146, 598
New York	38, 821	253, 514	376, 203	11, 840	816, 796	428, 753
Other States [1]	101, 421	466, 697	826, 797	8, 244	1, 611, 175	776, 134

[1] Connecticut, 2 establishments; Maine, 1; Maryland, 1; Minnesota, 1; Pennsylvania, 4; Rhode Island, 2.
[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

JEWELRY

A preliminary report for this industry was issued under date of February 15, 1929]

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.

Products.—A special schedule, providing for detailed data on the production of specified classes of jewelry, was first used at the census for 1927. For this reason no comparative product statistics can be given for earlier census years.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, containers for products, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	1,367	24,116	$36,765,805	$76,915,375	$164,865,057	$87,949,682	17,070
1925	1,468	23,837	35,177,020	79,885,823	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	(2)
1919	2,054	30,871	35,863,718	110,450,683	203,939,230	93,488,547	15,096
	PER CENT OF INCREASE OR DECREASE (−)						
1925–1927	−6.9	1.2	4.5	−3.7	−1.2	1.2	−1.3
1923–1925	−9.5	−9.6	−3.4	−4.9	−4.1	−3.5	2.6
1923–1927	−15.7	−8.5	.9	−8.4	−5.3	−2.3	1.3
1919–1927	−33.4	−21.9	2.5	−30.4	−19.2	−5.9	13.1

[1] Value of products less cost of materials, supplies, containers for products, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
		Horsepower		*Horsepower*		*Horsepower*
Prime movers, total	6,895	17,070	6,887	17,296	7,094	16,851
Steam engines	22	1,935	28	2,017	38	1,627
Steam turbines			1	75		
Internal-combustion engines	6	185	12	234	27	364
Water wheels and turbines	5	121	5	130	4	111
Electric motors driven by purchased current	6,862	14,829	6,841	14,840	7,025	14,449
Electric motors, total	7,234	15,646	7,217	15,580	7,382	15,344
Driven by purchased current	6,862	14,829	6,841	14,840	7,025	14,449
Driven by current generated in establishment reporting	372	817	376	740	357	895
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	9	778	18	1,143	(1)	(1)

[1] Not called for on schedule.

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

KIND	1927
1. Jewelry industry, all products, total value	$164,865,057
2. Jewelry and findings	154,999,465
3. Other products (not normally belonging to the industry) and receipts for custom work and repairing	9,865,592
4. Jewelry made as a secondary product in other industries, value	1,271,177
Jewelry and findings, all industries: Aggregate (sum of 2 and 4)	156,270,642
Jewelry, total	140,944,198
Platinum	35,730,399
Gold	39,554,691
Gold-filled and rolled-gold-plate	11,228,077
Gold—electroplated	3,305,479
Silver	6,088,567
Platinum, gold, and silver jewelry, not reported separately as to kind	26,787,439
Other metals	18,251,576
Jewelry findings	15,326,444

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing operations of individual establishments. One of the "Other States," however, reported a larger value of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	1,367	31,174	1,337	5,721	24,116	17,070
California	71	843	95	138	610	576
Colorado	11	79	12	13	54	22
Illinois	76	1,407	69	337	1,001	549
Indiana	9	192	4	52	136	111
Iowa	5	50	4	9	37	9
Kentucky	5	31	4	4	23	9
Louisiana	4	67	1	4	62	38
Maryland	10	114	6	27	81	42
Massachusetts	135	6,182	108	858	5,216	4,217
Michigan	21	313	16	86	211	86
Minnesota	17	267	19	60	188	78
Missouri	23	417	14	77	326	220
Nebraska	5	34	3	6	25	10
New Jersey	138	3,395	146	795	2,454	1,592
New York	491	6,442	531	1,552	4,359	3,280
Ohio	30	612	34	135	443	171
Oklahoma	4	17	1	4	12	1
Pennsylvania	68	803	62	148	593	307
Rhode Island	188	9,272	141	1,305	7,826	5,580
Tennessee	3	27	3	2	22	15
Texas	13	80	21	8	51	18
Washington	13	176	13	34	129	22
Wisconsin	4	53	9	7	37	13
Other States [1]	23	301	21	60	220	154

See footnotes at end of table.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927—Continued

[See note at head of this table]

STATE	Salaries	Wages	Cost of materials, supplies, containers for products, fuel, and power		Value of products	Value added by manufacture [2]
			Materials, supplies, and containers for products	Fuel and power		
United States	$13,947,534	$36,765,805	$76,067,371	$848,004	$164,865,057	$87,949,682
California	285,651	1,010,387	1,182,361	18,676	3,338,407	2,137,370
Colorado	16,593	82,401	81,507	707	266,215	184,001
Illinois	823,690	1,832,572	3,292,422	29,862	7,544,286	4,222,002
Indiana	140,297	208,538	397,209	3,571	1,023,364	622,584
Iowa	21,434	45,058	20,244	609	114,061	93,208
Kentucky	4,960	17,254	16,136	368	67,699	51,195
Louisiana	7,678	95,435	37,819	1,538	166,867	127,510
Maryland	42,338	116,316	183,382	2,213	443,646	258,051
Massachusetts	2,004,646	6,573,986	11,986,334	219,345	26,781,180	14,575,501
Michigan	233,065	415,951	840,978	6,913	2,230,948	1,383,057
Minnesota	69,106	278,385	429,033	4,080	1,101,821	668,708
Missouri	139,832	534,543	533,540	6,769	1,457,028	916,719
Nebraska	15,046	39,351	34,985	362	111,816	76,469
New Jersey	2,072,218	4,247,309	9,029,940	95,792	19,860,120	10,734,388
New York	4,147,481	10,275,603	28,033,763	163,859	55,664,655	27,467,033
Ohio	241,686	662,386	1,161,100	11,726	2,810,208	1,637,382
Oklahoma	8,393	22,860	28,001	----------	89,507	61,506
Pennsylvania	319,631	1,012,576	1,812,383	17,999	4,184,786	2,354,404
Rhode Island	3,124,224	8,696,059	16,343,233	244,118	35,451,319	18,863,968
Tennessee	3,222	31,822	21,591	1,584	83,808	60,633
Texas	18,300	62,541	69,397	1,485	232,164	161,282
Washington	54,584	169,749	207,068	6,307	546,581	333,206
Wisconsin	7,368	58,031	33,538	1,093	162,223	127,592
Other States [1]	145,891	276,692	291,407	9,028	1,132,348	831,913

[1] 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; Oregon, 2; South Carolina, 1; South Dakota, 2; Utah, 1; Virginia, 1.

[2] Value of products less cost of materials, supplies, containers for products, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

MANUFACTURES OF NONFERROUS METALS AND ALLOYS

Brass, bronze, and other nonferrous alloys, and manufactures of these alloys and of copper, not specifically classified; Smelting and refining, metals other than gold, silver, or platinum, not from the ore; Babbitt metal, white metal, type metal, and solder; Lead—bar, pipe, and sheet

[A preliminary report for these industries was issued under date of May 27, 1929]

A close relationship exists among these four industries because of the fact that they manufacture, to some extent, the same general classes of products, although each establishment must be classified in some one industry according to the character of its principal products. For this reason detailed product statistics for all the industries are combined for presentation (Tables 3 and 4).

No combined statistics for the group of industries are presented, for the reason that, since some of the products of certain industries (for example, ingots and pigs, plates and sheets, and rods and bars) are used as materials in other industries, such a presentation would result in considerable amounts of duplication in the cost-of-materials and value-of-products totals.

Description of the industries.—These industries as a group embrace establishments which are engaged primarily in rolling or drawing nonferrous metals (except precious metals and aluminum) into plates, sheets, rods, bars, tubing, and pipe; in manufacturing alloys, castings, bearings, bushings, and other products from these metals; and in recovering, by refining, nonferrous metals and alloys (except precious metals) from scrap. These industries do not include the smelting and refining of copper, lead, zinc, and other nonferrous metals from the ore.

The establishments assigned to the "Brass, bronze, and other nonferrous alloys, and manufactures of these alloys and of copper" industry are engaged primarily in the manufacture of brass, bronze, and other nonferrous alloys, and the rolling and drawing of these alloys and of copper 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.

The "Babbitt metal, white metal, type metal, and solder" industry embraces establishments engaged primarily in the manufacture of these alloys from virgin metal or from scrap.

The principal products of the "Lead: Bar, pipe, and sheet" industry are block, bar, and sheet lead, lead pipe, and lead traps and bends.

Detailed statistics of products (Tables 3 and 5).—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 3 presents detailed statistics on the specified products of the four industries composing the "Nonferrous metals and alloys" group, both those manufactured within these industries and those made as secondary products in other industries. The value of bare wire ($40,235,234), as shown in this table, represents only that manufactured by establishments engaged primarily in the manufacture of other classes of products made of nonferrous metals and alloys. Establishments whose chief products are wire are classified in the "Wire, drawn from purchased bars or rods" industry.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
BRASS, BRONZE, AND OTHER NONFERROUS ALLOYS, AND MANUFACTURES OF THESE ALLOYS AND OF COPPER, NOT SPECIFICALLY CLASSIFIED							
1927	1,106	64,187	$92,894,420	$327,604,747	$519,892,352	$192,287,605	404,512
1925	1,044	62,942	90,613,352	337,640,999	519,725,195	182,084,196	361,242
1923	1,035	64,713	88,839,005	331,756,688	511,470,131	179,713,443	305,839
1921	911	39,830	46,260,303	130,627,160	214,903,735	84,276,575	(2)
1919	1,092	75,051	94,132,118	304,823,580	482,312,790	177,489,210	265,373
Per cent of increase or decrease (−):							
1925–1927	5.9	2.0	2.5	−3.0	(3)	5.6	12.0
1923–1925	.9	−2.7	2.0	1.8	1.6	1.3	18.1
1923–1927	6.9	−.8	4.6	−1.3	1.6	7.0	32.3
1919–1927	1.3	−14.5	−1.3	7.5	7.8	8.3	52.4
SMELTING AND REFINING, METALS OTHER THAN GOLD, SILVER, OR PLATINUM, NOT FROM THE ORE							
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	6,736,313	9,654
1921	60	1,200	1,528,236	10,031,481	15,150,055	5,118,574	(2)
1919	81	2,167	3,093,140	40,675,880	50,246,088	9,570,208	7,921
Per cent of increase or decrease (−):							
1925–1927	-------	−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
1923–1927	(4)	74.9	92.5	137.2	125.7	76.3	24.2
1919–1927	(4)	28.1	38.4	69.4	60.7	24.1	51.4
BABBITT METAL, WHITE METAL, TYPE METAL, AND SOLDER							
1927	64	1,087	$1,533,939	$36,783,757	$44,673,031	$7,889,274	3,597
1925	67	1,465	2,220,977	44,081,151	50,650,498	6,569,347	3,907
1923	83	1,497	1,968,523	33,963,883	41,486,662	7,522,779	4,004
1921	98	1,372	1,880,036	22,355,006	26,255,075	3,900,069	(2)
1919	118	2,372	2,882,128	48,844,269	59,016,983	10,172,714	6,020
Per cent of increase or decrease (−):							
1925–1927	(4)	−25.8	−30.9	−16.6	−11.8	20.1	−7.9
1923–1925	(4)	−2.1	12.8	29.8	22.1	−12.7	−2.4
1923–1927	(4)	−27.4	−22.1	8.3	7.7	4.9	−10.2
1919–1927	−45.8	−54.2	−46.8	−24.7	−24.3	−22.4	−40.2
LEAD: BAR, PIPE, AND SHEET							
1927	27	649	$922,682	$13,801,630	$17,003,384	$3,201,754	3,816
1925	29	728	985,913	19,593,862	23,179,847	3,585,985	4,090
1923	29	861	1,215,374	15,887,200	19,294,655	3,407,455	4,488
1921	29	882	1,108,852	8,013,973	10,473,575	2,459,602	(2)
1919	32	852	1,066,941	13,634,120	17,174,281	3,540,161	5,537
Per cent of increase or decrease (−):							
1925–1927	(4)	−10.9	−6.4	−29.6	−26.6	−10.7	−6.7
1923–1925	-------	−15.4	−18.9	23.3	20.1	5.2	−8.9
1923–1927	(4)	−24.6	−24.1	−13.1	−11.9	−6.0	−15.0
1919–1927	(4)	−23.8	−13.5	1.2	−1.0	−9.6	−31.1

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Less than one-tenth of 1 per cent.
[4] Per cent not computed where base is less than 100.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
BRASS, BRONZE, AND OTHER NONFERROUS ALLOYS, AND MANUFACTURES OF THESE ALLOYS AND OF COPPER, NOT SPECIFICALLY CLASSIFIED						
		Horsepower		*Horsepower*		*Horsepower*
Prime movers, total	19,212	404,512	14,867	361,242	11,849	305,839
Steam engines	123	36,644	128	40,590	174	91,633
Steam turbines	46	66,598	40	55,730		
Internal-combustion engines	32	859	52	11,735	64	1,539
Water wheels and turbines	24	2,971	19	1,433	23	3,362
Electric motors driven by purchased current	18,987	297,440	14,628	251,754	11,588	209,305
Electric motors, total	23,827	391,141	18,942	331,925	16,092	299,122
Driven by purchased current	18,987	297,440	14,628	251,754	11,588	209,305
Driven by current generated in establishment reporting	4,840	93,701	4,314	80,171	4,504	89,817
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	70	49,299	99	60,119	(1)	(1)
SMELTING AND REFINING, METALS OTHER THAN GOLD, SILVER, OR PLATINUM, NOT FROM THE ORE						
		Horsepower		*Horsepower*		*Horsepower*
Prime movers, total	914	11,989	776	14,240	389	9,654
Steam engines	6	1,345	15	3,125	11	3,510
Steam turbines			1	500		
Internal-combustion engines	3	118	7	596	14	568
Water wheels and turbines			3	12		
Electric motors driven by purchased current	905	10,526	750	10,007	364	5,576
Electric motors, total	944	10,659	824	10,469	497	7,016
Driven by purchased current	905	10,526	750	10,007	364	5,576
Driven by current generated in establishment reporting	39	133	74	462	133	1,440
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	5	550	12	1,936	(1)	(1)
BABBITT METAL, WHITE METAL, TYPE METAL, AND SOLDER						
		Horsepower		*Horsepower*		*Horsepower*
Prime movers, total	339	3,597	405	3,907	348	4,004
Steam engines	7	1,662	7	1,350	6	1,178
Internal-combustion engines			1	60	1	2
Electric motors driven by purchased current	332	1,935	397	2,497	341	2,824
Electric motors, total	596	3,833	578	3,934	446	3,481
Driven by purchased current	332	1,935	397	2,497	341	2,824
Driven by current generated in establishment reporting	264	1,898	181	1,437	105	1,017
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	3	775	3	775	(1)	(1)
LEAD: BAR, PIPE, AND SHEET						
		Horsepower		*Horsepower*		*Horsepower*
Prime movers, total	169	3,816	181	4,090	106	4,488
Steam engines	11	1,360	14	1,728	14	2,918
Internal-combustion engines			1	19	1	19
Electric motors driven by purchased current	158	2,456	166	2,343	91	1,551
Electric motors, total	200	3,033	218	3,013	270	3,924
Driven by purchased current	158	2,456	166	2,343	91	1,551
Driven by current generated in establishment reporting	42	577	52	670	179	2,373
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	4	495	5	645	(1)	(1)

[1] Not called for on schedule.

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

[This table presents statistics for the total output of nonferrous-metal products by establishments classified for census purposes in the following-named industries: "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," "Lead: Bar, pipe, and sheet," and "Smelting and refining, metals other than gold, silver, and platinum, not from the ore;" and also for the production of these commodities as secondary products by establishments classified in other industries, valued at $31,400,536 in 1927 and at $31,230,864 in 1925]

CLASS	1927		1925	
	Pounds	Value	Pounds	Value
PRODUCTS FOR REMANUFACTURE				
Ingots and pigs		$133, 252, 833		$149, 562, 683
Copper (secondary)	33, 673, 926	4, 253, 957	78, 156, 043	10, 707, 278
Lead (secondary)	217, 925, 204	14, 773, 503	139, 130, 840	12, 603, 450
Zinc (secondary)	99, 627, 224	5, 979, 749	79, 006, 575	6, 518, 408
Brass and bronze	249, 664, 498	29, 503, 535	198, 886, 318	23, 586, 420
Babbitt	[1] 77, 091, 307	[1] 17, 467, 002	97, 756, 685	21, 817, 354
Solders of all kinds	[1] 97, 700, 488	[1] 29, 857, 696	85, 448, 515	25, 685, 262
Type metal	[1] 74, 269, 315	[1] 7, 340, 897	60, 103, 061	6, 517, 359
Other metals		[1] 24, 076, 494		[1] 42, 037, 152
Plates and sheets		131, 549, 729		124, 473, 260
Brass and bronze	329, 573, 493	60, 767, 996	378, 972, 074	71, 024, 795
Copper	185, 205, 150	39, 232, 472	162, 315, 804	35, 231, 493
Lead	52, 591, 337	4, 807, 378	51, 183, 053	5, 681, 165
Nickel and nickel alloys	37, 034, 566	12, 583, 270	(2)	(2)
Other metals		14, 158, 613		12, 535, 807
Rods and bars		65, 608, 990		68, 988, 472
Brass and bronze	183, 360, 517	28, 240, 630	160, 817, 668	26, 522, 416
Copper	220, 110, 274	32, 475, 636	226, 948, 057	36, 485, 503
Nickel and nickel alloys		3, 984, 646	(2)	(2)
Other metals		908, 078		5, 980, 553
Tubing, seamless, and pipe		54, 076, 301		52, 217, 893
Brass and bronze	124, 588, 870	25, 909, 674	102, 572, 466	24, 746, 835
Copper	72, 328, 786	17, 852, 019	57, 954, 140	14, 900, 482
Lead	87, 669, 548	8, 292, 077	105, 776, 216	11, 859, 902
Nickel and nickel alloys		544, 649	(2)	(2)
Other metals		1, 477, 882		701, 674
Tubing, brazed (brass and bronze)	12, 296, 881	3, 354, 420	13, 468, 337	3, 767, 053
Nonferrous-metal wire (bare) [3]	226, 807, 471	40, 235, 234	276, 291, 532	51, 005, 533
Castings, rough		79, 683, 888		75, 391, 014
Brass and bronze—				
Weight reported	307, 704, 101	59, 329, 567	304, 162, 069	59, 082, 537
Weight not reported		6, 952, 235		7, 944, 697
Copper	4, 511, 029	1, 312, 760	4, 907, 055	1, 307, 329
Nickel and nickel alloys		1, 772, 389	(2)	(2)
Other metals		10, 316, 937		7, 056, 451
FINISHED PRODUCTS [4]				
Castings, finished		17, 536, 111		14, 679, 922
Brass and bronze		16, 320, 846		12, 844, 329
Copper		49, 104		448, 212
Other metals		1, 166, 161		1, 387, 381
Bearings and bushings, including Babbitt-lined bearings		18, 722, 667		21, 184, 034
Brass and bronze		18, 513, 238		19, 542, 592
Other metals		209, 429		1, 641, 442
Die-castings		20, 059, 381		20, 116, 492
Aluminum and zinc, base alloys		19, 265, 637		(2)
Brass and bronze		793, 744		(2)

See footnotes at end of table.

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

[See note at head of this table, p. 1005]

CLASS	1927		1925	
	Pounds	Value	Pounds	Value
FINISHED PRODUCTS—continued				
Extruded shapes		$4,678,076		$1,808,667
Brass and bronze		2,610,761		1,408,050
Copper		176,946		193,324
Other metals		1,890,369		207,293
Forgings and hot-pressed parts		4,331,537		(2)
Brass		4,214,378		(2)
Other metals		117,159		(2)
Ornamental grilles, railings, etc		6,838,751		4,636,544
Brass and bronze		6,813,332		4,380,526
Other metals		25,419		256,018
Bells		820,200		1,182,690
Miscellaneous nonferrous-metal products		83,013,284		95,128,120

[1] Includes data for metal reported as "White metal."
[2] Not called for on schedule.
[3] Does not include wire made in establishments engaged primarily in wire drawing. The total production for sale of nonferrous wire in 1927 was 586,779,407 pounds, valued at $100,792,741.
[4] Data on quantity not called for.

TABLE 4.—NONFERROUS-METAL PRODUCTS—PRODUCTION OF SPECIFIED CLASSES, BY QUANTITY AND VALUE, FOR STATES: 1927

[This table presents statistics separately for all States for which such statistics can be given without disclosing the production reported by individual establishments and, in addition, gives combined figures for certain groups of States. Some of the States shown in combination, however, reported larger values for certain of the specified commodities than some of the States for which separate figures are given]

KIND AND STATE	Pounds	Value
Ingots and pigs:		
Brass and bronze	249, 664, 498	$29, 503, 535
Illinois	85, 303, 092	9, 975, 902
Michigan	19, 432, 523	2, 277, 838
New Jersey	9, 542, 000	1, 006, 000
New York	38, 452, 855	4, 545, 385
Ohio	8, 773, 666	1, 095, 691
Pennsylvania	55, 394, 470	6, 804, 383
Other States	32, 765, 892	3, 798, 336
Lead	217, 925, 204	14, 773, 503
California	17, 404, 287	1, 364, 604
Illinois	46, 185, 189	3, 291, 253
Massachusetts	10, 600, 230	817, 219
Missouri	18, 450, 335	1, 231, 253
New York	20, 568, 023	1, 475, 040
Pennsylvania	29, 704, 148	2, 059, 780
Other States	75, 012, 992	4, 534, 354
Babbitt	77, 091, 307	17, 467, 002
California	6, 047, 875	2, 015, 514
Illinois	25, 584, 081	5, 213, 038
Michigan	8, 720, 274	3, 055, 302
Missouri	5, 695, 852	990, 871
New Jersey	4, 299, 101	829, 617
New York	9, 181, 641	2, 096, 483
Ohio	2, 063, 370	447, 457
Pennsylvania	7, 550, 900	1, 876, 250
Other States	7, 948, 213	936, 470
Solders of all kinds	97, 700, 488	29, 857, 696
California	1, 975, 405	760, 245
Illinois	21, 598, 811	7, 081, 262
Massachusetts	2, 331, 622	829, 883
Michigan	7, 959, 277	2, 515, 493
New York	20, 666, 733	6, 772, 105
Pennsylvania	18, 456, 464	4, 453, 156
Other States	24, 712, 176	7, 445, 552
Type metal	74, 269, 315	7, 340, 897
Illinois	22, 477, 402	2, 204, 531
Michigan	2, 281, 319	249, 161
Missouri	4, 400, 264	479, 002
New York	11, 041, 104	1, 088, 802
Pennsylvania	13, 640, 685	1, 077, 490
Other States	20, 428, 541	2, 241, 911
Plates and sheets:		
Brass and bronze	329, 573, 493	60, 767, 996
Connecticut	170, 165, 294	32, 232, 717
Illinois and Michigan	78, 806, 943	13, 793, 203
Massachusetts and New York	55, 554, 329	9, 997, 210
Other States	25, 046, 927	4, 744, 866
Copper	185, 205, 150	39, 232, 472
Connecticut	39, 238, 978	8, 303, 660
Michigan	37, 167, 485	7, 930, 238
Illinois, Ohio, and Wisconsin	31, 601, 899	6, 158, 536
Maryland and Massachusetts	15, 085, 722	3, 230, 662
New Jersey, New York, and Pennsylvania	62, 111, 066	13, 609, 376
Plates and sheets—Contd.		
Lead	52, 591, 337	$4, 807, 378
Illinois, Michigan, and Ohio	21, 197, 173	1, 846, 604
New Jersey, New York, and Pennsylvania	15, 074, 897	1, 358, 368
Other States	16, 319, 267	1, 602, 406
Nickel and nickel alloys	37, 034, 566	12, 583, 270
Connecticut	23, 931, 637	7, 398, 549
New Jersey, Pennsylvania, and West Virginia	12, 107, 670	4, 810, 948
Maryland, Michigan, New York, and Wisconsin	995, 259	373, 773
Rods and bars:		
Brass and bronze	183, 360, 517	28, 240, 630
Connecticut	103, 418, 175	16, 424, 880
Michigan	34, 971, 206	4, 887, 592
Other States	44, 971, 136	6, 928, 158
Copper	220, 110, 274	32, 475, 636
Connecticut, New York, and Montana	197, 853, 260	28, 390, 429
Other States	22, 257, 014	4, 085, 207
Tubing, seamless, and pipe:		
Brass and bronze	124, 588, 870	25, 909, 674
Connecticut	85, 774, 742	16, 324, 003
Michigan	5, 202, 158	1, 555, 868
New York	15, 011, 976	3, 391, 691
Other States	18, 599, 994	4, 638, 112
Copper	72, 328, 786	17, 852, 019
Connecticut	21, 912, 477	5, 637, 407
Michigan	15, 727, 062	4, 376, 971
New York	20, 731, 748	4, 816, 123
Other States	13, 957, 499	3, 021, 518
Lead	87, 660, 548	8, 292, 077
Illinois	24, 466, 500	2, 086, 605
New Jersey	13, 165, 798	1, 562, 567
Ohio	6, 301, 297	512, 115
Pennsylvania	9, 328, 547	807, 562
Other States	34, 407, 406	3, 323, 228
Wire (bare):		
Brass and bronze	64, 758, 892	13, 283, 489
Connecticut	61, 046, 108	11, 997, 694
Other States	3, 712, 784	1, 285, 795
Castings, rough: [1]		
Brass and bronze		66, 281, 862
California		3, 864, 632
Connecticut		2, 705, 180
Illinois		7, 393, 742
Indiana		980, 603
Massachusetts		2, 773, 199
Michigan		3, 833, 816

[1] Data on quantity incomplete.

TABLE 4.—NONFERROUS-METAL PRODUCTS—PRODUCTION OF SPECIFIED CLASSES, BY QUANTITY AND VALUE, FOR STATES: 1927—Continued

[See note at head of this table, p. 1007]

KIND AND STATE	Pounds	Value
Castings, rough—Con.		
Brass and bronze—Con.		
Minnesota		$450,012
Missouri		2,894,523
New Jersey		3,623,926
New York		8,619,827
Ohio		5,112,055
Pennsylvania		10,454,033
Texas		1,456,460
Washington		438,356
Wisconsin		2,379,197
Other States		9,302,241
Castings, finished: [2]		
Brass and bronze		16,320,846
California		325,796
Connecticut		298,543
Illinois		370,694
Indiana		1,262,621
Massachusetts		329,027
Michigan		3,125,943
New Jersey		646,596
New York		2,543,210
Ohio		2,476,130
Pennsylvania		1,232,942
Washington		394,437
Wisconsin		327,385
Other States		2,987,522
Bearings and bushings, including Babbitt-lined bearings: [2]		
Brass and bronze		$18,513,238
Indiana		562,055
Michigan		5,514,394
New York		99,439
Ohio		5,156,942
Pennsylvania		3,171,982
Other States		4,008,426
Die castings: [2]		
Aluminum and zinc-base alloy		19,265,637
Michigan		1,480,700
New Jersey		1,955,466
New York		5,192,070
Ohio		3,800,823
Other States		6,836,578
Ornamental grilles, railings, etc.: [2]		
Brass and bronze		6,813,332
Illinois		529,854
New York		4,273,776
Other States		2,009,702

[2] Data on quantity not called for.

TABLE 5.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [1]
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)				Materials and supplies	Fuel and power		
BRASS, BRONZE, AND OTHER NONFERROUS ALLOYS, AND MANUFACTURES OF THESE ALLOYS AND OF COPPER, NOT SPECIFICALLY CLASSIFIED												
United States	1,106	74,342	635	9,520	64,187	404,512	$26,408,877	$92,894,420	$314,371,541	$13,233,206	$519,892,352	$192,287,605
Alabama	4	77	2	9	66	264	29,471	66,805	232,757	10,629	367,465	124,079
California	59	1,015	55	134	826	2,176	337,582	1,379,219	3,190,652	76,937	5,789,811	2,522,222
Colorado	10	123	4	16	103	337	32,827	139,057	652,173	28,651	952,199	271,375
Connecticut	67	23,353	33	2,873	20,442	165,577	8,179,688	28,537,673	92,442,225	4,836,404	152,389,739	55,111,110
Delaware	4	29	2	3	24	42	16,240	37,219	118,193	4,224	188,964	66,547
Georgia	3	20	2	6	12	120	11,932	17,324	75,806	3,904	126,787	47,077
Illinois	114	4,893	73	548	4,272	16,695	1,524,753	6,164,116	19,678,771	858,463	34,745,584	14,208,350
Indiana	34	1,457	15	154	1,288	9,818	393,308	1,705,106	2,768,770	166,543	5,833,329	2,898,016
Kentucky	7	213	3	28	182	127	95,550	295,238	342,937	14,681	961,860	604,242
Louisiana	4	44	3	9	32	89	20,128	40,154	65,342	3,399	141,324	72,583
Maryland	14	790	2	129	659	9,727	283,617	773,233	3,612,036	190,864	5,594,626	1,791,726
Massachusetts	82	2,276	70	294	1,912	14,877	743,077	2,584,743	7,126,026	457,872	12,688,441	5,104,543
Michigan	86	8,788	29	1,042	7,717	48,028	3,102,651	11,715,589	36,481,197	1,654,089	61,743,049	23,607,763
Minnesota	10	162	4	37	121	821	100,163	279,355	760,760	38,917	1,452,957	653,280
Missouri	16	847	6	118	723	1,570	413,384	1,019,670	6,141,362	120,270	8,802,420	2,540,788
New Hampshire	3	78	2	13	63	40	16,165	75,178	103,282	15,413	402,227	283,532
New Jersey	63	2,515	35	358	2,122	11,437	998,828	3,038,472	8,601,991	458,161	16,216,211	7,156,059
New York	197	13,827	100	1,892	11,835	52,304	5,166,778	17,630,959	54,252,896	1,893,651	92,424,714	36,278,167
Ohio	106	4,395	40	575	3,780	9,879	1,596,884	6,080,222	10,770,066	564,545	23,817,776	12,483,165
Oregon	6	85	4	21	60	178	51,091	85,451	147,698	8,218	317,254	161,338
Pennsylvania	115	4,452	61	659	3,732	17,371	1,790,887	5,251,775	20,464,228	703,093	32,058,531	10,891,210
Rhode Island	11	146	14	17	115	153	85,764	147,074	298,238	19,573	663,117	345,306

See foot notes at end of table.

TABLE 5.—GENERAL STATISTICS, BY STATES: 1927—Continued

[See note at head of this table, p. 1009]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY: Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	Horsepower	Salaries	Wages	Cost of materials, supplies, fuel, and power: Materials and supplies	Fuel and power	Value of products	Value added by manufacture
BRASS, BRONZE, ETC.—continued												
Texas	13	223	14	34	175	692	$77,992	$233,172	$1,160,800	$30,274	$1,725,099	$534,025
Washington	16	199	15	28	156	414	64,878	222,934	355,941	15,008	852,031	481,082
Wisconsin	33	2,731	26	367	2,338	19,235	834,699	3,199,172	18,254,947	495,199	25,754,145	7,003,999
Other States [2]	29	1,604	16	156	1,432	22,541	440,540	2,175,510	26,272,447	564,224	33,882,692	7,046,021
SMELTING AND REFINING, METALS OTHER THAN GOLD, SILVER, OR PLATINUM, NOT FROM THE ORE												
United States	102	3,517	47	694	2,776	11,989	2,244,024	4,280,291	67,623,566	1,270,928	80,770,546	11,876,052
California	6	299	-------	60	239	2,059	224,416	363,982	4,775,563	140,688	6,295,172	1,378,921
Illinois	23	862	10	158	694	2,970	656,102	1,085,568	21,898,012	292,975	25,543,803	3,352,816
Indiana	4	170	3	46	121	960	127,091	163,417	4,983,411	74,616	5,508,042	450,015
Massachusetts	6	86	1	22	63	176	38,395	86,484	1,711,621	19,443	1,983,680	252,616
New Jersey	7	120	5	20	95	321	57,258	138,893	2,108,096	59,915	2,704,443	536,432
New York	13	427		93	328	661	266,276	473,431	8,938,008	102,286	10,366,527	1,326,233
Ohio	11	169	4	45	120	278	124,618	199,163	3,365,243	51,811	3,936,848	519,794
Pennsylvania	14	798	12	143	643	1,729	474,745	1,061,694	13,712,170	301,339	16,420,621	2,407,112
Wisconsin	4	21	4	8	9	31	6,175	10,476	136,373	2,250	174,534	35,911
Other States [3]	14	565	2	99	464	2,804	268,948	697,183	5,995,069	225,605	7,836,876	1,616,202
BABBITT METAL, WHITE METAL, TYPE METAL, AND SOLDER												
United States	64	1,575	33	455	1,087	3,597	1,283,595	1,533,939	36,529,829	253,928	44,673,031	7,889,274
Illinois	7	443	2	134	307	1,863	381,138	404,457	10,398,253	61,985	12,314,081	1,853,843
Missouri	5	125	1	55	69	170	77,342	45,186	1,283,743	10,635	1,525,088	230,710
New Jersey	5	294	-------	52	242	329	149,832	456,496	7,877,751	50,046	8,901,816	974,019
New York	10	286	7	83	196	400	293,736	213,633	7,553,826	54,053	10,558,708	2,950,829
Pennsylvania	8	86	3	35	48	100	107,389	79,741	1,581,038	12,992	2,034,072	440,042
Other States [4]	29	341	20	96	225	735	274,158	334,426	7,835,218	64,217	9,339,266	1,439,831

LEAD: BAR, PIPE, AND SHEET												
United States	27	873	4	220	649	3,816	713,714	922,682	13,718,363	83,267	17,003,384	3,201,754
Pennsylvania	4	117	--------	33	84	318	79,417	114,030	1,886,986	11,998	2,274,766	375,782
Other States [5]	23	756	4	187	565	3,498	634,297	808,652	11,831,377	71,269	14,728,618	2,825,972

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] District of Columbia, 1 establishment; Florida, 1; Iowa, 4; Kansas, 3; Maine, 1; Montana, 1; Nebraska, 2; Oklahoma, 2; Tennessee, 2; Utah, 2; Vermont, 2; Virginia, 2; and West Virginia, 6.
[3] Alabama, 1 establishment; Connecticut, 1; Delaware, 1; Kansas, 1; Michigan, 3; Missouri, 2; Nebraska, 1; New Hampshire, 1; Virginia, 1; Washington, 1; and West Virginia, 1.
[4] California, 5 establishments; Colorado, 2; Maryland, 2; Massachusetts, 4; Michigan, 3; Minnesota, 3; Ohio, 5; Oregon, 2; Virginia, 1; Washington, 1; and Wisconsin, 1.
[5] California, 1 establishment; Colorado, 1; Georgia, 1; Illinois, 1; Maryland, 1; Massachusetts, 3; Michigan, 1; Missouri, 2; Nebraska, 1; New Jersey, 1; New York, 3; Ohio, 3; South Carolina, 1; Washington, 1; and Wisconsin, 2.

103734—30——65

NEEDLES, PINS, HOOKS AND EYES, AND SNAP FASTENERS

[A preliminary report for this industry was issued under date of May 25, 1929]

Description of the industry.—This industry consists 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: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
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	(2)
1919	92	9,294	8,809,781	10,227,199	29,304,995	19,077,796	8,423
	PER CENT OF INCREASE OR DECREASE (—)						
1925–1927	(3)	—4.2	4.1	(4)	11.8	17.6	—4.6
1923–1925	(3)	—14.4	—12.6	—24.0	—17.9	—14.7	—26.7
1923–1927	(3)	—18.0	—9.0	—24.0	—8.2	.4	—30.1
1919–1927	(3)	—39.7	—30.8	—42.1	—30.6	—24.5	—13.9

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Per cent not computed where base is less than 100.
[4] Less than one-tenth of 1 per cent.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
		Horsepower		*Horsepower*		*Horsepower*
Prime movers, total	1,117	7,250	908	7,603	838	10,367
Steam engines	12	1,846	12	2,241	20	4,257
Steam turbines	7	1,403	7	1,403		
Internal-combustion engines	3	25	1	25		
Water wheels and turbines	10	583	10	705	11	685
Electric motors driven by purchased current	1,085	3,393	878	3,229	807	5,425
Electric motors, total	1,294	5,487	1,115	5,376	945	6,171
Driven by purchased current	1,085	3,393	878	3,229	807	5,425
Driven by current generated in establishment reporting	209	2,094	237	2,147	138	746
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	13	1,960	18	2,105	(1)	(1)

[1] Not called for on schedule.

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

CLASS	1927	1925
1. Needles, pins, hooks and eyes, and snap fasteners industry, all products, total value	$20,325,250	$18,173,574
2. Needles, pins, hooks and eyes, and snap fasteners	17,372,452	15,666,148
3. Other products (not normally belonging to the industry)	2,952,798	2,507,426
4. Needles, pins, hooks and eyes, and snap fasteners made as secondary products in other industries, value	2,152,441	1,358,938
Needles, pins, hooks and eyes, and snap fasteners, all industries: Aggregate value (sum of 2 and 4) [1]	$19,524,893	$17,025,086
Needles—		
Total value	$5,503,227	$5,607,192
Knitting-machine—		
Latch—		
Thousands	103,479	102,407
Value	$3,022,347	$3,216,831
Spring—		
Thousands	104,132	113,875
Value	$955,249	$879,202
Other needles, including sewing-machine [2]—		
Thousands	103,012	(3)
Value	$1,525,631	[3] $1,511,159
Pins—		
Total value	$5,180,988	$5,055,394
Common or toilet, made of steel and brass wire, total value	$1,432,900	$1,477,158
Pounds	1,948,508	(4)
Value	$877,456	[4] $768,358
Packs	1,432,128	1,793,410
Value	$555,444	$708,800
Hairpins, metal—		
Pounds	4,045,599	3,423,331
Value	$1,559,723	$1,100,215
Safety pins—		
Gross	9,252,187	(5)
Value	$2,188,365	[5] $2,478,021
Hooks and eyes—		
Total great gross	189,516	278,334
Total value	$195,799	$342,772
Made of steel wire—		
Great gross	7,384	7,781
Value	$8,054	$8,667
Made of brass or other nonferrous wire—		
Great gross	182,132	270,553
Value	$187,745	$334,105
Snap fasteners and clasps, value	$6,320,184	$5,126,214
Miscellaneous products (eyelets, hook-and-eye tape) and products not reported in detail	$2,324,695	$893,514

[1] These aggregates are the sums of all value items in the columns beneath except those which are underlined.

[2] Sewing-machine needles not shown separately to avoid disclosing the production of individual establishments.

[3] Data in regard to number incomplete. The value is made up as follows: Number reported, 80,443 thousands, valued at $1,264,032; number not reported, value, $247,127.

[4] Data in regard to quantity incomplete. The value is made up as follows: Quantity reported, 1,578,285 pounds, valued at $653,296; quantity not reported, value, $115,062.

[5] Data in regard to quantity incomplete. The value is made up as follows: Quantity reported, 7,833,307 gross, valued at $2,192,612; quantity not reported, value, $285,409.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	45	6,338	10	722	5,606	7,250
Connecticut	13	2,611	4	254	2,353	3,623
Illinois	4	267		65	202	253
New Hampshire	5	408	1	29	378	296
New Jersey	5	650	1	54	595	609
New York	4	323	2	34	287	489
Pennsylvania	4	1,168		125	1,043	847
Other States [1]	10	911	2	161	748	1,133

STATE	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
			Materials and supplies	Fuel and power		
United States	$1,865,555	$6,098,477	$5,684,179	$238,665	$20,325,250	$14,402,406
Connecticut	617,127	2,712,227	2,262,221	95,287	8,481,852	6,124,344
Illinois	131,247	173,248	271,414	14,005	926,165	640,746
New Hampshire	53,761	402,241	79,698	9,131	642,316	553,487
New Jersey	142,958	618,925	600,393	23,732	1,959,198	1,335,073
New York	111,167	250,882	324,736	16,067	910,097	569,294
Pennsylvania	383,279	1,135,479	1,171,293	34,962	4,086,755	2,880,500
Other States [1]	426,016	805,475	974,424	45,481	3,318,867	2,298,962

[1] California, 1 establishment; Massachusetts, 3; Michigan, 1; Missouri, 1; Ohio, 1; Rhode Island, 1; Vermont, 1; Wisconsin, 1.

[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

PLATED WARE

[A preliminary report for this industry was issued under date of January 18, 1929]

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 ware. The products of this industry include flat and hollow tableware, toilet articles, fancy articles, etc., plated with silver or other metals and similar articles made from nickel silver.

Products.—A special schedule, providing for detailed data on the production of specified classes of plated ware, was first used at the census for 1927. For this reason no comparative product statistics can be given for earlier census years.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, containers for products, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	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	22,390
1921	66	9,535	10,664,149	12,408,683	33,944,136	21,535,453	(2)
1919	68	9,492	10,913,091	17,766,536	41,634,585	23,868,049	14,212
	PER CENT OF INCREASE OR DECREASE (—)						
1925–1927	(3)	4.1	5.9	0.7	4.4	6.6	15.9
1923–1925	(3)	—6.8	—2.6	1.3	.8	.5	6.8
1923–1927	(3)	—3.0	3.2	2.0	5.2	7.1	23.8
1919–1927	(3)	23.8	47.9	13.8	36.2	53.0	95.0

[1] Value of products less cost of materials, supplies, containers for products, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Not computed where base is less than 100.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
		Horse-power		*Horse-power*		*Horse-power*
Prime movers, total	2,983	27,712	2,075	23,914	1,871	22,390
Steam engines	20	3,551	21	4,009	36	10,193
Steam turbines	9	6,030	8	5,880		
Internal-combustion engines	2	40	4	70		
Water wheels and turbines	8	473	12	503	9	387
Electric motors driven by purchased current	2,944	17,618	2,030	13,452	1,826	11,810
Electric motors, total	3,638	21,806	2,590	17,131	2,280	15,394
Driven by purchased current	2,944	17,618	2,030	13,452	1,826	11,810
Driven by current generated in establishment reporting	694	4,188	560	3,679	454	3,584
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	25	9,227	33	5,942	(1)	(1)

[1] Not called for on schedule.

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

KIND AND STATE	Value
1. Plated-ware industry, all products, total value	$56,719,982
2. Silver-plated ware	45,853,897
3. Nickel-silver ware	5,665,766
4. Other products (not normally belonging to the industry) and receipts for custom work and repairing	5,200,319
5. Silver-plated ware made as secondary products in other industries, value	2,523,854
Silver-plated ware and nickel-silver ware, all industries: Aggregate (sum of 2, 3, and 5)	[1] 54,043,517
Silver-plated ware, total	48,377,751
Flatware	20,255,310
Cutlery [2]	10,261,717
Hollow ware, total	16,886,360
Connecticut	6,420,533
Illinois	384,063
Massachusetts	2,490,946
New Jersey	114,186
New York and Pennsylvania	6,125,341
Other States	1,351,291
Other ware, including plated electric household appliances, total	974,364
Massachusetts, Ohio, and Pennsylvania	297,746
New Jersey and New York	610,918
Other States	65,700
Nickel-silver ware, total	5,665,766
Flatware and cutlery	2,927,809
Hollow ware	1,529,400
Other	1,208,557

[1] This aggregate is the sum of all items in the column beneath except those which are underlined.
[2] Statistics on the production of cutlery other than plated will be found in the reports on "Cutlery and edge tools" and "Silversmithing and silverware."

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate 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]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	94	13,593	31	1,810	11,752	27,712
Connecticut	25	6,090	3	551	5,536	10,865
Illinois	6	164	-------	19	145	386
Massachusetts	14	1,470	7	205	1,258	2,075
New York	32	4,282	16	897	3,369	10,744
Ohio	3	277	-------	36	241	616
Pennsylvania	4	109	2	10	97	220
Other States [1]	10	1,201	3	92	1,106	2,806

STATE	Salaries	Wages	Cost of materials, supplies, containers for products, fuel, and power		Value of products	Value added by manufacture [2]
			Materials, supplies, and containers for products	Fuel and power		
United States	$4,724,969	$16,141,501	$19,478,626	$733,715	$56,719,982	$36,507,641
Connecticut	1,322,130	7,352,249	10,263,510	285,533	26,173,273	15,624,230
Illinois	25,618	198,875	289,892	13,210	588,094	284,992
Massachusetts	517,787	1,547,893	1,092,343	75,261	4,401,288	3,233,684
New York	2,412,680	5,290,115	6,211,206	251,760	20,088,543	13,625,577
Ohio	124,864	266,402	153,050	14,703	782,168	614,415
Pennsylvania	22,474	120,272	75,949	12,064	311,497	223,484
Other States [1]	299,416	1,365,695	1,392,676	81,184	4,375,119	2,901,259

[1] Indiana, 2 establishments; Maine, 1; New Hampshire, 1; New Jersey, 3; Rhode Island, 2; Virginia, 1.
[2] Value of products less cost of materials, supplies, containers for products, fuel, and purchased power. (See secs. 18 and 21, pp. 9 and 10.)

SILVERSMITHING AND SILVERWARE

[A preliminary report for this industry was issued under date of January 18, 1929]

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 glassware and chinaware, etc. The manufacture of small quantities of gold ware was also reported by some of the establishments in this industry.

Products.—A special schedule, providing for detailed data for specified classes of products, was first used at the census for 1927. For this reason no comparative product statistics can be given for earlier census years.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, containers for products, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	84	4,967	$7,803,183	$11,165,068	$30,704,218	$19,539,150	7,499
1925	93	5,587	8,607,244	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	7,150,690	8,964,865	24,410,809	15,445,944	(2)
1919	99	6,453	7,359,409	13,060,929	29,126,133	16,065,204	6,843
	PER CENT OF INCREASE OR DECREASE (—)						
1925-1927	(3)	—11.1	—9.3	—14.8	—5.6	0.6	—3.5
1923-1925	(3)	12.4	17.4	20.7	19.6	18.8	6.7
1923-1927	(3)	—.1	6.5	2.8	12.9	19.5	3.0
1919-1927	(3)	—23.0	6.0	—14.5	5.4	21.6	9.6

[1] Value of products less cost of materials, supplies, containers for products, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Not computed where base is less than 100.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
Prime movers, total	1,300	*Horse-power* 7,499	1,057	*Horse-power* 7,770	1,129	*Horse-power* 7,284
Steam engines	37	2,843	24	3,061	31	2,666
Steam turbines	2	75	2	150		
Internal-combustion engines	3	53	3	53	2	77
Water wheels and turbines	4	220	4	220	2	150
Electric motors driven by purchased current	1,254	4,308	1,024	4,286	1,094	4,391
Electric motors, total	1,810	6,805	1,389	6,166	1,362	6,031
Driven by purchased current	1,254	4,308	1,024	4,286	1,094	4,391
Driven by current generated in establishment reporting	556	2,497	365	1,880	268	1,640
Electric generators	15	*Kilowatts* 1,702	22	*Kilowatts* 1,912	(1)	*Kilowatts* (1)

[1] Not called for on schedule.

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

KIND	Value
1. Silversmithing and silverware industry, all products, total value	$30,704,218
2. Silverware	25,052,990
3. Other products (not normally belonging to the industry) and receipts for custom work and repairing	5,651,228
4. Silverware made as a secondary product in other industries, value	2,704,166
Silverware (sterling), all industries: Aggregate (sum of 2 and 4)	[1] 27,757,156
Flatware, total	9,213,477
Connecticut, New Hampshire, and Rhode Island	4,773,345
Maryland and Massachusetts	3,413,464
New Jersey	961,574
Other States	65,094
Cutlery, total	2,694,208
Connecticut, New York, and Rhode Island	1,487,966
Massachusetts	714,367
New Jersey	205,747
Other States	286,128
Hollow ware, total	12,882,295
Connecticut	2,225,702
Illinois	89,518
Maryland	562,617
Massachusetts	4,029,009
New Hampshire and Rhode Island	1,861,751
New Jersey	1,653,577
New York	2,403,440
Other States	56,681
Toilet ware	1,557,225
Other sterling-silver articles, total	1,409,951
Connecticut and Rhode Island	324,697
Illinois	49,070
New York	906,700
Other States	129,484

[1] This aggregate is the sum of all items in the column beneath except those which are underlined.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate 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]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horsepower
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	84	6,068	72	1,029	4,967	7,499
Illinois	5	25	4	5	16	18
Maryland	5	320	2	60	258	204
Massachusetts	16	1,418	19	152	1,247	1,452
New Jersey	16	1,091	6	165	920	1,507
New York	25	845	31	119	695	900
Other States [1]	17	2,369	10	528	1,831	3,328

STATE	Salaries	Wages	Cost of materials, supplies, containers for products, fuel, and power		Value of products	Value added by manufacture [2]
			Materials, supplies, and containers for products	Fuel and power		
United States	$2,315,082	$7,803,183	$10,833,914	$331,154	$30,704,218	$19,539,150
Illinois	9,552	34,273	39,884	582	136,404	95,938
Maryland	102,902	374,175	466,898	15,226	1,268,691	786,567
Massachusetts	556,442	1,766,433	2,553,285	53,951	7,131,401	4,524,165
New Jersey	350,787	1,671,592	1,548,004	45,959	4,575,961	2,981,998
New York	284,773	1,237,757	2,018,777	73,714	5,012,823	2,920,332
Other States [1]	1,010,626	2,718,953	4,207,066	141,722	12,578,938	8,230,150

[1] California, 2 establishments; Connecticut, 8; New Hampshire, 1; North Carolina, 1; Ohio, 1; Rhode Island, 4.

[2] Value of products less cost of materials, supplies, containers for products, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

SMELTING AND REFINING

Description of the industries.—Establishments engaged in smelting and refining nonferrous metals are classified for census purposes under four industry designations, as follows: (1) Copper; (2) lead; (3) zinc; and (4) other nonferrous metals—tungsten, nickel, and tin. (No establishments classifiable in the last-named industry were reported at the censuses for 1925 and 1927.) 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 refiners produce considerable quantities of lithopone, pigments, and zinc oxide, the values of which are included in the total value of refined products. Other establishments operate rolling mills in connection with their refineries and report only the finished 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, much of the blister copper and lead bullion produced by smelters is 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 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 UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
THE GROUP AS A WHOLE							
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	912,063,567	1,067,124,899	155,061,332	455,496
1923	88	35,146	51,510,128	830,089,699	952,734,111	122,644,412	446,047
1921	85	19,014	25,148,682	368,331,888	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
Per cent of increase or decrease (—):							
1925-1927	(3)	—7.5	—6.6	—11.5	—11.7	—12.6	2.1
1923-1925	(3)	—6.1	—6.9	9.9	12.0	26.4	2.1
1923-1927	(3)	—13.2	—13.0	—2.8	—1.0	10.5	4.3
1919-1927	—37.8	—23.0	—19.5	—4.9	—3.0	9.9	1.9
COPPER							
1927	26	13,924	$20,581,865	$527,763,711	$609,299,017	$81,535,306	323,799
1925	26	15,588	22,641,626	573,190,428	665,176,767	91,986,339	321,909
1923	29	16,777	25,459,160	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
Per cent of increase or decrease (—):							
1925-1927	(3)	—10.7	—9.1	—7.9	—8.4	—11.4	0.6
1923-1925	(3)	—7.1	—11.1	3.4	6.4	29.0	—3.3
1923-1927	(3)	—17.0	—19.2	—4.8	—2.6	14.3	—2.7
1919-1927	(3)	—19.7	—20.0	—9.7	—6.4	22.3	0.7
LEAD							
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	254,881,029	283,042,542	28,161,513	47,219
1923	20	6,194	8,767,924	207,314,578	227,735,149	20,420,571	42,377
1921	23	4,509	5,957,961	134,061,121	150,593,779	16,532,658	(2)
1919	25	6,438	9,179,615	179,373,646	196,794,519	17,420,873	49,668
Per cent of increase or decrease (—):							
1925-1927	(3)	—11.7	—14.6	—20.4	—20.5	—20.9	2.3
1923-1925	(3)	—1.3	2.7	22.9	24.3	37.9	11.4
1923-1927	(3)	—12.9	—12.3	—2.1	—1.1	9.1	14.0
1919-1927	(3)	—16.2	—16.2	13.1	14.4	27.9	—2.8
ZINC							
1927	25	11,188	$16,528,264	$76,619,331	$108,297,975	$31,678,644	93,067
1925	28	11,289	16,304,701	83,992,110	118,905,590	34,913,480	86,368
1923	35	11,918	16,895,864	64,134,114	94,183,900	30,049,786	69,583
1921	29	5,778	7,243,760	24,312,208	37,482,675	13,170,467	(2)
1919	39	13,796	17,783,278	70,014,728	104,122,938	34,108,210	73,604
Per cent of increase or decrease (—):							
1925-1927	(3)	—0.9	1.4	—8.8	—8.9	—9.3	7.8
1923-1925	(3)	—5.3	—3.5	31.0	26.2	16.2	24.1
1923-1927	(3)	—6.1	—2.2	19.5	15.0	5.4	33.7
1919-1927	(3)	—18.9	—7.1	9.4	4.0	—7.1	26.4
OTHER NONFERROUS METALS							
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	3,005,542	(2)
1919	13	2,041	2,963,148	14,957,367	20,074,504	5,117,137	11,700

[1] Value of products less cost of materials, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Not computed where base is less than 100.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
THE GROUP AS A WHOLE		*Horse-power*		*Horse-power*		*Horse-power*
Prime movers, total	6,367	465,164	5,975	455,496	4,565	446,047
Steam engines	286	111,639	323	133,126	544	225,422
Steam turbines	85	136,303	92	119,918		
Internal-combustion engines	22	1,185	25	1,984	30	14,615
Water wheels and turbines	4	1,840	5	2,895	8	4,524
Electric motors driven by purchased current	5,970	214,197	5,530	197,573	3,983	201,486
Electric motors, total	13,209	357,847	11,765	335,610	10,542	322,212
Driven by purchased current	5,970	214,197	5,530	197,573	3,983	201,486
Driven by current generated in establishment reporting	7,239	143,650	6,235	138,037	6,559	120,726
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	186	135,150	203	179,859	(1)	(1)
COPPER		*Horse-power*		*Horse-power*		*Horse-power*
Prime movers, total	3,527	323,799	3,539	321,909	2,702	332,943
Steam engines	163	83,133	172	91,347	264	153,678
Steam turbines	41	91,960	40	83,996		
Internal-combustion engines	3	558	3	558	12	13,060
Water wheels and turbines	4	1,840	4	1,890	8	4,524
Electric motors driven by purchased current	3,316	146,308	3,320	144,118	2,418	161,681
Electric motors, total	7,501	230,968	6,997	231,254	5,945	226,026
Driven by purchased current	3,316	146,308	3,320	144,118	2,418	161,681
Driven by current generated in establishment reporting	4,185	84,660	3,677	87,136	3,527	64,345
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	119	93,950	101	96,134	(1)	(1)
LEAD		*Horse-power*		*Horse-power*		*Horse-power*
Prime movers, total	1,624	48,298	1,366	47,219	1,141	42,377
Steam engines	32	8,116	47	13,374	139	20,519
Steam turbines	7	5,083	7	5,083		
Internal-combustion engines	1	40				
Electric motors driven by purchased current	1,584	35,059	1,312	28,762	1,002	21,858
Electric motors, total	2,146	41,948	1,758	33,795	1,609	28,071
Driven by purchased current	1,584	35,059	1,312	28,762	1,002	21,858
Driven by current generated in establishment reporting	562	6,889	446	5,033	607	6,213
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	16	6,479	22	8,897	(1)	(1)

[1] Not called for on schedule.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923—Con.

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
ZINC		*Horse-power*		*Horse-power*		*Horse-power*
Prime movers, total	1,216	93,067	1,070	86,368	585	69,583
Steam engines	91	20,390	104	28,405	139	50,975
Steam turbines	37	39,260	45	30,839		
Internal-combustion engines	18	587	22	1,426	18	1,555
Water wheels and turbines			1	1,005		
Electric motors driven by purchased current	1,070	32,830	898	24,693	428	17,053
Electric motors, total	3,562	84,931	3,010	70,561	2,852	67,146
Driven by purchased current	1,070	32,830	898	24,693	428	17,053
Driven by current generated in establishment reporting	2,492	52,101	2,112	45,868	2,424	50,093
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	51	34,721	80	74,828	(1)	(1)
OTHER NONFERROUS METALS		*Horse-power*		*Horse-power*		*Horse-power*
Prime movers, total					137	1,144
Steam engines					2	250
Steam turbines						
Electric motors driven by purchased current					135	894
Electric motors, total					136	969
Driven by purchased current					135	894
Driven by current generated in establishment reporting					1	75

[1] Not called for on schedule.

TABLE 3.—COPPER, LEAD, AND ZINC—PRODUCTION, BY SOURCE AND QUANTITY, FOR THE UNITED STATES: 1919 TO 1927 [1]

SOURCE	TONS OF 2,000 POUNDS				
	1927	1925	1923	1921	1919
COPPER					
Smelter output	842,020	837,435	717,500	252,793	643,210
Refinery production of new copper:					
Primary	1,162,882	1,102,287	989,918	475,389	885,084
Domestic ore [2]	859,476	841,448	732,082	304,707	716,743
Foreign ore [2]	303,406	260,839	257,836	170,682	168,341
Secondary	104,934	99,180	65,719	53,243	35,643
LEAD					
Refinery production of lead:					
Primary	796,530	766,969	618,322	448,589	482,220
Domestic ore	668,320	654,921	543,841	398,222	424,433
Foreign ore	128,210	112,048	74,481	50,367	57,787
Secondary	38,424	35,146	36,604	14,799	12,545
Antimonial	24,347	19,667	14,190	10,064	13,874
ZINC					
Refinery production of zinc:					
Primary	592,516	572,946	510,434	200,500	465,743
Domestic ore	576,960	555,631	508,335	198,232	452,272
Foreign ore	15,556	17,315	2,099	2,268	13,471
Secondary	42,784	39,181	39,434	17,573	19,748

[1] From Mineral Resources of the United States, issued by the U. S. Bureau of Mines.
[2] The distribution of refined copper as of domestic and of foreign origin is only approximate, it being impossible to make an accurate distribution at this stage of manufacture.

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY			Horsepower	Salaries	Wages
		Total	Salaried officers and employees	Wage earners (average for the year)			
THE GROUP AS A WHOLE							
United States	69	33,916	3,406	30,510	465,164	$8,123,074	$44,799,809
COPPER							
United States	26	15,690	1,766	13,924	323,799	3,943,652	20,581,865
Arizona	8	3,298	334	2,964	70,219	897,792	4,325,430
New Jersey	3	3,649	504	3,145	55,496	1,052,203	5,071,547
Other States [1]	15	8,743	928	7,815	198,084	1,993,657	11,184,888
LEAD							
United States	18	6,168	770	5,398	48,298	1,715,941	7,689,680
Utah	3	1,870	297	1,573	14,328	611,549	2,231,576
Other States [2]	15	4,298	473	3,825	33,970	1,104,392	5,458,104
ZINC							
United States	25	12,058	870	11,188	93,067	2,463,481	16,528,264
Illinois	5	3,051	224	2,827	15,475	765,418	4,063,524
Kansas	3	600	50	550	3,174	148,676	759,693
Oklahoma	6	1,779	62	1,717	4,033	191,453	2,502,541
Pennsylvania	3	3,838	265	3,573	44,643	720,466	5,571,251
Other States [3]	8	2,790	269	2,521	25,742	637,468	3,631,255

STATE	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [4]
	Materials and supplies	Fuel and power		
THE GROUP AS A WHOLE				
United States	$778,615,911	$28,626,265	$942,734,864	$135,492,688
COPPER				
United States	514,153,540	13,610,171	609,299,017	81,535,306
Arizona	55,648,866	4,341,093	82,745,917	22,755,958
New Jersey	196,425,915	2,276,457	210,201,789	11,499,417
Other States [1]	262,078,759	6,992,621	316,351,311	47,279,931
LEAD				
United States	197,803,342	5,055,792	225,137,872	22,278,738
Utah	28,193,265	1,991,030	34,513,685	4,329,390
Other States [2]	169,610,077	3,064,762	190,624,187	17,949,348
ZINC				
United States	66,659,029	9,960,302	108,297,975	31,678,644
Illinois	11,205,415	1,739,957	19,696,455	6,751,083
Kansas	4,120,152	564,296	5,813,661	1,129,213
Oklahoma	11,719,954	1,007,827	15,207,105	2,479,324
Pennsylvania	17,890,196	3,127,019	34,601,749	13,584,534
Other States [3]	21,723,312	3,521,203	32,979,005	7,734,490

[1] California, 1 establishment; Maryland, 1; Michigan, 3; Montana, 2; Nevada, 2; New York, 1; Tennessee, 2; Texas, 1; Utah, 1; Washington, 1.
[2] California, 1 establishment; Colorado, 2; Idaho, 1; Illinois, 2; Indiana, 2; Kansas, 1; Missouri, 2; Montana, 1; Nebraska, 1; New Jersey, 1; Oklahoma, 1.
[3] Arkansas, 2 establishments; Indiana, 1; Montana, 1; Texas, 1; West Virginia, 3.
[4] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

TIN AND OTHER FOILS, NOT INCLUDING GOLD AND SILVER; COLLAPSIBLE TUBES

[A preliminary report for this industry was issued under date of January 18, 1929]

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of tin, lead, aluminum, and other foils (not including gold and silver), and those manufacturing collapsible tubes as their primary products. Tables 1 and 2 give general statistics and power-equipment statistics for the industry as a whole and for the separate branches. The products statistics in Table 3 represent the output of the specified commodities reported by the establishments classified in this industry.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture[1]	Horsepower
THE INDUSTRY AS A WHOLE							
1927	27	3,642	$4,001,633	$22,453,943	$32,302,389	$9,848,446	21,619
1925	26	3,618	4,000,948	21,341,986	30,060,306	8,718,320	18,712
1923	24	3,323	3,522,505	14,515,160	23,465,320	8,950,160	12,595
1921	22	2,178	2,557,354	9,264,808	14,036,882	4,772,074	(2)
1919	15	1,908	1,759,320	13,007,990	17,920,834	4,912,844	6,991
Per cent of increase or decrease (—):							
1925–1927	(3)	0.7	(4)	5.2	7.5	13.0	15.5
1923–1925	(3)	8.9	13.6	47.0	28.1	—2.6	48.6
1923–1927	(3)	9.6	13.6	54.7	37.7	10.0	71.6
1919–1927	(3)	90.9	127.5	72.6	80.3	100.5	209.2
TIN AND OTHER FOILS BRANCH							
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
Per cent of increase or decrease (—):							
1925–1927	(3)	—0.7	—1.9	—1.9	1.7	12.9	17.0
COLLAPSIBLE TUBES BRANCH							
1927	17	1,984	$1,918,055	$7,103,927	$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
Per cent of increase:							
1925–1927	(3)	1.8	2.2	24.8	20.1	13.1	6.7

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.
[3] Not computed where base is less than 100.
[4] Less than one-tenth of 1 per cent.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927 AND 1925

TYPE	1927		1925	
	Number	Capacity	Number	Capacity
THE INDUSTRY AS A WHOLE				
Prime movers, total	1,314	*Horsepower* 21,619	1,171	*Horsepower* 18,712
Steam engines			1	750
Internal-combustion engines	9	603	8	478
Electric motors driven by purchased current	1,305	21,016	1,162	17,484
Electric motors, total	1,324	21,582	1,195	18,223
Driven by purchased current	1,305	21,016	1,162	17,484
Driven by current generated in establishment reporting	19	566	33	739
Electric generators	4	*Kilowatts* 225	7	*Kilowatts* 1,001
TIN AND OTHER FOILS BRANCH				
Prime movers, total	914	*Horsepower* 18,770	758	*Horsepower* 16,041
Steam engines			1	750
Electric motors driven by purchased current	914	18,770	757	15,291
Electric motors, total	914	18,770	769	15,481
Driven by purchased current	914	18,770	757	15,291
Driven by current generated in establishment reporting			12	190
Electric generators		*Kilowatts*	1	*Kilowatts* 750
COLLAPSIBLE TUBES BRANCH				
Prime movers, total	400	*Horsepower* 2,849	413	*Horsepower* 2,671
Internal-combustion engines	9	603	8	478
Electric motors driven by purchased current	391	2,246	405	2,193
Electric motors, total	410	2,812	426	2,742
Driven by purchased current	391	2,246	405	2,193
Driven by current generated in establishment reporting	19	566	21	549
Electric generators	4	*Kilowatts* 225	6	*Kilowatts* 251

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

	Quantity	Value
All products: Aggregate value		$32,302,389
Tin and other foils (not including gold and silver) branch, all products, total value		20,951,679
	Pounds	
Tin foil	7,493,483	6,618,509
Lead foil	40,627,542	3,979,247
Aluminum and other foils	47,044,846	9,637,266
Other products		716,657
Collapsible tubes branch, all products, total value		11,350,710
	Gross	
Collapsible tubes	2,999,183	9,235,320
Other products		2,115,390

TABLE 4.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing data reported by individual establishments. Certain of the "Other States," however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY			Horsepower
		Total	Salaried officers and employees	Wage earners (average for the year)	
THE INDUSTRY AS A WHOLE					
United States	27	4,048	406	3,642	21,619
Illinois	4	169	21	148	1,250
New Jersey	7	691	58	633	649
New York	5	816	79	737	6,662
Other States	11	2,372	248	2,124	13,058
TIN AND OTHER FOILS, NOT INCLUDING GOLD AND SILVER					
United States	[1] 10	1,879	221	1,658	18,770
COLLAPSIBLE TUBES					
United States	[2] 17	2,169	185	1,984	2,849

STATE	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [3]
			Materials and supplies	Fuel and power		
THE INDUSTRY AS A WHOLE						
United States	$1,230,716	$4,001,633	$22,101,344	$352,599	$32,302,389	$9,848,446
Illinois	64,623	197,403	1,962,871	25,209	2,502,319	514,239
New Jersey	273,711	607,626	2,640,646	35,254	4,206,722	1,530,822
New York	276,825	1,035,835	5,707,027	127,961	8,014,034	2,179,946
Other States	615,557	2,160,769	11,790,800	164,175	17,579,314	5,624,339
TIN AND OTHER FOILS, NOT INCLUDING GOLD AND SILVER						
United States	580,716	2,083,578	15,098,453	251,563	20,951,679	5,601,663
COLLAPSIBLE TUBES						
United States	650,000	1,918,055	7,002,891	101,036	11,350,710	4,246,783

[1] Establishments distributed as follows: Illinois, 2; Kentucky, 1; Missouri, 1; New York, 4; Virginia, 2.
[2] Establishments distributed as follows: Connecticut, 1; Delaware, 1; Illinois, 2; New Jersey, 7; New York, 1; Pennsylvania, 3; Rhode Island, 1; West Virginia, 1.
[3] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

SUMMARY FOR INDUSTRIES IN GROUP 12 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES

[This table presents summary statistics for the industries in Group 12 other than those for which separate reports are given on pp. 988–1028. More detailed statistics for 1927 are given, for the United States as a whole, in Table II, p. 1316; and summaries for States and large cities, carrying statistics for these industries in comparison with those for other industries, appear in Tables III and IV, pp. 1330 and 1416. See "General explanations," pp. 3–12; in particular, "Limitation of statistics to establishments reporting products valued at $5,000 or more," p. 6. "Power equipment," p. 7, "Cost of materials," etc., p. 8; "Value added by manufacture," p. 9, and "State and city statistics," p. 11]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
COPPER, TIN, AND SHEET-IRON WORK, INCLUDING GALVANIZED-IRON WORK, NOT ELSEWHERE CLASSIFIED							
[*Principal products:* Cornices, gutters, spouts, etc., for the exterior of buildings; radiator shields; stove and furnace pipes; ventilators and skylights; tanks and bins; culverts; and coppersmithing and sheet-iron work. Data for establishments engaged chiefly in laying of sheet-metal roofs, the installation of warm-air furnaces, and other contracting work, but which incidentally manufacture some copper, tin, and sheet-metal products, were included in the 1925 and 1927 statistics only when the manufactured products exceeded $20,000 in value. The figures for prior censuses include data for establishments of this character whose manufactured products exceeded $5,000 in value]							
United States							
1927	1,981	24,527	$38,667,690	$98,385,897	[1] $191,128,636	$92,742,739	35,880
1925	2,107	24,996	37,824,995	84,079,626	175,042,925	90,963,299	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	(2)
1919	4,796	27,640	33,866,823	80,898,528	160,313,945	79,415,417	24,130
States, 1927							
Alabama	12	215	250,595	664,666	1,204,719	540,053	159
Arkansas	6	56	48,821	546,961	706,728	159,767	146
California	233	1,554	2,437,802	4,505,230	10,373,467	5,868,237	1,858
Colorado	17	257	346,416	974,641	1,647,190	672,549	615
Connecticut	17	177	318,353	624,037	1,235,264	611,227	274
Delaware	4	20	29,449	32,133	97,419	65,286	11
District of Columbia	11	82	139,661	172,310	419,774	247,464	56
Florida	15	175	254,602	733,088	1,353,127	620,039	209
Georgia	12	170	183,395	1,370,017	1,981,073	611,056	131
Illinois	234	2,662	4,669,536	8,640,704	19,555,972	10,915,268	3,492
Indiana	41	474	697,559	2,105,766	3,920,769	1,815,003	664
Iowa	36	399	452,584	1,565,497	2,864,717	1,299,220	838
Kansas	13	143	207,092	868,931	1,688,037	819,106	200
Kentucky	19	508	580,205	4,284,503	5,758,572	1,474,069	601
Louisiana	17	338	364,113	795,285	1,464,497	669,212	205
Maine	8	68	96,788	157,253	368,268	211,015	41
Maryland	24	277	368,381	900,689	1,735,874	835,185	401
Massachusetts	83	923	1,635,547	2,117,596	5,984,297	3,866,701	1,119
Michigan	63	1,453	2,043,979	3,565,054	9,696,302	6,131,248	1,921
Minnesota	61	806	990,132	2,257,810	4,788,190	2,530,380	1,516
Mississippi	5	80	92,294	122,864	311,439	188,575	7
Missouri	91	765	1,102,368	2,666,737	5,414,701	2,747,964	1,185
Montana	4	19	31,945	52,387	105,755	53,368	5
Nebraska	19	159	210,649	608,152	1,192,821	584,669	377
New Jersey	66	909	1,726,528	2,992,171	6,788,780	3,796,609	1,318
New York	243	3,090	5,805,980	8,099,854	20,471,430	12,371,576	3,167
North Carolina	12	88	116,883	343,968	601,713	257,745	57
Ohio	118	2,575	4,646,504	18,991,144	28,876,019	9,884,875	3,772
Oklahoma	13	52	139,400	425,454	747,612	322,158	40
Oregon	33	286	435,457	892,234	1,886,471	994,237	675
Pennsylvania	137	2,330	3,512,165	8,862,755	18,641,454	9,778,699	4,113
Rhode Island	15	159	282,848	309,100	922,000	612,900	148
Tennessee	14	161	158,156	667,419	1,090,944	423,525	86
Texas	63	487	693,241	3,082,634	4,764,234	1,681,600	610
Utah	13	66	91,446	282,924	535,516	252,592	421
Vermont	5	41	48,504	187,495	376,912	189,417	33
Virginia	11	98	138,917	356,102	719,545	363,443	241
Washington	75	524	851,238	1,234,749	2,902,247	1,667,498	401
West Virginia	11	757	911,196	4,061,430	5,765,992	1,704,562	3,405
Wisconsin	90	1,015	1,414,701	6,530,557	10,842,966	4,312,409	1,143
Other States [3]	17	109	141,260	733,596	1,325,829	592,233	219

[1] Includes $8,217,650, the value of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in copper, tin, sheet-iron, and galvanized-iron work. Does not include $8,268,086, the value of copper, tin, sheet-iron, and galvanized-iron work reported by establishments engaged primarily in other industries.

[2] Not called for on schedule.

[3] Arizona, 1 establishment; Idaho, 2; Nevada, 2; New Hampshire, 2; North Dakota, 4; South Carolina, 2; South Dakota, 4. South Dakota reported a larger value of products than certain of the States for which separate figures are given.

SUMMARY FOR INDUSTRIES IN GROUP 12 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES—Continued

[See note at head of this table, p. 1029]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
ELECTROPLATING							
[The plating, by the electric process, of various metal articles, such as automobile accessories, lighting fixtures, musical instruments, and jewelry, with gold, silver, nickel, or copper. The value of products for the industry represents, to a large extent, the value of 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]							
United States							
1927	419	3,556	$5,629,104	$3,335,140	[1] $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	(2)
1919	515	3,024	3,793,605	2,639,248	10,389,617	7,750,369	6,788
States, 1927							
California	39	329	481,094	222,116	1,131,999	909,883	1,175
Connecticut	8	53	75,066	53,315	182,940	129,625	250
Dist. of Columbia	4	23	27,236	13,339	71,542	58,203	42
Illinois	66	776	1,351,688	1,010,679	3,609,635	2,598,956	2,862
Indiana	15	119	165,820	172,594	501,753	329,159	643
Maryland	8	37	53,737	17,301	117,276	99,975	111
Massachusetts	38	272	379,955	160,282	894,466	734,184	783
Michigan	14	298	437,272	214,689	901,735	687,046	1,171
Minnesota	8	40	74,865	40,075	152,998	112,923	265
Missouri	14	95	176,283	51,267	323,884	272,617	272
New Jersey	21	133	206,806	130,291	536,510	406,219	446
New York	73	513	871,357	404,038	2,091,315	1,687,277	1,427
Ohio	34	372	596,141	265,528	1,267,518	1,001,990	1,801
Pennsylvania	32	205	316,245	382,173	1,130,031	747,858	1,078
Rhode Island	8	65	81,058	49,232	223,276	174,044	91
Washington	8	30	43,005	20,908	111,727	90,819	110
Wisconsin	9	99	148,060	54,353	337,309	282,956	452
Other States [3]	20	97	143,416	72,960	344,407	271,447	1,111

[1] Includes $132,158, the value of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in electroplating. Does not include $101,972, the receipts for electroplating reported by establishments engaged primarily in other industries.
[2] Not called for on schedule.
[3] Colorado, 1 establishment; Delaware, 1; Iowa, 3; Kentucky, 2; Louisiana, 1; Maine, 1; Nebraska, 2; Oklahoma, 1; Oregon, 3; Tennessee, 2; Texas, 3.

FIRE EXTINGUISHERS, CHEMICAL

[*Principal products:* Chemical engines and hand appliances for extinguishing fire]

United States							
1927	[1] 26	832	$1,191,708	$4,009,775	[2] $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	3,366,159	6,152,082	2,785,923	1,235
1921	31	580	625,958	2,081,052	4,254,261	2,173,209	(3)
1919	32	777	751,119	2,693,416	5,563,180	2,869,764	855

[1] Delaware, 1 establishment; Illinois, 2; Indiana, 1; Massachusetts, 3; Michigan, 3; Missouri, 3; New Jersey, 1; New York, 6; Ohio, 4; Pennsylvania, 1; and Wisconsin, 1. Statistics for Michigan and Missouri are given in Table III, beginning on page 1330. In order to avoid disclosing data for individual establishments, no statistics are given for New York, the leading State in the industry, nor for other States with the exception of those named in the preceding sentence.
[2] Includes $1,160,029, value of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of chemical fire extinguishers. Does not include value of chemical fire extinguishers, made as secondary products by establishments classified in other industries. The total value of chemical fire extinguishers, as far as separately reported to the Bureau of the Census regardless of the industry classification of the establishment in which manufactured, was $7,495,426.
[3] Not called for on schedule.

SUMMARY FOR INDUSTRIES IN GROUP 12 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES—Continued

[See note at head of this table, p. 1029]

GAS AND ELECTRIC FIXTURES; LAMPS, LANTERNS, AND REFLECTORS

[*Principal products:* Brackets, chandeliers, electroliers; sconces, burners, domes, mantles; lamps for motor vehicles; marine lamps; desk, table, bridge, and boudoir lamps; miners' lamps; lanterns; reflectors for show cases, stage lighting; etc. (Establishments manufacturing incandescent electric bulbs as their primary product are classified in the "Elec trical machinery, apparatus, and supplies" industry]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
United States							
1927	481	21,030	$29,260,824	$55,608,545	[1] $127,802,407	$72,193,862	31,291
1925	517	22,384	31,072,058	57,770,818	129,698,389	71,927,571	30,038
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	32,801,606	72,054,398	39,252,792	(2)
1919	512	18,155	19,094,877	38,687,571	80,366,870	41,679,299	22,278
States, 1927							
California	57	880	1,307,301	1,803,842	5,122,846	3,319,004	978
Connecticut	11	1,042	1,175,560	2,434,250	5,400,204	2,965,954	1,852
Illinois	76	5,018	6,882,365	12,315,387	29,788,948	17,473,561	6,204
Indiana	7	949	1,043,543	5,277,537	9,262,432	3,984,895	1,803
Maryland	6	22	20,474	77,553	138,635	61,082	44
Massachusetts	15	351	510,235	821,028	2,039,279	1,218,251	856
Minnesota	5	29	38,441	67,489	131,460	63,971	84
Missouri	13	463	730,941	993,353	2,834,100	1,835,747	561
New Jersey	15	1,331	1,292,775	2,111,004	4,358,129	2,247,125	2,391
New York	156	5,474	8,243,236	13,966,407	34,139,032	20,172,625	5,178
Ohio	32	2,246	3,285,032	6,856,736	14,260,450	7,403,714	4,397
Oregon	3	33	55,941	82,335	200,366	118,031	12
Pennsylvania	39	972	1,349,611	1,830,990	4,762,240	2,931,250	1,185
Washington	14	143	242,623	378,253	931,612	553,359	360
Wisconsin	15	393	469,308	1,639,990	3,247,434	1,607,444	363
Other States [3]	17	1,684	2,613,438	4,947,391	11,185,240	6,237,849	5,023

[1] Does not include values of commodities made as secondary products by establishments classified in other industries, as follows: Gas and electric fixtures, $933,174; motor-vehicle lamps, $37,667; other lamps and lanterns, $2,061,640; reflectors, $493,319.
[2] Not called for on schedule.
[3] Colorado, 2 establishments; Iowa, 2; Kansas, 2; Kentucky, 1; Louisiana, 1; Michigan, 6; Oklahoma, 1; Texas, 1; Virginia, 1. Certain of these States outranked some of those shown separately.

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

[*Principal products:* Gold, silver, and platinum refined and alloyed for jewelers' and silversmiths' use, made from old gold and silver, sweepings, clippings, and plated scrap, as well as from purchased bullion. (Establishments engaged in extracting gold and silver from the principal ores in which they are found are classified under "Smelting and refining, copper" or "Smelting and refining, lead")]

United States							
1927	57	801	$1,434,620	$58,877,476	[1] $62,647,127	$3,769,651	4,288
1925	65	1,258	2,165,685	88,867,196	95,243,474	6,376,278	9,676
1923	76	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	(2)
1919	87	644	843,608	49,736,978	55,483,215	5,746,237	3,141
States, 1927							
California	4	19	57,209	1,064,048	1,212,134	148,086	147
Massachusetts	4	15	22,059	1,733,563	1,863,188	129,625	82
New Jersey	17	516	942,196	29,213,609	31,662,362	2,448,753	2,905
New York	11	61	123,350	4,628,555	4,982,427	353,872	319
Rhode Island	13	47	72,586	2,212,552	2,554,894	342,342	156
Other States [3]	8	143	217,220	20,025,149	20,372,122	346,973	679

[1] Includes $1,302,200, the value of products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the reducing and refining of gold, silver, and platinum, not from the ore. Does not include $1,731,846, the value of gold, silver, and platinum reduced and refined, not from the ore, reported as secondary products by establishments classified in other industries.
[2] Not called for on schedule.
[3] Connecticut, 2 establishments; Illinois, 1; Louisiana, 1; Michigan, 1; Ohio, 1; Pennsylvania, 2. Connecticut reported larger values of products than any of the States for which separate figures are given, with the exception of New Jersey.

SUMMARY FOR INDUSTRIES IN GROUP 12 WHICH ARE NOT COVERED BY SEPARATE REPORTS, BY STATES—Continued

[See note at head of this table, p. 1029]

PENS, GOLD

[*Principal products:* Gold pens (not including fountain and stylographic pens)]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
United States							
1927	8	137	$197,831	$443,975	[1] $732,309	$288,334	80
1925	13	226	299,308	588,856	1,114,840	525,984	121
1923	15	428	658,169	1,256,900	2,319,641	1,062,741	191
1921	12	289	376,399	631,501	1,335,220	703,719	(2)
1919	15	416	517,123	962,410	1,801,460	839,050	145
States, 1927							
New York	5	80	124,890	259,127	456,339	197,212	52
Other States [3]	3	57	72,941	184,848	275,970	91,122	28

[1] Includes values of miscellaneous products, normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of gold pens, but does not include value of gold pens made as secondary products by establishments classified in other industries. The total value of gold pens manufactured in 1927, regardless of the industry classification of the establishments in which manufactured, so far as separately reported to the Bureau of the Census, was $1,205,451.
[2] Not called for on schedule.
[3] Massachusetts, 2 establishments; New Jersey, 1.

STAMPED AND ENAMELED WARE, NOT ELSEWHERE CLASSIFIED

[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 under "Aluminum manufactures.") *Principal products:* Kitchen utensils, household and hospital ware, perforated screens for milling and mining, motor-vehicle license plates, metal seals, bottle and can caps and stoppers, buckles, suspender and garter trimming, etc.]

YEAR AND STATE	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
United States							
1927	365	28,594	$35,154,846	$65,580,861	[1] $141,793,184	$76,212,323	66,726
1925	370	29,704	36,106,675	77,486,915	[1] 154,096,183	76,609,268	64,346
1923	329	35,237	42,635,592	84,517,912	[1] 170,923,386	86,405,474	68,326
1921	324	24,192	26,862,380	48,232,687	[1] 100,585,381	52,352,694	(2)
1919	323	34,248	34,851,311	65,456,652	[1] 143,653,877	78,197,225	51,283
States, 1927							
California	9	319	412,319	681,408	1,690,362	1,008,954	567
Connecticut	24	1,881	1,999,027	2,804,912	6,960,923	4,156,011	2,619
Illinois	50	3,045	3,924,858	8,926,353	18,456,970	9,530,617	6,940
Indiana	9	1,014	1,059,071	1,793,561	4,037,066	2,243,505	2,058
Kansas	3	17	19,199	34,277	81,286	47,009	57
Maryland	8	2,196	2,323,006	4,720,955	10,875,824	6,154,869	6,042
Massachusetts	22	944	1,374,778	1,758,713	4,690,052	2,931,339	4,286
Michigan	27	1,435	2,308,820	3,549,493	8,808,613	5,259,120	3,246
Minnesota	3	38	33,064	84,630	160,600	75,970	65
Missouri	11	746	811,299	2,648,540	4,592,081	1,943,541	2,128
New Jersey	30	1,937	2,495,492	2,426,121	7,295,879	4,869,758	2,349
New York	61	5,538	7,093,067	14,675,450	29,868,907	15,193,457	12,514
Ohio	52	4,449	5,541,040	9,266,115	19,707,889	10,441,774	13,413
Pennsylvania	28	1,132	1,301,163	2,741,929	5,777,006	3,035,077	2,139
Rhode Island	4	111	132,487	159,062	428,667	269,605	352
West Virginia	4	958	1,022,999	2,601,219	4,914,091	2,312,872	2,143
Wisconsin	12	2,460	2,963,579	6,068,395	12,087,483	6,019,088	4,692
Other States [3]	8	374	329,578	639,728	1,359,485	719,757	1,116

[1] Includes values of miscellaneous products normally belonging to other industries, made as secondary products by establishments engaged primarily in the manufacture of stamped and enameled ware: 1927, $19,517,208; 1925, $8,538,506; corresponding amounts for earlier years not calculated. Does not include the following values of stamped and enameled ware made as a secondary product by establishments engaged primarily in other industries: 1927, $11,503,227; 1925, $12,040,648; 1923, $6,880,312; 1921, $5,415,508; 1919, $6,416,745.
[2] Not called for on schedule.
[3] Georgia, 1 establishment; Kentucky, 1; Louisiana, 1; Maine, 1; Tennessee, 2; Virginia, 1; Washington, 1. Tennessee, Louisiana, and Virginia reported larger values of products than some of the States for which separate figures are given.

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.

The manufacture of metal-working machinery other than machine tools is given a separate classification in this report, as in the reports for 1923 and earlier years, but was included in the "Metal-working machinery, including machine tools" industry at the census for 1925.

The manufacture of mechanical refrigerators, formerly classified in part under "Foundry and machine-shop products, not elsewhere classified" and in part under "Electrical machinery, apparatus, and supplies," is now treated as a separate industry under the desigation "Refrigerators, mechanical."

The table following presents summary statistics for the group as a whole and for each industry separately; on pages 1035 to 1119 are given statistics for those industries in Group 13 for which separate reports have been published in pamphlet form; and summary statistics for "Windmills and windmill towers," for which no report has been published, will be found on page 1120.

SUMMARY FOR GROUP 13.—MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT: 1921 TO 1927

[See "Regrouping of industries and renumbering of groups," p. 19]

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
				Expressed in thousands of dollars [1]				
Total	1927	12,037	886,427	1,287,778	2,062,671	5,368,015	3,305,344	3,009,265
	1925	11,807	858,843	1,225,359	1,985,367	5,020,281	3,034,914	2,714,377
	1923	12,147	907,707	1,253,743	1,891,524	4,727,818	2,836,294	2,300,443
	1921	12,395	662,277	832,783	1,361,163	3,235,075	1,873,912	(2)
Agricultural implements	1927	277	33,346	46,415	85,666	202,732	117,066	117,966
	1925	303	28,696	37,388	73,850	169,468	95,618	115,325
	1923	312	30,962	40,511	63,492	151,286	87,794	121,975
	1921	353	30,359	39,835	87,267	163,817	76,549	(2)
Cash registers, adding machines, and calculating machines.	1927	41	14,372	21,756	11,132	106,845	95,713	21,954
	1925	41	13,296	21,142	11,166	98,384	87,218	[3] 17,616
	1923	37	14,971	22,775	12,483	95,106	82,622	(4)
	1921	49	9,786	13,243	9,573	53,653	44,080	(2)
Electrical machinery, apparatus, and supplies.[5]	1927	1,777	241,566	336,239	645,762	1,637,307	991,545	661,168
	1925	1,739	239,921	323,835	636,692	1,540,002	903,310	539,398
	1923	1,671	234,892	305,455	548,627	1,293,002	744,375	480,268
	1921	1,333	161,204	194,242	344,070	833,985	489,915	(2)
Engines, turbines, and water wheels.	1927	215	54,341	84,791	165,203	367,879	202,676	241,788
	1925	220	51,099	73,585	145,784	313,588	167,804	224,194
	1923	249	48,495	70,878	124,543	266,998	142,455	165,137
	1921	296	35,567	52,005	111,698	199,499	87,800	(2)
Foundry and machine-shop products, not elsewhere classified.[5]	1927	8,318	397,814	591,065	872,790	2,259,794	1,387,004	1,538,856
	1925	8,154	397,838	590,801	883,708	2,232,986	1,349,278	1,424,259
	1923	8,531	448,777	642,431	936,231	2,337,073	1,400,842	1,234,326
	1921	9,013	321,363	412,359	653,364	1,565,527	912,163	(2)

See footnotes at end of table.

SUMMARY FOR GROUP 13.—MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT: 1921 TO 1927—Continued

[See "Regrouping of industries and renumbering of groups," p. 19]

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture	Horsepower
				Expressed in thousands of dollars [1]				
Gas machines and gas and water meters.	1927	58	5,915	8,792	15,591	36,715	21,124	10,427
	1925	61	5,514	7,429	13,038	34,292	21,254	7,375
	1923	61	6,127	7,757	14,332	34,250	19,919	7,364
	1921	65	4,280	5,212	9,000	21,956	12,956	(2)
Machine tools	1927	355	35,269	52,366	46,115	159,513	113,398	131,670
	1925	329	30,831	46,711	43,826	144,202	100,376	118,819
	1923	350	33,373	47,337	40,977	137,206	96,229	109,196
	1921	348	21,307	25,252	23,978	67,729	43,751	(2)
Metal-working machinery, other than machine tools.[6]	1927	62	6,125	9,958	10,861	31,749	20,887	23,078
	1925	49	5,994	9,221	10,698	31,390	20,692	[3] 22,199
Pumps (hand and power) and pumping equipment.	1927	278	18,671	27,119	52,765	130,591	77,826	64,763
	1925	253	17,935	25,278	50,328	120,148	69,820	56,470
	1923	229	14,550	19,991	34,465	92,930	58,465	38,286
	1921	221	12,186	13,970	26,804	69,962	43,158	(2)
Refrigerators, mechanical [5]	1927	22	11,285	17,712	42,651	96,514	53,862	40,084
Scales and balances	1927	60	3,906	5,461	7,454	24,655	17,202	8,766
	1925	71	4,292	5,783	7,349	27,237	19,888	9,771
	1923	65	4,245	5,500	6,594	24,157	17,562	9,615
	1921	65	3,720	4,428	4,716	15,885	11,168	(2)
Sewing machines, cases, and attachments.	1927	41	11,838	15,879	16,782	45,222	28,440	41,988
	1925	41	12,121	16,100	18,610	46,298	27,689	27,439
	1923	40	13,435	17,605	17,764	45,967	28,204	22,511
	1921	36	12,569	12,528	14,937	35,608	20,671	(2)
Textile machinery and parts.	1927	367	26,154	36,481	36,181	116,921	80,740	64,532
	1925	379	27,869	37,464	39,037	121,653	82,616	61,738
	1923	428	35,672	46,023	49,706	140,661	90,956	56,295
	1921	421	31,025	38,831	44,904	128,935	84,031	(2)
Typewriters and supplies.	1927	75	16,681	20,912	15,956	69,112	53,156	17,920
	1925	70	14,969	18,804	15,157	63,080	47,923	15,568
	1923	73	14,963	18,210	13,977	52,498	38,521	11,451
	1921	75	13,381	14,398	10,770	41,790	31,020	(2)
Washing machines, wringers, driers, and ironing machines, for household use.	1927	75	7,789	10,950	34,528	74,951	40,423	20,697
	1925	82	7,077	9,990	32,748	69,568	36,820	18,028
	1923	85	6,144	7,839	25,742	50,373	24,631	11,415
	1921	96	4,147	4,898	16,622	30,199	13,577	(2)
Windmills and windmill towers.	1927	16	1,355	1,882	3,234	7,514	4,281	3,608
	1925	15	1,391	1,830	3,376	7,984	4,608	3,378
	1923	16	1,101	1,431	2,592	6,311	3,719	2,732
	1921	24	1,383	1,581	3,459	6,530	3,070	(2)

[1] Each total is the sum, expressed to the nearest thousand, of the individual items expressed in units. For this reason the totals in some cases may differ slightly from the sums of the items as here given.
[2] Not called for on schedule.
[3] Revised; revision not carried into total.
[4] No comparable data.
[5] For censuses prior to 1927 the statistics for "Refrigerators, mechanical," are included in those for "Electrical machinery, apparatus, and supplies" or in "Foundry and machine-shop products."
[6] For censuses prior to 1925 not separately classified; included in "Foundry and machine-shop products."

AGRICULTURAL IMPLEMENTS; FARM EQUIPMENT

INTRODUCTION

The statistics in this section are shown under two heads, namely, "Agricultural implements" (following) and "Farm equipment" (pp. 1039–1051). 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," below.) 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 "Primary and secondary products," sec. 17a, p. 9.)

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 and tractor engines, horse-drawn vehicles, and some of the items in the "barn and barnyard equipment" and "miscellaneous" groups (Tables 12 and 13, p. 1049).

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. 1039.)

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, and those only, which were engaged primarily in the manufacture of products falling into the following classes: (1) Plows and listers; (2) harrows, rollers, pulverizers, and stock 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 3–9, pp. 1044–1047, and the production of agricultural implements of class 8, as reported by establishments in all industries, together with that of numerous other items of farm equipment not treated as products of the agricultural-implements industry is shown in Tables 10–13, pp. 1048–1050.

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 7 and the last items in Table 1 of the farm equipment report (p. 1040), 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: 1919 TO 1927

[Data for establishments with products under $5,000 in value included for 1919 but not for subsequent years. See sec. 10, p. 6]

YEAR OR PERIOD	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, supplies, fuel, and power	Value of products	Value added by manufacture [1]	Horsepower
1927	277	33,346	$46,415,459	$85,666,186	$202,732,126	$117,065,940	117,966
1925	303	28,696	37,387,620	73,850,060	169,467,966	95,617,906	115,325
1923	312	30,962	40,510,534	63,491,886	151,286,248	87,794,362	121,975
1921	353	30,359	39,835,414	87,267,274	163,816,679	76,549,405	(2)
1919	521	54,368	66,704,434	144,571,943	304,961,265	160,389,322	128,249
	PER CENT OF INCREASE OR DECREASE (—)						
1925–1927	—8.6	16.2	24.1	16.0	19.6	22.4	2.3
1923–1925	—2.9	—7.3	—7.7	16.3	12.0	8.9	—5.5
1923–1927	—11.2	7.7	14.6	34.9	34.0	—33.3	—3.3
1919–1927	—46.8	—38.7	—30.4	—40.7	—33.5	—27.0	—8.0

[1] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)
[2] Not called for on schedule.

TABLE 2.—PRIME MOVERS, MOTORS, AND GENERATORS, BY TYPE, NUMBER, AND RATED CAPACITY, FOR THE UNITED STATES: 1927, 1925, AND 1923

TYPE	1927		1925		1923	
	Number	Capacity	Number	Capacity	Number	Capacity
		Horse-power		*Horse-power*		*Horse-power*
Prime movers, total	5,642	117,966	5,146	115,325	4,846	121,975
Steam engines	158	34,349	191	40,188	251	62,931
Steam turbines	40	18,213	31	17,441		
Internal-combustion engines	38	1,297	46	1,014	47	1,188
Water wheels and turbines	33	3,623	38	3,828	37	3,882
Electric motors driven by purchased current	5,373	60,484	4,840	52,854	4,511	53,974
Electric motors, total	8,292	99,966	7,583	96,242	6,998	99,339
Driven by purchased current	5,373	60,484	4,840	52,854	4,511	53,974
Driven by current generated in establishment reporting	2,919	39,482	2,743	43,388	2,487	45,365
		Kilowatts		*Kilowatts*		*Kilowatts*
Electric generators	81	27,698	110	28,027	(1)	(1)

[1] Not called for on schedule.

TABLE 3.—GENERAL STATISTICS, BY STATES: 1927

[This table presents statistics for all States for which separate figures can be given without disclosing operations of individual establishments. Kentucky, Missouri, and Texas, however, reported larger values of products than some of the States shown separately]

STATE	Number of establishments	PERSONS ENGAGED IN THE INDUSTRY				Horse-power
		Total	Proprietors and firm members	Salaried officers and employees	Wage earners (average for the year)	
United States	277	38,661	91	5,224	33,346	117,966
California	16	1,250	6	177	1,067	3,323
Georgia	7	527	1	50	476	1,630
Illinois	46	20,087	12	2,264	17,811	67,190
Indiana	16	4,138	2	556	3,580	9,347
Iowa	22	939	11	285	643	2,368
Kansas	10	147	4	29	114	326
Maine	4	123		16	107	468
Michigan	11	709		125	584	2,132
Minnesota	15	442	4	88	350	1,071
Nebraska	4	104	3	23	78	203
New York	21	2,674	6	326	2,342	8,446
North Carolina	12	201	7	31	163	478
Ohio	24	2,086	5	310	1,771	6,524
Pennsylvania	10	1,033		228	805	3,748
Tennessee	5	332	1	45	286	1,596
Virginia	8	169	2	33	134	457
Washington	4	31	3	7	21	73
Wisconsin	17	2,526	4	485	2,037	4,372
Other States [1]	25	1,143	20	146	977	4,214

[1] Colorado, 2 establishments; Connecticut, 2; Florida, 2; Kentucky, 5; Massachusetts, 1; Missouri, 4; New Hampshire, 1; New Jersey, 3; South Carolina, 1; Texas, 1; and Vermont, 3.

TABLE 3.—GENERAL STATISTICS, BY STATES: 1927—Continued

STATE	Salaries	Wages	Cost of materials, supplies, fuel, and power		Value of products	Value added by manufacture [2]
			Materials and supplies	Fuel and power		
United States	$11,217,674	$46,415,459	$82,083,468	$3,582,718	$202,732,126	$117,065,940
California	660,827	1,577,326	2,985,982	61,856	7,468,311	4,420,473
Georgia	98,398	301,648	677,055	29,924	1,387,833	680,854
Illinois	4,532,483	26,337,328	46,021,177	2,187,811	102,206,815	53,997,827
Indiana	1,275,313	4,651,035	6,460,232	335,356	20,480,688	13,685,100
Iowa	438,294	803,721	2,133,138	63,442	5,282,735	3,086,155
Kansas	72,862	111,470	293,727	10,970	646,423	341,726
Maine	29,212	123,980	139,035	10,591	426,763	277,137
Michigan	288,294	843,644	1,913,145	46,286	5,562,595	3,603,164
Minnesota	222,038	399,791	717,565	31,881	2,069,451	1,320,005
Nebraska	43,475	94,236	237,326	11,508	711,923	463,089
New York	704,853	3,240,842	4,405,639	342,734	11,045,814	6,297,441
North Carolina	62,529	164,538	269,190	10,921	714,574	434,463
Ohio	577,726	2,176,426	4,448,180	157,281	10,419,678	5,814,217
Pennsylvania	528,786	984,206	1,505,475	49,485	3,754,279	2,199,319
Tennessee	111,530	287,831	517,185	31,710	1,012,771	463,876
Virginia	90,103	131,083	229,032	9,316	536,975	298,627
Washington	22,215	28,097	141,226	1,983	245,591	102,382
Wisconsin	1,186,325	3,014,579	6,354,749	128,638	23,483,944	17,000,557
Other States [1]	272,411	1,143,078	2,634,410	61,025	5,274,963	2,579,528

[1] Colorado, 2 establishments; Connecticut, 2; Florida, 2; Kentucky, 5; Massachusetts, 1; Missouri, 4; New Hampshire, 1; New Jersey, 3; South Carolina, 1; Texas, 1; and Vermont, 3.

[2] Value of products less cost of materials, supplies, fuel, and power. (See secs. 18 and 21, pp. 9 and 10.)

FARM EQUIPMENT—MANUFACTURE AND SALE

This special report is the eighth 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 compiled and issued by the Bureau of the Census.

The preliminary report for 1927 was released to the press under date of June 16, 1928. Some minor changes have since been made in the figures as a result of the final analysis of the returns. The report covers the production and sales, both domestic 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 products listed in this report as farm equipment, such as horse-drawn vehicles, engines, windmills, water pumps, domestic water systems, etc., are not used exclusively by agriculturists, but the proportion sold to farmers is large enough to justify including them among the products covered by this report. No data on the manufacture of automobiles and motor trucks were collected in connection with the farm-equipment census, because the proportion of the production sold to farmers is not large enough to warrant their being classified as farm equipment.

Decrease in production.—The total value of farm equipment manufactured in 1927 shows a decrease of about one-tenth of 1 per cent as compared with that for 1926, but an increase of 17.5 per cent over the value of the 1925 production. Decreases are shown for 7 of the 11 groups, the exceptions being "Harvesting machinery," with increases of 24.6 per cent over 1926 and 101.9 per cent over 1925; "Haying machinery," with an increase of 10.3 per cent over 1926 but a decrease of one-half of 1 per cent from 1925; "Tractors," with increases of 9.3 per cent over 1926 and 31.8 per cent over 1925; and "Barn and barnyard equipment," with increases of 5.7 per cent over 1926 and 2.4 per cent over 1925.

Sales statistics.—The total value of domestic and foreign sales 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 1927 the total value of sales (domestic and foreign) exceeded that of production by approximately six-tenths of 1 per cent. In 1926 the total production value exceeded the sales value (domestic and foreign) by 4 per cent. In 1925, however, the total sales (domestic and foreign) exceeded the production by 3.5 per cent. The total export sales for 1927 show a decrease of 8.9 per cent compared with 1926, but an increase of 10.1 per cent over the total for 1925. Ten of the eleven groups show decreases in export sales for 1927 compared with 1926, the exception being the tractor group, which shows increases of 4.2 per cent over 1926 and 20.2 per cent over 1925. While these value figures are in a general way indicative of the trends in the industry, a better indication of the increases and decreases in production is afforded by the numbers presented in Table 2.

TABLE 1.—FARM EQUIPMENT MANUFACTURED AND SOLD—VALUE, BY CLASSES: 1927, 1926, AND 1925

[Number of estalishments reporting: 1927, 836; 1926, 839; 1925, 1,011]

CLASS	Year	Manufactured	SOLD BY MANUFACTURERS— In United States	SOLD BY MANUFACTURERS— For export
Total	1927	$460, 881, 111	$391, 868, 822	$71, 946, 128
	1926	461, 399, 528	364, 751, 042	78, 992, 525
	1925	391, 812, 436	340, 271, 234	65, 323, 750
Plows and listers (Table 3)	1927	29, 477, 372	22, 675, 891	6, 358, 371
	1926	33, 148, 358	23, 736, 742	9, 069, 908
	1925	23, 936, 803	20, 002, 022	7, 308, 560
Harrows, rollers, pulverizers, and stalk cutters (Table 4).	1927	13, 867, 839	12, 327, 240	1, 444, 118
	1926	15, 552, 934	13, 546, 887	1, 563, 048
	1925	10, 179, 624	10, 174, 078	1, 335, 797
Planting and fertilizing machinery (Table 5)	1927	24, 560, 375	22, 882, 361	1, 477, 259
	1926	26, 590, 991	24, 489, 874	2, 602, 791
	1925	20, 889, 786	19, 121, 584	2, 611, 020
Cultivators and weeders (Table 6)	1927	14, 296, 272	13, 085, 460	589, 410
	1926	20, 311, 165	17, 041, 640	1, 060, 118
	1925	17, 670, 894	17, 233, 894	1, 098, 445
Harvesting machinery (Table 7)	1927	57, 319, 248	38, 823, 209	13, 864, 359
	1926	46, 006, 889	29, 161, 034	14, 744, 252
	1925	28, 386, 628	23, 467, 963	9, 200, 815
Haying machinery (Table 8)	1927	15, 386, 759	14, 849, 828	1, 427, 438
	1926	13, 950, 440	12, 857, 788	1, 891, 352
	1925	15, 457, 022	12, 246, 967	3, 319, 667
Machines for preparing crops for market or for use (Table 9).	1927	32, 328, 555	28, 947, 937	5, 311, 005
	1926	34, 126, 745	25, 445, 596	5, 802, 558
	1925	28, 488, 167	27, 616, 584	4, 192, 084
Tractors (Table 10)	1927	159, 530, 521	131, 667, 221	33, 142, 788
	1926	145, 912, 489	105, 001, 649	31, 821, 849
	1925	121, 050, 374	92, 506, 790	27, 577, 508
Horse-drawn vehicles (Table 11)	1927	[1] 8, 883, 803	8, 961, 039	[1] 344, 607
	1926	[1] 13, 657, 953	11, 965, 108	[1] 1, 284, 013
	1925	17, 487, 982	17, 457, 040	245, 718
Barn and barnyard equipment (Table 12)	1927	9, 188, 333	9, 157, 499	70, 664
	1926	8, 692, 174	8, 562, 822	84, 685
	1925	8, 969, 737	8, 889, 299	122, 293
Miscellaneous (Table 13)	1927	96, 042, 034	88, 491, 137	7, 916, 689
	1926	103, 449, 390	92, 941, 902	9, 007, 911
	1925	99, 296, 019	91, 555, 133	8, 311, 855

[1] Includes values of attachments for converting wheeled horse-drawn vehicles into tracklaying vehicles, for use principally on sugar-cane plantations.

TABLE 2.—FARM EQUIPMENT MANUFACTURED—NUMBER AND VALUE OF MACHINES AND IMPLEMENTS, BY KINDS: 1927, 1926, AND 1925

[This table covers only those items of farm equipment in regard to which comparable figures can be shown for either 1926 or 1925. Production and sales statistics for 1927 for all items are given in Tables 3–13]

KIND	NUMBER			VALUE		
	1927	1926	1925	1927	1926	1925
Plows and listers:						
Moldboard plows—						
Horse—						
Walking, 1-horse	202,349	227,155	227,218	$1,209,611	$1,369,964	$1,281,810
Walking, 2-horse and larger	163,638	211,940	182,306	2,245,775	2,797,640	2,321,960
Sulky—						
1-bottom	24,246	25,461	17,331	1,290,341	1,456,007	964,061
2-bottom	30,795	52,069	28,344	2,991,985	5,090,034	2,942,893
3-bottom and larger	3,214	3,696	1,118	372,368	482,607	135,343
Tractor—						
1-bottom	11,541	5,158	4,510	644,520	409,718	288,855
2-bottom	53,365	72,304	48,966	3,479,990	5,030,998	3,163,959
3-bottom	14,419	11,956	3,749	1,482,714	1,307,105	312,858
4-bottom and larger	2,322	1,673	907	365,773	280,197	102,794
Two-way—						
Walking	11,036	12,727	24,096	127,513	141,214	325,989
Sulky	8,521	6,050	2,848	600,884	446,502	209,592
Disk plows—						
Horse—						
Single-disk	1,405	2,304	2,001	73,180	130,628	99,875
2-disk	2,977	6,100	5,714	233,667	489,508	435,115
3-disk and larger	1,247	2,046	1,484	129,886	217,968	150,881
Tractor—						
2-disk	4,993	8,463	7,621	414,560	663,633	602,611
3-disk	1,395	1,680	1,750	144,955	180,998	206,513
4-disk	964	1,000	528	115,749	133,145	66,931
5-disk and larger	8,444	2,597	1,320	1,283,858	403,763	207,111
Listers (middle busters)—						
Horse—						
1-bottom	23,779	39,878	30,536	509,976	903,050	747,807
2-bottom	2,778	7,722	6,355	253,428	692,243	591,130
Tractor—						
2-bottom	5,283	6,270	1,243	344,739	419,798	118,034
3-bottom	3,850	2,217	692	430,213	217,380	67,415
Plowstocks	123,904	143,437	(1)	212,918	248,243	329,981
Harrows, rollers, pulverizers, and stalk cutters:						
Harrows—						
1-horse (spike-tooth and spring-tooth)	19,007	25,323	20,545	93,066	121,548	102,194
Spike-tooth harrow sections	242,459	315,844	176,951	1,724,415	2,218,778	1,431,405
Spring-tooth harrow sections	117,434	117,757	109,404	1,241,951	1,316,402	999,512
Disk harrows, horse	76,864	96,525	66,628	3,303,904	4,258,472	2,815,246
Disk harrows, tractor	45,816	45,439	29,086	3,747,447	3,803,822	2,319,413
Smooth land rollers	1,490	1,574	1,776	40,619	50,090	57,789
Soil pulverizers and packers	22,813	19,339	6,757	1,212,834	957,788	351,884
Stalk cutters	10,400	11,722	6,934	377,306	447,929	308,840
Planting and fertilizing machinery:						
Corn planters—						
Hand	17,519	18,674	29,486	14,899	17,091	34,783
Horse—						
1-row	13,494	18,970	18,657	235,675	354,025	324,575
2-row	42,533	53,272	41,173	2,365,631	3,028,977	2,392,995
Cotton planters, 1-row	16,566	23,697	32,139	118,201	173,671	310,548
Combination corn and cotton planters—						
1-row	[2] 39,636	65,235	52,140	[2] 803,601	1,597,822	1,330,668
2-row	4,893	9,013	10,787	294,409	607,352	719,002
Combined listers and drills	[2] 9,231	22,908	20,203	[2] 674,443	1,670,893	1,389,984
Potato planters, horse	6,357	6,340	3,539	440,061	404,373	237,615
Grain drills—						
Horse	52,506	[2] 45,041	31,777	5,775,929	[2] 5,021,576	3,460,952
Tractor	6,123	2,072	805	862,403	253,326	106,155
Transplanters, horse	4,503	3,894	2,604	305,602	259,951	172,557
Broadcast seeders—						
Wheel, horse	5,434	6,330	4,434	337,393	305,930	236,209
End-gate	17,202	16,211	10,427	253,549	243,791	157,125
Hand (wheelbarrow and other)	55,876	54,898	63,691	87,706	104,507	90,315
Fertilizer distributors, horse	53,427	84,407	68,058	432,672	649,483	584,572
Lime spreaders	11,884	8,931	6,589	410,366	318,578	267,212
Manure spreaders	67,722	[2] 67,322	53,839	8,298,058	[2] 8,244,562	6,328,818

[1] No data.

[2] Revised.

TABLE 2.—FARM EQUIPMENT MANUFACTURED—NUMBER AND VALUE OF MACHINES AND IMPLEMENTS, BY KINDS: 1927, 1926, AND 1925—Continued

KIND	NUMBER			VALUE		
	1927	1926	1925	1927	1926	1925
Planting and fertilizing machinery—Con.						
Cultivators and weeders—						
Cultivators—						
Horse-drawn, except disk—						
1-horse	132, 244	136, 154	155, 539	$697, 794	$755, 487	$822, 066
1-row, walking	34, 546	68, 121	51, 975	1, 091, 486	2, 107, 070	1, 555, 041
1-row, riding	86, 691	147, 224	122, 292	3, 313, 500	6, 031, 016	5, 144, 689
2-row	41, 037	64, 723	50, 471	3, 504, 013	5, 238, 580	4, 107, 374
Tractor-drawn	10, 211	10, 397	1, 698	1, 045, 793	694, 182	229, 504
Disk cultivators	7, 167	7, 776	5, 680	313, 302	366, 656	262, 319
Beet cultivators	4, 634	4, 595	5, 086	213, 493	217, 940	247, 997
Hand cultivators (wheeled hoes)	147, 065	143, 832	125, 048	446, 860	505, 813	397, 191
Weeders	15, 518	9, 150	12, 273	309, 461	260, 454	192, 948
Harvesting machinery:						
Grain binders	71, 091	79, 155	42, 405	10, 830, 699	12, 133, 662	6, 649, 786
Grain headers	4, 621	7, 200	2, 857	1, 102, 459	1, 676, 725	664, 582
Combined (harvester-thresher)	18, 307	11, 760	5, 131	26, 885, 260	15, 862, 716	7, 284, 429
Corn binders	21, 423	26, 449	20, 829	2, 932, 706	3, 641, 146	2, 933, 319
Potato-digging machines, elevator type	12, 139	7, 036	4, 594	939, 715	532, 385	352, 219
Potato diggers, plow type	3, 641	3, 098	2, 027	63, 621	53, 868	46, 765
Pea and bean harvesters	4, 110	5, 642	5, 712	207, 941	234, 075	232, 303
Beet lifters	1, 871	3, 912	1, 516	104, 991	208, 871	67, 518
Haying machinery:						
Mowers	110, 644	112, 259	112, 299	6, 007, 007	5, 987, 461	6, 041, 832
Rakes, sulky (dump)	51, 058	42, 209	61, 050	1, 494, 089	1, 292, 537	1, 805, 246
Rakes, side-delivery	23, 168	17, 058	15, 474	1, 655, 784	1, 270, 144	1, 143, 538
Rakes, sweep	12, 263	13, 270	11, 092	440, 408	464, 793	415, 474
Loaders	25, 102	19, 793	15, 746	2, 018, 355	1, 630, 441	1, 243, 034
Stackers	3, 342	4, 004	3, 716	284, 925	314, 671	360, 726
Machines for preparing crops for market or for use:						
Grain threshers, wood—						
Width of rear, 46 inches and under	983	927	919	680, 667	649, 219	561, 958
Width of rear, 47 inches and over	97	157	262	120, 667	208, 734	355, 991
Grain threshers, steel—						
Width of rear, 46 inches and under	12, 888	13, 327	10, 486	11, 421, 246	11, 914, 211	9, 613, 190
Width of rear, 47 inches and over	1, 603	2, 705	1, 898	2, 317, 671	4, 007, 483	2, 866, 329
Pea and bean threshers	250	503	752	159, 803	485, 239	461, 430
Ensilage cutters (silo fillers)	9, 247	8, 857	8, 771	1, 926, 210	2, 054, 244	1, 973, 524
Fodder cutters	6, 033	5, 945	5, 841	161, 464	142, 762	168, 794
Corn shellers, hand	43, 250	40, 722	39, 352	303, 899	278, 910	301, 307
Corn shellers, power—						
Spring (2, 4, 6, and 8 hole)	2, 658	2, 384	2, 691	317, 585	204, 994	345, 312
Cylinder	1, 488	1, 607	1, 343	546, 705	735, 175	540, 533
Corn huskers and shredders	2, 448	3, 531	2, 225	1, 150, 212	1, 775, 256	1, 219, 023
Hay presses—						
Horse	1, 278	1, 608	1, 448	212, 890	272, 648	294, 544
Engine	2, 047	1, 849	1, 744	858, 621	788, 574	813, 637
Feed grinders and crushers—						
Hand	64, 012	67, 531	64, 768	198, 370	185, 648	191, 677
Power	40, 743	41, 221	33, 283	1, 850, 331	1, 729, 143	1, 373, 444
Grain cleaners and graders (for small grain only)	15, 237	18, 890	17, 329	990, 529	1, 177, 178	944, 323
Cider mills	15, 044	11, 433	15, 943	205, 495	295, 335	273, 464
Tractors:						
Wheel type	184, 594	170, 302	158, 037	101, 649, 329	100, 243, 361	82, 892, 374
Tracklaying type, all sizes	10, 319	7, 772	6, 060	27, 719, 695	22, 024, 220	17, 441, 015
Motor cultivators (including garden tractors)	5, 591	3, 921	3, 456	814, 096	568, 971	515, 302
Horse-drawn vehicles:						
Farm wagons—						
1-horse	8, 754	11, 387	15, 115	477, 723	604, 739	821, 560
2-horse	36, 160	63, 306	93, 362	3, 614, 379	6, 282, 242	9, 403, 263
Farm trucks—						
With wood wheels	18, 154	26, 510	34, 955	862, 947	1, 331, 098	1, 837, 064
With metal wheels	30, 124	30, 781	28, 222	1, 063, 484	1, 083, 621	1, 039, 337
Buggies	7, 019	8, 854	20, 486	612, 311	756, 047	1, 871, 727
Barn and barnyard equipment:						
Overhead feed and litter carriers (box and gearing only)	9, 769	8, 554	10, 068	339, 547	301, 897	398, 991
Hay carriers	52, 943	46, 217	46, 479	473, 889	438, 817	411, 379
Track for carriers, feet	2, 779, 886	2, 503, 463	2, 461, 108	509, 108	461, 307	444, 636
Hayforks (harpoon, grapple, etc.)	50, 778	45, 595	58, 393	134, 948	119, 268	135, 313
Hay slings	56, 477	61, 405	49, 112	158, 897	167, 396	116, 567
Stanchions	433, 787	369, 348	388, 414	1, 276, 521	1, 200, 649	1, 237, 656

TABLE 10.—TRACTORS MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$159, 530, 521		$131, 667, 221		$33, 142, 788
Tractors:							
Wheeled type, total (not including motor cultivators and garden tractors)	26	184, 594	101, 649, 329	147, 123	81, 346, 986	41, 998	24, 668, 943
Belt horsepower—							
Under 25	12	136, 349	55, 040, 471	109, 234	44, 851, 248	27, 356	10, 383, 043
25-29	8	17, 275	16, 054, 193	13, 786	13, 084, 254	4, 058	3, 739, 279
30-39	15	27, 674	25, 146, 893	21, 397	19, 014, 825	9, 953	9, 674, 764
40-49	12	2, 840	4, 391, 956	2, 325	3, 554, 422	(1)	(1)
50 and over	7	456	1, 015, 816	381	842, 237	(1)	(1)
Tracklaying type, all sizes	6	10, 319	27, 719, 695	8, 720	25, 387, 463	(1)	(1)
Motor cultivators (including garden tractors)	17	5, 591	814, 096	4, 794	701, 736	134	19, 633
Attachments and parts [2]	34		29, 347, 401		24, 231, 036		5, 002, 882
Wheeled type, total		184, 594	101, 649, 329	147, 123	81, 346, 986	41, 998	24, 668, 943
Plow pull—							
2-plow		133, 252	52, 687, 415	107, 072	43, 307, 454	26, 425	9, 577, 978
3-plow		38, 452	31, 916, 034	30, 826	25, 665, 088	11, 141	9, 210, 287
4-plow		4, 529	6, 265, 516	3, 738	5, 368, 706	1, 624	2, 329, 657
1, 2-3, 3-4, 4-5, and 4-6 plow [3]		7, 859	9, 377, 396	5, 046	5, 772, 662	2, 690	3, 253, 015
5, 5-8, 6, 6-8, and 8 plow [3]		502	1, 402, 968	441	1, 233, 076	118	298, 006

[1] Can not be shown without disclosing production of individual establishments.
[2] Includes value of tracklaying attachments used to convert wheeled type into tracklaying type.
[3] Combined in order to avoid disclosing operations of individual establishments.

TABLE 11.—HORSE-DRAWN VEHICLES MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$8, 883, 803		$8, 961, 039		$344, 607
Farm wagons:							
1-horse	33	8, 754	477, 723	8, 412	466, 603		
2-horse	46	36, 160	3, 614, 379	40, 424	4, 016, 191	101	9, 456
Size not reported	3	5, 896	335, 207	5, 896	335, 207		
Farm trucks:							
With wood wheels	24	18, 154	862, 947	17, 358	830, 494	(1)	(1)
With metal wheels	30	30, 124	1, 063, 484	28, 957	1, 034, 027	(1)	(1)
Light spring vehicles, other than buggies	9	416	38, 635	418	38, 730		
Buggies	17	7, 019	612, 311	7, 007	611, 238	(1)	(1)
Carts (2-wheeled)	15	2, 073	69, 317	1, 884	60, 200	(1)	(1)
Other horse-drawn vehicles [2]	16	10, 734	250, 804	10, 913	261, 776		
Attachments and parts	48		[3] 1, 558, 996		1, 306, 573		[3] 234, 203

[1] Can not be shown without disclosing operations of individual establishments.
[2] Bobsleds, sleighs, dump wagons, tobacco trucks, etc.
[3] Includes value of tracklaying attachments for wagons.

TABLE 3.—PLOWS AND LISTERS MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$29,477,372		$22,675,891		$6,358,371
Plows and listers:							
Moldboard plows—							
Horse—							
Walking, 1-horse	45	202,349	1,209,611	120,227	708,229	74,236	460,456
Walking, 2-horse and larger	51	163,638	2,245,775	112,613	1,551,794	54,355	740,602
Sulky—							
1-bottom	23	24,246	1,290,341	17,755	925,669	2,939	196,156
2-bottom	19	30,795	2,991,985	17,158	1,641,624	13,682	1,347,982
3-bottom and larger	7	3,214	372,368	1,585	196,473	(1)	(1)
Tractor—							
1-bottom	10	11,541	644,520	8,650	417,884	(1)	(1)
2-bottom	16	53,365	3,479,990	45,794	2,862,154	12,243	905,591
3-bottom	12	14,419	1,482,714	14,292	1,447,732	1,809	203,296
4-bottom and larger	11	2,322	365,773	1,971	316,895	537	97,508
Two-way—							
Walking	5	11,036	127,513	5,912	67,449	7,115	81,349
Sulky	7	8,521	600,884	8,188	592,663	(1)	(1)
Disk plows—							
Horse—							
Single-disk	12	1,405	73,180	769	42,760	499	26,789
2-disk	12	2,977	233,667	2,053	153,182	695	52,352
3-disk and larger	10	1,247	129,886	528	54,001	546	56,863
Tractor—							
2-disk	10	4,993	414,560	3,769	296,791	1,768	163,179
3-disk	10	1,395	144,955	976	96,967	457	55,412
4-disk	10	964	115,749	641	76,040	575	70,718
5-disk and larger	12	8,444	1,283,858	6,438	914,492	806	115,841
Listers (middle busters)—							
Horse—							
1-bottom	22	23,779	509,976	21,688	508,045	(1)	(1)
2-bottom	7	2,778	253,428	3,127	287,593	(1)	(1)
Tractor—							
2-bottom	8	5,283	344,739	4,675	318,630	(1)	(1)
3-bottom	8	3,850	430,213	3,290	354,291	5	518
Ridge busters	9	3,359	178,477	4,007	214,377	(1)	(1)
Subsoilers	11	630	51,611	428	33,091	281	29,440
Other plows and listers [2]	16	9,999	1,456,212	8,012	1,098,034	(1)	(1)
Plowstocks	11	123,904	212,918	121,377	207,908	(1)	(1)
Steel plowshapes (pounds)	8	13,989,492	834,788	13,929,597	829,002	(1)	(1)
Attachments and parts	70		7,997,681		6,462,121		1,417,716

[1] Can not be shown without disclosing operations of individual establishments.
[2] Contractors' plows not specified above, disk fillers, furrow openers, row markers, etc.

TABLE 4.—HARROWS, ROLLERS, PULVERIZERS, AND STALK CUTTERS MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$13,867,839		$12,327,240		$1,444,118
Harrows:							
1-horse (spike-tooth and spring-tooth)	11	19,007	93,066	17,762	87,096	(1)	(1)
Spike-tooth harrow sections	43	242,459	1,724,415	236,121	1,680,194	9,941	80,148
Spring-tooth harrow sections	21	117,434	1,241,951	118,440	1,247,560	5,426	93,318
Disk harrows, horse	33	76,864	3,303,904	67,152	2,830,470	10,152	558,162
Disk harrows, tractor	27	45,816	3,747,447	39,759	3,200,275	5,160	441,997
Smooth land rollers	7	1,490	40,619	1,490	40,619		
Soil pulverizers and packers	20	22,813	1,212,834	19,189	999,424	1,279	69,802
Stalk cutters	25	10,400	377,306	8,896	310,069	14	502
Other harrows, rollers, etc.[2]	20	5,765	112,638	5,462	104,326	(1)	(1)
Attachments and parts	57		2,013,659		1,827,207		194,426

[1] Can not be shown without disclosing operations of individual establishments.
[2] Combination harrow-rollers, rotary and side harrows, stubble shavers, etc.

TABLE 5.—PLANTING AND FERTILIZING MACHINERY MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$24,560,375		$22,882,361		$1,477,239
Corn planters:							
Hand	4	17,519	14,899	15,904	13,453	(1)	(1)
Horse—							
1-row	18	13,394	235,675	12,439	217,548	2,124	39,626
2-row	22	42,533	2,365,631	40,944	2,329,347	2,092	121,459
Cotton planters, 1-row	18	16,566	118,201	15,436	111,634	(1)	(1)
Combination corn and cotton planters:							
1-row	[3] 17	[3] 39,636	[3] 803,601	[3] 31,909	[3] 655,156	[3] 1,289	[3] 29,835
2-row	[3] 10	4,893	294,409	[3] 2,210	[3] 138,345	[3] 384	[3] 21,958
Potato planters, horse	13	6,357	440,061	6,078	425,875	624	47,681
Transplanters, horse	5	4,503	305,602	4,301	292,369	(1)	(1)
Combined listers and drills:							
1-row	[3] 6	[3] 4,886	[3] 274,539	[3] 3,751	[3] 210,748	(1)	(1)
2-row	8	4,345	399,904	[3] 3,946	[3] 366,283	(1)	(1)
Beet drills, horse	4	1,350	107,397	1,339	104,997	(1)	(1)
Grain drills, horse	20	52,506	5,775,929	47,876	5,239,568	5,129	660,360
Grain drills, tractor	10	6,123	862,403	5,929	844,740	(1)	(1)
Broadcast seeders:							
Wheel, horse	10	5,434	337,393	3,328	225,480	1,902	98,461
End-gate	4	17,202	253,549	15,826	235,064	(1)	(1)
Hand (wheelbarrow and other)	5	55,876	87,706	43,035	68,354	7,963	15,256
Fertilizer distributors, horse	29	53,427	432,672	50,671	403,059	644	8,867
Lime spreaders	16	11,884	410,366	9,924	341,930	322	11,319
Manure spreaders	20	67,722	8,298,058	66,225	8,177,956	888	95,375
Other planting and fertilizing machinery [2]	16	20,770	304,757	13,802	181,674	5,834	131,519
Attachments and parts	61		2,437,623		2,298,781		157,064

[1] Can not be shown without disclosing operations of individual establishments.
[2] Bean, peanut, and 3 and 4 row corn planters, garden or hand drills, 3-row listers and drills, combination potato planters and diggers, etc.
[3] Revised.

TABLE 6.—CULTIVATORS AND WEEDERS MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$14,296,272		$13,085,460		$589,470
Cultivators:							
Horse-drawn, except disk—							
1-horse	30	132,244	697,794	113,010	573,067	20,790	119,372
1-row, walking	27	34,546	1,091,486	28,771	906,147	666	21,254
1-row, riding	36	86,691	3,313,500	86,716	3,321,400	1,225	59,983
2-row	32	41,037	3,504,013	38,988	3,254,087	56	4,368
Tractor-drawn	13	10,211	1,045,793	7,202	725,538	1,546	129,943
Disk cultivators	17	7,167	313,302	5,675	255,058	356	17,465
Beet cultivators	8	4,634	213,493	3,660	173,371	(1)	(1)
Hand cultivators (wheeled hoes)	21	147,065	446,860	142,890	426,112	(1)	(1)
Weeders	20	15,518	309,461	14,246	244,846	(1)	(1)
Other cultivators and weeders [2]	30	20,659	1,035,188	20,048	994,626	248	14,133
Attachments and parts	55		2,325,382		2,211,208		107,434

[1] Can not be shown without disclosing operations of individual establishments.
[2] Cotton scrapers; alfalfa, fallow, onion, spring-tooth, stiff-tooth, and universal cultivators; lister cultivators; combination seeders and cultivators; quack-grass diggers; grape, potato, and rotary hoes; shovel plows, etc.

TABLE 7.—HARVESTING MACHINERY MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$57,319,248		$38,823,209		$13,864,339
Grain binders	6	71,091	10,830,699	53,219	7,897,868	19,804	3,158,811
Grain headers	3	4,621	1,102,459	1,035	217,345	3,031	744,056
Combined (harvester-thresher):							
Width of cut, 10 feet and less	6	5,481	4,975,446	4,805	4,451,859	(1)	(1)
Width of cut, over 10 feet	9	12,826	21,909,814	6,416	11,816,294	4,072	5,391,727
Corn binders (row binders)	5	21,423	2,932,706	18,240	2,532,927	(1)	(1)
Corn harvesters (not binders)	5	1,832	44,100	1,488	37,823		
Self-rake reapers	4	3,663	281,607	619	46,584	2,774	211,797
Corn pickers and huskers (field)	6	6,193	1,591,500	7,145	1,817,173	(1)	(1)
Potato-digging machines (elevator type)	13	12,139	939,715	10,890	836,951	(1)	(1)
Potato diggers (plow type)	13	3,641	63,621	3,361	59,517	(1)	(1)
Pea and bean harvesters	17	4,110	207,941	3,790	204,795	(1)	(1)
Beet lifters	6	1,871	104,991	2,212	124,036	(1)	(1)
Other harvesting machinery [2]	10	2,314	400,163	1,782	286,427	(1)	(1)
Attachments and parts	50		11,934,486		8,493,610		3,616,582

[1] Can not be shown without disclosing operations of individual establishments.
[2] Ricebinders, bean cutters, blue-grass-seed harvesters, cotton strippers and pickers, grain shockers, combination potato pickers and baggers, etc.

TABLE 8.—HAYING MACHINERY MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$15,386,759		$14,849,828		$1,427,438
Mowers	10	110,644	6,007,007	105,220	5,600,005	14,811	876,247
Rakes:							
Sulky (dump)	12	51,058	1,494,089	43,509	1,272,195	5,009	156,944
Side-delivery	10	23,168	1,655,784	22,161	1,594,957	(1)	(1)
Sweep	11	12,263	440,408	13,779	488,470	(1)	(1)
Tedders	8	1,319	60,748	1,271	59,368	(1)	(1)
Loaders	12	25,102	2,018,355	26,332	2,108,053	(1)	(1)
Stackers	10	3,342	284,925	4,395	360,756	(1)	(1)
Windrowers and bunchers	4	2,380	16,689	2,082	15,443	(1)	(1)
Attachments and parts	31		3,408,754		3,350,581		315,100

[1] Can not be shown without disclosing operations of individual establishments.

TABLE 9.—MACHINES FOR PREPARING CROPS FOR MARKET OR FOR USE MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$32,328,555		$28,947,937		$5,311,005
Grain threshers (wood):							
Width of rear, 46 inches and under	17	983	680,667	871	631,329	77	33,100
Width of rear, 47 inches and over	12	97	120,667	170	238,845	(1)	(1)
Grain threshers (steel):							
Width of rear, 46 inches and under	17	12,888	11,421,246	12,088	10,467,964	3,062	2,584,916
Width of rear, 47 inches and over	12	1,603	2,317,671	1,533	2,247,375	338	423,901
Pea and bean threshers	8	250	159,803	247	201,748	(1)	(1)
Peanut threshers (pickers)	5	774	343,893	757	336,506	(1)	(1)
Ensilage cutters (silo cutters)	24	9,247	1,926,210	8,549	1,823,375	(1)	(1)
Fodder cutters	19	6,033	161,464	5,314	132,862	454	16,616
Corn shellers (hand)	20	43,250	303,899	29,532	191,507	12,570	102,848
Corn shellers (power):							
Spring (2, 4, 6, and 8 hole)	15	2,658	317,585	2,274	310,872	(1)	(1)
Cylinder	10	1,488	546,705	1,415	493,708	(1)	(1)
Corn huskers and shredders	11	2,448	1,150,212	1,478	732,025	(1)	(1)
Hay presses:							
Horse	12	1,278	212,890	1,156	182,767	386	72,033
Engine	17	2,047	858,621	1,841	772,202	304	125,026
Feed grinders and crushers:							
Hand	13	64,012	198,370	11,831	54,714	51,719	142,689
Power	37	40,743	1,850,331	37,411	1,781,029	2,707	114,784
Grain cleaners and graders (for small grain only)	14	15,237	990,529	8,736	745,492	6,281	215,096
Cane mills (farm size)	6	3,006	147,035	766	33,514	(1)	(1)
Sirup evaporators and kettles	7	5,888	104,088	5,494	95,784	456	6,892
Sirup-evaporator furnaces	6	658	25,607	552	24,178		
Cider mills	12	15,044	205,495	14,653	198,120	(1)	(1)
Other machines for preparing crops for markets or for use [2]	42	32,258	1,040,232	29,729	964,642	477	79,447
Attachments and parts	83		7,245,335		6,287,379		996,516

[1] Can not be shown without disclosing operations of individual establishments.
[2] Rice threshers, clover hullers, potato sorters and graders, raisin stemmers, fruit presses, cucumber and melon seed threshers and washers, ensilage harvesters and blowers, seed-corn dryers, root cutters, smut treaters, grain and bean graders, hand hay presses, combination mills, etc.

TABLE 10.—TRACTORS MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$159, 530, 521		$131, 667, 221		$33, 142, 788
Tractors:							
Wheeled type, total (not including motor cultivators and garden tractors)	26	184, 594	101, 649, 329	147, 123	81, 346, 986	41, 998	24, 668, 943
Belt horsepower—							
Under 25	12	136, 349	55, 040, 471	109, 234	44, 851, 248	27, 356	10, 383, 043
25-29	8	17, 275	16, 054, 193	13, 786	13, 084, 254	4, 058	3, 739, 279
30-39	15	27, 674	25, 146, 893	21, 397	19, 014, 825	9, 953	9, 674, 764
40-49	12	2, 840	4, 391, 956	2, 325	3, 554, 422	(1)	(1)
50 and over	7	456	1, 015, 816	381	842, 237	(1)	(1)
Tracklaying type, all sizes	6	10, 319	27, 719, 695	8, 720	25, 387, 463	(1)	(1)
Motor cultivators (including garden tractors)	17	5, 591	814, 096	4, 794	701, 736	134	19, 633
Attachments and parts [2]	34		29, 347, 401		24, 231, 036		5, 002, 882
Wheeled type, total		184, 594	101, 649, 329	147, 123	81, 346, 986	41, 998	24, 668, 943
Plow pull—							
2-plow		133, 252	52, 687, 415	107, 072	43, 307, 454	26, 425	9, 577, 978
3-plow		38, 452	31, 916, 034	30, 826	25, 665, 088	11, 141	9, 210, 287
4-plow		4, 529	6, 265, 516	3, 738	5, 368, 706	1, 624	2, 329, 657
1, 2-3, 3-4, 4-5, and 4-6 plow [3]		7, 859	9, 377, 396	5, 046	5, 772, 662	2, 690	3, 253, 015
5, 5-8, 6, 6-8, and 8 plow [3]		502	1, 402, 968	441	1, 233, 076	118	298, 006

[1] Can not be shown without disclosing production of individual establishments.
[2] Includes value of tracklaying attachments used to convert wheeled type into tracklaying type.
[3] Combined in order to avoid disclosing operations of individual establishments.

TABLE 11.—HORSE-DRAWN VEHICLES MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$8, 883, 803		$8, 961, 039		$344, 607
Farm wagons:							
1-horse	33	8, 754	477, 723	8, 412	466, 603		
2-horse	46	36, 160	3, 614, 379	40, 424	4, 016, 191	101	9, 456
Size not reported	3	5, 896	335, 207	5, 896	335, 207		
Farm trucks:							
With wood wheels	24	18, 154	862, 947	17, 358	830, 494	(1)	(1)
With metal wheels	30	30, 124	1, 063, 484	28, 957	1, 034, 027	(1)	(1)
Light spring vehicles, other than buggies	9	416	38, 635	418	38, 730		
Buggies	17	7, 019	612, 311	7, 007	611, 238	(1)	(1)
Carts (2-wheeled)	15	2, 073	69, 317	1, 884	60, 200	(1)	(1)
Other horse-drawn vehicles [2]	16	10, 734	250, 804	10, 913	261, 776		
Attachments and parts	48		[3] 1, 558, 996		1, 306, 573		[3] 234, 203

[1] Can not be shown without disclosing operations of individual establishments.
[2] Bobsleds, sleighs, dump wagons, tobacco trucks, etc.
[3] Includes value of tracklaying attachments for wagons.

TABLE 12.—BARN AND BARNYARD EQUIPMENT MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$9,188,333		$9,157,499		$70,664
Overhead feed and litter carriers (box and gearing only)	20	9,769	339,547	9,657	395,948	(1)	(1)
Hay carriers	14	52,943	473,889	51,757	461,692	(1)	(1)
Track for carriers (feet)	19	2,779,886	509,108	2,638,203	482,713	(1)	(1)
Hayforks (harpoon, grapple, etc.)	11	50,778	134,948	49,961	125,350	(1)	(1)
Hay slings	11	56,477	158,897	59,668	159,749	(1)	(1)
Feed trucks	15	1,324	27,303	1,327	27,396	(1)	(1)
Stanchions	24	433,787	1,276,521	425,593	1,254,014	(1)	(1)
Manger partitions and fittings	19	25,730	64,273	24,828	62,241	(1)	(1)
Stalls and fittings (not including stanchions and manger divisions)	21	231,404	1,093,798	229,279	1,083,651	(1)	(1)
Stock pens (steel)	19		372,283		365,363		(1)
Hog troughs	57	353,168	268,943	345,944	265,734		
Stock tanks	61	110,912	1,290,233	110,503	1,287,104	(1)	(1)
Stock-watering bowls	19	33,273	200,394	33,407	194,561	(1)	(1)
Individual drinking cups	18	160,880	404,354	161,553	406,143	(1)	(1)
Feed cookers	15	7,021	80,614	5,943	74,725		
Stock feeders	17	12,722	274,743	12,907	279,578		
Tank heaters	19	10,650	120,429	10,679	125,508		
Other equipment [2]	33		2,075,528		2,075,489		2,733
Attachments and parts	12		22,528		30,540		

[1] Can not be shown without disclosing operations of individual establishments.
[2] Barn-door track and hangers; barn cupolas; hoists; tanks for dipping, hauling, and storage; hog catchers, hog houses, hog oilers, hog scrapers; barn ventilating and lighting systems; tank towers; and undistributed miscellaneous barn equipment.

TABLE 13.—MISCELLANEOUS FARM EQUIPMENT MANUFACTURED AND SOLD: 1927

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Total			$96,042,034		$88,491,137		$7,916,089
Beekeepers' supplies	16		1,592,968		1,510,249		(1)
Corncribs, portable	14	28,662	540,782	28,399	540,076		
Grain bins, portable	15	5,306	468,323	5,352	471,525		
Dairy machinery:							
Milking-machine units	10	17,132	1,339,474	15,276	1,196,891	1,002	51,575
Cream separators—							
Hand	16	190,543	7,641,648	187,311	7,500,434	9,053	411,430
Power	8	1,453	456,658	1,941	518,631	(1)	(1)
Butter-making equipment	5		417,922		416,655		(1)
Attachments and parts	16		1,114,810		1,128,798		46,442
Elevators, farm:							
Portable	17	5,418	933,324	5,654	1,006,830	(1)	(1)
Stationary	11	1,512	297,222	1,341	292,560	(1)	(1)
Eveners	6	3,062	10,781	3,107	10,826		
Singletrees, doubletrees, and neck yokes	17		1,038,337		1,040,318		1,037
Gates, farm:							
Field	12	143,060	552,878	142,813	543,879	(1)	(1)
Other	4	24,873	64,029	24,914	64,152		
Hoes, eye	4	441,640	180,254	355,240	147,211	(1)	(1)
Hoes, handled	9	1,128,920	585,122	1,182,697	613,893		
Forks and rakes	14	7,773,294	5,932,755	7,010,382	5,427,929	703,644	465,987
Spades and shovels	15	7,471,049	6,169,253	7,188,007	5,959,501	201,738	165,745
Scythes	5	291,902	278,109	282,800	270,189	(1)	(1)
Snaths	4	489,612	389,382	396,168	338,717	80,676	35,665
Engines, internal-combustion, for farm use:							
Less than 5 horsepower	30	113,084	5,782,167	94,943	4,819,112	20,952	1,173,329
5 or more but under 10 horsepower	28	16,103	2,103,811	10,188	1,378,958	5,149	627,504
10 or more but under 15 horsepower	16	1,746	464,643	1,253	359,438	513	119,335
15 or more but under 20 horsepower	9	677	268,134	449	186,829	31	13,242
Attachments and parts [2]	9		935,111		765,610		188,293
Lawn mowers:							
Hand	17	926,631	6,500,280	841,515	5,934,419	80,884	556,137
Power	11	10,471	1,675,928	9,780	1,590,832	391	62,465
Lightning rod (feet)	19	9,874,834	1,056,963	10,087,167	1,078,230	(1)	(1)

See footnotes at end of table.

TABLE 13.—MISCELLANEOUS FARM EQUIPMENT MANUFACTURED AND SOLD: 1927—Continued

KIND	Number of establishments	MANUFACTURED		SOLD BY MANUFACTURERS—			
				In United States		For export	
		Number	Value	Number	Value	Number	Value
Poultry-farm equipment:							
Incubators, standard sizes, reported by number	30	152,689	$2,558,531	146,478	$2,424,369	7,343	$137,513
Incubators, special sizes, or not reported by number [3]	6		5,308,982		4,907,882		96,504
Brooders	35	425,995	4,305,048	364,651	3,639,026	3,869	31,495
Other equipment [4]	40		2,554,540		2,534,253		13,493
Attachments and parts	11		200,046		198,307		1,420
Water systems, pneumatic (domestic):							
Deep-well—							
3 horsepower and smaller	33	11,597	1,282,530	11,088	1,392,007	466	28,504
Over 3 horsepower	9	557	275,642	567	279,350	(1)	(1)
Shallow-well—							
Under 250 gallons per hour	29	66,343	4,184,153	67,913	4,299,889	1,551	82,459
250–499 gallons per hour	21	18,504	1,473,981	18,705	1,484,576	246	27,224
500 gallons per hour and over	13	2,892	335,285	2,877	329,614	(1)	(1)
Attachments and parts	11		358,632		338,092		19,661
Pumps, water:							
Hand—							
Pitcher	26	334,704	504,003	311,350	462,299	(1)	(1)
Other	33	211,718	1,725,600	176,084	1,442,393	35,853	273,219
Power—							
Horizontal type, up to and including 75 gallons per minute, 100 pounds pressure	19	21,404	1,514,139	18,199	1,311,781	(1)	(1)
Windmill pumps	29	101,467	787,662	95,031	717,259	12,255	110,255
Cylinders for sale separately	28	174,098	605,056	157,047	532,235	21,340	102,890
Attachments and parts	22		681,780		679,474		14,943
Pump jacks	37	37,805	348,753	36,620	330,887	3,045	36,467
Pushcarts and hand trucks	16	39,672	278,365	38,462	273,104	(1)	(1)
Silos	23	5,807	2,270,707	5,737	2,254,877	(1)	(1)
Spraying outfits, complete:							
Hand (with tank, barrel, knapsack, etc.)	21	217,310	1,063,327	206,420	1,000,510	11,091	65,478
Power (not including engine) [5]	27	11,707	2,156,217	11,255	2,056,924	406	90,182
Spray pumps (not included above):							
Hand (not including small spray guns)	17	169,379	372,653	148,149	347,312	7,779	12,826
Power	10	2,636	188,993	2,182	154,704	382	28,919
Attachments and parts [2]	8		298,364		290,125		5,300
Trucks, tongue	9	34,787	373,382	28,297	297,263	3,086	32,713
Wheelbarrows:							
Tubular (steel)	9	46,817	192,612	22,054	101,028	(1)	(1)
Wooden	12	112,719	431,849	111,442	426,655	(1)	(1)
Windmills	27	79,213	3,326,668	61,325	2,288,361	22,541	1,214,277
Windmill attachments and parts	12		365,541		267,717		104,291
Windmill towers	25	41,384	1,228,648	29,386	794,715	14,948	535,284
Wood-sawing machines:							
Circular	36	11,829	245,607	12,195	252,420	136	4,417
Drag	9	1,887	299,885	1,873	299,144	(1)	(1)
Miscellaneous items [6]			3,749,159		3,630,218		246,516
Attachments and parts [7]			1,404,626		1,339,675		53,352

[1] Can not be shown without disclosing operations of individual establishments.
[2] Not listed on schedule.
[3] This item comprises incubators of large commercial sizes and those reported by egg capacity or by sections. These incubators are not comparable with those of standard sizes.
[4] Brood coops, feeders, fountains, nests, roosts, bone cutters, sprouters, etc.
[5] The value of some of the sprayers includes the value of the engines, which are built in.
[6] Grain cradles, stump pullers, beet elevators (portable), ditchers and graders, farm sawmills, fence stretchers, hand weeders, implement poles, brush rakes and burners, water sprinklers, well casing, husking pins, knife and tool grinders, steam-traction engines, stone boats, small garden tools, steel wheels, internal-combustion engines over 20 horsepower, power transmitters, concrete mixers (for farm use), seed testers, disk sharpeners, iron fence posts and braces, grain tanks, grass hooks, post-hole augers and diggers, farm ladders, overhead irrigation systems, drag scrapers, shovel handles, mandrel sets, milk cans and coolers, etc.
[7] Includes value of attachments and parts for elevators, lawn mowers, lightning rods, stump pullers, and undistributed agricultural implements.

TABLE 14.—VALUE OF FARM EQUIPMENT MANUFACTURED, FOR PRINCIPAL GROUPS, BY STATES: 1927, 1926, AND 1925

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

KIND AND STATE	1927	1926	1925
Plows, harrows, cultivators, and other tillage implements	$57,641,483	$69,012,457	$51,786,721
Illinois	28,295,128	35,084,795	24,115,265
Indiana	(1)	13,874,373	10,615,258
New York	5,052,895	5,425,885	4,250,194
Ohio	2,688,131	2,454,284	2,423,954
Wisconsin	1,688,550	1,954,939	1,392,419
Tennessee	1,199,629	1,034,001	973,838
Georgia	971,735	1,244,759	1,211,203
Pennsylvania	955,804	1,111,552	1,129,543
California	821,958	735,672	662,586
Nebraska	547,605	554,974	336,577
Virginia	466,711	520,127	589,222
Minnesota	308,270	433,341	277,278
Iowa	238,882	214,202	180,374
Michigan	(1)	219,685	(1)
North Carolina	118,550	(1)	(1)
Other States	14,287,635	4,149,868	3,629,010
Planting and fertilizing machinery	24,560,375	26,590,991	20,889,786
Illinois	8,838,171	11,360,349	8,789,104
Ohio	5,208,098	5,296,017	4,285,870
Indiana	(1)	2,768,267	(1)
Wisconsin	3,451,027	3,168,442	2,318,180
New York	807,991	778,597	553,214
Iowa	451,840	558,400	375,926
Georgia	154,746	215,321	194,838
Other States	5,648,502	2,445,598	4,372,654
Harvesting and haying machinery	72,706,007	59,957,329	43,843,650
Illinois	44,645,879	42,515,150	33,231,423
Ohio	348,752	(1)	(1)
Harvesting and haying machinery—Con.			
Minnesota	$165,826	(1)	(1)
Kansas	102,673	(1)	(1)
Other States	27,442,877	$17,442,179	$10,612,227
Machines for preparing crops for market or for use	32,328,555	34,126,745	28,488,167
Illinois	8,063,120	6,505,795	4,570,330
Wisconsin	5,488,269	6,327,811	4,539,359
Michigan	(1)	4,531,328	4,069,474
Minnesota	3,718,398	3,879,173	3,032,424
Iowa	2,695,669	2,996,794	2,680,358
Indiana	2,265,831	4,288,654	3,954,699
Ohio	2,115,865	2,208,546	2,242,135
New York	1,623,123	1,438,924	1,433,547
Pennsylvania	1,057,701	859,134	806,009
Tennessee	312,321	(1)	(1)
Georgia	125,240	(1)	(1)
Missouri	78,738	226,006	232,376
Other States	4,784,280	864,580	927,456
Tractors, including motor cultivators and garden tractors	159,530,521	145,912,489	121,050,374
Michigan and Minnesota [2]	50,987,784	44,062,602	51,513,544
Illinois and Indiana [2]	46,332,515	43,931,576	27,923,289
Wisconsin	32,328,363	34,476,571	21,659,931
California and Iowa [2]	23,471,782	18,620,041	16,544,614
Ohio	6,194,764	4,691,430	3,176,524
Other States	215,313	130,269	232,472

[1] Included in "Other States" to avoid disclosing operations of individual establishments.
[2] Combined in order to avoid disclosing operations of individual establishments.