Major Group 29.—PETROLEUM AND COAL PRODUCTS

This major group includes establishments refining crude petroleum and manufacturing coke and coke-oven products, paving and roofing materials, and other products made from petroleum and coal. Establishments manufacturing gas (except coke-oven gas) and distributing gas to consumers are classified in public utility industries.

GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

CENSUS YEAR	Number of establishments	All employees [1]		Production workers		Value added by manufacture [2]
		Number (average for the year)	Wages and salaries, total	Number (average for the year)	Wages, total	
1947	1,387	212,003	$739,345	169,610	$556,365	$2,015,307
1939 [3]	1,227	n.a.	n.a.	107,695	176,606	697,273
1937	934	n.a.	n.a.	115,837	188,843	638,265
1935 [4]	928	124,148	186,513	105,079	143,053	471,411
1933	835	102,523	140,706	89,772	113,320	395,245
1931	859	n.a.	n.a.	90,827	139,812	431,585
1929 [5]	922	n.a.	n.a.	111,554	180,028	828,848
1927	645	116,430	201,760	99,845	159,044	543,148
1925	750	113,072	193,370	97,071	153,921	634,939
1923	781	124,504	210,125	103,110	163,279	562,039
1921	692	102,485	175,940	86,538	135,824	429,870
1919	787	118,209	182,389	97,250	142,615	510,769
1914	591	59,956	48,999	50,702	36,440	111,860
1909 [6]	590	51,317	34,076	45,755	26,764	76,299
1904	376	39,111	23,264	35,751	19,293	57,462
1899	308	31,314	16,411	29,198	13,803	36,989

n.a.—Not available.

[1] The figures for 1947 and 1939 include data for employees of manufacturing establishments who were engaged in distribution and construction work. The extent to which data for such employees are included in the figures for earlier years is not known. See GENERAL EXPLANATIONS—Manufacturing employees—Classifications used.

[2] Value of products less cost of materials, supplies, fuel, electricity, and contract work. For 1899-1933, cost of contract work was not subtracted from value of products in calculating value added by manufacture. See GENERAL EXPLANATIONS—Value added by manufacture.

[3] Figures for years prior to 1939 exclude byproduct coke ovens owned by city gas companies. Such ovens represented less than 2 percent of the total value of products for the "Petroleum and coal products" group for 1939.

[4] Excludes a few establishments engaged principally in blending and compounding lubricating oils.

[5] Figures for years prior to 1929 exclude "Lubricants, n.e.c." and "Paving mixtures and blocks." These industries represented 4 percent of the figure for "Number of production workers" and 5 percent of the figure for "Value added by manufacture," shown for the "Petroleum and coal products" group for 1929. Prior to 1929, the "Lubricants, n.e.c." industry is included in the series for the "Chemical and allied products" group.

[6] Figures for years prior to 1909 exclude "Fuel briquets" and "Roofing felts and coatings." For 1909, these industries represented 6 percent of the figure for "Number of production workers" and 9 percent of the figure for "Value added by manufacture" shown for the "Petroleum and coal products" group.

PETROLEUM AND COAL PRODUCTS

This report shows 1947 Census of Manufactures statistics for establishments primarily engaged in the production of products from petroleum and coal. In addition to petroleum refineries and coke ovens producing gaseous, liquid, and solid hydrocarbons and carbons from crude petroleum and coal, plants are included which engaged primarily in compounding and blending asphalt and tar paving and roofing mixtures, lubricating oils and greases, and waxes. Also included are plants primarily producing asphalt-saturated roofings and sidings, fuel briquets, and calcined petroleum coke. These establishments have been classified in eight industries described separately below.

For 1939, the industry classifications were approximately the same, except that the "Lubricants, N.E.C.," Industry was classified in the chemical industries and no provision was made for the "Petroleum and Coal Products, N.E.C.," Industry.

Petroleum Refining *(Standard Industrial Classification No. 2911.)*—This industry comprises establishments primarily engaged in producing gasoline, fuel oils, lubricants, illuminating oils, and other products from crude petroleum and its fractionation products in petroleum refineries. Establishments primarily engaged in producing natural gasoline from natural gas are classified in mining industries, and in manufacturing lubricating oils and greases by blending and compounding purchased materials in Industry 2992.

Companies engaged in petroleum refining prepared separate reports covering the operations at each refinery. All refining activities, including associated lube, wax, or asphalt departments, were covered by the reports. The reports excluded nonmanufacturing activities, such as drilling and operation of oil and gas wells, operation of natural-gasoline and cycle-condensate plants, pipe-line and other long-distance transportation, and the operation of bulk stations, distributing terminals, and filling stations.

Establishments primarily engaged in re-refining or reclaiming used oils (crankcase drainings) by a distillation process are included in the Petroleum Refining Industry. Prior to the 1947 census, such activities were included in the "Lubricants, N.E.C.," Industry. For 1939, reports from re-refiners were retabulated to show figures comparable with 1947, but no separate figures for re-refiners are available for earlier years. Nonmanufacturing establishments engaged in re-refining used oils as a secondary activity, and establishments reclaiming used oils by a process other than distillation, are excluded from the 1947 census.

Establishments in the Petroleum Refining Industry were classified on the basis of the type of oils run to stills during the year. Of the 437 plants in the industry, 391 refineries were primarily engaged in refining crude petroleum and petroleum products, and 46 plants were primarily engaged in re-refining used oils by a distillation process. Detailed statistics are presented for the industry as a whole, and selected separate figures are shown in tables 1, 4, and 6-A for establishments primarily engaged in "Refining new oils" and in "Re-refining used oils."

Oils are frequently transferred from one refinery to another for further processing. This introduces some duplication in the "Value of products shipped" by the Petroleum Refining Industry, as shown in tables 1, 2, and 5. For the United States as a whole the overstatement in this value figure is about 11 percent. To eliminate duplication in the statistics for individual products, figures were collected on the amount of oil received by refineries during the year. Net (unduplicated) shipments of each petroleum product were calculated, for the United States as a whole, by subtracting "Receipts" from the quantity shipped (see table 6-A). These net shipments represent the quantity of petroleum products made available for consumption by the "Petroleum Refining" and "Lubricants, N.E.C.," industries.

In order to show product detail, by State, for all oils produced, special reports were obtained from the owners of oils processed at refineries operated by other companies. Tables 6-A and 6-B include these oils and table 6-D shows separately the quantity and value of oils processed under such arrangements. Amounts paid and received for processing such oils are shown in footnote 1 of table 6-D, but are not included in the amounts paid for contract and commission work shown in tables 1, 2, and 3, or in the miscellaneous receipts shown in table 5.

The 391 plants engaged in refining crude petroleum and petroleum products, as shown in this census report, represent refineries which operated during any part of 1947. The Bureau of Mines of the U. S. Department of the Interior lists 361 operating refineries as of January 1, 1947, and 352 refineries as of January 1, 1948. The census figure also includes separate reports from six butadiene plants, five asphalt refineries, and four wax refineries.

Petroleum-product statistics shown in this report are not directly comparable with Bureau of Mines figures. The 1947 Census of Manufactures collected data on shipments, whereas the Bureau of Mines figures are in terms of "output" (production). The census figure for crude petroleum consumed at refineries exceeds the Bureau of Mines figure for crude run to stills by about 2 percent.

Beehive Coke Ovens *(Standard Industrial Classification No. 2931.)*—This industry comprises establishments primarily engaged in producing coke in beehive ovens.

Byproduct Coke Ovens *(Standard Industrial Classification No. 2932.)*—This industry comprises establishments primarily engaged in manufacturing coke, coal gas, tar, and other products in "byproduct" coke ovens.

Census reports for coke ovens show the production of coke, screenings and breeze, gas, and other major classes of products

from beehive and byproduct ovens. Detailed statistics on the production of coke-oven products and the coal charged to coke ovens are collected by the Bureau of Mines, U. S. Department of the Interior, and published in its annual report, "Minerals Yearbook." While the Bureau of the Census obtained reports for a few beehive operations which were not covered by the Bureau of Mines, the slight differences between the totals of the two agencies are due primarily to differences in reports submitted by the operating companies.

The value of shipments of the coke industries includes coke, gas, tar, and other products transferred to affiliated blast furnaces and steel works, as well as coke and other products sold. Since a major portion of the coke produced at byproduct ovens is transferred to such affiliated plants, the value figures for coke are, at best, approximations of market values.

Paving Mixtures and Blocks *(Standard Industrial Classification No. 2951.)*—This industry comprises establishments primarily engaged in manufacturing asphalt and tar paving mixtures and manufacturing paving blocks made of asphalt, creosoted wood, and various compositions of asphalt or tar with other materials. Establishments primarily engaged in manufacturing brick, concrete, granite, and stone paving blocks are classified in Major Group 32. Plants primarily engaged in producing emulsified asphalt, not made in petroleum refineries, are included in the Paving Mixtures and Blocks Industry.

Roofing Felts and Coatings *(Standard Industrial Classification No. 2952.)*—This industry comprises establishments primarily engaged in manufacturing asphalt and other saturated roofing felts in roll or shingle form, either smooth or faced with grit, and in manufacturing roofing cements and coatings. Establishments primarily engaged in manufacturing paints are classified in Industry 2851.

A monthly survey on Census Form M26D, "Asphalt and Tar Roofing and Siding Products," collects figures for quantity of each of the major products shipped. These figures are summarized and published in Facts for Industry, Series M26D, "Asphalt and Tar Roofing and Siding Products." The 1947 Census of Manufactures totals for major products differ from the current survey totals by less than 5 percent; differences for other items are somewhat greater. Some of the figures used in the current survey are preliminary or estimated.

Fuel Briquets and Packaged Fuel *(Standard Industrial Classification No. 2991.)*—This industry comprises establishments primarily engaged in manufacturing fuel briquets, boulets, and packaged fuel from anthracite culm, bituminous slack, charcoal, coke screenings, sawdust or other materials, usually mixed with tar or other binders; and in manufacturing powdered fuel.

Census figures show that 35 plants were primarily engaged in making fuel briquets in 1947 and 64 plants were primarily engaged in making packaged fuel. Two of the briquet plants also produced packaged fuel and two made briquets from charcoal only. In its annual report, "Minerals Yearbook," the Bureau of Mines, U. S. Department of the Interior, publishes more detailed figures on production of fuel briquets and packaged fuel made from petroleum and coal products. Census and Bureau of Mines figures for the quantity of fuel briquets produced differ by less than 1 percent and for packaged fuel by only 2 percent.

Lubricants, Not Elsewhere Classified *(Full Standard Industrial Classification title and number: Lubricating Oils and Greases Not Made in Petroleum Refineries, 2992.)*—This industry comprises establishments primarily engaged in blending and compounding lubricating oils and greases from purchased materials. Petroleum refineries engaged in the production of lubricating oils and greases are classified in Industry 2911.

The "Lubricants, N.E.C.," Industry includes plants operated by companies also engaged in petroleum refining wherever these plants are not located at the site of the refinery. The industry excludes the blending of lubricants at terminals, bulk stations, and other nonmanufacturing establishments; such establishments blend large quantities of lubricants. The figures shown in tables 6-A and 6-B include lubricating oils and greases blended in the manufacturing industries, but exclude oils blended at terminals, bulk stations, etc.

Petroleum and Coal Products, Not Elsewhere Classified *(Full Standard Industrial Classification title and number: Products of Petroleum and Coal, Not Elsewhere Classified, 2999.)*—This industry comprises establishments primarily engaged in producing petroleum and coal products not provided for in the other industries of Major Group 29. The principal products of this industry in 1947 were calcined petroleum coke and compounded or blended wax.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Petroleum refining:								
1947	437	145,806	$535,781	113,847	$396,236	$1,494,474	$5,129,234	$6,623,708
1939 [4]	518	n.a.	n.a.	72,982	128,420	528,575	1,933,921	2,462,496
1937	365	98,450	176,808	83,182	140,415	482,439	2,064,307	2,546,746
1935	395	92,111	143,452	77,402	109,611	356,686	1,481,936	1,838,622
1933	389	78,862	111,361	69,047	89,793	314,200	1,064,437	1,378,637
1931	376	n.a.	n.a.	68,824	107,474	313,768	1,210,517	1,524,285
1929	390	94,393	164,755	80,596	131,177	608,324	2,031,341	2,639,665
1927	354	83,293	144,617	71,234	113,717	389,652	1,752,997	2,142,649
1925	359	76,527	132,286	65,324	104,645	486,979	1,889,678	2,376,657
1923	382	82,759	138,402	66,717	103,834	368,647	1,425,053	1,793,700
1921	366	74,228	130,197	63,189	102,294	345,270	1,382,170	1,727,440
1919	320	73,414	116,369	58,889	89,750	384,625	1,247,908	1,632,533
1914	176	31,025	27,290	25,366	19,397	71,096	325,205	396,361
1909	147	16,598	13,759	13,929	9,830	37,725	199,273	236,998
1904	98	18,744	12,713	16,770	9,989	35,618	139,387	175,005
1899	67	13,400	8,528	12,199	6,717	21,070	102,859	123,929
Refining new oils:								
1947	*391*	*145,386*	*534,336*	*113,513*	*395,193*	*1,490,446*	*5,126,034*	*6,616,480*
1939 [4]	*485*	*100,972*	*190,547*	*72,840*	*128,214*	*527,802*	*1,933,265*	*2,461,127*
Re-refining used oils:								
1947	*46*	*420*	*1,445*	*334*	*1,043*	*4,028*	*3,200*	*7,228*
1939 [4]	*33*	*n.a.*	*n.a.*	*142*	*206*	*713*	*656*	*1,369*
Beehive coke ovens:								
1947	78	3,100	10,251	2,935	9,597	21,661	48,576	70,237
1939 [5]	29	761	782	685	701	1,214	3,567	4,781
Byproduct coke ovens:								
1947	89	35,838	109,745	31,481	91,415	256,569	714,065	970,634
1939 [6]	83	24,060	39,003	21,008	31,780	84,547	257,650	342,197
Total for Beehive coke ovens and Byproduct coke ovens: [6]								
Including byproduct ovens owned by city gas companies:								
1947	167	38,938	119,996	34,416	101,012	278,230	762,641	1,040,871
1939 [5]	112	24,821	39,785	21,693	32,481	85,761	261,217	346,978
Excluding byproduct ovens owned by city gas companies: [7]								
1937	94	n.a.	n.a.	20,603	33,103	84,401	273,068	357,469
1935	88	18,437	25,713	16,694	21,575	58,147	180,557	238,704
1933	97	14,488	18,677	13,066	15,527	42,456	123,275	165,731
1931	112	n.a.	n.a.	14,383	22,134	63,716	162,793	226,509
1929	153	23,503	40,841	20,552	33,389	134,756	281,592	416,348
1927	171	23,809	41,368	21,082	34,168	95,284	286,729	382,013
1925	237	26,098	43,645	23,191	36,762	100,883	277,751	378,634
1923	262	31,639	55,931	28,364	48,108	162,893	354,030	516,923
1921	176	19,156	32,076	16,070	23,833	52,522	168,791	221,313
1919	278	32,841	49,905	29,319	42,299	92,249	224,267	316,516
1914	231	23,427	16,946	21,107	14,289	30,137	69,138	99,275
1909	315	31,125	17,526	29,273	15,454	31,672	64,025	95,697
1904	278	20,367	10,551	18,981	9,304	21,844	29,885	51,729
1899	241	17,914	7,883	16,999	7,086	15,919	19,666	35,585
Paving mixtures and blocks:								
1947	263	2,684	8,268	1,960	5,486	22,803	27,384	50,187
1939	231	3,193	4,494	2,437	2,681	13,728	19,026	32,754
1937	148	2,456	3,407	1,946	2,419	10,684	14,605	25,289
1935	132	2,660	3,570	2,231	2,514	7,901	9,984	17,885
1933	93	1,348	1,569	1,151	1,215	4,663	6,287	10,950
1931	97	n.a.	n.a.	1,081	1,556	7,416	8,587	16,003
1929 [8]	77	n.a.	n.a.	1,376	2,187	10,062	11,998	22,060
Roofing felts and coatings:								
1947	174	16,579	49,780	13,819	38,515	132,852	205,625	338,477
1939 [9]	135	n.a.	n.a.	8,187	10,032	48,079	62,359	110,438
1937	111	8,520	11,831	7,418	9,520	39,918	62,644	102,562
1935	108	7,364	8,695	6,478	6,685	31,848	44,325	76,173
1933	74	5,053	5,547	4,418	4,436	20,940	23,893	44,833
1931	83	n.a.	n.a.	4,123	5,331	26,257	32,706	58,963
1929	102	7,411	12,456	6,027	8,952	42,114	61,392	103,506
1927	100	8,997	15,177	7,255	10,713	55,882	67,328	123,210
1925	140	10,149	16,940	8,310	12,145	44,994	78,597	123,591
1923	122	9,676	15,137	7,665	10,826	28,822	55,520	84,342
1921	136	8,640	12,945	6,908	9,213	31,180	45,013	76,193
1919	178	11,726	15,759	8,871	10,344	33,307	52,588	85,895
1914	170	5,334	4,620	4,088	2,642	10,373	17,605	27,978
1909 [10]	117	3,484	2,720	2,465	1,339	6,746	12,458	19,204

See footnotes at end of table.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS—Continued

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Fuel briquets and packaged fuel:								
1947	99	1,204	$3,467	1,042	$2,986	$9,093	$23,769	$32,862
1939 [11]	32	494	645	410	485	1,716	3,571	5,287
1937 [11]	21	526	676	457	547	2,097	4,041	6,138
1935 [11]	25	415	533	341	386	1,519	3,394	4,913
1933 [11]	24	358	368	296	262	1,058	1,886	2,944
1931	23	n.a.	n.a.	301	357	1,533	3,035	4,568
1929	23	515	849	426	584	3,579	5,919	9,498
1927	20	331	598	274	446	2,330	4,873	7,203
1925	14	298	499	246	369	2,083	3,936	6,019
1923	15	430	655	364	511	1,677	3,907	5,584
1921	14	461	722	371	484	898	2,280	3,178
1919	11	228	356	171	222	588	1,386	1,974
1914	14	170	143	141	112	254	609	863
1909 [12]	11	110	71	88	50	156	155	311
Lubricants, n.e.c.:								
1947	233	6,271	20,643	4,091	11,022	69,435	105,566	175,001
1939 [4]	199	n.a.	n.a.	1,986	2,507	19,414	28,274	47,688
1937 [13]	195	3,260	5,309	2,231	2,839	18,726	25,387	44,113
1933	158	2,414	3,184	1,794	2,087	11,928	16,774	28,702
1931	168	n.a.	n.a.	2,115	2,960	18,895	22,809	41,704
1929 [13]	177	4,059	7,906	2,577	3,739	30,013	39,571	69,584
Petroleum and coal products, n.e.c.:								
1947 [14]	14	521	1,410	435	1,108	8,420	6,741	15,161

n.a.—Not available.

[1] Value of products less cost of materials, fuel, supplies, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] Figures for years prior to 1935 do not include cost of contract work.

[3] For 1947 and 1929, the figures represent value of products shipped, except in the case of "Fuel briquets and packaged fuel" for 1947 and "Coke-oven products" for 1929 where they represent value of products made; for all other years, the figures represent value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[4] For 1947 and 1939, establishments engaged in re-refining crankcase drainings and other used oils have been included in the figures for "Petroleum refining"; for earlier years, such establishments were included under "Lubricants, n.e.c." In table 1 and table 4, separate figures are shown in italics for establishments primarily engaged in "Refining new oil" and in "Re-refining used oils." No comparable figures for "Re-refining used oils" are available for earlier years.

[5] Census figures for "Beehive coke ovens" in 1939 were incomplete. Bureau of Mines, U. S. Department of the Interior, figures indicate that a total of 58 beehive coke establishments were operated in 1939 with total value of products $6,488,000, cost of materials, etc., about $4,692,000, and value added by manufacture about $1,796,000. See also footnote [6].

[6] "Beehive coke ovens" and "Byproduct coke ovens" formerly were combined in a single industry. The separate industry figures shown for 1947 and 1939 have been combined in order that more comparable statistics can be shown for the period 1899–1947.

[7] Figures from the Bureau of Mines, U. S. Department of the Interior, indicate that 20 byproduct coke plants were owned by city gas companies in 1937. The value of shipments of these plants was about $41 million.

[8] The figures for "Paving mixtures and blocks" prior to 1929 are not sufficiently comparable with those for later years to be shown in this table because they include data for quarrying and crushing stone which is classified in the mineral industries.

[9] Revised.

[10] Data for certain asbestos products are included for 1909. See also footnote [14].

[11] Figures for 1933–39 are incomplete, principally due to the omission of reports for packaged-fuel plants. According to the Bureau of Mines, U. S. Department of the Interior, in 1939, 31 fuel-briquet plants and 103 packaged-fuel plants were operated with products valued at $7,669,000; in 1937, 31 fuel-briquet plants and 64 packaged-fuel plants were operated with products valued at $7,681,000; in 1935, 29 fuel-briquet plants and 25 packaged-fuel plants were operated; and in 1933, 27 fuel-briquet plants and a few packaged-fuel plants were operated. The first sales of packaged fuel were made in the autumn of 1932.

[12] Census reports for 1904 and earlier years show no separate figures for fuel briquets.

[13] The figures for 1935 and years prior to 1929 included only lubricating greases and, therefore, are not sufficiently comparable with other years to be given in this table.

[14] No comparable figures are available for earlier years.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Petroleum refining, total [1]	437	145,806	$535,781	113,847	237,506	$396,236	$1,494,474	$5,129,234	$6,623,708	$316,370
New England	6	983	3,690	740	1,776	2,697	13,953	56,423	70,376	919
Middle Atlantic	46	29,911	113,574	23,404	49,052	85,441	334,588	948,682	1,283,270	46,947
New York	9	3,156	11,226	2,634	5,231	8,940	28,241	130,505	158,746	1,292
New Jersey	10	11,277	44,639	9,307	20,312	35,863	167,827	365,615	533,442	13,671
Pennsylvania	27	15,478	57,709	11,463	23,509	40,638	138,520	452,562	591,082	31,984
East North Central	68	26,574	98,875	20,405	42,108	73,172	258,397	848,011	1,106,408	94,983
Ohio	16	3,610	13,912	2,769	6,334	10,173	50,487	191,586	242,073	10,526
Indiana	10	12,137	45,463	9,391	18,417	33,871	78,371	258,289	336,660	66,035
Illinois	18	9,307	33,635	7,114	14,713	25,073	101,871	305,411	407,282	16,261
West North Central	31	5,625	18,699	4,416	10,581	14,231	56,397	191,004	247,401	21,258
South Atlantic	11	2,309	7,600	1,824	3,235	5,453	22,633	110,400	133,033	2,449
East South Central	14	1,205	4,030	921	2,176	2,915	21,470	58,702	80,172	1,029
West South Central	134	56,090	207,281	43,822	89,631	150,398	556,304	2,005,847	2,562,151	97,255
Arkansas	7	1,118	3,303	845	1,811	2,443	15,007	34,642	49,649	1,708
Louisiana	16	11,453	45,793	8,146	16,774	25,431	114,162	365,537	479,699	20,711
Oklahoma	27	7,202	22,709	6,143	12,632	18,883	77,711	200,284	277,995	7,830
Texas	84	36,317	135,476	28,688	58,414	103,641	349,424	1,405,384	1,754,808	67,006
West	127	23,109	82,032	18,315	38,947	61,929	230,732	910,165	1,140,897	51,530
Wyoming	22	2,230	8,255	1,587	3,242	5,824	18,363	53,999	72,362	9,061
California	68	18,813	66,362	15,120	32,119	50,628	187,034	780,303	967,337	39,055

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947—Continued

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Beehive coke ovens, total [1]	78	3,100	$10,251	2,935	5,971	$9,597	$21,661	$48,576	$70,237	$376
Middle Atlantic	62	2,444	8,302	2,317	4,838	7,786	18,502	42,787	61,289	310
Pennsylvania	62	2,444	8,302	2,317	4,838	7,786	18,502	42,787	61,289	310
South and West	16	656	1,949	618	1,133	1,811	3,159	5,789	8,948	66
Virginia	5	240	594	226	344	538	832	1,759	2,591	37
West Virginia	8	254	784	241	490	732	1,666	2,518	4,184	20
Byproduct coke ovens, total [1]	89	35,838	109,745	31,481	63,662	91,415	256,569	714,065	970,634	63,887
Northeast	28	14,668	45,262	12,639	25,196	36,702	101,245	267,648	368,893	22,772
Pennsylvania	13	8,469	25,348	7,330	14,219	20,549	63,616	157,685	221,301	11,303
East North Central	36	13,572	42,520	12,137	24,887	36,326	94,161	297,104	391,265	19,476
Ohio	17	5,388	16,347	4,870	9,799	14,023	26,356	106,373	132,729	(d)
Indiana	5	3,846	12,414	3,432	7,224	10,745	30,981	107,058	138,039	2,519
Illinois	8	2,272	7,221	2,015	4,206	6,082	14,982	46,082	61,064	832
West North Central	4	1,020	3,009	879	1,776	2,534	4,698	14,409	19,107	578
South and West	21	6,578	18,954	5,826	11,803	15,853	56,465	134,904	191,369	21,061
West Virginia	5	1,339	4,318	1,203	2,436	3,723	9,550	21,072	30,622	(d)
Alabama	7	2,450	6,394	2,199	4,391	5,354	28,895	54,380	83,275	2,040
Paving mixtures and blocks, total [1]	263	2,684	8,268	1,960	4,387	5,486	22,803	27,384	50,187	2,924
Northeast	115	1,043	3,250	732	1,666	2,061	8,681	11,438	20,119	1,396
Pennsylvania	41	435	1,146	267	580	600	2,379	3,308	5,687	390
East North Central	56	544	1,804	410	897	1,239	4,932	6,234	11,166	507
Ohio	36	286	876	210	450	555	2,399	3,689	6,088	285
Illinois	13	185	690	142	300	512	2,035	1,929	3,904	171
West North Central	8	127	381	107	213	292	885	1,002	1,887	58
Missouri	8	127	381	107	213	292	885	1,002	1,887	58
South Atlantic	35	204	562	155	362	386	1,822	2,680	4,502	356
East South Central	13	185	420	161	382	349	1,126	1,259	2,385	89
Alabama	6	117	267	101	238	215	732	723	1,455	80
West South Central	13	142	364	114	254	255	1,216	1,089	2,305	71
Mountain	4	48	152	31	67	96	312	595	907	56
Pacific	19	391	1,335	250	546	808	3,829	3,087	6,916	391
California	19	391	1,335	250	546	808	3,829	3,087	6,916	391
Roofing felts and coatings, total [1]	174	16,579	49,780	13,819	31,053	38,515	132,852	205,625	338,477	12,210
New England	6	764	2,717	633	1,631	2,120	6,740	9,460	16,200	315
Middle Atlantic	39	4,102	11,992	3,545	8,153	9,994	30,331	55,165	85,496	1,777
New York	9	535	1,591	467	1,096	1,325	4,996	7,613	12,609	298
New Jersey	19	2,541	7,525	2,221	5,190	6,390	17,012	34,245	51,257	866
Pennsylvania	11	1,026	2,876	857	1,867	2,279	8,323	13,307	21,630	613
East North Central	62	5,927	18,113	4,969	10,914	13,850	45,981	72,664	118,645	4,559
Ohio	12	759	2,487	619	1,460	1,865	6,812	14,688	21,500	703
Illinois	38	4,591	13,604	3,893	8,438	10,646	33,933	49,956	83,889	3,220
West North Central	12	963	2,870	800	1,795	2,191	8,510	15,090	23,600	1,042
Minnesota	6	409	1,368	352	884	1,080	4,268	7,663	11,931	790
Missouri	6	554	1,502	448	911	1,111	4,242	7,427	11,669	252
South Atlantic	10	644	1,992	531	1,224	1,432	5,918	8,217	14,135	173
East South Central	4	384	968	333	732	751	3,495	6,202	9,697	145
West South Central	12	1,831	4,847	1,327	2,892	3,150	13,244	17,957	31,201	2,324
Mountain	4	74	176	60	123	132	469	427	896	58
Pacific	25	1,890	6,105	1,621	3,589	4,895	18,164	20,443	38,607	1,817
California	17	1,657	5,334	1,410	3,128	4,251	15,975	17,076	33,051	1,452
Fuel briquets and packaged fuel, total [1]	99	1,204	3,467	1,042	2,249	2,986	9,093	23,769	32,862	686
Michigan	23	110	262	97	189	238	447	1,076	1,523	23
Wisconsin	19	285	781	267	572	717	2,997	11,451	14,448	35
Lubricants, n.e.c., total [1]	233	6,271	20,643	4,091	8,713	11,022	69,435	105,566	175,001	3,168
Northeast	66	2,577	8,838	1,740	3,603	4,904	32,880	46,555	79,435	926
New York	14	250	752	131	276	332	944	2,117	3,061	145
East North Central	70	1,762	6,164	1,090	2,476	3,142	19,500	32,657	52,247	914
Ohio	27	876	2,982	590	1,384	1,782	9,579	14,997	24,576	415
West North Central	40	941	2,662	592	1,247	1,301	7,305	9,317	16,622	655
Minnesota	10	316	849	198	439	439	2,529	2,615	5,144	347
Kansas	10	162	439	93	199	193	957	1,985	2,942	30
South	30	703	2,060	457	982	1,086	6,029	10,810	16,839	431
Louisiana	3	306	1,030	237	517	668	2,116	7,520	9,636	331
Oklahoma	7	150	411	87	188	169	1,110	1,316	2,426	37
West	27	288	919	212	405	589	3,631	6,227	9,858	242
Petroleum and coal products, n.e.c., total [1]	14	521	1,410	435	806	1,108	8,420	6,741	15,161	133

[d] Withheld to avoid disclosing figures for individual companies.

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Petroleum refining: *New England*, Massachusetts, 3 (655); Rhode Island, 3 (328); *East North Central*, Michigan, 22; Wisconsin, 2; *West North Central*, Minnesota, 3; Missouri, 1; Nebraska, 6 (144); Kansas, 21 (4,357); *South Atlantic*, Delaware, 1; Maryland, 3 (1,431); Virginia, 1; West Virginia, 4 (607); South Carolina, 1; Georgia, 1; *East South Central*, Kentucky, 8 (934); Tennessee, 2; Alabama, 2; Mississippi, 2; *West*, Montana, 11 (566); Idaho, 1; Colorado, 9 (243); New Mexico, 8 (289); Arizona, 1; Utah, 3 (648); Washington, 3 (151); Oregon, 1.

Beehive coke ovens: *South and West*, Kentucky, 1; Colorado, 1; Utah, 1.

Byproduct coke ovens: *Northeast*, Massachusetts, 2; Rhode Island, 1; Connecticut, 1; New York, 9 (3,257); New Jersey, 2; *East North Central*, Michigan, 4; Wisconsin, 2; *West North Central*, Minnesota, 3; Missouri, 1; *South and West*, Maryland, 1; Kentucky, 1; Tennessee, 1; Texas, 2; Colorado, 1; Utah, 2; California, 1.

Paving mixtures and blocks: *Northeast*, Maine, 1; Vermont, 1; Massachusetts, 16 (187); Rhode Island, 1; Connecticut, 4 (14); New York, 40 (335); New Jersey, 11 (60); *East North Central*, Indiana, 4 (16); Michigan, 3 (57); *South Atlantic*, Delaware, 4 (17); Maryland, 6 (26); Virginia, 5 (39); West Virginia, 12 (59); North Carolina, 2; South Carolina, 2; Georgia, 2; Florida, 2; *East South Central*, Kentucky, 3; Tennessee, 3 (40); Mississippi, 1; *West South Central*, Arkansas, 3 (20); Louisiana, 3; Oklahoma, 5 (73); Texas, 2; *Mountain*, Colorado, 1; Arizona, 2; Utah, 1.

Roofing felts and coatings: *New England*, Vermont, 1; Massachusetts, 5; *East North Central*, Indiana, 7 (394); Michigan, 5 (183); *South Atlantic*, Delaware, 1; Maryland, 3 (166); West Virginia, 1; Georgia, 3 (310); Florida, 2; *East South Central*, Tennessee, 3; Alabama, 1; *West South Central*, Louisiana, 3; Oklahoma, 1; Texas, 8 (902); *Mountain*, Colorado, 2; Utah, 2; *Pacific*, Washington, 2; Oregon, 6.

Fuel briquets and packaged fuel: Maine, 2; Massachusetts, 1; New York, 1; Pennsylvania, 4 (213); Ohio, 16 (40); Indiana, 2; Illinois, 5 (49); Minnesota, 5 (45); Iowa, 1; Missouri, 4 (103); North Dakota, 1; Nebraska, 2; Kansas, 2; Virginia, 2; West Virginia, 2; Kentucky, 1; Arkansas, 2; Washington, 1; Oregon, 1; California, 2.

Lubricants, n.e.c.: *Northeast*, Massachusetts, 3 (68); Rhode Island, 3; New Jersey, 15 (965); Connecticut, 1; Pennsylvania, 30 (1,227); *East North Central*, Indiana, 3 (101); Illinois, 22 (476); Michigan, 10 (172); Wisconsin, 8 (137); *West North Central*, Iowa, 5 (60); Missouri, 12 (363); North Dakota, 1; South Dakota, 1; Nebraska, 1; *South*, Maryland, 3 (106); Georgia, 1; Florida, 1; Tennessee, 2; Arkansas, 1; Texas, 12 (62); *West*, Montana, 1; Washington, 2; California, 24 (280).

Petroleum and coal products, n.e.c.: New York, 2; New Jersey, 1; Pennsylvania, 3 (33); Illinois, 3; Wisconsin, 1; Kansas, 1; Florida, 1; Texas, 1; California, 1.

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry							
	Petroleum refining	Beehive coke ovens	Byproduct coke ovens	Paving mixtures and blocks	Roofing felts and coatings	Fuel briquets and packaged fuel	Lubricants, n.e.c.	Petroleum and coal products, n.e.c.
Number of establishments	437	78	89	263	174	99	233	14
All employees:								
Number (average for the year)	145,806	3,100	35,838	2,684	16,579	1,204	6,271	521
Salaries and wages, total	$535,781	$10,251	$109,745	$8,268	$49,780	$3,467	$20,643	$1,410
Production and related workers:								
Number (average for the year)	113,847	2,935	31,481	1,960	13,819	1,042	4,091	435
Man-hours, total ... thousands	237,506	5,971	63,662	4,387	31,053	2,249	8,713	806
Wages, total	$396,236	$9,597	$91,415	$5,486	$38,515	$2,986	$11,022	$1,108
Value added by manufacture	$1,494,474	$21,661	$256,569	$22,803	$132,852	$9,093	$69,435	$8,420
Number of employees for pay period ended nearest Oct. 15:								
All employees	148,240	3,207	36,449	3,113	17,192	1,229	6,309	437
Male	141,480	3,177	35,848	2,982	16,176	1,202	5,500	404
Female	6,760	30	601	131	1,016	27	809	33
Production and related workers	115,383	3,030	31,922	2,317	14,354	1,060	4,104	356
Male	113,874	3,029	31,812	2,316	13,989	1,058	3,913	355
Female	1,509	1	110	1	365	2	191	−1
Force-account construction workers	4,207	3	93	78	52	7	7	----------
Administrative, supervisory, sales, and all other	28,650	174	4,434	718	2,786	162	2,198	81
Male	23,399	145	3,943	588	2,135	137	1,580	49
Female	5,251	29	491	130	651	25	618	32
All employees, number by month:								
January	141,858	3,043	34,589	1,970	16,087	1,395	6,207	570
February	142,223	3,007	34,774	1,971	15,981	1,362	6,234	557
March	142,326	3,036	35,100	2,052	16,211	1,282	6,220	654
April	141,551	3,033	35,200	2,432	16,131	1,141	6,257	667
May	143,535	3,152	35,646	2,802	16,355	1,090	6,209	645
June	147,342	3,071	36,023	2,977	16,615	1,058	6,273	531
July	148,650	2,999	36,153	3,200	16,494	1,038	6,236	459
August	149,449	3,136	36,601	3,251	16,991	1,069	6,327	426
September	148,610	3,145	36,406	3,144	16,993	1,160	6,275	423
October	148,240	3,207	36,449	3,113	17,192	1,229	6,309	437
November	147,572	3,162	36,579	2,809	16,981	1,273	6,292	425
December	148,112	3,192	36,547	2,364	16,823	1,288	6,327	451
Cost of materials, fuel, electricity, and contract work	$5,129,234	$48,576	$714,065	$27,384	$205,625	$23,769	$105,566	$6,741
Materials, parts, containers, and supplies	5,061,617	48,289	695,067	24,439	200,159	22,972	104,040	6,336
Purchased fuels used for power or heat, total	46,315	11	14,076	1,733	4,335	384	1,199	345
Bituminous coal	8,548	----------	2,111	233	1,159	222	322	2
Anthracite	----------	----------	467	10	20	106	50	----------
Coke	----------	----------	123	5	2	----------	----------	----------
Fuel oils	2,712	4	1,928	1,227	2,349	30	683	213
Gas	34,448	----------	7,801	148	735	7	111	88
Other fuels	607	7	1,646	110	70	19	33	42
Purchased electric energy	20,917	222	4,774	508	1,073	412	327	60
Contract and commission work	385	54	178	704	58	1	----------	----------
Value of inventories:								
Beginning of year, total	$638,624	$710	$48,936	$1,678	$16,397	$1,798	$21,496	$949
Finished products	372,310	255	10,853	678	4,109	74	11,348	666
Materials, supplies, and work in process	266,314	455	38,083	1,000	12,288	1,724	10,148	283
End of year, total	745,528	862	88,306	2,184	20,502	2,865	26,660	1,676
Finished products	416,203	86	15,649	776	5,898	98	14,056	840
Materials, supplies, and work in process	329,325	776	72,657	1,408	14,604	2,767	12,604	836
Expenditures for plant and equipment:								
New plant and equipment	$316,370	$376	$63,887	$2,924	$12,210	$686	$3,168	$133
Construction and major alteration of fixed plants	271,939	155	39,567	715	3,484	209	1,308	63
Buildings	33,602	22	3,448	475	3,009	121	870	23
Other construction	238,337	133	36,119	240	475	88	438	40
Machinery and equipment	44,431	221	24,320	2,209	8,726	477	1,860	70
Production machinery and equipment	36,067	199	23,069	1,756	8,105	401	1,277	23
Other machinery and equipment	8,364	22	1,251	453	621	76	583	47
Used plant and equipment, and land	34,105	13	5,036	168	143	26	250	26
Number of highway-type motor vehicles owned or leased:								
Trucks	[1] 3,423	140	349	604	180	84	352	4
By manufacturer's rated capacity:								
Under 1½ tons	1,218	9	103	150	40	22	51	----------
1½ tons	1,156	70	87	145	67	28	136	2
Over 1½ tons and less than 3½ tons	661	43	54	82	32	25	138	----------
3½ tons and less than 5 tons	152	3	21	52	9	5	15	1
5 tons and over	236	15	84	175	32	4	12	1
By body type:								
Van	22	3	2	6	18	1	13	1
Stake or platform	1,039	1	32	43	62	19	170	1
Panel or light delivery	969	6	86	84	27	17	48	----------
All other trucks	1,393	130	229	471	73	47	121	2
Truck tractors	575	4	9	44	45	16	56	5
Trailers and semitrailers	[2] 759	5	22	54	60	7	57	8

[1] Includes 559 tank-type bodies.
[2] Includes 585 tank-type bodies.

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TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1–4 employees	5–9 employees	10–19 employees	20–49 employees	50–99 employees	100–249 employees	250–499 employees	500–999 employees	1,000–2,499 employees	2,500 employees and over
Petroleum refining:											
Number of establishments	437	39	28	44	89	65	68	49	20	24	11
Number of employees (average for the year)	145,806	100	178	656	3,038	4,615	10,697	18,135	13,234	38,823	56,330
Value added by manufacture	$1,494,474	$936	$1,879	$11,408	$48,298	$74,656	$122,632	$249,181	$157,327	$407,661	$420,496
Refining new oils:											
Number of establishments	391	17	18	37	82	65	68	49	20	24	11
Number of employees (average for the year)	145,386	50	114	555	2,833	4,615	10,697	18,135	13,234	38,823	56,330
Value added by manufacture	$1,490,446	$588	$1,384	$10,302	$46,219	$74,656	$122,632	$249,181	$157,327	$407,661	$420,496
Re-refining used oils:											
Number of establishments	46	22	10	7	7						
Number of employees (average for the year)	420	50	64	101	205						
Value added by manufacture	$4,028	$348	$495	$1,106	$2,079						
Beehive coke ovens:											
Number of establishments	78	3	7	15	26	24	3				
Number of employees (average for the year)	3,100	11	48	233	848	1,596	364				
Value added by manufacture	$21,661	$66	$178	$1,295	$5,830	$12,592	$1,700				
Byproduct coke ovens:											
Number of establishments	89			1	3	2	22	43	16	1	1
Number of employees (average for the year)	35,838			(d)	(d)	*274*	3,897	15,031	*16,636*	(d)	(d)
Value added by manufacture	$256,569			(d)	(d)	*$1,511*	$24,536	$103,207	*$127,315*	(d)	(d)
Paving mixtures and blocks:											
Number of establishments	263	74	105	54	26	3	1				
Number of employees (average for the year)	2,684	213	675	723	763	*310*	(d)				
Value added by manufacture	$22,803	$2,309	$6,532	$5,741	$4,958	*$3,263*	(d)				
Roofing felts and coatings:											
Number of establishments	174	27	17	23	20	26	48	7	6		
Number of employees (average for the year)	16,579	64	123	311	659	1,961	7,278	2,482	3,701		
Value added by manufacture	$132,852	$228	$895	$2,229	$5,212	$17,326	$59,279	$21,712	$25,971		
Fuel briquets and packaged fuel:											
Number of establishments	99	59	11	11	8	10					
Number of employees (average for the year)	1,204	106	65	138	250	645					
Value added by manufacture	$9,093	$455	$331	$983	$2,212	$5,112					
Lubricants, n.e.c.:											
Number of establishments	233	54	51	15	47	25	9	2			
Number of employees (average for the year)	6,271	124	358	610	1,469	1,677	*2,024*	(d)			
Value added by manufacture	$69,435	$1,324	$3,393	$5,263	$13,140	$17,101	*$29,214*	(d)			
Petroleum and coal products, n.e.c.:											
Number of establishments	14	2	1	4	3	3	1				
Number of employees (average for the year)	521	(d)	(d)	(d)	(d)	*521*	(d)				
Value added by manufacture	$8,420	(d)	(d)	(d)	(d)	*$8,420*	(d)				

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

PETROLEUM REFINING INDUSTRY	Shipped by— Petroleum refining industry	Other industries	All industries
Total shipments by the industry	$6,623,708		
A. Primary products	6,581,719	$163,998	$6,745,717
Gasoline	3,136,709		3,136,709
Naphtha solvents	71,524		71,524
Kerosene	342,997		342,997
Distillate fuel oil	918,291		918,291
Residual fuel oil	899,581		899,581
Lubricating oils [1]	545,922	118,425	664,347
Lubricating-oil base stocks [1]	107,309	1,312	108,621
Lubricating greases [1]	49,436	44,261	93,697
Asphalt	130,344		130,344
Petroleum waxes	76,005		76,005
Liquefied gases	110,487		110,487
Other finished petroleum products	87,069		87,069
Unfinished oils	106,045		106,045
B. Secondary products, including industrial organic chemicals, n.e.c., chemical specialties, and synthetic rubber	38,819		
C. Miscellaneous receipts	3,170		
Contract and commission work	555		
Repair work	290		
Scrap and salable refuse	1,165		
Nonmanufacturing activities	1,160		

BEEHIVE COKE OVENS INDUSTRY	Shipped by— Beehive coke ovens industry	Other industries	All industries
Total shipments by the industry	$70,237		
A. Coke, screenings, and breeze [2]	69,921	$726,383	$796,304
B. Secondary products	316		
C. Miscellaneous receipts			

BYPRODUCT COKE OVENS INDUSTRY	Shipped by— Byproduct coke ovens industry	Other industries	All industries
Total shipments by the industry	$970,634		
A. Primary products	970,059	$69,921	$1,039,980
Coke, screenings, and breeze [2]	726,383	69,921	796,304
Coke-oven gas	115,059		115,059
Other coke-oven products	128,617		128,617
B. Secondary products			
C. Miscellaneous receipts	575		

PAVING MIXTURES AND BLOCKS INDUSTRY	Shipped by— Paving mixtures and blocks industry	Other industries	All industries
Total shipments by the industry	$50,187		
A. Paving mixtures and blocks	49,415	$6,861	$56,276
B. Secondary products	581		
C. Miscellaneous receipts	191		

ROOFING FELTS AND COATINGS INDUSTRY	Shipped by— Roofing felts and coatings industry	Other industries	All industries
Total shipments by the industry	$338,477		
A. Roofing felts and coatings	319,053	$12,385	$331,438
B. Secondary products	18,181		
Paving mixtures and blocks	3,870		
Oil and water paints and stains	1,075		
Other secondary products, including tar, tar crudes, and tar pitches	13,236		
C. Miscellaneous receipts	1,243		

FUEL BRIQUETS AND PACKAGED FUEL INDUSTRY	Shipped by— Fuel briquets and packaged fuel industry	Other industries	All industries
Total shipments by the industry	$32,862		
A. Primary products	32,838		$32,838
Fuel briquets	30,047		30,047
Packaged fuel	2,791		2,791
B. Secondary products	23		
C. Miscellaneous receipts	1		

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LUBRICANTS, NOT ELSEWHERE CLASSIFIED, INDUSTRY	Shipped by— Lubricants, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$175,001		
A. Primary products	155,683	$710,982	$866,665
Lubricating oils [1]	110,909	553,438	664,347
Lubricating-oil base stocks [1]	1,312	107,309	108,621
Lubricating greases [1]	43,462	50,235	93,697
B. Secondary products	16,552		
Other finished petroleum compounds	3,483	2844	
Chemical specialties	4,399		
Other, including polishing preparations and related products, and other organic chemicals, n.e.c.	8,670		
C. Miscellaneous receipts	2,766		
Contract and commission work	1,754		
Nonmanufacturing activities	1,012		

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PETROLEUM AND COAL PRODUCTS, N.E.C., INDUSTRY	Shipped by— Petroleum and coal products, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$15,161		
A. Products of petroleum and coal, n.e.c.	14,924		$14,924
B. Secondary products	165		
C. Miscellaneous receipts	72		

[1] "Lubricating oils," "Lubricating-oil base stocks," and "Lubricating greases" are primary to both the Petroleum refining and the Lubricants, n.e.c., industries, and appear in table 5 for each industry.

[2] "Coke, screenings, and breeze" is primary to both the Beehive coke ovens and the Byproduct coke ovens industries, and appears in table 5 for each industry.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947				1939	
		Receipts [1] (quantity)	Shipments and interplant transfers		Net shipments [2] (quantity)	Production	
			Quantity	Value f.o.b. plant (excluding tax)		Quantity	Value f.o.b. plant (including tax)
Petroleum products, total				**$6,745,717**			**$2,497,235**
Gasoline, total	M bbls	54,296	845,621	3,136,709	791,325	580,805	1,424,436
Aviation gasoline	do	3,271	29,967	143,964	26,696	9,420	36,269
Automotive gasoline	do	35,898	790,825	2,907,212	754,927	571,385	1,388,167
Other finished gasolines (including finished base stocks and blending agents) [3]	do	15,127	24,829	85,533	9,702		
Naphtha solvents [4]	do	1,872	18,120	71,524	16,248	9,352	23,112
Kerosene (including range oil) [5]	do	6,317	114,450	342,997	108,133	64,526	112,065
Distillate fuel oil, total [6]	do	24,670	341,907	918,291	317,237	n.a.	n.a.
Grade No. 1 (including P. S. 100) [7]	do	1,852	47,050	140,865	45,198	[8] 68,255	[8] 107,649
Grades No. 2, 3, and 4 (including P. S. 200)	do	17,958	218,867	572,837	200,909		
Diesel-type fuel oil (light)	do	3,693	58,013	156,152	54,320	[9] 94,586	[9] 130,467
Other distillate fuel oils (including light gas-enrichment oil)	do	1,167	17,977	48,437	16,810		
Residual fuel oil, total	do	42,323	488,069	899,581	445,746	n.a.	n.a.
Grade No. 5 (including Navy special and P. S. 300)	do	1,506	55,464	115,853	53,958	[10] 312,944	[10] 234,093
Grade No. 6 (including Bunker C and P. S. 400)	do	36,531	387,862	698,552	351,331		
Diesel-type fuel oil (heavy)	do	609	7,046	16,163	6,437	(9)	(9)
Other residual fuel oils (including heavy gas-enrichment oil)	do	3,677	37,697	69,013	34,020	(9)	(9)
Lubricating oils, total [11]	do	n.a.	58,230	664,347	n.a.	n.a.	n.a.
Petroleum refining industry:							
Refiners of new oils	do	6,776	50,363	539,295	43,587	[12] 38,258	[12] 237,161
Re-refiners of used oils	do	30	682	6,627	652	193	1,250
Lubricants, n.e.c., industry	do	1,798	6,898	110,909	5,100	[13] 2,157	[13] 25,511
Other manufacturing industries	do	n.a.	287	7,516	n.a.	n.a.	n.a.
Lubricating-oil base stocks (for blending, compounding, and grease manufacture), total [14]	do	11,971	12,342	108,621	371	(12)	(12)
Petroleum refining industry	do	5,434	12,264	107,309	6,830	(12)	(12)
Lubricants, n.e.c., industry	do	6,537	78	1,312	−6,459		
Lubricating greases, total [15]	M lbs	n.a.	1,198,254	93,697	n.a.	n.a.	n.a.
Petroleum refining industry:							
Refiners of new oils	do	58,267	684,585	49,245	626,318	(16)	14,451
Re-refiners of used oils	do	224	1,978	191	1,754	n.a.	n.a.
Lubricants, n.e.c., industry	do	20,639	506,204	43,462	485,565	285,124	[13] 16,275
Other manufacturing industries	do	n.a.	5,487	799	n.a.	n.a.	n.a.
Asphalt, total				130,344			37,994
200 penetration and over [17]	M bbls	963	24,782	61,646	23,819	[18] 14,498	[18] 17,142
Less than 200 penetration [19]	M tons	62	5,464	68,698	5,402	2,346	20,852
Petroleum waxes, total	M lbs	73,832	1,233,458	76,005	1,159,626	(20)	19,485
Microcrystalline [21]	do	1,615	96,216	10,363	94,601	n.a.	n.a.
Refined and semirefined crystalline	do	23,728	690,159	43,158	666,431	n.a.	n.a.
Crude-scale crystalline	do	48,489	447,083	22,484	398,594	n.a.	n.a.
Liquefied gases, total [22]	M bbls	7,354	22,496	110,487	15,142	3,463	4,942
For direct automotive use (not included under gasoline)	do		162	410		n.a.	n.a.
Chemical raw material (including synthetic rubber components) [23]	do		9,549	83,007		n.a.	n.a.
Other liquefied gases	do		12,785	27,070		n.a.	n.a.
Other finished petroleum products, total				87,069			69,466
Still gas	Mil. cu. ft	4	26,416	9,245	26,412	n.a.	(24)
Road oil [25]	M bbls	85	9,053	19,131	8,968	6,020	8,539
Petrolatum	M lbs	120,618	455,294	11,944	334,676	(26)	2,873
Petroleum coke	M tons		1,619	12,444	1,619	1,522	4,987
Other finished petroleum products	M bbls	375	4,571	34,305	4,196	n.a.	[24] 53,067
Unfinished oils [27]	do	59,533	44,710	106,045	−14,823	31,714	38,878

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947			1939	
		Shipments and interplant transfers		Production	Production [28]	
		Quantity	Value f.o.b. plant	Quantity	Quantity	Value f.o.b. plant
Coke-oven products, total			$1,039,980			$345,031
Coke, screenings, and breeze, total	M tons	76,175	796,304	79,146	47,733	220,217
Coke (except screenings and breeze)	do	72,014	782,147	73,141	44,327	212,884
From beehive ovens	do	6,712	69,697	6,690	1,445	6,426
From byproduct ovens	do	65,302	712,450	66,451	42,882	206,458
Screenings and breeze	do	4,161	14,157	6,005	3,406	7,333
From beehive ovens	do	88	224	93	52	62
From byproduct ovens	do	4,073	13,933	5,912	3,354	7,271
Coke-oven gas	Mil. cu. ft	564,689	115,059	976,363	675,143	[29] 71,876
Other coke-oven products, total			128,617			52,938
Ammonia (sulfate and liquor) [30]			29,729			14,635
Crude tar	M gals	548,798	40,985	736,014	554,406	[31] 16,587
Tar derivatives			15,756			3,219
Crude light oil	M gals	30,296	2,884	253,902	170,963	[32] 728
Light oil derivatives	do	210,498	34,235	211,903	139,805	[33] 16,306
Naphthalene	M lbs	104,730	3,184	104,694	48,460	[34] 728
Pyridine (crude and refined)			809			735
Other coke-oven products [35]			1,035			

PRODUCT	Unit of measure	1947		1939	
		Shipments and interplant transfers		Production	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Paving mixtures and blocks, total [36]			$56,276		[36] $32,754
Liquid asphalt and tar paving materials, total	M bbls	3,744	15,612	n.a.	n.a.
Emulsified asphalt	do	2,106	7,841	n.a.	n.a.
Other liquid asphalt and tar paving materials	do	1,638	7,771	n.a.	n.a.
Asphalt and tar paving mixtures and blocks			40,664		n.a.
Roofing felts and coatings, total			331,438		99,733
Asphalt roofing:					
Smooth-surfaced roll roofing (including sanded, talc, mica, and other fine-material surfacing)	M sales sq	22,482	31,817	17,395	15,171
Mineral-surfaced roll roofing	do	16,357	31,781	9,646	13,144
Strip shingles	do	28,569	120,665	10,210	33,547
Individual shingles	do	4,053	14,346	1,701	5,427
Asphalt sidings:					
Roll form	do	3,903	10,200	n.a.	2,450
Shingle form	do	413	1,100	n.a.	
Insulated brick siding	do	3,686	32,014	n.a.	3,939
Saturated felts:					
Asphalt	Tons	354,291	25,333	327,018	10,334
Tar	do	103,579	6,795	67,498	2,412
Roof coatings, cements, and pitches:					
Solid asphalt roof cement	do	182,405	4,403	148,526	2,362
Coal-tar roofing pitch	do	110,328	2,894	77,719	1,552
Fibrous and nonfibrous roof coatings			21,593		4,612
Other asphalt and tar roofing and siding products:					
Asphalt-saturated woven fabrics (except floor coverings)	M sq. ft	42,994	1,165	n.a.	506
Asphalt board products	do	86,086	2,540	n.a.	4,277
Asphalt- and tar-saturated coatings and sheathings	Tons	37,619	3,496	n.a.	
Other asphalt and tar roofing and siding products			21,296		

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947			1939 [37]	
		Production			Production	
		Total for all purposes		Produced and used at plant for power or heat (quantity)	Quantity	Value f.o.b. plant
		Quantity	Value f.o.b. plant			
Fuel briquets and packaged fuel, total			$32,838			$7,669
Fuel briquets	M tons	3,184	30,047	23	892	5,802
Packaged fuel	do	179	2,791	1	216	1,867

PRODUCT	1947	1939
	Shipments (value f.o.b. plant)	Production (value f.o.b. plant)
Products of petroleum and coal, n.e.c. (principally calcined petroleum coke and petroleum waxes)	$14,924	n.a.

n.a.—Not available.

[1] Reporting companies were requested to classify items in the same manner as billed by the shipper, regardless of how the refinery (or blending and compounding establishment) would otherwise classify them.

[2] Represents the difference between the quantities shipped and the "Receipts."

[3] Includes alkylate, polymers (dimer, codimer, etc.), hydropolymers (hydrodimer, hydrocodimer, etc.), cumene, isopentane, isohexane, neohexane, isoheptane, iso-octane, motor benzol (benzene), and other blending agents derived from petroleum; excludes natural gasoline.

[4] Includes petroleum ether, rubber solvent, mineral spirits (petroleum spirits), Varnish Makers' and Painters' naphtha, high-solvency naphtha, benzol diluent, lacquer diluent, cleaners' naphtha, Stoddard solvent, extraction solvents, and other petroleum distillates shipped as solvents.

[5] Includes signal oil, mineral seal oil, mineral colza oil, longtime burning oil, 300° oil, mineral coach oil, and insecticide base.

[6] Includes 36,000 barrels valued at $74,000, recovered by re-refiners of used-oils (crankcase drainings).

[7] Includes jet-propulsion fuel.

[8] Represents "Distillates" except gas oils and Diesel oils.

[9] Figures for residual oils of these types are included with figures for distillate oils. The figures shown for distillate oils represent "Gas oils, including Diesel oils."

[10] Represents "Residual fuel oils" except gas oils and Diesel oils.

[11] Includes oils for lubricating purposes and such nonlubricating purposes as transformer oil, hydraulic oil, processing oil, quenching oil, and liquid rust preventives.

[12] Lubricating-oil base stocks are probably included with "Lubricating oils."

[13] Value figure for "Lubricating oils" includes "Lubricants (kind and quantity not reported)" valued at $660,000. The quantity figure for "Lubricating oils" excludes such lubricants and also other lubricating oils valued at $486,000 for which no quantity was reported.

[14] Includes light, medium neutral, heavy neutral, and residual stocks.

[15] Includes greases for aviation, automotive, industrial, and railroad uses; launching grease; and cutting, drawing, and grinding compounds and paste. Also includes paste rust-preventive compounds and thread compounds.

[16] Reported as 61,885,000 gallons.

[17] Includes flux for paving, roofing, waterproofing, mastic, and other purposes; cut-back asphalt; emulsified asphalt made in petroleum refineries; asphalt paints, japans, enamels, and lacquers; and other liquid asphaltic products except road oil and fuel oil used for heating purposes.

[18] Represents "Liquid asphaltic road oils."

[19] Includes asphalt for paving, roofing, waterproofing, mineral rubber, briquetting, mastic, pipe coating, molding composition, and other heavy asphalt products.

[20] Reported as 90,649,000 gallons.

[21] Represents amorphous paraffin of melting point not under 145° F.

[22] Includes propane, butane, propane-butane mixtures, pentane, and other liquefied refinery gases. Receipts exclude liquefied petroleum gases from natural-gasoline plants; these are shown in table 6-B under "Materials consumed."

[23] Includes propene, butene, propadiene, and butadiene sold as chemical raw materials.

[24] "Other finished petroleum products" includes still gas, "Residuum or tar," "Acid oil," and "Other refinery products."

[25] Represents residual asphaltic oil used for surface treatment of roads and highways.

[26] Reported as 18,875,000 gallons.

[27] Includes such products as cracking stock, unfinished gasoline requiring further distillation, naphtha stocks, slops, wax distillate, and other unfinished petroleum oils. Excludes lubricating-oil base stocks, natural gasoline, and cycle condensates. Although respondents were requested to report receipts in the same manner as billed by the shipper, the figures indicate that items billed as other oils by the shipper were sometimes reported as receipts of "Unfinished oils" for the refinery receiving these oils.

[28] Source: Bureau of Mines, U. S. Department of the Interior.

[29] Represents value of 433,711 million cubic feet sold.

[30] Includes ammonium sulfate from purchased anhydrous ammonia.

[31] Represents value of 344,534,000 gallons of crude tar sold; excludes value of crude tar transferred to other plants of the reporting companies for consumption.

[32] Represents value of 9,384,000 gallons of crude light oil sold.

[33] Represents value of 133,435,000 gallons of light oil derivatives sold.

[34] Represents value of 46,551,000 pounds of naphthalene sold.

[35] Includes ammonium thiocyanate, sodium phenolate, sodium prussiate, sodium cyanide, sodium carbolate, sulfur, picoline, cyanogen, phenol, and dichloropentadiene.

[36] Represents value of products of the "Paving mixtures and blocks" industry in 1939.

[37] Source: Bureau of Mines, U. S. Department of the Interior. Excludes charcoal briquets.

TABLE 6-B.—PETROLEUM PRODUCTS AND PRINCIPAL MATERIALS CONSUMED BY STATES: 1947

[Money figures in thousands of dollars]

PRODUCT OR MATERIAL	Unit of measure	United States			Northeast								
					New Jersey			Pennsylvania			Other Northeast		
		Receipts (quantity)	Shipments and interplant transfers		Receipts (quantity)	Shipments and interplant transfers		Receipts (quantity)	Shipments and interplant transfers		Receipts (quantity)	Shipments and interplant transfers	
			Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant
Petroleum products, total				$6,745,717			$550,180			$620,415			$233,199
Gasoline, total	M bbls	54,296	845,621	3,136,709	6,905	38,793	158,667	1,889	64,423	245,659	4,430	16,810	66,361
Aviation gasoline	do	3,271	29,967	143,964	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Automotive gasoline	do	35,898	790,825	2,907,212	4,950	36,901	149,157	927	62,714	238,240	3,985	16,086	63,260
Other finished gasolines	do	15,127	24,829	85,533	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Naphtha solvents	do	1,872	18,120	71,524	(d)	(d)	(d)	95	1,421	6,181	(d)	(d)	(d)
Kerosene	do	6,317	114,450	342,997	1,138	7,243	22,974	46	7,233	22,793	1,510	4,575	14,995
Distillate fuel oil, total	do	24,670	341,907	918,291	4,517	29,154	82,167	1,059	27,270	74,446	5,349	13,254	37,802
Grade No. 1	do	1,852	47,050	140,865		(d)	(d)	135	925	3,153			
Grades No. 2, 3, and 4	do	17,958	218,867	572,837	2,287	(d)	(d)	906	24,048	64,796	(d)	12,580	35,795
Diesel-type fuel oil (light)	do	3,693	58,013	156,152	2,230	(d)	(d)	18	2,297	6,497	(d)	674	2,007
Other distillate fuel oils	do	1,167	17,977	48,437		(d)	(d)				(d)		
Residual fuel oil, total	do	42,323	488,069	899,581	12,130	43,342	94,862	1,135	28,467	61,662	7,332	21,299	45,732
Grade No. 5	do	1,506	55,464	115,853	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Grade No. 6	do	36,531	387,862	698,552	(d)	(d)	(d)	737	21,653	46,454	(d)	19,726	41,557
Diesel-type fuel oil (heavy)	do	609	7,046	16,163	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Other residual fuel oils	do	3,677	37,697	69,013	(d)	(d)	(d)	(d)	(d)	(d)			
Lubricating oils, total	do	n.a.	58,230	664,347	n.a.	(d)	(d)	n.a.	(d)	(d)	n.a.	(d)	(d)
Petroleum refining industry	do	6,806	51,045	545,922	(d)	6,448	78,032	1,760	10,383	117,135	470	1,777	25,228
Lubricants, n.e.c., industry	do	1,798	6,898	110,909	(d)	1,956	29,600	(d)	1,029	16,572	59	105	2,717
Other manufacturing industries	do	n.a.	287	7,516	n.a.	(d)	(d)	n.a.	(d)	(d)	n.a.	(d)	(d)
Lubricating-oil base stocks, total	do	11,971	12,342	108,621	2,587	1,428	13,443	1,930	(d)	(d)	(d)	(d)	(d)
Petroleum refining industry	do	5,434	12,264	107,309	1,324	1,428	13,443	858	1,100	14,453	(d)	(d)	(d)
Lubricants, n.e.c., industry	do	6,537	78	1,312	1,263			1,072	(d)	(d)	119	(d)	(d)
Lubricating greases, total	M lbs	n.a.	1,198,254	93,697	n.a.	89,278	6,632	n.a.	179,894	17,092	n.a.	(d)	(d)
Petroleum refining industry	do	58,491	686,563	49,436	1,627	36,525	2,550	15,468	61,536	4,536	(d)	(d)	(d)
Lubricants, n.e.c., industry	do	20,639	506,204	43,462	4,452	52,753	4,082	2,843	118,358	12,556	2,865	25,247	1,897
Other manufacturing industries	do	n.a.	5,487	799	n.a.			n.a.			n.a.		
Asphalt, total				130,344			(d)			(d)			10,373
200 penetration and over	M bbls	963	24,782	61,646	(d)	(d)	(d)		(d)	(d)	(d)	690	2,320
Less than 200 penetration	M tons	62	5,464	68,698	(d)	(d)	(d)		(d)	(d)	(d)	528	8,053
Petroleum waxes, total	M lbs	73,832	1,233,458	76,005	(d)	(d)	(d)	8,341	255,682	15,922	1,469	(d)	(d)
Microcrystalline	do	1,615	96,216	10,363				5,579	43,274	2,701		(d)	(d)
Refined and semirefined crystalline	do	23,728	690,159	43,158	(d)	(d)	(d)		84,199	5,774	(d)	(d)	(d)
Crude-scale crystalline	do	48,489	447,083	22,484		(d)	(d)	2,762	128,209	7,447	(d)	(d)	(d)
Liquefied gases, total	M bbls	7,354	22,496	110,487	33	1,299	3,085		(d)	(d)		(d)	(d)
For direct automotive use	do		162	410									
Chemical raw material	do		9,549	83,007					(d)	(d)			
Other liquefied gases	do		12,785	27,070		1,299	3,085		(d)	(d)		(d)	(d)
Other finished petroleum products:													
Still gas	Mil. cu. ft.	4	26,416	9,245		(d)	(d)		(d)	(d)		(d)	(d)
Road oil	M bbls	85	9,053	19,131		(d)	(d)		(d)	(d)	(d)	(d)	(d)
Petrolatum	M lbs	120,618	455,294	11,944	(d)	(d)	(d)	71,685	177,584	7,332	(d)	(d)	(d)
Petroleum coke	M tons		1,619	12,444		(d)	(d)		(d)	(d)			
Other finished petroleum products	M bbls	375	4,571	34,305	(d)	(d)	(d)	316	711	10,890	(d)	(d)	(d)
Unfinished oils	do	59,533	44,710	106,045	(d)	(d)	(d)	2,456	461	2,455	(d)	(d)	(d)
			Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]
MATERIALS CONSUMED													
Crude petroleum (domestic and foreign) [3]	M bbls		1,884,052			110,325			148,740			46,790	
Domestic only	do		1,786,082	$3,833,743		76,109	$195,387		111,299	$286,962		29,767	$80,079
Cycle condensate [4]	do		9,845						(d)			(d)	
Natural gasoline [5]	do		48,051			443			479				
Benzol (100 % C_6H_6)	do		127			1			24				
Liquefied petroleum gases [6]	do		7,786						(d)				
Additives for making lubricants, total [7]	do		1,270			100			227			105	
Petroleum refining industry	do		733			42			92			(d)	
Lubricants, n.e.c., industry	do		537			58			135			(d)	
Crankcase drainings and other used oils for re-refining or reclaiming	do		[8] 1,235			270			244			(d)	
Phenol (100 % C_6H_5OH)	M lbs		7,893			(d)			2,176				
Sodium hydroxide (100% NaOH)	M tons		149			3			11			1	
Sulfuric acid (100% H_2SO_4):													
Purchased or transferred from other plants of same company	do		947			57			53			3	
Made and consumed in same plant	do		233			(d)			(d)				
Reclaimed and reused	do		345						(d)				
FUELS CONSUMED													
Purchased:													
Bituminous coal	M tons		1,766	8,870		(d)	(d)		516	2,414		133	860
Anthracite	do		6	50			2		4	27			3
Fuel oils	M bbls		1,631	3,395		529	1,160		129	401		95	215
Gas	Mil. cu. ft.		408,286	34,559		2	2		618	244		19	10
Other fuels				640						25			
Made and consumed in same plant:													
Residual fuels	M bbls		40,330	77,118		6,145	12,566		6,027	13,428		2,555	5,743
Still gas	Mil. cu. ft.		322,493	95,580		11,259	5,944		22,096	12,195		3,303	2,422
Other (acid sludge, etc.)	M bbls		8,282	8,510		630	1,187		307	659		192	429

See footnotes at end of table.

TABLE 6-B.—PETROLEUM PRODUCTS AND PRINCIPAL MATERIALS CONSUMED BY STATES: 1947—Continued

PRODUCT OR MATERIAL	Unit of measure	East North Central											
		Ohio			Indiana			Illinois			Michigan and Wisconsin		
		Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant	Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant	Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant	Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant
Petroleum products, total				$262,944			$339,018			$421,340			$130,652
Gasoline, total	M bbls	1,063	34,653	141,363	1,331	44,902	188,514	4,157	61,597	244,394	1,802	11,648	48,863
Aviation gasoline	do	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	9,964	42,771
Automotive gasoline	do	613	34,267	139,406	(d)	(d)	(d)	(d)	(d)	(d)	(d)	1,684	6,092
Other finished gasoline	do	(d)	(d)	(d)	(d)	(d)	(d)		(d)	(d)	(d)	764	2,898
Naphtha solvents	do	(d)	769	3,356		(d)	(d)		(d)	(d)	(d)	3,125	11,720
Kerosene	do	66	2,696	10,067	(d)	7,234	25,164	546	5,855	19,871	(d)		
Distillate fuel oil, total	do	302	9,470	30,884	41	11,831	38,153	1,184	17,717	52,875	1,448	7,773	26,610
Grade No. 1	do		2,711	9,333	(d)	3,154	10,699	(d)	4,731	14,790	(d)	3,053	10,779
Grades No. 2, 3, and 4	do	302	5,037	16,045	(d)	7,730	24,629	(d)	10,406	30,530	(d)	2,960	10,224
Diesel-type fuel oil (light)	do		1,722	5,506		947	2,825	(d)	2,223	6,437	(d)	1,760	5,607
Other distillate fuel oils	do							(d)	357	1,118	(d)		
Residual fuel oil, total	do	(d)	13,371	37,849		15,055	35,090	7	13,196	29,771	938	8,983	25,522
Grade No. 5	do		(d)	(d)		(d)	(d)		(d)	(d)	533	4,106	12,137
Grade No. 6	do	(d)	11,186	31,156		10,075	25,557	(d)	9,294	20,983	(d)	4,804	13,138
Diesel-type fuel oil (heavy)	do		(d)	(d)		(d)	(d)		(d)	(d)			
Other residual fuel oils	do		(d)	(d)		(d)	(d)	(d)	(d)	(d)	(d)	73	247
Lubricating oils, total	do	n.a.	1,431	18,091	n.a.	1,984	19,503	n.a.	(d)	(d)	n.a.	397	7,711
Petroleum refining industry	do	(d)	(d)	(d)	(d)	(d)	(d)	429	2,610	35,618	(d)	21	409
Lubricants, n.e.c., industry	do	88	957	15,304	(d)	(d)	(d)	359	751	10,544	40	340	6,484
Other manufacturing industries	do	n.a.	(d)	(d)	n.a.			n.a.	(d)	(d)	n.a.	36	818
Lubricating-oil base stocks, total	do	(d)	(d)	(d)	357	(d)	(d)	673	(d)	(d)	381		
Petroleum refining industry	do	(d)	(d)	(d)	(d)	(d)	(d)	254	(d)	(d)			
Lubricants, n.e.c., industry	do	1,322	13	193	(d)			419	(d)	(d)	381		
Lubricating greases, total	M lbs	n.a.	(d)	(d)	n.a.	80,563	6,932	n.a.	(d)	(d)	n.a.	32,229	2,971
Petroleum refining industry	do		(d)	(d)		(d)	(d)	(d)	(d)	(d)		(d)	(d)
Lubricants, n.e.c., industry	do	3,181	83,203	5,518	919	(d)	(d)	1,186	24,092	2,554	1,404	30,744	2,895
Other manufacturing industries	do	n.a.			n.a.			n.a.			n.a.	(d)	(d)
Asphalt, total				7,687			(d)			10,913			(d)
200 penetration and over	M bbls	176	1,623	4,446	(d)	(d)	(d)		3,168	7,047	(d)	643	1,850
Less than 200 penetration	M tons	(d)	182	3,241		(d)	(d)		367	3,866		(d)	(d)
Petroleum waxes, total	M lbs		(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Microcrystalline	do				(d)	(d)	(d)				(d)	(d)	(d)
Refined and semirefined crystalline	do				(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Crude-scale crystalline	do		(d)	(d)	(d)	(d)	(d)		(d)	(d)	(d)	(d)	(d)
Liquefied gases, total	M bbls	(d)	(d)	(d)		158	339	(d)	(d)	(d)		(d)	(d)
For direct automotive use	do								(d)	(d)			
Chemical raw material	do		(d)	(d)									
Other liquefied gases	do		(d)	(d)		158	339		(d)	(d)		(d)	(d)
Other finished petroleum products:													
Still gas	Mil.cu.ft	4	4,072	1,744		5,368	2,402		(d)	(d)		(d)	(d)
Road oil	M bbls		(d)	(d)	(d)	(d)	(d)	(d)	1,431	3,019		(d)	(d)
Petrolatum	M lbs				(d)	(d)	(d)		(d)	(d)		(d)	(d)
Petroleum coke	M tons		(d)	(d)		(d)	(d)		319	1,483		(d)	(d)
Other finished petroleum products	M bbls	(d)	(d)	(d)	(d)	187	2,393		(d)	(d)			
Unfinished oils	do	326	(d)	(d)		(d)	(d)	(d)	(d)	(d)		(d)	(d)
MATERIALS CONSUMED			Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]
Crude petroleum (domestic and foreign) [3]	M bbls		71,890			96,095			110,735			30,067	
Domestic only	do		71,890	$176,379		96,095	$219,320		110,735	$249,113		30,067	$73,275
Cycle condensate [4]	do					(d)			(d)				
Natural gasoline [5]	do		59			1,474			2,817			153	
Benzol (100 % C_6H_6)	do		1			(d)			(d)			(d)	
Liquefied petroleum gases [6]	do					(d)			(d)			(d)	
Additives for making lubricants, total [7]	do		102			55			95			33	
Petroleum refining industry	do		1			50			30				
Lubricants, n.e.c., industry	do		101			5			65			33	
Crankcase drainings and other used oils for re-refining or reclaiming	do		8			(d)			99			24	
Phenol (100 % C_6H_5OH)	M lbs		(d)			(d)			(d)				
Sodium hydroxide (100 % NaOH)	M tons		1			9			8			2	
Sulfuric acid (100 % H_2SO_4):													
Purchased or transferred from other plants of same company	do		(d)			24			44				
Made and consumed in same plant	do					(d)			(d)				
Reclaimed and reused	do					(d)			(d)				
FUELS CONSUMED													
Purchased:													
Bituminous coal	M tons		136	717		(d)	(d)		453	1,014		2	18
Anthracite	do		2	16									1
Fuel oils	M bbls		62	139		2	5		104	241		8	26
Gas	Mil.cu.ft		23	14		1,324	274		36	17		21	11
Other fuels				7									
Made and consumed in same plant:													
Residual fuels	M bbls		2,349	5,269		3,892	8,505		3,744	5,172		1,016	2,748
Still gas	Mil.cu.ft		14,519	8,307		15,172	7,682		24,986	9,628		2,979	1,594
Other (acid sludge, etc.)	M bbls		245	458		402	659		821	790			

See footnotes at end of table.

TABLE 6-B.—PETROLEUM PRODUCTS AND PRINCIPAL MATERIALS CONSUMED BY STATES: 1947—Continued

PRODUCT OR MATERIAL	Unit of measure	West North Central			South Atlantic			East South Central		
		Receipts (quantity)	Shipments and interplant transfers		Receipts (quantity)	Shipments and interplant transfers		Receipts (quantity)	Shipments and interplant transfers	
			Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant
Petroleum products, total				$263,554			$134,050			$80,232
Gasoline, total	M bbls	267	38,106	136,949	1,144	10,432	41,136	1,317	11,116	42,582
Aviation gasoline	do	(d)	(d)	(d)	(d)	(d)	(d)			
Automotive gasoline	do	49	35,899	129,103	(d)	(d)	(d)	1,078	11,116	42,582
Other finished gasoline	do	(d)	(d)	(d)	(d)	(d)	(d)	239		
Naphtha solvents	do	3	460	1,706	(d)	301	1,086	(d)	(d)	(d)
Kerosene	do	(d)	4,538	14,407	(d)	1,412	4,524	241	1,701	5,521
Distillate fuel oil, total	do	138	15,501	43,552	476	5,608	15,742	358	2,973	9,165
Grade No. 1	do		5,910	16,889					(d)	(d)
Grades No. 2, 3, and 4	do	103	4,214	11,937	(d)	(d)	(d)	155	1,490	4,593
Diesel-type fuel oil (light)	do	1	3,503	9,867	(d)	(d)	(d)	203	654	2,038
Other distillate fuel oils	do	34	1,874	4,859	(d)	(d)	(d)		(d)	(d)
Residual fuel oil, total	do	42	12,283	22,930	6,816	14,556	30,295	(d)	5,645	12,828
Grade No. 5	do		496	1,144		(d)	(d)		(d)	(d)
Grade No. 6	do	(d)	8,823	16,378	6,816	(d)	(d)	(d)	4,905	10,720
Diesel-type fuel oil (heavy)	do									
Other residual fuel oils	do	(d)	2,964	5,408		(d)	(d)		(d)	(d)
Lubricating oils, total	do	n.a.	(d)	(d)	n.a.	960	13,723	n.a.	(d)	(d)
Petroleum refining industry	do	73	541	7,852	(d)	912	12,936	(d)	(d)	(d)
Lubricants, n.e.c., industry	do	29	548	9,185					(d)	(d)
Other manufacturing industries	do	n.a.	(d)	(d)	n.a.	48	787	n.a.		
Lubricating-oil base stocks, total	do	1,013	(d)	(d)	37	(d)	(d)	7	(d)	(d)
Petroleum refining industry	do	242	(d)	(d)		(d)	(d)	(d)	(d)	(d)
Lubricants, n.e.c., industry	do	771	32	547	37			(d)		2
Lubricating greases, total	M lbs	n.a.	86,588	7,283	n.a.	(d)	(d)	n.a.	(d)	(d)
Petroleum refining industry	do	3,755	9,084	813		(d)	(d)		(d)	(d)
Lubricants, n.e.c., industry	do	1,405	77,504	6,470	2,450	(d)	(d)	(d)	(d)	(d)
Other manufacturing industries	do	n.a.			n.a.			n.a.		
Asphalt, total				6,647			(d)			(d)
200 penetration and over	M bbls		1,584	3,446	44	2,490	7,480	(d)	1,329	3,743
Less than 200 penetration	M tons	(d)	226	3,201	(d)	(d)	(d)	(d)	(d)	(d)
Petroleum waxes, total	M lbs		24,191	1,776	(d)	(d)	(d)		(d)	(d)
Microcrystalline	do		(d)	(d)						
Refined and semirefined crystalline	do		(d)	(d)	(d)	(d)	(d)		(d)	(d)
Crude-scale crystalline	do		(d)	(d)	(d)	(d)	(d)			
Liquefied gases, total	M bbls		(d)	(d)	(d)	(d)	(d)		(d)	(d)
For direct automotive use	do									
Chemical raw material	do					(d)	(d)			
Other liquefied gases	do		(d)	(d)		(d)	(d)		(d)	(d)
Other finished petroleum products:										
Still gas	Mil.cu.ft.					(d)	(d)			
Road oil	M bbls		716	1,503	(d)	(d)	(d)			
Petroleum	M lbs		(d)	(d)	(d)	(d)	(d)			
Petroleum coke	M tons		(d)	(d)		(d)	(d)		(d)	(d)
Other finished petroleum products	M bbls		(d)	(d)	(d)	(d)	(d)		(d)	(d)
Unfinished oils	do	(d)		1	2,289	153	558		(d)	(d)
MATERIALS CONSUMED			Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]
Crude petroleum (domestic and foreign) [3]	M bbls		79,723			28,648			23,455	
Domestic only	do		79,723	$169,592		19,889	$53,624		23,455	$52,524
Cycle condensate [4]	do		(d)							
Natural gasoline [5]	do		1,731			189			667	
Benzol (100% C_6H_6)	do		(d)			(d)				
Liquefied petroleum gases [6]	do		(d)							
Additives for making lubricants, total [7]	do		43			24				
Petroleum refining industry	do		5			(d)				
Lubricants, n.e.c., industry	do		38			(d)				
Crankcase drainings and other used oils for refining or reclaiming	do		29			12				
Phenol (100% C_6H_5OH)	M lbs									
Sodium hydroxide (100% NaOH)	M tons		3			3			(d)	
Sulfuric acid (100% H_2SO_4):										
Purchased or transferred from other plants of same company	do		33			(d)			(d)	
Made and consumed in same plant	do									
Reclaimed and reused	do									
FUELS CONSUMED										
Purchased:										
Bituminous coal	M tons		3	21		36	171		40	206
Anthracite	do			1						
Fuel oils	M bbls		74	217		3	7		(d)	(d)
Gas	Mil.cu.ft.		11,839	1,699		1,644	346		1,470	344
Other fuels				9						38
Made and consumed in same plant:										
Residual fuels	M bbls		2,007	3,638		717	1,588		509	1,070
Still gas	Mil.cu.ft.		12,884	4,235		4,055	2,369		3,355	1,353
Other (acid sludge, etc.)	M bbls		633	776		(d)	(d)			

See footnotes at end of table.

TABLE 6-B.—PETROLEUM PRODUCTS AND PRINCIPAL MATERIALS CONSUMED BY STATES: 1947—Continued

PRODUCT OR MATERIAL	Unit of measure	West South Central											
		Arkansas			Louisiana			Oklahoma			Texas		
		Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant	Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant	Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant	Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant
Petroleum products, total				$52,352			$475,333			$280,117			$1,753,536
Gasoline, total	M bbls	(1)	(1)	(1)	[1] 2,592	[1] 67,009	[1] 242,081	566	37,797	120,753	17,456	254,901	896,585
Aviation gasoline	do	(d)				(d)	(d)	1	(d)	(d)	871	14,236	62,081
Automotive gasoline	do	(d)	(d)	(d)	570	(d)	(d)	565	35,228	120,573	13,151	232,022	805,234
Other finished gasoline	do	(d)	698	2,073	1,606	(d)	(d)		(d)	(d)	3,434	8,643	29,270
Naphtha solvents	do	40	(d)	(d)	(d)	(d)	(d)	(d)	777	2,829	39	5,828	23,538
Kerosene	do	(d)	(d)	(d)	25	17,868	49,816	(d)	5,039	14,556	1,022	39,936	108,136
Distillate fuel oil, total	do	(d)	2,486	6,728	746	27,861	66,196	15	9,643	26,096	2,280	97,055	236,938
Grade No. 1	do		1,375	3,829		(d)	(d)		3,953	10,298	(d)	2,182	6,076
Grades No. 2, 3, and 4	do				668	17,144	40,199	1	2,430	6,645	1,330	69,328	165,700
Diesel-type fuel oil (light)	do		787	2,197	78	(d)	(d)	14	2,684	7,555	435	19,372	49,834
Other distillate fuel oils	do	(d)	324	702		(d)	(d)		576	1,598	(d)	6,173	15,328
Residual fuel oil, total	do		3,576	5,966	698	25,558	41,740	332	11,405	20,407	2,160	114,330	196,256
Grade No. 5	do		(d)	(d)		(d)	(d)		(d)	(d)	129	9,358	20,074
Grade No. 6	do		(d)	(d)	697	(d)	(d)	(d)	7,366	12,633	2,009	92,745	154,184
Diesel-type fuel oil (heavy)	do		(d)	(d)		(d)	(d)		501	1,067	22	1,566	3,192
Other residual fuel oils	do		(d)	(d)	1	(d)	(d)	(d)	(d)	(d)		10,661	18,806
Lubricating oils, total	do	n.a.	(d)	(d)	n.a.	3,571	35,958	n.a.	2,545	33,760	n.a.	(d)	(d)
Petroleum refining industry	do	(d)	1,162	7,541	(d)	(d)	(d)	(d)	2,387	32,194	735	13,133	123,661
Lubricants, n.e.c., industry	do		(d)	(d)	(d)	(d)	(d)	(d)	158	1,566	(d)	36	662
Other manufacturing industries	do	n.a.			n.a.			n.a.			n.a.	(d)	(d)
Lubricating-oil base stocks, total	do	(d)	(d)	(d)	541	(d)	(d)	424	3,043	31,185	935	(d)	(d)
Petroleum refining industry	do		(d)	(d)	68	(d)	(d)	326	3,043	31,185	907	(d)	(d)
Lubricants, n.e.c., industry	do	(d)			473			98			28		
Lubricating greases, total	M lbs	n.a.	(d)	(d)	n.a.	71,792	5,508	n.a.	(d)	(d)	n.a.	(d)	(d)
Petroleum refining industry	do	(d)	(d)	(d)	1,064	71,792	5,508	120	26,783	2,094	20,794	268,727	19,637
Lubricants, n.e.c., industry	do							(d)	(d)	(d)		1,899	166
Other manufacturing industries	do	n.a.			n.a.			n.a.			n.a.	(d)	(d)
Asphalt, total				4,469			8,983			(d)			10,869
200 penetration and over	M bbls		1,115	2,404	(d)	1,143	3,646	(d)	351	953	3	2,032	4,720
Less than 200 penetration	M tons	(d)	167	2,065	(d)	405	5,337		(d)	(d)		592	6,149
Petroleum waxes, total	M lbs				(d)	(d)	(d)	(d)	119,864	9,917	(d)	174,423	11,658
Microcrystalline	do								(d)	(d)		(d)	(d)
Refined and semirefined crystalline	do				(d)	(d)	(d)	(d)	(d)	(d)	(d)	140,863	8,361
Crude-scale crystalline	do					(d)	(d)		(d)	(d)		(d)	(d)
Liquefied gases, total	M bbls	(d)	(d)	(d)	977	5,563	28,235		288	470	4,746	7,542	52,262
For direct automotive use	do												
Chemical raw material	do		(d)	(d)		(d)	(d)					5,481	48,002
Other liquefied gases	do		(d)	(d)		(d)	(d)		288	470		2,061	4,260
Other finished petroleum products:													
Still gas	Mil. cu. ft					(d)	(d)					9,440	483
Road oil	M bbls		16	27					534	1,208		502	1,155
Petrolatum	M lbs					(d)	(d)	(d)	136,447	2,139	(d)	62,522	1,333
Petroleum coke	M tons		(d)	(d)		(d)	(d)		(d)	(d)		(d)	(d)
Other finished petroleum products	M bbls		(d)	(d)		(d)	(d)		227	833	7	200	1,953
Unfinished oils	do	(d)	(d)	(d)	(d)	(d)	(d)	1,242	516	1,413	(d)	(d)	(d)
MATERIALS CONSUMED			Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]
Crude petroleum (domestic and foreign) [3]	M bbls		16,231			145,262			76,142			524,822	
Domestic only	do		16,231	$29,414		145,262	$309,196		76,142	$154,454		524,291	$1,118,191
Cycle condensate [4]	do					(d)			(d)			4,962	
Natural gasoline [5]	do		(d)			2,290			3,571			17,035	
Benzol (100 % C_6H_6)	do								1			(d)	
Liquefied petroleum gases [6]	do					869			(d)			3,823	
Additives for making lubricants, total [7]	do		17			36			52			155	
Petroleum refining industry	do		(d)			16			48			153	
Lubricants, n.e.c., industry	do		(d)			20			4			2	
Crankcase drainings and other used oils for re-refining or reclaiming	do		(d)			(d)			(d)			(d)	
Phenol (100 % C_6H_5OH)	M lbs					(d)			445			1,011	
Sodium hydroxide (100 % NaOH)	M tons		1			11			15			49	
Sulfuric acid (100 % H_2SO_4):													
Purchased or transferred from other plants of same company	do		5			(d)			47			313	
Made and consumed in same plant	do					(d)						(d)	
Reclaimed and reused	do					(d)			(d)			51	
FUELS CONSUMED													
Purchased:													
Bituminous coal	M tons									1			
Anthracite	do								1	3		16	28
Fuel oils	M bbls		(d)	(d)					28,408	2,895		234,134	14,283
Gas	Mil. cu. ft		8,271	680		49,569	3,678			5			139
Other fuels													
Made and consumed in same plant:													
Residual fuels	M bbls		14	15		248	383		1,177	1,683		874	1,506
Still gas	Mil. cu. ft		1,193	125		29,993	2,848		11,431	2,449		107,702	18,823
Other (acid sludge, etc.)	M bbls		(d)	(d)		(d)	(d)		408	321		2,138	801

See footnotes at end of table.

TABLE 6-B.—PETROLEUM PRODUCTS AND PRINCIPAL MATERIALS CONSUMED BY STATES: 1947—Continued

PRODUCT OR MATERIAL	Unit of measure	West											
		Montana			Wyoming			California			Other West		
		Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant	Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant	Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant	Receipts (quantity)	Shipments and interplant transfers: Quantity	Shipments and interplant transfers: Value f.o.b. plant
Petroleum products, total				$30,713			$72,260			$975,287			$70,535
Gasoline, total	M bbls	52	4,134	16,165	60	10,009	39,871	8,996	127,511	451,115	269	11,180	46,651
Aviation gasoline	do				(d)	(d)	(d)	105	6,787	36,240		(d)	(d)
Automotive gasoline	do	52	(d)	(d)	(d)	9,633	38,164	4,745	114,962	397,454	163	11,002	45,869
Other finished gasoline	do		(d)	(d)	49	(d)	(d)	4,146	5,762	17,421	106	(d)	(d)
Naphtha solvents	do		(d)	(d)		(d)	(d)	161	2,267	7,594	(d)	(d)	(d)
Kerosene	do		(d)	(d)		461	1,480	537	3,533	10,838	4	286	1,008
Distillate fuel oil, total	do	(d)	1,760	5,100		3,476	10,856	6,600	55,223	143,017	134	3,852	11,964
Grade No. 1	do		(d)	(d)		1,184	3,773	1,190	15,987	44,602	(d)	832	3,064
Grades No. 2, 3, and 4	do	1	326	965		810	2,696	4,212	32,696	80,677		886	2,625
Diesel-type fuel oil (light)	do	(d)	880	2,393		1,344	3,967	957	3,625	9,376	(d)	2,134	6,275
Other distillate fuel oils	do	(d)	(d)	(d)		138	420	241	2,915	8,362	(d)		
Residual fuel oil, total	do	309	4,439	6,809	(d)	5,857	9,319	10,168	143,138	215,587		3,569	6,956
Grade No. 5	do	(d)	(d)	(d)		785	1,203	60	17,800	28,479		190	459
Grade No. 6	do	(d)	(d)	(d)	(d)	3,735	5,891	8,063	112,292	166,028		2,967	5,645
Diesel-type fuel oil (heavy)	do		(d)	(d)		1,337	2,225	2,045	13,046	21,080		412	852
Other residual fuel oils	do												
Lubricating oils, total	do	n.a.	(d)	(d)	n.a.	(d)	(d)	n.a.	(d)	(d)	n.a.	(d)	(d)
Petroleum refining industry	do	(d)	(d)	(d)	6	(d)	(d)	445	5,576	50,078		61	523
Lubricants, n.e.c., industry	do							73	398	6,280		(d)	(d)
Other manufacturing industries	do	n.a.			n.a.			n.a.	(d)	(d)	n.a.		
Lubricating-oil base stocks, total	do				(d)			1,121	(d)	(d)	180		
Petroleum refining industry	do				(d)			670	(d)	(d)	(d)		
Lubricants, n.e.c., industry	do							451	(d)	(d)	(d)		
Lubricating greases, total	M lbs	n.a.	(d)	(d)	n.a.	(d)	(d)	n.a.	119,192	6,790	n.a.	822	55
Petroleum refining industry	do		(d)	(d)	200	(d)	(d)	7,053	87,840	4,397		(d)	(d)
Lubricants, n.e.c., industry	do		(d)	(d)				380	31,328	2,392	(d)	(d)	(d)
Other manufacturing industries	do	n.a.			n.a.			n.a.	24	1	n.a.		
Asphalt, total				(d)			2,524			15,978			(d)
200 penetration and over	M bbls		(d)	(d)	(d)	950	1,907	187	4,063	7,709	(d)	(d)	(d)
Less than 200 penetration	M tons	(d)	(d)	(d)		46	617	7	784	8,269		(d)	(d)
Petroleum waxes, total	M lbs		(d)	(d)		(d)	(d)	(d)	(d)	(d)		(d)	(d)
Microcrystalline	do		(d)	(d)		(d)	(d)		(d)	(d)			
Refined and semirefined crystalline	do					(d)	(d)	(d)	(d)	(d)			
Crude-scale crystalline	do											(d)	(d)
Liquefied gases, total	M bbls					(d)	(d)	1,202	4,278	18,538	(d)	49	125
For direct automotive use	do								(d)	(d)		(d)	(d)
Chemical raw material	do								(d)	(d)			
Other liquefied gases	do					(d)	(d)		(d)	(d)		(d)	(d)
Other finished petroleum products:													
Still gas	Mil. cu. ft.												
Road oil	M bbls		(d)	(d)	(d)	1,190	2,314	(d)	3,174	5,917		(d)	(d)
Petrolatum	M lbs					(d)	(d)	(d)	(d)	(d)			
Petroleum coke	M tons					(d)	(d)		343	3,613		(d)	(d)
Other finished petroleum products	M bbls		(d)	(d)				(d)	1,330	10,210		(d)	(d)
Unfinished oils	do							23,025	12,577	26,852	(d)	(d)	(d)
			Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]		Quantity consumed	Cost or value [2]
MATERIALS CONSUMED													
Crude petroleum (domestic and foreign) [3]	M bbls		11 298			25,221			317,080			21,528	
Domestic only	do		11,298	$21,397		25,221	$46,148		317,080	$554,746		21,528	$43,942
Cycle condensate [4]	do					(d)			1,895				
Natural gasoline [5]	do		102			676			15,506			551	
Benzol (100 % C_6H_6)	do								(d)			(d)	
Liquefied petroleum gases [6]	do		(d)						2,233			(d)	
Additives for making lubricants, total [7]	do					(d)			223			(d)	
Petroleum refining industry	do					(d)			187			(d)	
Lubricants, n.e.c., industry	do								36			(d)	
Crankcase drainings and other used oils for re-refining or reclaiming	do		(d)						240			15	
Phenol (100 % C_6H_5OH)	M lbs								(d)				
Sodium hydroxide (100 % NaOH)	M tons								33			(d)	
Sulfuric acid (100 % H_2SO_4):													
Purchased or transferred from other plants of same company	do					4			186				
Made and consumed in same plant	do					(d)							
Reclaimed and reused	do					(d)			(d)				
FUELS CONSUMED													
Purchased:													
Bituminous coal	M tons												
Anthracite	do												
Fuel oils	M bbls					14	31		437	563		2	3
Gas	Mil. cu. ft.		1,840	214		5,865	627		62,273	9,065		930	156
Other fuels										417			
Made and consumed in same plant:													
Residual fuels	M bbls		105	135		1,107	1,662		6,688	9,871		1,156	2,136
Still gas	Mil. cu. ft.		602	179		3,659	816		49,858	13,235		3,447	1,376
Other (acid sludge, etc.)	M bbls		(d)	(d)		140	98		668	588			

n.a.—Not available.
[d] Withheld to avoid disclosing figures for individual companies.
[1] For "Gasoline, total" only, figures for Arkansas have been included with the figures for Louisiana.
[2] Represents delivered cost for domestic crude petroleum and for purchased fuels; and represents value, f.o.b. plant, for fuels made and consumed in the same plant.
[3] Excludes topped crude and other unfinished oils. These items are included under "Receipts" of petroleum products.
[4] Includes material mixed with crude petroleum.
[5] Includes drip gasoline and natural gasoline mixed with crude petroleum.
[6] Represents liquefied petroleum gases from natural-gasoline plants. Includes material mixed with crude petroleum.
[7] Includes such materials as soaps, vegetable and animal oils, and chemicals.
[8] Of this total, 1,075,000 barrels were used by plants primarily engaged in re-refining used oils.

TABLE 6-C.—COKE-OVEN PRODUCTS BY STATES: 1947

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	United States			Northeast						West North Central		
					Pennsylvania			Other Northeast					
		Shipments and interplant transfers		Production (quantity)	Shipments and interplant transfers		Production (quantity)	Shipments and interplant transfers		Production (quantity)	Shipments and interplant transfers		Production (quantity)
		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant	
Coke-oven products, total			$1,039,980			$282,274			$147,592			$19,107	
Coke, screenings and breeze, total	M tons	76,175	796,304	79,146	23,557	220,416	23,949	8,132	91,597	9,739	1,284	14,954	1,289
Coke (except screenings and breeze)	do	72,014	782,147	73,141	22,297	217,336	22,406	7,821	89,922	8,757	1,185	14,552	1,175
From beehive ovens	do	6,712	69,697	6,690	5,932	60,814	5,912						
From byproduct ovens	do	65,302	712,450	66,451	16,365	156,522	16,494	7,821	89,922	8,757	1,185	14,552	1,175
Screenings and breeze	do	4,161	14,157	6,005	1,260	3,080	1,543	311	1,675	982	99	402	114
From beehive ovens	do	88	224	93	75	158	80						
From byproduct ovens	do	4,073	13,933	5,912	1,185	2,922	1,463	311	1,675	982	99	402	114
Coke-oven gas	Mil.cu.ft.	564,689	115,059	976,363	140,269	22,601	250,020	105,019	40,849	138,963	9,649	2,894	16,929
Other coke-oven products, total			128,617			39,257			15,146			1,259	
Ammonia (sulfate and liquor)			29,729			8,350			3,412			438	
Crude tar	M gals.	548,798	40,985	736,014	89,675	5,738	220,728	82,649	5,614	98,304	9,432	691	9,409
Tar derivatives			15,756			11,815			(d)				
Crude light oil	M gals.	30,296	2,884	253,002	3,352	324	74,099	8,210	840	23,679			(d)
Light oil derivatives	do	210,498	34,235	211,903	64,580	10,268	64,719	25,833	4,205	26,571	(d)	(d)	(d)
Naphthalene	M lbs.	104,730	3,184	104,694	62,511	1,960	62,500	6,791	230	6,619			
Pyridine (crude and refined)			809			582			20			(d)	
Other coke-oven products			1,035			220			(d)			(d)	

PRODUCT	Unit of measure	East North Central											
		Ohio			Indiana			Illinois			Michigan and Wisconsin		
		Shipments and interplant transfers		Production (quantity)	Shipments and interplant transfers		Production (quantity)	Shipments and interplant transfers		Production (quantity)	Shipments and interplant transfers		Production (quantity)
		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant	
Coke-oven products, total			$132,729			$137,472			$61,064			$59,433	
Coke, screenings, and breeze, total	M tons	10,811	104,634	10,923	9,378	115,699	9,479	4,037	50,794	4,163	3,616	43,702	3,739
Coke (except screenings and breeze)	do	10,093	101,959	10,031	8,760	114,069	8,786	3,772	50,035	3,798	3,397	42,557	3,455
From beehive ovens	do												
From byproduct ovens	do	10,093	101,959	10,031	8,760	114,069	8,786	3,772	50,035	3,798	3,397	42,557	3,455
Screenings and breeze	do	718	2,675	892	618	1,630	693	265	759	365	219	1,235	284
From beehive ovens	do												
From byproduct ovens	do	718	2,675	892	618	1,630	693	265	759	365	219	1,235	284
Coke-oven gas	Mil.cu.ft.	72,942	10,798	142,663	61,604	9,508	116,383	27,925	4,247	52,978	35,010	9,183	46,039
Other coke-oven products, total			17,207			12,265			6,023			6,458	
Ammonia (sulfate and liquor)			3,707			2,818			1,415			2,018	
Crude tar	M gals.	94,574	7,637	97,570	49,195	3,845	67,204	34,785	2,672	35,154	32,375	2,514	33,172
Tar derivatives			(d)			(d)			(d)			(d)	
Crude light oil	M gals.	6,024	545	38,668	(d)	(d)	27,582	3,306	252	13,541	(d)	(d)	11,966
Light oil derivatives	do	27,147	4,493	26,948	24,815	3,961	24,721	9,094	1,532	8,647	9,758	1,535	8,916
Naphthalene	M lbs.	(d)	(d)	(d)	(d)	(d)	(d)	3,378	100	3,448			
Pyridine (crude and refined)			35			(d)			(d)			(d)	
Other coke-oven products			(d)			(d)			(d)			(d)	

TABLE 6-C.—COKE-OVEN PRODUCTS BY STATES: 1947—Continued

PRODUCT	Unit of measure	South and West											
		Virginia			West Virginia			Alabama			Other South and West		
		Shipments and interplant transfers		Production (quantity)	Shipments and interplant transfers		Production (quantity)	Shipments and interplant transfers		Production (quantity)	Shipments and interplant transfers		Production (quantity)
		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant	
Coke-oven products, total			$2,594			[2] $34,795			$83,275			[2] $79,645	
Coke, screenings, and breeze, total	M tons	220	2,594	220	[2] 3,321	[2] 23,727	[2] 3,387	6,065	67,943	6,192	[2] 5,754	[2] 60,154	[2] 6,066
Coke (except screenings and breeze)	do	217	2,567	217	3,161	23,254	3,176	5,877	66,763	5,843	5,434	59,133	5,497
From beehive ovens	do	217	2,567	217	376	4,147	377				187	2,169	184
From byproduct ovens	do				2,785	19,107	2,799	5,877	66,763	5,843	5,247	56,964	5,313
Screenings and breeze	do	3	27	3	[2] 160	[2] 473	[2] 211	188	1,180	349	[2] 320	[2] 1,021	[2] 569
From beehive ovens	do	3	27	3	[2] 10	[2] 39	[2] 10				(2)	(2)	(2)
From byproduct ovens	do				150	434	201	188	1,180	349	320	1,021	569
Coke-oven gas	Mil. cu. ft.				29,007	4,623	44,752	34,543	3,292	84,331	48,721	7,064	83,305
Other coke-oven products, total						6,445			12,040			12,427	
Ammonia (sulfate and liquor)						1,147			3,456			2,968	
Crude tar	M gals				42,437	3,396	42,581	63,805	5,316	64,845	49,871	3,562	67,047
Tar derivatives									(d)			(d)	
Crude light oil	M gals				(d)	(d)	13,224	(d)	(d)	22,864	(d)	(d)	[1] 28,279
Light oil derivatives	do				8,990	1,512	9,579	19,084	2,988	19,136	(d)	(d)	[1] 22,666
Naphthalene	M lbs				(d)	(d)	(d)	8,100	186	8,208	(d)	(d)	(d)
Pyridine (crude and refined)						26			(d)			(d)	
Other coke-oven products						(d)						(d)	

d Withheld to avoid disclosing figures for individual companies.
1 Figure for West North Central is included with the figure for Other South and West.
2 Figures for screenings and breeze from beehive ovens in Kentucky, Colorado, and Utah are included with the figures for West Virginia.

TABLE 6-D.—QUANTITY AND VALUE OF OILS REFINED ON CONTRACT AND PRINCIPAL MATERIALS CONSUMED IN THEIR PRODUCTION, TOTALS FOR THE UNITED STATES: 1947 [1]

[Money figures in thousands of dollars]

PRODUCT	Shipments	
	Thousand barrels	Value f.o.b. plant
Petroleum products, total		$115,403
Gasoline, total	15,464	55,271
Aviation gasoline		
Automotive and other gasoline	15,464	55,271
Kerosene	2,346	8,089
Distillate fuel oil, total	8,009	21,508
Grade No. 1	698	1,796
Grades No. 2, 3, and 4	7,063	18,930
Diesel-type fuel oil (light) and all other distillate fuels	248	782
Residual fuel oil, total	9,841	18,883
Grades No. 5 and 6	9,476	17,954
Diesel-type fuel oil (heavy)		
All other residual fuel oils	365	929
Other petroleum products [2]		11,652

MATERIAL CONSUMED	Thousand barrels	Cost (delivered at plant)
Crude petroleum [3]	41,705	$85,928
Unfinished oils (includes cracking stock and unfinished gasoline-base stocks)	1,158	
Other petroleum products	1,493	
Natural gasoline	125	

1 The companies processing these oils reported total receipts of $15,348,000 for such processing. Companies owning the oils reported that they paid $15,270,000 for this work.
2 Includes unfinished oils, asphalt, lubricating oils and base stocks, still gas, naphtha solvents, and other finished petroleum products.
3 The quantity figure includes foreign crude petroleum amounting to less than 5 percent of the total; the cost figure represents domestic crude only.

Major Group 30.—RUBBER PRODUCTS

This major group includes establishments manufacturing from natural or synthetic rubber, gutta percha, balata, or gutta siak, all kinds of rubber products such as tires, rubber footwear, mechanical rubber goods, and rubber sundries. This group also includes establishments manufacturing reclaimed rubber or rebuilt and retreaded rubber tires. Automobile tire repair shops engaged in the recapping and the retreading of automobile tires are classified in service industries. The manufacture of elastic webbing is classified in Major Group 22, products made of elastic webbing and garments made from rubberized fabrics in Major Group 23, and synthetic rubber in Industry 2824.

GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

CENSUS YEAR	Number of establishments	All employees [1]		Production workers		Value added by manufacture [2]
		Number (average for the year)	Wages and salaries, total	Number (average for the year)	Wages, total	
1947	875	259,092	$783,464	214,533	$614,762	$1,302,863
1939	595	149,738	226,922	120,740	161,410	406,155
1937	*478*	*149,965*	216,327	129,818	171,305	368,773
1935	466	131,526	169,415	114,681	133,715	308,848
1933	408	121,157	125,440	106,283	99,117	261,347
1931	453	n.a.	n.a.	99,259	112,596	361,398
1929	525	171,982	262,659	149,148	207,306	538,782
1927	516	168,593	258,733	141,907	198,074	564,707
1925 [3]	*530*	n.a.	n.a.	141,869	191,286	539,075
1923	529	160,054	231,047	137,868	182,084	457,355
1921	496	124,643	170,868	103,273	123,613	327,024
1919	477	206,104	278,992	158,549	193,763	543,872
1914	342	88,734	60,446	74,022	44,167	137,959
1909	*267*	*55,956*	32,978	49,264	25,137	*74,650*
1904	265	47,571	24,623	43,873	20,084	68,013
1899	301	39,071	18,576	36,566	15,427	39,040

n.a.—Not available.

[1] *The figures for 1947 and 1939 include data for employees of manufacturing establishments who were engaged in distribution and construction work.* The extent to which data for such employees are included in the figures for earlier years is not known. See GENERAL EXPLANATIONS—Manufacturing employees—Classifications used.

[2] Value of products less cost of materials, supplies, fuel, electricity, and contract work. For 1899–1933, cost of contract work was not subtracted from value of products in calculating value added by manufacture. See GENERAL EXPLANATIONS—Value added by manufacture.

[3] *The figures for 1925–47, but not for earlier years,* include data for establishments primarily engaged in manufacture of rubber cement and rubber toy balloons. Value added by manufacture for 1925, excluding data for these establishments and on a basis comparable with earlier years, was $536.6 million.

RUBBER PRODUCTS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production from natural or synthetic (chemical) rubber, balata, gutta percha or guayule of rubber products such as tires, inner tubes, coated fabrics, footwear, heels, soles, mechanical rubber goods, sponge rubber, gloves, druggists' and mechanical sundries, and other miscellaneous rubber products. It also includes establishments specializing in reclaiming rubber and rebuilding or retreading rubber tires for the trade or for wholesale. These establishments have been classified in four industries described separately below.

For census purposes, the rebuilding or retreading of rubber tires by tire repair shops is classified in the service industries rather than as a manufacturing operation. The manufacture of elastic webbing is classified in Major Group 22, Textile Mill Products; products made of elastic webbing and garments made from purchased rubberized fabrics in Major Group 23, Apparel and Other Finished Products Made From Fabrics and Similar Materials; and insulated wire and cable, in Major Group 36, Electrical Machinery, Equipment and Supplies. Establishments primarily manufacturing rubber gaskets are classified in the Steam and Other Packing Industry (3293). Establishments manufacturing synthetic (chemical) rubbers are classified in that industry (2824).

The reclaimed rubber industry classification was first established in the 1939 Census of Manufactures. Statistics for this industry were retabulated for the year 1937 from data formerly included in the industry entitled "Rubber Goods Other Than Tires, Inner Tubes, and Boots and Shoes." Table 1 shows the combined statistics for these industries for the period 1921–47.

For 1947, the value added by manufacture for these industries was partly estimated by subtracting cost of materials, fuel, electricity, and contract work from value of products calculated by multiplying the quantity of each product produced in these industries by its unit value of shipments.

Consumption data shown in table 7 are limited to the quantities of natural, chemical, and reclaimed rubber consumed by the establishments classified in the specified industries. This table does not show the total United States rubber consumption for all industries, estimates of which are prepared by the Rubber Division, United States Office of Domestic Commerce. Based on the 1947 figures released by this agency, the establishments classified in the industries shown here used approximately 93 percent of the total new rubber and about 88 percent of the total reclaimed consumed in the United States, or about 92 percent of all the rubber consumed.

Many manufacturers were unable to report by kind of rubber the quantities consumed classified by end product. Hence, in some cases, only totals by kind of rubber were furnished, and the quantities of rubber consumed classified by end products shown in table 7 therefore contain some estimates.

Tires and Inner Tubes *(Standard Industrial Classification No. 3011.)*—This industry comprises establishments primarily engaged in manufacturing pneumatic casings, inner tubes, and solid and cushion tires for all types of vehicles. Establishments primarily manufacturing solid and cushion tires and tiring of less than 2 inches, including those for lawn mowers, tricycles, baby carriages, wheel chairs, juvenile, etc., are excluded from this industry and included in Rubber Industries, n.e.c. (3099). Commodity statistics for this industry include "seconds," but factory rebuilt or retreaded tires are included in Industry 3099.

Data for truck and bus tires and inner tubes, respectively, include figures for "off-the-road" tires and inner tubes, since the quantities of these produced and shipped for use on road building machinery, logging equipment, etc. are small and the sizes are frequently the same as those used for trucks and busses.

Rubber Footwear *(Standard Industrial Classification No. 3021.)*—This industry comprises establishments primarily engaged in manufacturing all-rubber footwear, waterproof fabric-upper footwear and other fabric-upper footwear having rubber soles. Footwear products of this industry are those having soles attached by a process of vulcanization; when soles are attached by sewing, cementing, or similar process, the producing establishments are classified in the Footwear Industry (3141). Establishments primarily engaged in manufacturing rubber, composition, and fiber heels, soles and soling strips and related shoemaking and repairing materials are classified in Rubber Industries, n.e.c. (3099).

The classification of canvas footwear has been changed from that used in the 1939 census. The item "base shoes" has been dropped since it is not a recognized industry classification.

Reclaimed Rubber *(Standard Industrial Classification No. 3031.)*—This industry comprises establishments primarily engaged in reclaiming rubber from used tires, scrap, and miscellaneous waste rubber by manufacturing processes which result in a product that is sold for mixing with crude rubber or rubberlike material as an extender. Establishments primarily engaged in the assembly and wholesale sale of scrap rubber, but not engaged in manufacturing reclaimed rubber, are classified in trade industries.

Reclaimed rubber is defined as any vulcanizable material, except reclaimed residue or mud, derived from processing or treatment of natural or synthetic (chemical) vulcanized scrap rubber. Crumb or ground rubber which is shown as a separate product is defined as grindings of scrap rubber not devulcanized by the pan or digestor process and not including grindings of unvulcanized factory scrap.

Only about 44 percent of the above products are produced in plants classified in this industry, large amounts of reclaiming being done by the Tires and Inner Tubes Industry and the Rubber Products, n.e.c. Industry where the quantities produced are used within the plant as materials for the products of these industries.

Rubber Industries, Not Elsewhere Classified *(Standard Industrial Classification No. 3099.)*—This industry comprises establishments primarily engaged in the manufacturing of industrial and mechanical rubber goods, rubberized fabrics, and vulcanized rubber clothing and miscellaneous rubber specialties and sundries. Establishments primarily engaged in rebuilding and retreading tires for the trade or for wholesale sale are included in this industry but the rebuilding or retreading by tire-repair shops is classified in service industries. Rubber girdles are classified in the Corsets and Allied Garments Industry (2342).

Establishments manufacturing rubber garments and garments made from rubber sheeting and from rubberized fabrics produced in the same establishment are classified in this industry, whereas those manufacturing such garments from purchased rubber sheeting and rubberized fabrics are classified in the Raincoats and Other Waterproof Outer Garments Industry (2385). Commodity statistics for raincoats and other waterproof outer garments are shown in Industry 2385. Rubberized fabrics exclude fabrics coated and impregnated with other resins and establishments primarily engaged in manufacturing these are classified in the Artificial Leather, Oilcloth, and Other Impregnated and Coated Fabrics Industry (2295).

Establishments primarily engaged in making rubber shoe findings (heels, soles, soling slabs, and top lifts) are included in this industry; those primarily making plastic shoe findings are classified in the Boot and Shoe Cut Stock and Findings Industry (3131).

Data for rubber gaskets (for sealing nonmoving parts) are to be found in the Steam and Other Packing and Pipe and Boiler Covering Industry (3293). Figures for shoulder seal and top seal jar rings are shown in Census Facts for Industry Series M75C, Commercial and Home Canning Closures. The dollar value shown in this report for jar rings includes totals for these as well as other kinds of rubber jar rings for which current information was not secured. Asphalt floor tile and asphalt battery boxes are included respectively in Asbestos Products (3292) and Fabricated Plastic Products, n. e. c. (3971). Because of the difficulty of classification, the dollar values shown for "Other Mechanical Goods" are probably overstated with understatement resulting in some of the specified products for the Mechanical Goods class.

Additional data for rubber and plastic aprons are shown in Major Group 23, Apparel and Other Finished Products Made From Fabrics and Other Similar Materials. No figures are available for bare rubber thread as distinguished from that of covered. Since the data shown for these products are combined, the totals contain duplications, for an unspecified amount of bare thread is shipped from one establishment to a second where the thread is covered.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Tires and inner tubes:								
1947	57	115,657	$390,841	93,916	$311,276	$650,165	$944,215	$1,547,040
1939	53	67,169	122,164	54,115	89,774	231,372	349,557	580,929
1937	46	74,242	122,031	63,290	96,707	209,002	366,858	575,860
1935	42	65,715	97,061	57,128	78,253	180,577	265,515	446,092
1933	44	61,227	70,648	52,976	54,737	159,921	139,392	299,313
1931	48	n.a.	n.a.	49,159	63,089	232,679	173,604	406,283
1929	91	96,244	158,180	83,263	127,082	340,570	429,607	770,177
1927	109	95,418	160,494	78,256	120,064	370,467	499,221	869,688
1925	126	96,063	152,964	81,640	120,614	365,062	559,940	925,002
1923	160	87,059	139,711	73,963	108,623	279,029	365,165	644,194
1921 [4]	178	68,864	107,119	55,496	75,054	204,569	291,554	496,123
Rubber footwear:								
1947	26	28,125	72,666	23,952	58,462	121,040	80,607	198,691
1939	13	18,098	22,056	14,861	16,802	29,231	20,750	49,981
1937	12	20,731	24,645	18,356	20,422	36,980	27,475	64,455
1935	12	19,377	19,838	17,246	16,113	32,341	20,821	53,162
1933	13	20,131	17,609	18,102	14,440	27,895	14,124	42,019
1931	15	n.a.	n.a.	15,882	13,770	35,607	12,298	47,905
1929	22	29,278	37,690	25,659	29,945	68,142	34,396	102,538
1927	22	30,267	37,260	26,848	32,079	81,235	43,373	124,608
1925	23	28,402	33,434	24,999	28,058	75,369	40,566	115,935
1923	25	32,989	39,431	29,435	33,671	86,471	45,269	131,740
1921	24	27,436	28,964	23,888	23,428	61,900	32,133	94,033
1919	25	37,928	38,284	32,875	30,883	66,570	50,347	116,917
1914	23	20,357	11,945	18,687	9,986	29,866	23,956	53,822
1909	22	18,899	9,959	17,612	8,544	20,144	29,577	49,721
1904	22	19,813	9,741	18,991	8,867	38,065	32,000	70,065
1899	22	14,874	7,024	14,391	6,427	18,407	22,683	41,090
Reclaimed rubber:								
1947	15	2,070	6,849	1,855	5,826	9,604	8,049	17,263
1939	10	1,282	1,970	1,072	1,477	3,902	2,992	6,894
1937 [5]	9	n.a.	n.a.	1,258	1,830	3,771	4,172	7,943
Rubber industries, n. e. c.:								
1947	777	113,240	313,108	94,810	239,198	522,054	441,234	953,453
1939	519	63,189	80,733	50,692	53,358	141,650	122,875	264,525
1937 [5]	411	n.a.	n.a.	46,914	52,346	119,019	115,755	234,774

See footnotes at end of table.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS—Continued

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Total for Reclaimed rubber and Rubber industries, n. e. c.:								
1947 [5]	792	115,310	$319,957	96,665	$245,024	$531,658	$449,283	$970,716
1939	529	64,471	82,703	51,764	54,835	145,552	125,867	271,419
1937	420	54,992	69,651	48,172	54,176	122,790	119,927	242,717
1935	412	46,434	52,516	40,307	39,348	95,930	82,475	178,405
1933	351	39,799	37,182	35,205	29,939	73,530	57,881	131,411
1931	390	n.a.	n.a.	34,218	35,738	93,112	66,965	160,077
1929	412	46,460	66,788	40,226	50,279	130,072	114,674	244,746
1927	385	42,908	60,979	36,893	45,931	113,004	117,777	230,781
1925 [6]	381	n.a.	n.a.	35,230	42,613	98,645	121,224	219,869
1923	344	40,006	51,906	34,470	39,790	91,855	90,729	182,584
1921 [4]	294	28,343	34,785	23,889	25,131	60,555	54,192	114,747

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture. For the industries shown in this report, see GENERAL EXPLANATIONS—Method of calculating value added by manufacture for selected industries in 1947.

[2] Figures for years prior to 1935 do not include cost of contract work.

[3] For 1947 and 1929, value of products shipped; for all other years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[4] "Tires and inner tubes" and "Reclaimed rubber and rubber industries, n. e. c.," formerly constituted a single classification. Separate figures for each are therefore not available prior to 1921.

[5] "Reclaimed rubber" and "Rubber industries, n. e. c.," constituted one industry from 1921 through 1935. The separate industry figures shown for 1937-47 have been combined in order that statistics can be shown for the period 1921-35.

[6] The figures for 1925 and later years include data for rubber toy balloons and rubber cement, whereas those for 1921 and 1923 do not. Value added in 1925, excluding data for these products, was $96.1 million.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[**Money figures and man-hours in thousands.** For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Tires and inner tubes, total [1]	57	115,657	$390,841	93,916	185,392	$311,276	$650,165	$944,215	$1,547,040	$54,883
Northeast	12	17,461	61,689	14,585	31,457	50,188	117,362	168,161	274,058	15,358
Pennsylvania	7	8,290	28,894	6,890	14,830	23,259	55,236	82,376	133,553	9,572
North Central	25	71,771	242,641	56,730	106,922	189,955	355,898	504,486	837,271	29,374
Ohio	11	49,709	158,013	39,077	69,546	122,883	233,364	298,850	514,561	18,158
South	13	15,846	51,539	13,632	29,777	43,110	115,987	178,265	284,268	6,173
Pacific	7	10,579	34,972	8,969	17,236	28,023	60,918	93,303	151,443	3,978
California	7	10,579	34,972	8,969	17,236	28,023	60,918	93,303	151,443	3,978
Rubber footwear, total [1]	26	28,125	72,666	23,952	48,954	58,462	121,040	80,607	198,691	4,982
Northeast and North Central	23	26,637	69,539	22,557	46,262	55,943	116,875	76,809	190,999	4,285
Rhode Island	3	2,101	4,573	1,902	3,758	3,905	8,061	4,785	12,935	171
South	3	1,488	3,127	1,395	2,692	2,519	4,165	3,798	7,692	697
Reclaimed rubber, total [1]	15	2,070	6,849	1,855	4,015	5,826	9,604	8,049	17,263	2,864
Rubber industries, n. e. c., total [1]	777	113,240	313,108	94,810	186,719	239,198	522,054	441,234	953,453	47,054
New England	132	20,379	53,332	16,836	35,666	40,244	96,575	83,654	177,096	9,204
Maine	6	195	368	173	361	251	452	412	864	41
Massachusetts	79	10,472	28,210	8,650	18,620	21,423	53,271	48,416	101,314	5,159
Rhode Island	11	4,235	11,125	3,407	7,199	8,298	19,102	14,032	31,918	1,447
Connecticut	31	4,106	10,433	3,400	7,027	7,604	17,711	14,358	31,984	1,624
Middle Atlantic	202	27,849	82,110	22,814	46,214	61,847	129,415	114,041	243,027	9,957
New York	81	5,478	15,761	4,327	9,076	11,111	27,343	34,294	61,616	3,787
North Central	283	50,904	139,234	43,860	82,146	109,295	227,363	191,715	413,118	20,334
Illinois	55	3,115	8,573	2,693	5,681	6,777	15,145	10,985	26,133	1,107
South and West	160	14,108	38,432	11,300	22,693	27,812	68,701	51,824	120,212	7,559
West Virginia	4	140	244	129	245	212	321	269	590	(d)
California	95	3,304	9,353	2,645	4,936	6,490	14,699	11,570	26,214	2,384

[d] Withheld to avoid disclosing figures for individual companies.

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Tires and inner tubes: *Northeast*, Massachusetts, 2; Connecticut, 2; New York, 1; *North Central*, Indiana 1; Illinois, 3 (716); Michigan, 3 (12,085); Wisconsin, 2; Minnesota, 1; Iowa, 2; Missouri, 1; Kansas, 1; *South*, Maryland, 1; Kentucky, 1; Tennessee, 2; Alabama, 4 (4,657); Mississippi, 1; Oklahoma, 1; Texas, 3 (863).

Rubber footwear: *Northeast and North Central*, Massachusetts, 8 (10,854); Connecticut, 3 (4,507); New York, 3; Pennsylvania, 1; Ohio, 1; Indiana, 1; Illinois, 1; Michigan, 1; Wisconsin, 1; *South*, Maryland, 2; Tennessee, 1.

Reclaimed rubber: *Middle Atlantic*, New York, 3; New Jersey, 4 (639); Pennsylvania, 2; *East North Central*, Ohio, 3; Illinois, 1; *Pacific*, Oregon, 1; California, 1.

Rubber industries, n. e. c.: *New England*, New Hampshire, 3; Vermont, 2; *Middle Atlantic*, New Jersey, 74 (16,044); Pennsylvania, 47 (6,327); *North Central*, Ohio, 119 (33,429); Indiana, 29 (7,921); Michigan, 34 (3,304); Wisconsin, 16; Minnesota, 7 (486); Iowa, 4 (661); Missouri, 15 (888); Nebraska, 3 (637); Kansas, 1; *South and West*, Delaware, 2; Maryland, 10 (1,563); Virginia, 3 (667); North Carolina, 3; South Carolina, 1; Georgia, 3; Florida, 2; Kentucky, 2; Tennessee, 7 (736); Alabama, 3 (44); Mississippi, 1; Arkansas, 1; Oklahoma, 2; Texas, 10 (286); Colorado, 2; Washington, 5 (40); Oregon, 4 (121).

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TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry: Tires and inner tubes	Rubber footwear	Reclaimed rubber	Rubber industries, n. e. c.
ALL ESTABLISHMENTS				
Number of establishments	57	26	15	777
All employees:				
Number (average for the year)	115,657	28,125	2,070	113,240
Salaries and wages, total	$390,841	$72,666	$6,849	$313,108
Production and related workers:				
Number (average for the year)	93,916	23,952	1,855	94,810
Man-hours, total ... thousands	185,392	48,054	4,015	186,719
Wages, total	$311,276	$58,462	$5,826	$239,198
Value added by manufacture	$650,165	$121,040	$9,604	$522,054
ESTABLISHMENTS REPORTING DETAILED STATISTICS				
Number of establishments	57	26	13	627
All employees:				
Number (average for the year)	115,657	28,125	2,066	112,412
Salaries and wages, total	$390,841	$72,666	$6,842	$311,347
Production and related workers:				
Number (average for the year)	93,916	23,952	1,851	94,004
Man-hours, total ... thousands	185,392	48,954	4,005	185,107
Wages, total	$311,276	$58,462	$5,819	$237,536
Value added by manufacture	$650,165	$121,040	$9,562	$519,497
Number of employees for pay period ended nearest October 15:				
All employees	113,060	27,745	2,039	111,971
Male	94,329	13,785	1,942	78,601
Female	18,731	13,960	97	33,370
Production and related workers	92,083	23,582	1,831	93,576
Male	79,554	11,400	1,787	66,676
Female	12,529	12,182	44	26,900
Force-account construction workers	627	----------	4	54
Administrative, supervisory, sales, and all other	20,350	4,163	204	18,341
Male	14,148	2,385	151	11,877
Female	6,202	1,778	53	6,464
All employees, number by month:				
January	121,214	30,130	2,093	119,144
February	120,508	30,659	2,114	118,341
March	119,711	30,518	2,093	117,204
April	118,532	30,304	2,104	115,232
May	117,195	28,473	2,105	108,508
June	115,292	26,882	2,092	107,838
July	112,907	22,249	1,994	106,169
August	112,037	26,781	2,033	106,878
September	112,145	26,974	2,008	108,876
October	113,060	27,745	2,039	111,971
November	112,808	28,096	2,046	113,530
December	112,430	28,673	2,068	114,853

ITEM	Industry: Tires and inner tubes	Rubber footwear	Reclaimed rubber	Rubber industries, n. e. c.
ESTABLISHMENTS REPORTING DETAILED STATISTICS—Continued				
Cost of materials, fuel, electricity, and contract work	$944,215	$80,607	$8,010	$438,908
Materials, parts, containers, and supplies	919,313	74,031	6,508	419,540
Fuels, total	12,006	1,099	464	7,047
Bituminous coal	9,732	402	409	4,456
Anthracite	50	2	----------	715
Coke	----------	11	----------	17
Fuel oils	1,122	600	53	1,841
Gas	1,076	21	2	539
Other fuels	26	3	----------	79
Purchased electric energy	12,774	1,406	1,036	9,409
Contract and commission work	122	3,171	2	2,252
Value of inventories:				
Beginning of year, total	$200,220	$25,434	$3,267	$144,137
Finished products	52,462	7,152	413	38,400
Materials, supplies, and work in process	147,758	18,282	2,854	105,737
End of year, total	223,952	27,005	3,198	159,630
Finished products	93,538	11,517	932	46,980
Materials, supplies, and work in process	130,414	15,488	2,266	112,650
Expenditures for plant and equipment:				
New plant and equipment	$54,883	$4,982	$2,864	$47,054
Construction and major alteration of fixed plants	14,313	648	1,072	14,860
Buildings	10,156	563	945	14,246
Other construction	4,157	85	127	614
Machinery and equipment	40,570	4,334	1,792	32,194
Production machinery and equipment	39,140	4,133	1,755	30,236
Other machinery and equipment	1,430	201	37	1,958
Used plant and equipment, and land	4,683	160	22	2,427
Number of highway-type motor vehicles owned or leased:				
Trucks	276	62	25	583
By manufacturer's rated capacity:				
Under 1½ tons	120	11	4	182
1½ tons	93	17	15	259
Over 1½ tons and less than 3½ tons	50	25	3	88
3½ tons and less than 5 tons	4	2	----------	26
5 tons and over	9	7	3	28
By body type:				
Van	13	9	1	50
Stake or platform	93	20	14	230
Panel or light delivery	102	8	4	200
All other trucks	68	25	6	103
Truck tractors	52	10	3	41
Trailers and semitrailers	200	20	4	99

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is *printed in italics*]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of— 1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Tires and inner tubes:											
Number of establishments	57	3	4	1	3	----------	2	6	9	16	13
Number of employees (average for the year)	115,657	8	25	(d)	*89*	----------	(d)	*2,215*	6,558	25,620	81,142
Value added by manufacture	$650,165	$42	$123	(d)	*$360*	----------	(d)	*$15,252*	$38,938	$168,681	$426,769
Rubber footwear:											
Number of establishments	26	----------	1	4	2	----------	----------	6	6	4	3
Number of employees (average for the year)	28,125	----------	(d)	(d)	*120*	----------	----------	2,240	4,060	4,823	16,882
Value added by manufacture	$121,040	----------	(d)	(d)	*$365*	----------	----------	$6,130	$17,508	*$18,470*	*$78,667*
Reclaimed rubber:											
Number of establishments	15	3	----------	1	2	3	3	1	2	----------	----------
Number of employees (average for the year)	2,070	6	----------	(d)	*74*	168	433	(d)	*1,389*	----------	----------
Value added by manufacture	$9,604	$51	----------	(d)	*$326*	$700	$2,330	(d)	*$6,197*	----------	----------
Rubber industries, n. e. c.:											
Number of establishments	777	158	102	111	145	86	90	39	26	15	5
Number of employees (average for the year)	113,240	359	672	1,584	4,657	6,294	15,201	13,921	19,135	20,197	31,220
Value added by manufacture	$522,054	$1,646	$2,870	$6,937	$21,977	$27,754	$76,028	$71,345	$85,727	$88,663	$139,107

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

TIRES AND INNER TUBES INDUSTRY	Shipped by— Tires and inner tubes industry	Other industries	All industries
Total shipments by the industry	**$1,547,040**		
A. Tires and inner tubes	1,387,016	$76,342	$1,463,358
B. Secondary products	158,120		
Camelback and tire repair materials	24,893		
Rubber heels and soles	4,000		
Mechanical rubber goods	75,826		
Miscellaneous rubber products	20,760		
Other secondary products [1]	32,641		
C. Miscellaneous receipts	1,904		

RECLAIMED RUBBER INDUSTRY	Shipped by— Reclaimed rubber industry	Other industries	All industries
Total shipments by the industry	**$17,263**		
A. Reclaimed rubber	15,974	$20,066	$36,040
B. Secondary products	867		
Miscellaneous rubber products	867		
C. Miscellaneous receipts	422		

RUBBER FOOTWEAR INDUSTRY	Shipped by— Rubber footwear industry	Other industries	All industries
Total shipments by the industry	**$198,691**		
A. Rubber footwear	157,491	$1,699	$159,190
B. Secondary products	40,377		
Miscellaneous rubber products	31,344		
Other secondary products [2]	9,033		
C. Miscellaneous receipts	823		

RUBBER INDUSTRIES, N. E. C.	Shipped by— Rubber industries, n. e. c.	Other industries	All industries
Total shipments by the industry	**$953,453**		
A. Primary products of the industry	808,036	$184,071	$992,107
Camelback and tire repair materials	17,273	25,441	42,714
Rubber heels and soles	66,635	5,540	72,175
Mechanical rubber goods	513,615	108,088	621,703
Druggist and medical sundries	40,647	3,793	44,440
Other rubber products, n. e. c.	164,307	40,964	199,502
Rainwear and other waterproof outer garments [3]			5,769
Other rubber products, not specified by kind	5,559	245	5,804
B. Secondary products	139,157		
Resin coated fabrics	7,280		
Unsupported films	6,046		
Tires and inner tubes	76,046		
Chemical specialties	1,417		
Fabricated plastic products	4,387		
Gaskets	6,451		
Miscellaneous rubber products	5,507		
Other secondary products [4]	29,371		
Secondary products, not specified by kind	2,652		
C. Miscellaneous receipts	6,260		
Scrap and salable refuse	1,887		
Contract and commission work	3,095		
Nonmanufacturing activities	1,278		

[1] Some of the more important products are industrial organic chemicals, machine shop products, sporting and athletic goods, and storage batteries.
[2] Some of the more important products are resin coated fabrics, asphalt floor tile, and fabricated plastic products, not elsewhere classified.
[3] For additional detail see raincoats and waterproof outer garments industry (2385).
[4] Some of the more important products are paint, asbestos friction materials, surgical and orthopedic supplies, and sporting and athletic goods.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers: Quantity	1947 Total shipments and interplant transfers: Value f.o.b. plant	1947 Total production: Quantity	1939 Produced for sale and interplant transfer: Quantity	1939 Produced for sale and interplant transfer: Value f.o.b. plant
Tires and inner tubes, total	Number		**$1,463,358**			**$503,448**
Pneumatic tires (casings), total	do	108,803,532	1,306,693	111,686,368	63,994,029	[1] 444,325
Passenger car	do	75,786,596	670,039	77,891,023	49,522,341	272,522
Truck and bus (including off-the-road)	do	17,172,006	536,708	17,621,976	8,217,981	156,973
Motorcycle	do	203,453	1,365	199,986	6,223,302	4,602
Bicycle casings and single tube tires	do	9,417,139	9,456	9,528,598		
Airplane	do	154,703	5,367	153,165	30,405	545
Tractor and implement	do	4,832,673	78,598	5,006,196	n.a.	n.a.
Industrial	do	1,236,962	5,160	1,285,424	n.a.	n.a.
Inner tubes, total	do	96,475,906	150,001	97,596,708	55,682,655	[2] 55,938
Passenger car	do	65,877,087	90,608	66,513,525	51,251,112	52,953
Truck and bus (including off-the-road)	do	14,065,791	41,776	14,573,206		
Motorcycle and bicycle	do	11,351,279	5,761	11,090,939	4,404,351	1,532
Airplane	do	94,189	467	92,468	27,192	105
Tractor and implement	do	3,894,376	10,179	4,074,880	n.a.	n.a.
Industrial	do	1,193,184	1,210	1,251,690	n.a.	n.a.
Solid tires, total	do	2,572,476	6,663	2,720,755		3,185
Pressed on industrial highway	do	280,889	3,525	285,321	n.a.	n.a.
Cured on industrial (2.00-inch or larger)	do	849,692	2,003	853,253	n.a.	n.a.
All other solids (2.00-inch or larger)	do	943,932	533	955,025	n.a.	n.a.
Semipneumatic (2.00-inch or larger)	do	497,963	602	627,156	n.a.	n.a.

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947			1939	
		Total shipments and interplant transfers		Total production	Produced for sale and interplant transfer	
		Quantity	Value f.o.b. plant	Quantity	Quantity	Value f.o.b. plant
Rubber footwear, total	Pairs		$159,190			$43,112
Canvas footwear	do	22,920,846	38,481	23,602,181	[3] 28,177,454	[3] 15,048
Bals	do	14,172,840	24,176	14,262,866	n.a.	n.a.
Oxfords	do	6,413,902	9,885	6,364,643	n.a.	n.a.
Specialty shoes	do	2,334,104	4,420	2,974,672	n.a.	n.a.
Boots	do	5,444,165	19,933	5,625,331	2,919,489	5,082
Lumberman and pacs	do	1,792,313	6,953	1,859,614	1,124,387	1,988
Arctics and gaiters	do	31,249,080	72,780	31,284,053	15,899,031	13,050
Buckle and automatic, except style	do	10,360,170	27,336	10,437,981	3,770,347	5,150
Style rubber and cloth	do	20,888,910	45,444	20,846,072	12,128,684	7,900
Light and heavy rubbers	do	17,952,428	21,043	18,684,524	[4] 14,720,735	[4] 7,944
Reclaimed rubber, total	Pounds	483,680,951	36,040	635,762,626	340,186,856	16,962
Reclaimed rubber	do	480,623,571	35,931	628,606,397	340,186,856	16,962
Crumb or ground rubber	do	3,057,380	109	7,156,229	n.a.	n.a.
Camelback and tire repair materials, total			42,714			19,428
Camelback	Pounds	96,284,395	24,221	97,413,406	54,223,474	10,612
Tire sundries and repair materials			18,493			8,816
Rubber heels and soles, total			72,175			31,335
Soling slabs and toplift sheets	Square feet	48,755,172	9,916	48,817,049	8,338,017	1,728
Heels	Pairs	317,622,891	31,028	320,355,316	205,665,741	14,494
Soles	do	117,342,584	31,231	119,956,369	146,557,290	15,113
Mechanical rubber goods, total			621,703			177,067
Belts and belting:						
Conveyor and elevator	Pounds	56,152,171	37,195	56,649,334	18,583,416	7,792
Transmission:						
Flat	do	29,459,672	26,132	30,019,087	15,734,803	7,304
V-belt:						
Motor vehicles	do	21,546,974	21,083	23,125,699	11,006,447	5,304
Industrial and all other (including standard, notched, and segment)	do	33,572,967	40,784	34,059,019	9,358,068	7,432
Other			3,588			628
Hose:						
Railroad specification:						
Airbrake and air signal	Pounds	4,030,227	2,686	3,955,735	[5] 13,143,090	[5] 4,475
Other			1,073			
Molded:						
Garden	Pounds	79,940,284	19,056	[6] 83,072,666	45,533,630	6,471
Other			24,667			n.a.
Wrapped:						
Handbuilt	Pounds	13,077,245	9,082	13,037,643	n.a.	n.a.
Other			25,968			n.a.
Cotton, rubber lined:						
Fire, specification	Pounds	6,848,046	6,271	6,861,973	12,628,955	5,460
Fire, commercial grade	do	3,502,052	3,159	3,412,899		
Other			3,103			
Gasoline	Pounds	8,703,002	6,269	8,797,800	[7] 8,886,508	[7] 4,434
Other			14,068			17,329
Tubing (except reinforced)	Pounds	21,326,713	7,382	21,202,257	11,438,326	2,609
Packing (for sealing moving parts) (excluding molded and lathe-cut goods)	do	17,663,995	12,451	17,740,341	[8] 32,270,071	[8] 10,092
Jar rings			2,892			2,667
Rubber and friction tape	Pounds	35,711,390	16,516	33,926,800	n.a.	4,339
Insulation products (heat, electrical, and others)	do	4,190,572	1,839	4,159,337	8,071,700	1,623
Molded and extruded goods:						
Molded industrial goods (excluding sponge and hard rubber)	do	112,859,888	70,953	105,836,340	[9] 30,840,987	[9] 10,385
Extruded industrial goods (except tubing)	do	54,734,729	23,955	53,962,857	n.a.	n.a.
Solid and cushion tires and tiring (less than 2.00-inch including juvenile, toy, baby carriage, etc.)			6,909			n.a.
Rolls and platens, solid and covered:						
Printers rolls			3,081			1,220
Other rolls and platens			9,820			3,655
Other mechanical goods			83,710			32,154
Flooring (tile or sheet)	Square feet	46,602,790	14,314	47,508,116	9,993,345	2,920
Mats and matting			34,890			11,210
Hard rubber goods (except druggist sundries):						
Battery jars, boxes, and parts			25,030			11,683
Other hard rubber goods (except druggist sundries)			12,099			4,739
Sponge rubber:						
Latex foam:						
Automobile seating	Pounds	14,637,206	14,356	15,060,233	n.a.	11,133
Upholstery	do	3,950,423	4,568	4,052,510		
Mattresses	Number	29,405	617	30,241		
Other			11,056			
Chemically blown sponge	Pounds	43,967,903	21,081	46,254,434		
Druggist and medical sundries, total			44,440			13,733
Water bottles, fountain syringes, and combinations	Dozen	593,797	4,893	639,256	684,922	3,031
Ice bags and caps	do	102,594	702	108,972	n.a.	n.a.
Nipples and pacifiers	Gross	1,016,253	7,777	[6] 1,214,853	423,709	1,384
Other (including prophylactics, medical, dental, and surgical hard rubber)			17,295			7,037
Gloves:						
Household	Doz. pairs	604,297	1,963	632,731	892,038	1,181
Surgeons	do	1,165,269	2,503	1,183,150	851,581	1,100
Baby pants [10]	Dozen	2,828,709	9,307	[11] 2,831,605	n.a.	n.a.

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947			1939	
		Total shipments and interplant transfers		Total Production	Produced for sale and interplant transfer	
		Quantity	Value f.o.b. plant	Quantity	Quantity	Value f.o.b. plant
Other rubber products, n. e. c., total			$199,502			$78,808
Factory rebuilt or retreaded tires	Number	257,025	1,955	259,045	1,236,392	4,701
Rubber and synthetic rubber-coated fabrics:						
Hospital and crib sheeting	Square yard	4,180,258	2,999		3,857,247	1,640
Automobile upholstery	do	1,219,292	763			
Automobile decking	do	4,795,687	3,347			
Furniture upholstery	do	1,310,692	846		n.a.	[12] 20,015
Garment fabrics	do	6,493,416	2,263			
Shoe and slipper fabrics	do	17,783,013	8,889			
Other rubber and synthetic rubber-coated fabrics	do	28,190,623	16,882			
Mouthpieces for pipes, and cigar and cigarette holders			705			454
Gloves:						
Electricians	Doz. pairs	17,300	633	17,625	12,899	299
Other (including dipped and rubberized work gloves)			4,012			936
Bathing caps	Dozen	879,674	3,243	[6] 1,027,222	1,074,010	1,531
Aprons, bibs, dress shields, etc. [10]			7,056		n.a.	n.a.
Rubber thread (bare and covered) [13]	Pounds	10,496,556	17,377	10,637,271	9,704,379	7,539
Rubber cement (for sale as such)	Gallons	17,649,571	20,982		17,218,330	[14] 9,165
Balloons (toy and advertising)	Gross	7,382,491	9,865	7,501,541		2,126
Stationers' rubber bands	Pounds	3,948,541	3,058	3,993,217	5,229,431	1,852
Erasers (except pencil plugs)	do	1,885,974	2,203	1,620,012	1,316,896	[15] 1,026
Balls (except bowling balls)			10,854			[16] 5,453
Toys (except balloons, balls, and dolls)			5,105			n.a.
Other rubber products (including gutta percha products, and unsupported film)			76,465			22,071
Rainwear and other waterproof outer garments [17]			5,769			11,764
Rubber products, not specified by kind			5,804			

n.a.—Not available.

[1] Includes 997,225 pneumatic tires and casings valued at $9,683,000, not classified by type.

[2] Includes 656,157 inner tubes valued at $1,348,000, not classified by type.

[3] Comprises 11,588,697 pairs of base shoes valued at $4,640,000; 5,889,112 pairs of lace-to-toe trimmed shoes valued at $3,661,000; 4,919,559 pairs of plain oxfords and bals valued at $2,697,000; and 5,780,086 pairs of specialty oxfords and pumps valued at $4,050,000.

[4] Includes an unspecified amount of other rubber shoes.

[5] Airbrake, airline, and other pneumatic.

[6] Includes small quantities of plastic and plastic-coated products, which cannot be shown separately without disclosing the figures of individual companies.

[7] Gasoline and oil.

[8] These totals composed of 13,483,266 pounds valued at $2,955,353 of rubber packing and 18,787,405 pounds valued at $7,137,343 of washers, gaskets, valves, pump sleeves, and liner strips.

[9] For motor vehicles.

[10] Additional data are shown in Major Group 23, Apparel and Other Finished Products Made From Fabrics and Other Similar Materials.

[11] Includes 794,876 dozen plastic and plastic-coated baby pants.

[12] Includes 6,925,676 square yards of automobile and carriage fabric made for sale and valued at $1,710,000; 12,216,969 square yards of raincoat fabrics, valued at $2,126,000; and other fabrics, valued at $16,178,000.

[13] Covered thread included in these totals is limited to quantities produced by establishments classified in this industry; data for covered thread made from purchased bare thread are given in the Narrow Fabrics Mills Industry (2241).

[14] Includes $193,000 for which quantity was not reported.

[15] Includes $367,000 for which quantity was not reported.

[16] Play balls and other rubber toys.

[17] For additional detail see Raincoats and Other Waterproof Outer Garments, Industry (2385).

TABLE 7.—QUANTITY AND COST OF RUBBER CONSUMED BY ESTABLISHMENTS CLASSIFIED IN THE RUBBER PRODUCTS INDUSTRIES, BY TYPE OF RUBBER AND BY CLASS OF PRODUCTS MADE: 1947

[Not including consumption in the wire, electrical, textile, or other industries]
[Money figures in thousands of dollars and quantities in long tons]

INDUSTRY AND CLASS OF PRODUCT	Total rubber consumed	Natural rubber	Synthetic rubber	Reclaimed rubber		
				Total	Purchases and interplant transfers	Made and consumed in same plant
RUBBER PRODUCTS INDUSTRIES						
Total cost of rubber consumed in all products	$520,638	$258,438	$228,648	$33,552	$33,552	
	Long tons	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*
Total rubber consumed in all products	1,298,854	533,512	511,275	254,067	184,663	69,404
Tires, total	809,571	387,882	312,913	108,776	79,560	29,216
Passenger car	448,361	147,012	229,945	71,404	55,471	15,933
Truck and bus	292,763	227,470	47,588	17,705	11,129	6,576
All other pneumatic and solid tires	68,447	13,400	35,380	19,667	12,960	6,707
Inner tubes	102,289	34,323	64,492	3,474	1,555	1,919
Camelback, tire sundries, and repair materials	32,961	10,823	19,254	2,884	1,799	1,085
Rubber footwear	25,076	17,170	4,230	3,676	3,122	554
Rubber heels	21,044	5,340	8,412	7,292	6,311	981
Rubber soles	15,151	4,243	7,277	3,631	3,209	422
Mechanical rubber goods, flooring, mats, and matting	*163,779*	*33,435*	*51,685*	*78,659*	*50,302*	*28,357*
Sponge rubber	20,361	9,832	8,518	2,011	1,849	162
Coated fabrics	5,733	1,029	3,818	886	797	89
Other rubber products	102,889	29,435	30,676	42,778	36,159	6,619
TIRES AND TUBES						
Total cost of rubber consumed in all products	$381,380	$197,384	$169,197	$14,799	$14,799	
	Long tons	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*
Total rubber consumed in all products	924,253	415,837	390,237	118,179	84,673	33,506
Tires, total	765,576	363,753	299,378	102,445	79,526	22,919
Passenger car	434,118	142,994	221,897	69,227	55,471	13,756
Truck and bus	268,798	211,169	42,789	14,840	11,129	3,711
All other pneumatic and solid tires	62,660	9,590	34,692	18,378	12,926	5,452
Inner tubes	96,720	30,628	62,695	3,397	1,531	1,866
Camelback, tire sundries, and repair materials	23,691	8,553	13,386	1,752	1,042	710
Rubber heels	1,048	134	481	433	193	240
Rubber soles	1,622	378	1,087	157	31	126
Mechanical rubber goods, flooring, mats, and matting	20,104	3,884	7,205	8,925	1,895	7,030
Sponge rubber	5,082	2,511	2,571			
Coated fabrics	148	31	90	27	27	
Other rubber products	10,262	5,965	3,254	1,043	428	615
RUBBER FOOTWEAR						
Total cost of rubber consumed in all products	$15,034	$10,270	$3,499	$1,265	$1,265	
	Long tons	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*
Total rubber consumed in all products	36,463	20,134	7,406	8,923	6,650	2,273
Rubber footwear	24,822	17,020	4,126	3,676	3,122	554
Rubber soles	140	140				
Mechanical rubber goods, flooring, mats, and matting	6,398	514	1,125	4,759	3,040	1,719
Sponge rubber	3,918	2,168	1,311	439	439	
Coated fabrics	911	239	624	48	48	
Other rubber products	274	53	220	1	1	
RECLAIMED RUBBER AND RUBBER INDUSTRIES, N. E. C.						
Total cost of rubber consumed in all products	$124,224	$50,784	$55,952	$17,488	$17,488	
	Long tons	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*
Total rubber consumed in all products	338,138	97,541	113,632	126,965	93,340	33,625
Tires, total	43,995	24,129	13,535	6,331	34	6,297
Passenger car	14,243	4,018	8,048	2,177		2,177
Truck and bus	23,965	16,301	4,799	2,865		2,865
All other pneumatic and solid tires	5,787	3,810	688	1,289	34	1,255
Inner tubes	5,569	3,695	1,797	77	24	53
Camelback, tire sundries, and repair materials	9,270	2,270	5,868	1,132	757	375
Rubber footwear	254	150	104			
Rubber heels	19,996	5,206	7,931	6,859	6,118	741
Rubber soles	13,389	3,725	6,190	3,474	3,178	296
Mechanical rubber goods, flooring, mats, and matting	137,277	29,037	43,265	64,975	45,367	19,608
Sponge rubber	11,361	5,153	4,636	1,572	1,410	162
Coated fabrics	4,674	759	3,104	811	722	89
Other rubber products	92,353	23,417	27,202	41,734	35,730	6,004

Major Group 31.—LEATHER AND LEATHER PRODUCTS

This major group includes establishments engaged in tanning, currying, and finishing hides and skins, and establishments manufacturing finished leather and artificial leather products and some similar products made of other materials. Jobbers, who do no manufacturing but who assign hides and skins to contractors for tanning and finishing, are included in Industry 3111.

GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

CENSUS YEAR	Number of establishments	All employees [1]		Production workers		Value added by manufacture [2]
		Number (average for the year)	Wages and salaries, total	Number (average for the year)	Wages, total	
1947	5,308	383,175	$873,566	348,529	$725,143	$1,532,803
1939 [3]	3,505	n.a.	n.a.	327,189	293,922	582,915
1937	3,249	n.a.	n.a.	328,551	308,027	583,780
1935	3,506	336,112	333,427	310,755	279,740	530,138
1933	3,265	301,951	254,071	282,000	222,487	452,036
1931	3,702	n.a.	n.a.	272,757	262,130	523,676
1929	4,285	351,224	443,827	318,472	359,461	774,179
1927	4,272	350,380	443,832	316,081	364,537	780,799
1925	4,252	n.a.	n.a.	314,128	355,419	751,004
1923	4,881	n.a.	n.a.	345,650	389,677	797,259
1921	4,827	313,877	385,184	280,363	314,652	610,382
1919	6,423	394,104	469,321	350,079	364,036	898,313
1914	6,798	340,741	213,331	308,223	169,917	353,280
1909	5,785	339,992	190,969	311,312	155,814	325,203
1904	5,376	284,300	141,004	266,013	121,436	246,064
1899	5,685	265,218	117,404	249,913	101,982	186,870

n.a.—Not available.

[1] The figures for 1947 and 1939 include data for employees of manufacturing establishments who were engaged in distribution and construction work. The extent to which data for such employees are included in the figures for earlier years is not known. See GENERAL EXPLANATIONS—Manufacturing employees—Classifications used.

[2] Value of products less cost of materials, supplies, fuel, electricity, and contract work. For 1899–1933, cost of contract work was not subtracted from value of products in calculating value added by manufacture. See GENERAL EXPLANATIONS—Value added by manufacture.

[3] The figures for 1939 have been revised because of a change in the industry classification of a number of establishments.

TANNING; SHOES; INDUSTRIAL LEATHER GOODS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of leather: tanned, curried, and finished; industrial leather belting and packing; boot and shoe cut stock and findings; footwear (except rubber) and house slippers. These establishments have been classified in five industries described separately below.

Leather Tanning and Finishing *(Standard Industrial Classification No. 3111.)*—This industry comprises establishments primarily engaged in tanning, currying, and finishing sole and belting leathers, upper and lining leathers, and miscellaneous specialty leathers, and in embossing, japanning, and currying leather. Two types of establishments operate in this industry; namely, the "regular" tannery which tans, curries, and finishes hides or skins for its own account, and the "contract" factory which tans, curries, and finishes hides or skins owned by others.

Also included are a few establishments which hire no production workers but which have hides processed for them from materials owned by them. It was necessary to include these in order to obtain data on cost of materials and value of shipments.

Complete detail on production was reported. Shipment data, however, on a considerable portion of leather made on contract were not received from owners of the product. Accordingly estimated material cost and shipment figures were added to offset these missing reports. Estimated shipment value approximated 11 percent of the total for the industry.

Industrial Leather Belting *(Full Standard Industrial Classification title and number: Industrial Leather Belting and Packing, 3121.)*—This industry comprises establishments primarily engaged in manufacturing leather belting used for transmission of power, and leather packing.

Footwear Cut Stock *(Standard Industrial Classification No. 3131.)*—This industry comprises establishments primarily engaged in manufacturing leather soles, inner soles, and other shoe cut stock, and leather welting, shanks, heel and toe caps, leather shoe laces, finished wood heels, and other boot and shoe findings. Establishments primarily engaged in manufacturing heels, soling strips, and soles made of rubber, composition, and fiber are classified in Industry 3099.

Footwear, Except Rubber *(Full Standard Industrial Classification title and number: Footwear (Except House Slippers and Rubber Footwear), 3141.)*—This industry comprises establishments primarily engaged in manufacturing boots, shoes, sandals, moccasins, and allied footwear, and leggings, overgaiters, etc., made chiefly of leather, but to some extent of canvas and other textiles. Establishments primarily engaged in manufacturing house slippers are classified in Industry 3142, and rubber footwear and rubber-soled canvas footwear in Industry 3021.

Current statistics are published on production, shipments, and value of shipments of footwear (shoes and slippers) in Facts for Industry Series M68A. Differences between the product figures shown in the Census of Manufactures and in the current series are attributable to minor variations in the reports of some establishments. It is believed that differences in the dress and play shoe categories result from the reporting by some manufacturers of dress type sandals as play shoes on their current monthly reports.

House Slippers *(Standard Industrial Classification No. 3142.)*—This industry comprises establishments primarily engaged in manufacturing house slippers of leather or other materials.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Leather tanning and finishing:								
1947	561	53,205	$156,540	48,627	$130,586	$403,783	$666,302	$1,070,085
1939	446	51,592	69,266	47,252	56,783	117,394	229,044	346,438
1937	402	54,427	72,026	50,687	61,288	113,516	281,506	395,022
1935	384	54,823	66,640	50,877	55,683	108,934	199,411	308,345
1933	374	47,008	48,909	44,191	43,076	99,025	138,177	237,202
1931	418	n.a.	n.a.	42,047	49,542	98,352	172,786	271,138
1929	471	54,223	79,063	49,932	63,414	143,742	337,598	481,340
1927	494	57,324	81,743	52,924	67,887	162,271	331,985	494,256
1925	531	n.a.	n.a.	52,263	65,834	155,233	296,953	452,186
1923	597	65,312	89,401	59,703	73,784	167,148	321,750	488,898
1921	608	53,669	71,138	48,955	57,741	105,640	277,725	383,365
1919	680	78,894	108,384	72,476	88,205	282,070	646,522	928,592
1914	741	60,214	39,291	55,936	31,914	82,057	284,245	367,202
1909	919	66,316	38,846	62,202	32,103	79,595	248,279	327,874
1904	1,049	60,490	31,501	57,239	27,049	61,442	191,179	252,621
1899	1,306	54,551	25,750	52,109	22,591	49,038	155,000	204,038
Industrial leather belting:								
1947	183	5,032	13,441	4,015	9,667	28,375	29,028	57,403
1939	190	3,117	4,941	2,337	2,861	10,814	13,596	24,410
1937	182	3,454	4,869	2,829	3,355	12,372	15,529	27,901
1935	187	3,038	4,016	2,362	2,520	9,948	11,574	21,522
1933	152	2,161	2,502	1,684	1,733	7,862	7,018	14,880
1931	178	n.a.	n.a.	1,640	1,968	7,220	7,302	14,522
1929	207	3,417	5,908	2,602	3,550	14,952	20,680	35,632
1927	173	2,925	4,944	2,164	2,925	11,081	16,185	27,266
1925	168	3,430	5,631	2,644	3,505	12,943	18,868	31,811
1923	169	3,969	5,912	3,160	3,895	13,155	24,569	37,724
1921	164	3,249	5,099	2,268	2,842	6,092	13,076	19,168
1919	172	3,928	5,956	2,765	3,260	12,324	28,157	40,481
1914	151	4,177	3,829	2,951	2,070	7,556	15,480	23,036
1909	139	4,270	3,363	3,006	1,861	8,069	15,623	23,692
1904	117	2,706	1,952	2,092	1,165	4,903	9,317	14,220
1899	104	2,100	1,399	1,667	914	3,122	7,500	10,622

See footnotes at end of table.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS—Continued

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees: Number (average for the year)	All employees: Salaries and wages, total	Production and related workers: Number (average for the year)	Production and related workers: Wages, total	Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
Footwear cut stock:								
1947	606	22,077	$47,793	19,706	$38,468	$87,301	$206,560	$294,309
1939	520	21,293	22,735	18,845	17,196	38,912	90,487	129,399
1937	470	20,780	22,266	18,755	17,844	36,672	95,988	132,660
1935 [4]	498	20,263	21,257	18,275	16,781	35,262	76,317	111,579
1933	487	18,331	16,615	16,798	13,918	31,429	61,864	93,293
1931	552	n.a.	n.a.	17,672	16,412	34,827	82,274	117,101
1929	592	22,290	27,538	19,875	21,378	52,563	139,510	192,073
1927	580	21,230	26,311	18,561	20,556	48,627	129,829	178,456
1925	571	n.a.	n.a.	16,582	18,601	41,537	104,575	146,112
1923	592	n.a.	n.a.	15,903	16,255	41,166	109,685	150,851
1921	570	15,000	18,628	12,966	14,222	31,954	79,854	111,808
1919	679	21,469	23,259	18,656	17,312	49,713	174,316	224,029
1914	605	16,645	9,823	14,533	7,278	16,513	71,755	88,268
1909	575	14,456	7,446	13,181	6,104	14,897	55,270	70,167
1904	579	11,077	4,717	10,370	4,012	9,655	27,925	37,580
1899	654	9,970	3,972	9,401	3,483	8,255	22,823	31,078
Footwear, except rubber:								
1947	1,288	229,303	494,319	210,634	420,510	745,995	970,985	1,716,980
1939 [5]	930	n.a.	n.a.	207,767	175,384	330,075	369,203	699,278
House slippers:								
1947	212	11,012	22,560	10,020	18,384	39,548	37,469	77,017
1939 [5]	139	n.a.	n.a.	10,243	8,253	16,072	19,235	35,307
Total for footwear (except rubber) and house slippers: [5]								
1947	1,500	240,315	516,879	220,654	438,894	785,543	1,008,454	1,793,997
1939	1,069	n.a.	n.a.	218,010	183,637	346,147	388,438	734,585
1937	1,080	230,330	220,352	215,438	191,305	352,022	416,305	768,327
1935	1,024	216,335	200,241	202,113	172,349	310,073	333,799	643,872
1933	1,132	202,795	159,884	190,914	142,054	267,122	286,303	553,425
1931	1,156	n.a.	n.a.	181,374	163,271	316,253	337,627	653,880
1929	1,341	225,235	266,693	205,640	222,408	450,868	515,055	965,923
1927	1,357	223,436	268,434	203,110	225,090	450,161	494,553	944,714
1925	1,460	227,955	267,994	206,992	225,788	443,751	481,632	925,383
1923	1,606	249,565	299,984	225,216	250,346	472,621	527,457	1,000,078
1921	1,505	204,044	244,543	183,502	204,954	389,044	478,432	867,476
1919	1,449	236,224	268,860	211,049	210,735	439,772	715,269	1,155,041
1914	1,355	209,258	128,623	191,555	105,695	191,403	310,357	501,760
1909	1,343	199,629	109,646	185,116	92,359	165,163	277,468	442,631
1904	1,316	158,735	77,766	149,924	69,060	122,744	197,363	320,107
1899	1,599	149,609	66,111	141,830	58,441	90,337	168,633	258,970

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture. For "Footwear cut stock," see GENERAL EXPLANATIONS—Method of calculating value added by manufacture for selected industries in 1947.

[2] Figures for years prior to 1935 do not include cost of contract work.

[3] For 1947 and 1929, the figures represent value of products shipped, except in the case of "Industrial leather belting" and "Footwear cut stock" for 1929 where they represent value of products made; for all other years, the figures represent value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[4] Figures for 1933 and earlier years were obtained by combining the data for the two former industries "Boot and shoe cut stock, not made in boot and shoe factories" and "Boot and shoe findings, not made in boot and shoe factories."

[5] "Footwear, except rubber" and "House slippers" formerly constituted a single classification. The separate industry figures for 1947 and 1939 have been combined in order that statistics can also be shown for the entire period 1899–1947.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees: Number (average for the year)	All employees: Salaries and wages, total	Production and related workers: Number (average for the year)	Production and related workers: Man-hours, total	Production and related workers: Wages, total	Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
Leather tanning and finishing, total [1]	561	53,205	$156,540	48,627	100,964	$130,586	$403,783	$666,302	$1,070,085	$10,565
New England	204	14,531	43,279	13,277	26,636	36,172	129,886	203,371	333,257	3,213
Maine	7	672	1,578	631	1,345	1,316	2,632	5,105	7,737	201
New Hampshire	9	1,299	3,578	1,202	2,562	3,106	5,991	11,462	17,453	311
Massachusetts	182	12,170	37,082	11,079	21,985	30,890	119,326	183,628	302,954	2,587
Middle Atlantic	200	16,064	47,567	14,755	30,471	39,168	119,933	217,404	337,337	2,559
New York	99	4,875	15,065	4,483	9,177	13,026	46,969	97,359	144,328	1,174
New Jersey	58	3,319	11,073	2,972	6,331	8,104	25,528	32,563	58,091	476
Pennsylvania	43	7,870	21,429	7,300	14,963	18,038	47,436	87,482	134,918	909
North Central	87	14,701	45,378	13,266	28,858	37,709	108,907	166,214	275,121	3,542
Ohio	15	1,962	5,558	1,796	3,732	4,697	16,851	26,208	43,059	602
Illinois	25	3,902	13,196	3,525	7,931	11,106	28,180	46,322	74,502	553
Michigan	11	2,332	7,063	2,175	4,775	6,075	14,793	18,568	33,361	495
Wisconsin	26	5,499	17,045	4,879	10,549	13,783	42,523	63,922	106,445	1,794
Missouri	3	247	470	201	420	391	1,288	2,474	3,762	32
South	51	7,173	18,033	6,664	13,615	15,567	39,633	71,603	111,236	1,060
Virginia	9	789	1,858	747	1,553	1,694	4,410	10,306	14,716	44
West Virginia	7	1,136	2,574	1,073	2,244	2,309	6,126	16,687	22,813	104
North Carolina	7	1,203	2,487	1,121	2,217	2,195	8,897	10,494	19,391	142
Tennessee	4	358	779	317	691	619	2,058	4,649	6,707	75
West	19	736	2,283	665	1,384	1,970	5,424	7,710	13,134	191
California	14	693	2,174	631	1,316	1,883	5,236	7,603	12,839	118

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947—Continued

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Industrial leather belting, total [1]	183	5,032	$13,441	4,015	8,285	$9,667	$28,375	$29,028	$57,403	$1,320
New England	41	1,023	2,460	841	1,707	1,837	6,133	6,991	13,124	817
Massachusetts	31	750	1,773	629	1,289	1,391	4,964	5,507	10,471	795
Middle Atlantic	52	846	2,217	626	1,280	1,523	5,023	4,802	9,825	48
New York	29	319	863	226	490	532	1,728	1,881	3,609	30
East North Central			5,074	1,624	3,358	4,142	10,669	9,800	20,469	352
Michigan	8	112	[illegible]	180	347	498	1,361	1,670	3,031	45
West North Central	8			62	137	135	497	646	1,143	1
South	31	581	1,597	427	955	928	3,736	5,183	8,919	73
Pacific	15	615	1,749	435	848	1,102	2,317	1,606	3,923	29
California	12	611	1,737	430	835	1,090	2,299	1,565	3,864	27
Footwear cut stock, total [1]	606	22,077	47,793	19,706	38,145	38,468	87,301	206,560	294,309	1,921
New England	362	10,870	24,490	9,497	18,464	18,734	49,155	92,932	142,388	1,039
New Hampshire	36	1,777	3,799	1,576	3,062	3,102	6,717	16,800	23,811	225
Massachusetts	294	7,886	18,378	6,856	13,195	13,764	38,168	73,306	111,516	716
Rhode Island	8	163	339	147	312	249	904	504	1,407	27
Middle Atlantic	132	4,441	9,413	4,072	7,562	7,973	16,438	46,672	63,715	380
New York	105	2,553	5,846	2,321	4,376	4,998	11,020	23,666	34,654	218
New Jersey	3	115	285	103	220	191	329	111	440	17
Pennsylvania	24	1,773	3,282	1,648	2,966	2,784	5,089	22,895	28,621	145
East North Central	48	1,859	3,838	1,674	3,315	3,196	9,311	16,071	25,080	160
Illinois	22	840	1,813	734	1,470	1,429	4,458	9,034	13,676	28
Wisconsin	7	360	805	329	653	691	2,612	2,044	3,708	30
West North Central	36	4,131	8,425	3,753	7,374	7,214	8,975	41,067	50,040	189
Missouri	36	4,131	8,425	3,753	7,374	7,214	8,975	41,067	50,040	189
South	14	617	1,194	569	1,155	1,002	2,648	9,502	11,996	47
Virginia	4	142	246	132	250	202	484	703	1,273	----------
Kentucky	4	173	382	161	345	314	687	2,767	3,545	10
Pacific	14	159	433	141	275	349	774	316	1,090	106
Footwear, except rubber, total [1]	1,288	229,303	494,319	210,634	400,757	420,510	745,995	970,985	1,716,980	12,587
New England	471	75,165	166,971	68,544	129,769	138,098	242,894	296,447	539,341	4,007
Maine	67	14,221	29,329	13,212	25,291	24,305	42,476	49,794	92,270	1,072
Massachusetts	338	44,254	101,288	39,951	74,540	83,213	143,921	169,476	313,397	2,278
Middle Atlantic	375	47,017	113,140	43,275	83,723	97,836	169,230	206,699	375,929	2,574
New York	249	29,874	80,009	27,421	52,906	69,386	113,025	140,839	253,864	1,251
New Jersey	18	1,136	2,785	1,021	1,913	2,245	4,283	3,230	7,513	109
Pennsylvania	108	16,007	30,346	14,833	28,904	26,205	51,922	62,630	114,552	1,214
East North Central	149	45,426	95,234	41,504	78,824	80,938	151,622	195,433	347,055	2,362
Illinois	52	18,370	38,517	16,839	30,605	32,891	58,440	82,438	140,878	433
West North Central	128	36,068	70,338	33 453	60,578	61,469	100,928	168,904	269,832	1,444
Iowa	4	492	878	437	852	722	1,566	2,242	3,808	42
Nebraska	3	208	429	182	337	328	442	944	1,386	8
Kansas	4	104	219	99	217	184	395	383	778	22
South	87	22,960	41,438	21,479	43,289	36,442	70,841	95,025	165,866	1,826
Tennessee	21	9,409	17,878	9,037	19,466	16,132	37,471	46,573	84,044	522
Arkansas	7	1,243	1,670	1,173	2,030	1,493	2,810	3,010	5,820	313
West	78	2,667	7,198	2,379	4,574	5,727	10,480	8,477	18,957	374
House slippers, total [1]	212	11,012	22,560	10,020	18,895	18,384	39,548	37,469	77,017	757
New England	52	2,583	5,427	2,340	4,255	4,224	9,005	9,888	18,893	117
Massachusetts	43	2,224	4,631	2,016	3,675	3,657	7,899	8,354	16,253	94
Middle Atlantic	108	5,180	11,411	4,636	8,894	9,046	19,906	17,443	37,349	312
New York	80	3,869	8,756	3,460	6,801	7,134	15,693	13,378	29,071	249
New Jersey	9	548	1,346	501	899	915	1,815	1,672	3,487	29
Pennsylvania	13	763	1,309	675	1,194	997	2,398	2,393	4,791	34
East North Central	25	1,537	2,736	1,453	2,697	2,433	5,348	5,635	10,983	89
Illinois	14	895	1,544	878	1,601	1,473	3,087	2,800	5,887	21
West North Central	9	1,195	2,090	1,173	2,235	2,017	3,856	3,308	7,164	131
South	6	369	601	284	564	407	895	698	1,593	78
Pacific	12	148	295	134	250	257	538	497	1,035	30

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Leather tanning and finishing: *New England*, Vermont, 1; Rhode Island, 1; Connecticut, 4; *North Central*, Indiana, 4 (382); Minnesota, 2; Nebraska, 1; *South*, Delaware, 11 (2,667); Maryland, 2; Georgia, 2; Florida, 2; Kentucky, 3 (312); Texas, 4 (168); *West*, Colorado, 1; Washington, 1; Oregon, 3.

Industrial leather belting: *New England*, New Hampshire, 1; Rhode Island, 5; Connecticut, 4 (35); *Middle Atlantic*, New Jersey, 5 (24); Pennsylvania, 18 (503); *East North Central*, Ohio, 11 (375); Indiana, 5 (19); Illinois, 8 (1,216); Wisconsin, 4 (22); *West North Central*, Minnesota, 2; Missouri, 5 (77); Nebraska, 1; *South*, Delaware, 2; Maryland, 2; Virginia, 5 (57); North Carolina, 5 (88); South Carolina, 3 (20); Georgia, 4 (116); Tennessee, 4 (75); Mississippi, 1; Louisiana, 3 (34); Texas, 2; *Pacific*, Washington, 2; Oregon, 1.

Footwear cut stock: *New England*, Maine, 19 (809); Vermont, 3; Connecticut, 2; *East North Central*, Ohio, 16 (587); Michigan, 3 (72); *South*, West Virginia, 1; North Carolina, 1; Tennessee, 3 (71); Arkansas, 1; *Pacific*, Oregon, 1; California, 13.

Footwear, except rubber: *New England*, New Hampshire, 63 (16,435); Connecticut, 3 (255); *East North Central*, Ohio, 31 (13,782); Indiana, 6 (1,527); Michigan, 7 (779); Wisconsin, 53 (10,968); *West North Central*, Minnesota, 8 (934); Missouri, 109 (34,330); *South*, Maryland, 13 (2,606); Virginia, 9 (3,631); West Virginia, 2; North Carolina, 1; Georgia, 6 (1,621); Florida, 4 (82); Kentucky, 8 (2,735); Alabama, 2; Oklahoma, 1; Texas, 13 (757); *West*, Colorado, 2; New Mexico, 2; Arizona, 1; Washington, 3 (77); Oregon, 6 (110); California, 64 (2,349).

House slippers: *New England*, New Hampshire, 2; Vermont, 1; Rhode Island, 3 (20); Connecticut, 3 (163); *East North Central*, Ohio, 1; Indiana, 1; Michigan, 1; Wisconsin, 8 (221); *West North Central*, Minnesota, 2; Missouri, 7; *South*, Maryland, 1; Virginia, 1; North Carolina, 2; Georgia, 1; Texas, 1; *Pacific*, Oregon, 1; California, 11.

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry				
	Leather tanning and finishing	Industrial leather belting	Footwear cut stock	Footwear, except rubber	House slippers
ALL ESTABLISHMENTS					
Number of establishments	561	183	606	1,288	212
All employees:					
Number (average for the year)	53,205	5,032	22,077	229,303	11,012
Salaries and wages, total	$156,540	$13,441	$47,793	$494,319	$22,560
Production and related workers:					
Number (average for the year)	48,627	4,015	19,706	210,634	10,020
Man-hours, total thousands	100,964	8,285	38,145	400,757	18,895
Wages, total	$130,586	$9,667	$38,468	$420,510	$18,384
Value added by manufacture	$403,783	$28,375	$87,301	$745,995	$39,548
ESTABLISHMENTS REPORTING DETAILED STATISTICS					
Number of establishments	471	183	497	1,118	212
All employees:					
Number (average for the year)	52,772	5,032	21,579	227,543	11,012
Salaries and wages, total	$155,570	$13,441	$46,938	$491,106	$22,560
Production and related workers:					
Number (average for the year)	48,205	4,015	19,215	209,024	10,020
Man-hours, total thousands	100,122	8,285	37,160	397,540	18,895
Wages, total	$129,687	$9,667	$37,628	$417,757	$18,384
Value added by manufacture	$401,544	$28,375	$85,773	$741,801	$39,548
Number of employees for pay period ended nearest Oct. 15:					
All employees	54,160	4,758	22,270	234,189	13,544
Male	47,826	3,358	13,489	113,311	6,187
Female	6,334	1,400	8,781	120,878	7,357
Production and related workers	49,453	3,751	19,872	215,384	12,470
Male	44,398	2,678	12,144	103,428	5,595
Female	5,055	1,073	7,728	111,956	6,875
Force-account construction workers	54	1	--------	63	4
Administrative, supervisory, sales, and all other	4,653	1,006	2,398	18,742	1,070
Male	3,374	679	1,345	9,820	588
Female	1,279	327	1,053	8,922	482
All employees, number by month:					
January	52,081	5,323	21,870	224,094	9,023
February	52,729	5,389	21,956	227,630	9,243
March	52,625	5,398	22,001	229,741	9,601
April	52,699	5,329	21,045	224,960	9,787
May	51,980	5,233	20,140	216,920	9,817
June	51,484	5,053	20,075	216,948	10,036
July	50,949	4,883	20,778	222,617	10,682
August	52,653	4,729	21,590	229,045	11,959
September	53,605	4,691	21,843	231,512	12,719
October	54,160	4,758	22,270	234,189	13,544
November	54,458	4,720	22,432	234,833	13,551
December	54,212	4,830	22,800	237,484	12,132

ITEM	Industry				
	Leather tanning and finishing	Industrial leather belting	Footwear cut stock	Footwear, except rubber	House slippers
ESTABLISHMENTS REPORTING DETAILED STATISTICS—Continued					
Cost of materials, fuel, electricity, and contract work	$664,089	$29,028	$205,305	$966,413	$37,469
Materials, parts, containers, and supplies	616,928	28,654	203,931	954,847	36,556
Fuels, total	8,540	119	435	2,043	104
Bituminous coal	6,558	62	179	1,460	74
Anthracite	288	9	18	82	3
Coke	6	--------	1	22	--------
Fuel oils	1,507	37	168	335	22
Gas	74	10	52	105	4
Other fuels	107	1	17	39	1
Purchased electric energy	2,989	190	727	3,727	222
Contract and commission work	35,632	65	212	5,796	587
Value of inventories:					
Beginning of year, total	$158,865	$7,611	$34,091	$174,233	$9,938
Finished products	36,699	2,515	8,804	30,379	2,029
Materials, supplies, and work in process	122,166	5,096	25,287	143,854	7,909
End of year, total	174,544	10,660	39,470	210,962	9,546
Finished products	38,129	5,052	11,832	39,706	2,171
Materials, supplies, and work in process	136,415	5,608	27,638	171,256	7,375
Expenditures for plant and equipment:					
New plant and equipment	$10,565	$1,320	$1,921	$12,587	$757
Construction and major alteration of fixed plants	3,376	207	492	2,906	78
Buildings	3,179	198	424	2,716	72
Other construction	197	9	68	190	6
Machinery and equipment	7,189	1,113	1,429	9,681	679
Production machinery and equipment	6,357	981	1,142	7,989	609
Other machinery and equipment	832	132	287	1,692	70
Used plant and equipment, and land	388	229	204	1,696	99
Number of highway-type motor vehicles owned or leased:					
Trucks	320	80	157	256	15
By manufacturer's rated capacity:					
Under 1½ tons	62	62	69	94	6
1½ tons	149	16	47	116	9
Over 1½ tons and less than 3½ tons	64	2	28	30	--------
3½ tons and less than 5 tons	17	--------	4	12	--------
5 tons and over	28	--------	9	4	--------
By body type:					
Van	12	--------	38	52	8
Stake or platform	135	12	35	79	1
Panel or light delivery	63	52	60	79	5
All other trucks	110	16	24	46	1
Truck tractors	8	--------	3	25	--------
Trailers and semitrailers	15	--------	3	38	--------

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1–4 employees	5–9 employees	10–19 employees	20–49 employees	50–99 employees	100–249 employees	250–499 employees	500–999 employees	1,000–2,499 employees	2,500 employees and over
Leather tanning and finishing:											
Number of establishments	561	87	69	71	99	88	94	35	17	1	--------
Number of employees (average for the year)	53,205	214	471	977	3,180	6,339	14,685	12,864	*14,475*	(d)	--------
Value added by manufacture	$403,783	$56,609	$4,814	$5,718	$20,799	$34,499	$98,272	$86,895	*$96,177*	(d)	--------
Industrial leather belting:											
Number of establishments	183	65	46	29	29	4	6	2	1	1	--------
Number of employees (average for the year)	5,032	144	309	396	892	232	848	*2,211*	(d)	(d)	--------
Value added by manufacture	$28,375	$786	$1,862	$1,876	$4,686	$1,476	$5,165	*$12,524*	(d)	(d)	--------
Footwear cut stock:											
Number of establishments	606	132	100	110	144	75	35	8	1	1	--------
Number of employees (average for the year)	22,077	273	692	1,535	4,622	5,186	5,099	*4,670*	(d)	(d)	--------
Value added by manufacture	$87,301	$1,397	$2,966	$7,087	$19,957	$21,551	$21,275	*$13,068*	(d)	(d)	--------
Footwear, except rubber:											
Number of establishments	1,288	86	87	97	213	185	299	220	86	13	2
Number of employees (average for the year)	229,303	175	582	1,363	6,951	13,358	48,170	78,425	58,448	*21,831*	(d)
Value added by manufacture	$745,995	$804	$1,574	$3,904	$22,328	$43,960	$156,355	$253,765	$190,076	*$73,229*	(d)
House slippers:											
Number of establishments	212	36	35	36	51	30	16	5	3	--------	--------
Number of employees (average for the year)	11,012	87	234	499	1,766	2,117	2,818	*3,491*	(d)	--------	--------
Value added by manufacture	$39,548	$323	$675	$1,904	$6,382	$7,733	$8,453	*$14,078*	(d)	--------	--------

NOTE: Value added figures in smaller size groups may be distorted in relation to employment by reports of firms which have a large part of their manufacturing work done by others on contract.

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

LEATHER TANNING AND FINISHING INDUSTRY	Shipped by— Leather tanning and finishing industry	Other industries	All industries
Total shipments by the industry[1]	$1,070,085		
A. Leather tanning and finishing	1,001,611	$3,359	$1,004,970
Cattle hide and kip side leathers	653,368	3,098	656,466
Calf and whole kip leathers	108,281	5	108,286
Sheep and lamb leathers	92,411	256	92,667
Other leather tanning and finishing products, n.e.c.	147,551		147,551
B. Secondary products	4,306		
C. Miscellaneous receipts	64,168		
Contract and commission work	53,613		
Scrap and salable refuse	10,555		

FOOTWEAR CUT STOCK INDUSTRY	Shipped by— Footwear cut stock industry	Other industries	All industries
Total shipments by the industry	$294,309		
A. Boot and shoe cut stock and findings, total	285,670	$8,465	$294,135
Boot and shoe cut stock	195,631	2,908	198,539
Boot and shoe findings, n.e.c.	90,039	5,557	95,596
B. Secondary products	3,090		
C. Miscellaneous receipts	5,549		
Contract and commission work	2,418		
Scrap and salable refuse	3,131		

HOUSE SLIPPERS INDUSTRY	Shipped by— House slippers industry	Other industries	All industries
Total shipments by the industry	$77,017		
A. Slippers for housewear	72,257	$13,062	$85,319
B. Secondary products	4,596		
C. Miscellaneous receipts	164		

INDUSTRIAL LEATHER BELTING INDUSTRY	Shipped by— Industrial leather belting industry	Other industries	All industries
Total shipments by the industry	$57,403		
A. Industrial leather belting and packing, total	51,030	$1,237	$52,267
Industrial leather belting	21,662	331	21,993
Leather packings, oil and grease retainers, and washers	19,815	196	20,011
Other industrial leather products, n.e.c.	9,553	710	10,263
B. Secondary products	5,307		
C. Miscellaneous receipts	1,066		
Contract and commission work	196		
Repair work	329		
Scrap and salable refuse	541		

FOOTWEAR, EXCEPT RUBBER, INDUSTRY	Shipped by— Footwear, except rubber, industry	Other industries	All industries
Total shipments by the industry	$1,716,980		
A. Footwear (except house slippers and rubber footwear), total	1,696,464	$6,668	$1,703,132
Men's, youths', and boys' shoes, except play shoes and men's work shoes	522,426	484	522,910
Men's work shoes	97,470	53	97,523
Women's, misses', and children's shoes, except play shoes	914,281	391	914,672
Infants' and babies' shoes	56,871	305	57,176
Athletic shoes	15,599	1,943	17,542
Play shoes	74,891	3,082	77,973
Other footwear, n.e.c.	14,926	410	15,336
B. Secondary products	15,147		
House slippers	12,674		
Other secondary products	2,473		
C. Miscellaneous receipts	5,369		
Contract and commission work	5,008		
Scrap and salable refuse	169		
Nonmanufacturing activities	192		

[1] Includes $13,277,000 of rough, russet, and crust leathers.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money and quantity figures in thousands]

PRODUCT	1947						1939		
	Total shipments and interplant transfers			Production			Production		
	Finished leather		Value of rough, russet, and crust leather	Total	From own hides, skins, or rough leather	On contract	Total	From own hides, skins, or rough leather	On contract
	Quantity	Value							
	(pounds)			(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)
Leather tanning and finishing, total		$992,446	$12,524						
Cattle hide and kip side leathers:									
Grains:									
Sole leather	381,512	212,693	1,721	383,657	335,150	48,507	330,201	289,708	40,493
Vegetable tanned (backs, bends, sides)	218,842	133,647		218,428	195,767	22,661	241,338	201,021	40,317
Chrome or retan (backs, bends, sides)	19,889	17,493	127	20,003	13,748	6,255			
Heads, bellies, shoulders, etc	142,781	61,553	1,594	145,226	125,635	19,591	[1] 88,863	88,687	176
Welting leather	7,265	4,031		7,270	7,189	81	7,933	7,933	
Belting leather	17,034	17,456	2,762	16,722	16,717	5	n.a.	n.a.	
Curried (butts, butt bends)	15,674	16,578	2,760	15,360	15,360		6,107	6,107	
Shoulders	1,360	878	2	1,362	1,357	5	(2)	(2)	
Mechanical leather (sides)	3,676	4,449		3,769	2,882	887	n.a.	n.a.	n.a.
Harness leather (sides, backs)	5,260	3,526	300	5,385	5,385		7,668	7,668	
Collar, skirting, lace, and latigo leather (sides)	6,854	5,114	20	6,930	6,930		9,414	9,414	
	(sq. ft.)			(sq. ft.)	(sq. ft.)	(sq. ft.)	(sq. ft.)	(sq. ft.)	(sq. ft.)
Bag, case, and strap leather (sides)	44,637	26,169	158	44,645	38,499	6,146	21,245	21,245	
Upholstery leather—top grains and machine buffs (hides)	26,566	14,028	2,195	26,661	22,323	4,338	23,387	17,791	[3] 5,596
Upper leather, excluding patent (sides)	492,824	234,405	585	492,829	422,393	70,436	370,610	362,921	7,689
Patent leather (sides)	51,129	28,056		51,168	12,476	38,692	51,286	29,080	22,206
Glove leather, excluding athletic (sides)	10,084	2,553		10,025	2,228	7,797	10,633	7,314	3,319
Garment leather (sides)	12,952	5,023		13,018	3,199	9,819			
Flat leather, handbag leather, and other fancy leather (sides)	10,558	2,738		10,609	8,323	2,286	3,962	3,962	
Other	116,457	24,614	29	38,347	31,899	6,448	n.a.	n.a.	n.a.
Finished splits (including deep buffs and buffings)	281,256	61,250	2,591	276,708	208,068	68,640	n.a.	n.a.	n.a.
Bottom stock	51,602	11,892	916	51,404	43,462	7,942	(4)	(4)	(4)
Upper	54,751	14,250		51,901	42,913	8,988	39,330	39,330	
Lining	79,374	15,056	179	79,542	63,091	16,451	[5] 138,186	[5] 112,399	[5] 25,787
Glove	55,164	9,342	293	55,493	32,433	23,060			
Garment	6,034	1,255		6,041	3,034	3,007			
Upholstery, including beef buffs	14,722	4,017	639	14,683	14,200	483	10,193	10,193	(6)
Other	19,609	5,438	564	17,644	8,935	8,709	n.a.	n.a.	n.a.
Calf and whole kip leathers	127,238	107,747	539	128,296	105,862	22,433	156,214	144,220	11,994
Upper (skins)	119,532	102,042	537	119,994	98,228	21,766	133,470	123,140	10,330
Other	[7] 7,706	[7] 5,705	2	[7] 8,302	[7] 7,634	[7] 667	22,744	21,080	1,664
Goat and kid leathers	180,239	93,097	202	180,626	148,261	32,365	210,916	188,873	22,043
Upper (skins)	147,903	80,159	176	148,001	120,178	27,823	153,829	141,410	12,419
Lining (skins)	25,806	9,528		25,962	24,573	1,389	54,274	44,650	9,624
Glove (skins)							2,123	2,123	
Garment (skins)	678	253		820	811	9			
Other	5,852	3,157	26	5,843	2,699	3,144	690	690	
Cabretta	28,318	13,202	5	28,583	13,895	14,688	n.a.	n.a.	n.a.
Upper (skins)	7,076	3,040		7,075	6,296	779	(8)	(8)	(8)
Glove (skins)	17,375	8,773		17,611	4,937	12,674	22,320	8,326	13,994
Garment (skins)									
Other	3,867	1,389	5	3,897	2,662	1,235	n.a.	n.a.	n.a.
Sheep and lamb leathers	277,329	69,362	993	283,193	201,803	81,390	n.a.	n.a.	n.a.
Upper (skins)	12,515	3,074	183	12,615	8,354	4,261	[8] 15,773	[8] 12,617	[8] 3,156
Lining (skins)	113,375	25,419		114,065	76,560	37,505	87,238	60,522	26,716
Fancy (skins)	12,330	3,849	14	12,137	10,237	1,900	14,272	12,247	2,025
Glove (skins)	22,120	6,835	45	22,141	11,745	10,396	142,786	99,515	43,271
Garment (skins)	50,287	11,872		50,499	34,377	16,122			
Skivers	22,774	4,628	47	24,034	17,572	6,462	31,371	22,985	8,386
Fleshers, including chamois	9,350	2,430		10,654	10,165	489	4,151	n.a.	4,151
Textile and roller (skins)	4,761	1,829	235	4,761	3,077	1,684	3,755	1,204	2,551
Other	29,817	9,426	469	32,287	29,716	2,571	n.a.	n.a.	n.a.
Shearlings (skins)	37,458	22,312		35,005	34,143	862	19,050	19,050	
Horse, colt, mule, ass, and pony leathers	52,129	20,086	26	53,436	46,820	6,316	n.a.	n.a.	n.a.
Sole	3,311	1,990		3,408	3,308	100	3,960	3,960	
Upper	8,182	4,796	26	8,235	7,443	792	11,592	6,826	4,766
Glove	12,970	3,209		13,031	10,468	2,563	25,679	25,679	
Garment	21,802	7,213		22,552	19,672	2,580			
Other	5,864	2,878		6,210	5,929	281	n.a.	n.a.	n.a.
Kangaroo and wallaby leather (skins)	8,840	5,327		8,853	7,115	1,738	5,529	5,529	
Deer and elk leathers	7,486	4,024		7,599	812	6,787	7,648	2,111	5,537
Reptile leather	4,008	611	153	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Aquatic leather	539	533	32	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Pig and hog leathers, including peccary, carpincho, bacon rind and strips, etc	20,137	8,819	4	20,206	4,330	15,876	837	837	
Other animals	2,390	1,221	209	2,668	2,538	130	n.a.	n.a.	n.a.

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	1947			1939	
	Shipments		Production (pairs)	Production	
	Quantity (pairs)	Value		Quantity (pairs)	Value
Footwear, except house slippers and rubber footwear, total	**436,332**	**$1,703,132**	437,312	385,596	**$697,072**
Dress and work shoes	396,959	1,592,281	398,084	361,578	658,565
Men's dress, including moccasin-type dress shoes	85,015	466,072	84,957	76,637	182,167
Welted, including Silhouwelt			77,072	65,790	
McKay, including Littleway			6,679	9,406	
Other construction			1,206	1,441	
Men's work, including moccasins	21,786	97,523	21,786	28,125	48,553
Welted, including Silhouwelt			11,798	7,338	
McKay, including Littleway			1,476	4,642	
Wood or metal fastened			7,496	14,133	
Other construction			1,016	2,012	
Youths' and boys'	19,822	55,938	19,829	17,316	24,778
Welted, including Silhouwelt			7,982	[9] 6,251	
McKay, including Littleway			3,539	4,748	
Wood or metal fastened			4,413	3,495	
Stitchdown			3,238	2,822	
Other construction			657	(9)	
Women's, including sandal-type dress shoes	182,215	774,861	182,816	168,777	335,127
Welted, including Silhouwelt			44,245	30,554	
McKay, including Littleway			24,972	45,153	
Cemented, excluding Slip-lasted			85,252	81,235	
Slip-lasted			15,142	n.a.	
Other construction			13,205	11,835	
Misses', including sandal-type dress shoes	26,934	73,737	27,026	[10] 46,091	[10] 50,290
Welted, including Silhouwelt			7,333	8,125	
McKay, including Littleway			1,405	4,248	
Stitchdown			13,576	30,297	
Cemented, excluding Slip-lasted			3,398	3,273	
Slip-lasted			1,234	n.a.	
Other construction			80	148	
Children's	26,149	66,074	26,262	(10)	(10)
Welted, including Silhouwelt			8,701		
Stitchdown			13,108		
Cemented, excluding Slip-lasted			3,754		
Slip-lasted			292		
Other construction			407		
Infants'	20,538	39,462	20,906	[11] 24,632	[11] 17,650
Welted, including Silhouwelt			5,682	5,391	
Stitchdown			7,635	10,520	
Cemented, excluding Slip-lasted			4,413	[12] 2,104	
Other construction			3,176	6,617	
Babies	14,500	17,714	14,502	(11)	(11)
Welted, including Silhouwelt			1,011		
Turned			6,337		
Stitchdown			3,629		
Other construction			3,525		
Athletic shoes	4,424	19,926	4,233	4,144	8,890
Men's, youths', and boys'	3,351	16,085	3,145		
Women's, misses', and children's	1,073	3,841	1,088		
Play shoes	31,779	77,973	31,839		
Men's, youths', and boys'	740	2,429	743		
Women's and misses', including nondress type sandals	29,510	73,294	29,565		
Welted, including Silhouwelt			3,672		
McKay, including Littleway			3,479		
Cemented, excluding Slip-lasted			7,973	19,874	29,617
Slip-lasted			11,589		
Other construction			2,852		
Children's	773	1,236	773		
Infants' and babies'	756	1,014	758		
Footwear, not specified by kind	3,170	12,952	3,156		
Slippers for housewear, total	**47,762**	**85,319**	47,652		
Men's	10,800	22,617	10,726		
Welted, including Silhouwelt			957		
McKay, including Littleway			1,666		
Turned			1,714		
Stitchdown			2,868		
Cemented, excluding Slip-lasted			2,869		
Slip-lasted			338		
Other			314		
Youth's and boys'	635	785	636	n.a.	n.a.
Women's	21,418	43,300	21,353		
McKay, including Littleway			3,781		
Turned			1,358		
Cemented, excluding Slip-lasted			8,034		
Slip-lasted			3,375		
Other			4,805		
Misses'	1,594	2,308	1,618		
Children's	2,816	3,033	2,828		
Infants' and babies'	1,015	946	1,128		
Other house slippers, not specified by kind	9,484	12,330	9,363		

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Production	
	Quantity	Value f.o.b. plant	Quantity	Value
	(doz. prs.)		(doz. prs.)	
Footwear cut stock and findings, total		$294,135		n.a.
Cut stock		201,648		n.a.
Outer soles:				
Leather	18,698	101,874	20,069	$44,851
Rubber	9,779	[13] 31,231	12,213	[13] 15,114
Other than leather or rubber [14]	650	2,146	n.a.	n.a.
Midsoles:				
Leather	5,509	12,648	12,914	13,236
Other than leather	415	474	2,603	807
Heels:				
Leather	3,877	5,249	3,190	2,640
Rubber	26,469	[13] 31,028	22,139	[13] 14,494
Other than leather or rubber [14]	4,269	5,240	4,246	1,910
Heel lifts and top lifts:				
Leather	9,976	7,329	9,040	3,491
Other than leather	1,116	333	1,117	198
Counters:				
Leather	6,942	5,945	6,355	3,854
Other than leather	15,839	5,524	21,756	3,682
Box toes	18,221	5,422	20,358	3,143
Taps	4,304	13,008	2,744	5,914
Uppers (vamps, quarters, tips, tongues, etc.)		2,460		157
Other cut stock:				
Leather		26,389		7,630
Other than leather		4,498		
Findings		31,695		
Platforms, other than wood	1,685	2,677	n.a.	n.a.
Wood heel blocks made for sale as such	8,974	10,616	7,678	3,519
Finished wood heels:				
Manufactured complete in own plant	5,066	7,924	4,153	4,998
Finished from purchased blocks	4,178	10,478	4,818	5,684
Other cut stock and findings, n.e.c.		63,901		
Shanks:				
Metal	12,890	3,536	23,290	2,189
Other than metal	4,889	1,610		
	(Lin. yds.)		(Lin. yds.)	
Welting (equivalent ½ inch wide)	205,938	21,611	171,263	6,733
Other shoe findings, n.e.c.		37,144		
Industrial leather belting and packing, total		52,267		23,503
Industrial leather belting		21,993		11,676
Flat [15]		19,283		10,417
Other		2,710		1,259
Leather packings		9,305		4,305
Leather oil and grease retainers		9,778		n.a.
Leather washers		928		([16])
Textile leathers		7,486		2,218
Other products made wholly or partly of leather		2,777		5,304

n.a.—Not available.
[1] Includes belting leather, except belting butts-curried.
[2] Included with cattle hide and kip side sole leathers.
[3] Includes both finished and rough, top grains, machine buffs, and splits upholstery leather.
[4] Included with lining, glove, and garment finished splits.
[5] Includes bottom stock splits.
[6] Included with cattle hide and kip side upholstery leather.
[7] Includes lining and fancy calf and whole kip leathers.
[8] Cabretta upper leather included with sheep and lamb upper leather.
[9] Data for a small number of pairs of youths' and boys' "Turned" shoes included in figures for "Welted, including Silhouwelt" to avoid disclosing figures for individual companies.
[10] Data for misses' shoes and children's shoes combined in 1939.
[11] Data for infants' shoes and babies' shoes combined in 1939.
[12] Data for a small number of pairs of infants' "wood-or-metal fastened" shoes included in figure for "cemented" to avoid disclosing figures for individual companies.
[13] These products also shown in the products of the rubber industries where they are made. They are shown here also only as a convenience. The dollar amounts for these items are not included in the cut stock total.
[14] Made of materials such as leather board. Believed to include some rubber soles and heels which were not reported separately.
[15] In 1947, shipments totaled 7,211,000 pounds of flat leather belting; production in 1947 was 7,720,000 and in 1939, 6,400,000 pounds.
[16] Included in "Other products made wholly or partly of leather" in 1939 to avoid disclosure.

LEATHER GLOVES; LUGGAGE; AND RELATED GOODS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of leather dress and semidress gloves and work gloves, luggage, women's handbags, small leather goods, saddlery, and other miscellaneous leather goods. These establishments have been classified in seven industries described separately below.

Dress and Semidress Leather Gloves *(Standard Industrial Classification No. 3151.)*—This industry comprises establishments primarily engaged in manufacturing dress and semidress gloves exclusively of leather. Establishments primarily engaged in manufacturing leather work gloves and mittens are classified in Industry 3152; sporting and athletic gloves, in Industry 3949; and dress and semidress gloves and mittens of cloth, or cloth and leather combined, in Industry 2381.

Current statistics were published on the production of this industry during 1947 in Facts for Industry, series M67D, "Gloves and mittens."

Leather Work Gloves and Mittens *(Standard Industrial Classification No. 3152.)*—This industry comprises establishments primarily engaged in manufacturing leather work gloves and mittens. Establishments primarily engaged in manufacturing dress and semidress leather gloves are classified in Industry 3151; sporting and athletic leather gloves, in Industry 3949; and work gloves and mittens of cloth or cloth and leather combined, in Industry 2382.

Current statistics were published on the production of this industry during 1947 in Facts for Industry, Series M67D, "Gloves and mittens."

Suitcases, Briefcases, Bags, Trunks, and Other Luggage *(Standard Industrial Classification No. 3161.)*—This industry comprises establishments primarily engaged in manufacturing suitcases, briefcases, bags, trunks, and related luggage of leather or other materials.

Women's Handbags and Purses *(Standard Industrial Classification No. 3171.)*—This industry comprises establishments primarily engaged in manufacturing women's handbags and purses of leather or other materials.

Small Leather Goods *(Standard Industrial Classification No. 3172.)*—This industry comprises establishments primarily engaged in manufacturing small leather (and nonleather) articles such as billfolds; card, cigarette, and key cases; coin purses; and checkbook covers.

Saddlery, Harness, and Whips *(Standard Industrial Classification No. 3192.)*—This industry comprises establishments primarily engaged in manufacturing saddles and parts, harness and parts, halters, horse boots, feed bags, whips and crops, whipstocks, and whip handles.

Leather Goods, Not Elsewhere Classified *(Standard Industrial Classification No. 3199.)*—This industry comprises establishments primarily engaged in manufacturing miscellaneous leather goods, not elsewhere classified, including embossed leather goods, leather desk sets, dog collars and other dog furnishings, leather handles for luggage, novelties, razor strops, and safety belts.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Leather dress gloves:								
1947	252	8,968	$15,844	8,151	$13,141	$24,042	$22,521	$47,308
1939 [4]	166	n.a.	n.a.	7,690	5,650	9,766	10,341	20,107
Leather work gloves:								
1947	89	2,576	4,866	2,313	3,899	7,869	7,937	15,530
1939 [4]	65	n.a.	n.a.	1,849	1,411	2,701	2,928	5,629
Total for leather dress gloves and leather work gloves: [4]								
1947	341	11,544	20,710	10,464	17,040	31,911	30,458	62,838
1939	231	n.a.	n.a.	9,539	7,061	12,467	13,269	25,736
1937	221	12,568	10,694	11,637	9,039	14,998	15,720	30,718
1935	224	10,573	10,011	9,810	8,500	14,257	13,874	28,131
1933	194	8,759	7,371	8,129	6,434	12,093	11,377	23,470
1931	227	n.a.	n.a.	7,884	7,554	14,888	13,136	28,024
1929	257	10,101	11,476	9,203	9,204	18,917	20,206	39,123
1927	232	10,146	10,852	9,106	8,814	17,386	19,276	36,662
1925 [5]	226	n.a.	n.a.	7,115	6,915	15,514	17,779	33,293
1923	260	11,115	10,705	10,010	8,545	17,857	20,224	38,081
1921	272	8,853	7,714	7,907	5,843	11,011	13,844	24,855
1919	355	12,189	11,249	10,685	8,151	20,655	26,286	46,941
1914	352	11,928	5,959	10,668	4,558	9,443	12,171	21,614
1909	377	12,492	6,020	11,354	4,764	10,423	13,208	23,631
1904	339	11,285	4,425	10,645	3,840	7,739	10,001	17,740
1899 [6]	394	15,004	4,730	14,345	4,183	7,443	9,483	16,926
Luggage:								
1947	592	16,066	41,293	13,904	31,141	68,078	66,095	134,173
1939	329	9,924	11,556	8,326	7,919	17,377	19,214	36,591
1937	277	9,708	10,624	8,708	8,458	18,186	20,534	38,720
1935	307	7,644	8,278	6,654	6,336	13,316	14,932	28,248
1933	270	5,831	4,791	5,117	3,749	8,040	9,328	17,368
1931	371	n.a.	n.a.	6,198	6,343	13,483	13,232	26,715
1929	467	13,069	18,682	11,359	13,757	32,275	31,694	63,969
1927	495	12,097	17,591	10,345	13,084	30,831	29,128	59,959
1925	475	11,964	17,282	10,348	13,226	29,842	31,382	61,224
1923	505	13,217	17,685	11,441	13,520	30,186	32,837	63,023
1921	504	10,045	13,240	8,712	10,260	22,666	23,883	46,549
1919	597	13,615	17,736	11,470	12,464	30,710	33,222	63,932
1914	561	11,605	7,706	9,911	5,540	12,847	13,625	26,472
1909	524	12,870	7,653	11,122	5,537	13,399	14,629	28,028
1904	373	10,052	5,150	9,091	4,139	9,536	9,108	18,644
1899	312	7,672	3,469	6,964	2,777	6,474	5,955	12,429

See footnotes at end of table.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS—Continued

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Handbags and purses:								
1947	734	20,301	$45,409	18,404	$35,992	$76,586	$85,333	$161,919
1939	286	15,700	14,777	14,048	11,239	22,929	32,878	55,807
1937 [7]	203	12,236	11,264	11,306	9,054	18,690	24,756	43,446
Small leather goods:								
1947	246	5,606	11,602	4,842	8,130	19,490	18,159	37,649
1939	118	4,350	4,461	3,615	2,751	6,962	7,372	14,334
1937 [7]	68	2,706	2,385	2,443	1,850	4,875	5,342	10,217
Total for handbags and purses and small leather goods: [7]								
1947	980	25,907	57,011	23,246	44,122	96,076	103,492	199,568
1939	404	20,050	19,238	17,663	13,990	29,891	40,250	70,141
1937	271	14,942	13,649	13,749	10,904	23,565	30,098	53,663
1935	324	12,570	11,630	11,406	9,232	20,736	22,256	42,992
1933	218	8,822	6,966	8,107	5,954	12,996	15,349	28,345
1931	260	n.a.	n.a.	8,747	9,793	20,546	22,601	43,147
1929	290	11,871	19,881	10,430	15,229	33,276	35,352	68,628
1927	257	9,798	16,340	8,570	13,170	27,726	29,619	57,345
1925	190	7,785	11,573	6,826	9,022	20,663	22,442	43,105
1923	207	6,456	9,396	5,518	7,291	16,496	16,236	32,732
1921	115	3,126	4,160	2,715	3,224	6,864	6,221	13,085
1919	139	3,329	4,187	2,905	3,062	6,993	7,557	14,550
1914	64	1,657	941	1,466	702	1,567	1,784	3,351
1909	79	n.a.	n.a.	1,472	689	1,699	1,929	3,628
1904	46	2,438	1,031	2,281	797	1,840	1,927	3,767
1899	68	1,777	735	1,653	589	1,217	1,278	2,495
Saddlery, harness, and whips:								
1947	140	2,861	6,294	2,501	5,021	9,437	11,022	20,459
1939	156	3,351	3,416	2,755	2,388	5,242	6,876	12,118
1937	139	3,461	3,429	3,049	2,699	5,307	8,110	13,417
1935	157	3,773	3,878	3,234	2,919	5,618	7,739	13,357
1933	147	2,967	2,589	2,515	2,054	4,218	6,146	10,364
1931	185	n.a.	n.a.	1,974	1,926	4,071	5,268	9,339
1929	268	4,091	5,243	3,396	3,761	9,649	13,914	23,563
1927	271	4,998	6,300	4,113	4,631	10,965	16,702	27,667
1925	267	5,779	7,074	4,673	5,133	11,484	18,908	30,392
1923	484	8,234	9,596	6,817	7,097	18,093	24,762	42,855
1921	607	6,040	7,482	4,781	5,237	13,093	18,093	31,186
1919	1,849	13,803	16,252	11,128	11,431	33,159	53,540	86,699
1914	2,591	17,030	12,116	14,132	8,555	22,294	34,427	56,721
1909	1,404	19,418	12,029	16,178	8,775	23,410	34,763	58,173
1904	1,134	18,901	10,441	16,586	8,238	20,175	25,027	45,202
1899	933	17,616	8,407	15,651	6,733	15,388	21,049	36,437
Leather goods, n.e.c.:								
1947	405	6,168	13,605	5,412	10,204	22,299	18,718	41,017
1939	160	2,863	2,939	2,462	2,087	4,671	4,240	8,911
1937 [8]	207	n.a.	n.a.	3,699	3,133	7,142	7,439	14,581

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture. For "Leather dress gloves" and "Leather work gloves," see GENERAL EXPLANATIONS—Method of calculating value added by manufacture for selected industries in 1947.

[2] Figures for years prior to 1935 do not include cost of contract work.

[3] For 1947 and 1929, value of products shipped; for all other years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[4] The returns for 1939 have been retabulated to provide figures comparable with those for 1947. "Leather dress gloves" and "Leather work gloves" formerly constituted a single industry classification. The separate figures given for 1939 and 1947 have, therefore, been combined in order that figures can be shown for the entire period 1899–1947.

[5] The figures for 1925–47 do not include data for gloves and mittens of cloth and leather combined, whereas the figures for earlier years include data for these products.

[6] The figures for 1899 include data for a few establishments making gloves and mittens from materials other than leather.

[7] "Handbags and purses" and "Small leather goods" formerly constituted one industry. The separate industry figures shown for 1937–47 have been combined in order that statistics can be shown for the entire period 1899–1947.

[8] The figures for "Leather goods, n.e.c.," prior to 1937 include data for belts for personal wear, and, therefore, are not sufficiently comparable with those for later years to be shown in this table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Leather dress gloves, total [1]	252	8,968	$15,844	8,151	13,669	$13,141	$24,042	$22,521	$47,308	$302
Northeast	217	6,833	12,101	6,172	10,091	10,009	18,863	17,440	37,296	185
New York	210	6,565	11,683	5,927	9,642	9,663	18,224	16,986	36,203	173
East North Central	18	1,779	3,232	1,658	3,000	2,708	4,429	4,354	8,481	98
Wisconsin	11	1,510	2,780	1,410	2,563	2,331	3,781	3,896	7,375	63
West North Central	5	121	186	103	182	144	278	280	558	9
South and West	12	235	325	218	396	280	472	447	973	10
Leather work gloves, total [1]	89	2,576	4,866	2,313	4,463	3,899	7,869	7,937	15,530	226
Northeast	19	387	669	348	633	534	1,041	930	1,854	16
New York	13	136	205	125	205	174	377	317	694	8
East North Central	38	1,780	3,372	1,615	3,224	2,714	5,413	5,833	11,093	141
Wisconsin	19	613	1,201	542	1,125	917	1,806	2,137	3,914	45
West North Central	6	91	172	71	121	108	324	275	599	2
South and West	26	318	653	279	485	543	1,091	899	1,984	67
California	16	171	351	148	267	279	562	535	1,097	8

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947—Continued

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant an equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Luggage, total [1]	592	16,066	$41,293	13,904	27,814	$31,141	$68,078	$66,095	$134,173	$1,842
New England	29	834	1,772	724	1,267	1,383	3,526	3,646	7,172	42
Massachusetts	21	671	1,438	590	1,051	1,173	2,889	3,140	6,029	29
Middle Atlantic	368	6,941	18,487	6,155	12,460	14,563	29,657	32,892	62,549	708
New York	268	3,918	10,515	3,473	7,041	8,155	16,637	17,691	34,328	346
New Jersey	44	1,751	4,685	1,525	3,039	3,783	6,877	8,006	14,883	173
Pennsylvania	56	1,272	3,287	1,157	2,380	2,625	6,143	7,195	13,338	189
East North Central	102	4,129	11,468	3,360	6,905	7,741	17,635	14,751	32,386	363
Ohio	15	802	2,552	423	862	793	4,743	1,978	6,721	66
Illinois	59	1,787	4,928	1,577	3,323	3,906	6,765	7,659	14,424	96
Michigan	9	251	584	223	299	462	924	430	1,354	74
Wisconsin	13	1,219	3,283	1,076	2,314	2,482	5,086	4,533	9,619	127
West North Central	23	1,334	2,914	1,173	2,333	2,233	4,055	4,401	8,456	123
Missouri	17	1,246	2,779	1,093	2,166	2,111	3,788	4,187	7,975	107
South	20	861	1,768	808	1,669	1,546	4,811	3,343	8,154	132
Texas	6	99	172	77	176	133	271	254	525	22
West	50	1,967	4,884	1,684	3,180	3,675	8,394	7,062	15,456	474
California	40	839	2,148	714	1,384	1,707	3,808	2,835	6,643	369
Handbags and purses, total [1]	734	20,301	45,409	18,404	38,725	35,992	76,586	85,333	161,919	799
New England	45	2,236	4,362	2,037	3,918	3,420	7,180	7,301	14,481	103
Massachusetts	28	1,536	2,918	1,402	2,724	2,353	4,703	4,521	9,224	69
Middle Atlantic	627	16,572	38,110	14,984	32,152	30,167	65,040	73,184	138,224	639
New York	555	12,988	31,697	11,622	26,074	24,678	52,411	58,844	111,255	510
New Jersey	50	1,811	3,492	1,675	2,932	2,894	6,751	9,214	15,965	96
Pennsylvania	22	1,773	2,921	1,687	3,146	2,595	5,874	5,126	11,004	33
North Central	22	1,002	1,981	932	1,794	1,604	2,846	3,082	5,928	37
South	12	204	346	191	381	293	503	699	1,202	1
Pacific	28	287	610	260	480	508	1,017	1,067	2,084	19
California	28	287	610	260	480	508	1,017	1,067	2,084	19
Small leather goods, total [1]	246	5,606	11,602	4,842	9,133	8,130	19,490	18,159	37,649	314
New England	20	822	1,998	665	1,281	1,267	3,055	2,290	5,345	82
Massachusetts	16	798	1,961	644	1,239	1,236	2,985	2,211	5,196	81
Middle Atlantic	171	3,020	5,824	2,722	5,210	4,520	9,363	10,657	20,020	158
New York	145	1,974	4,094	1,774	3,371	3,098	6,667	8,570	15,237	77
New Jersey	15	582	902	530	1,063	752	1,411	1,319	2,730	49
Pennsylvania	11	464	828	418	776	670	1,285	768	2,053	32
North Central	37	1,520	3,300	1,250	2,221	2,029	6,366	4,562	10,928	47
Illinois	15	133	275	126	258	245	402	359	761	5
Kansas	3	14	19	14	26	19	24	7	31	----------
South	8	194	379	163	340	227	519	503	1,022	27
Mountain	3	11	15	8	16	14	27	21	48	----------
Pacific	7	39	86	34	65	73	160	126	286	----------
California	7	39	86	34	65	73	160	126	286	----------
Saddlery, harness, and whips, total [1]	140	2,861	6,294	2,501	5,117	5,021	9,437	11,022	20,459	194
New England	4	77	162	59	118	110	243	172	415	2
Middle Atlantic	14	176	476	133	307	293	771	517	1,288	5
New York	8	128	359	102	243	241	678	387	1,065	1
East North Central	19	319	821	243	554	530	1,116	1,570	2,686	29
Illinois	7	140	372	108	258	245	527	499	1,026	----------
West North Central	13	275	519	240	544	428	761	1,466	2,227	23
South	57	1,533	2,952	1,421	2,740	2,555	4,686	6,093	10,779	113
Kentucky	9	162	313	126	238	208	349	515	864	----------
Tennessee	13	256	444	233	489	358	699	1,173	1,872	17
Texas	16	479	1,031	452	844	939	1,856	1,623	3,479	77
Mountain	16	268	706	220	476	554	846	658	1,504	11
Pacific	17	213	658	185	378	551	1,014	546	1,560	11
California	9	126	414	110	217	356	611	340	951	8
Leather goods, n.e.c., total [1]	405	6,168	13,605	5,412	10,807	10,204	22,299	18,718	41,017	474
New England	43	640	1,338	563	1,136	968	1,929	1,669	3,598	46
Middle Atlantic	238	3,708	8,327	3,316	6,712	6,559	14,520	12,096	26,616	317
New York	193	2,441	5,439	2,170	4,223	4,197	9,637	7,887	17,524	120
New Jersey	24	888	2,138	817	1,825	1,794	3,803	3,002	6,805	182
Pennsylvania	21	379	750	329	664	568	1,080	1,207	2,287	15
East North Central	61	969	2,185	850	1,659	1,587	3,439	3,132	6,571	60
Ohio	13	196	288	184	374	241	549	388	937	4
Illinois	34	562	1,400	490	946	997	2,162	2,019	4,181	49
Wisconsin	6	47	66	43	82	58	164	180	344	1
West North Central	11	350	605	307	579	419	894	726	1,620	16
South	15	132	170	120	206	147	309	184	493	3
Mountain	8	57	134	53	103	95	221	205	426	4
Pacific	29	312	846	203	412	429	987	706	1,693	28
California	25	303	834	198	400	420	967	693	1,660	28

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Leather dress gloves: *Northeast*, Vermont, 2; Massachusetts, 2; New Jersey, 1; Pennsylvania, 2; *East North Central*, Illinois, 6; Michigan, 1; *West North Central*, Minnesota, 3; Iowa, 2; *South and West*, Tennessee, 2; Oregon, 2; California, 8 (71).

Leather work gloves: *Northeast*, New Hampshire, 2; Vermont, 1; Pennsylvania, 3 (105); *East North Central*, Ohio, 2; Indiana, 4 (271); Illinois, 9 (455); Michigan, 4; *West North Central*, Minnesota, 3 (27); Iowa, 3 (64); *South and West*, Kentucky, 2; Texas, 1; Washington, 6 (77); Oregon, 1.

Luggage: *New England*, Maine, 1; New Hampshire, 2; Rhode Island, 3 (114); Connecticut, 2; *East North Central*, Indiana, 6 (70); *West North Central*, Minnesota, 1; Iowa, 3 (57); Nebraska, 1; Kansas, 1; *South*, Maryland, 4 (147); Virginia, 1; Georgia, 1; Florida, 1; Kentucky, 2; Tennessee, 3 (61); Louisiana, 2; *West*, Colorado, 4 (838); Washington, 5; Oregon, 1.

Handbags and purses: *New England*, Rhode Island, 2; Connecticut, 15; *North Central*, Illinois, 11 (227); Wisconsin, 2; Missouri, 9; *South*, Maryland, 2; Virginia, 1; South Carolina, 1; Georgia, 1; Florida, 4 (42); Tennessee, 1; Oklahoma, 1; Texas, 1.

Small leather goods: *New England*, Rhode Island, 1; Connecticut, 3; *North Central*, Ohio, 9 (280); Indiana, 1; Wisconsin, 6 (628); Missouri, 3; *South*, Maryland, 1; South Carolina, 1; Tennessee, 2; Texas, 4 (102); *Mountain*, Colorado, 2; Nevada, 1.

Saddlery, harness, and whips: *New England*, Massachusetts, 2; Rhode Island, 1; Connecticut 1; *Middle Atlantic*, Pennsylvania, 6 (48); *East North Central*, Ohio, 4 (90); Indiana, 3 (34); Michigan, 1; Wisconsin, 4; *West North Central*, Minnesota, 2; Iowa, 2; Missouri, 6 (65); Nebraska, 3 (20); *South*, Virginia, 2; West Virginia, 1; North Carolina, 1; Georgia, 10 (431); Alabama, 3 (55); Oklahoma, 2; *Mountain*, Montana, 1; Idaho, 2; Wyoming, 1; Colorado, 6 (168); New Mexico, 2; Arizona, 2; Utah, 2; *Pacific*, Washington, 2; Oregon, 6.

Leather goods, n.e.c.: *New England*, Maine, 1; Massachusetts, 33 (544); Rhode Island, 3 (48); Connecticut, 6; *East North Central*, Indiana, 4 (61); Michigan, 4 (103); *West North Central*, Minnesota, 4 (125); Iowa, 1; Missouri, 4 (212); Kansas, 2; *South*, Maryland, 3 (60); Virginia, 1; North Carolina, 3 (20); Georgia, 2; Kentucky, 1; Oklahoma, 2; Texas, 3 (13); *Mountain*, Idaho, 2; Colorado, 4 (42); New Mexico, 2; *Pacific*, Oregon, 4 (9).

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry						
	Leather dress gloves	Leather work gloves	Luggage	Handbags and purses	Small leather goods	Saddlery, harness, and whips	Leather goods, n.e.c.
ALL ESTABLISHMENTS							
Number of establishments	252	89	592	734	246	140	405
All employees:							
Number (average for the year)	8,968	2,576	16,066	20,301	5,606	2,861	6,168
Salaries and wages, total	$15,844	$4,866	$41,293	$45,409	$11,602	$6,294	$13,605
Production and related workers:							
Number (average for the year)	8,151	2,313	13,904	18,404	4,842	2,501	5,412
Man-hours, total ... thousands	13,669	4,463	27,814	38,725	9,133	5,117	10,807
Wages, total	$13,141	$3,899	$31,141	$35,992	$8,130	$5,021	$10,204
Value added by manufacture	$24,042	$7,869	$68,078	$76,586	$19,490	$9,437	$22,299
ESTABLISHMENTS REPORTING DETAILED STATISTICS							
Number of establishments	252	89	524	507	139	140	222
All employees:							
Number (average for the year)	8,968	2,576	15,711	18,845	5,183	2,861	5,304
Salaries and wages, total	$15,844	$4,866	$40,557	$42,924	$10,867	$6,294	$12,019
Production and related workers:							
Number (average for the year)	8,151	2,313	13,563	17,012	4,420	2,501	4,568
Man-hours, total ... thousands	13,669	4,463	27,127	35,943	8,284	5,117	11,036
Wages, total	$13,141	$3,899	$30,486	$33,674	$7,399	$5,021	$8,679
Value added by manufacture	$24,042	$7,869	$66,925	$72,288	$18,100	$9,437	$19,772
Number of employees for pay period ended nearest Oct. 15:							
All employees	9,890	2,745	17,426	22,341	6,551	2,724	6,015
Male	3,553	1,076	10,341	7,695	1,979	2,153	2,736
Female	6,337	1,669	7,085	14,646	4,572	571	3,279
Production and related workers	8,952	2,453	15,173	20,420	5,740	2,354	5,245
Male	3,070	899	8,918	6,577	1,552	1,897	2,295
Female	5,882	1,554	6,255	13,843	4,188	457	2,950
Force-account construction workers	----	----	----	----	----	----	----
Administrative, supervisory, sales, and all other	938	292	2,253	1,921	811	370	770
Male	483	177	1,423	1,118	427	256	441
Female	455	115	830	803	384	114	329
All employees, number by month:							
January	9,566	2,580	15,241	16,609	4,813	3,551	5,348
February	9,171	2,520	15,154	18,445	4,869	3,432	5,413
March	8,976	2,546	15,251	19,301	5,053	3,356	5,363
April	8,031	2,577	15,013	17,772	4,716	2,995	5,042
May	7,816	2,509	14,373	16,037	4,374	2,735	4,785
June	7,947	2,498	14,808	14,836	4,109	2,536	4,727
July	8,313	2,282	14,570	16,975	4,361	2,523	4,644
August	9,199	2,502	15,784	20,009	4,981	2,529	4,988
September	9,437	2,576	16,644	21,010	5,687	2,610	5,428
October	9,890	2,745	17,426	22,341	6,551	2,724	6,015
November	9,997	2,715	17,457	22,174	6,693	2,678	6,054
December	9,197	2,754	16,552	20,344	5,897	2,655	5,754
Cost of materials, fuel, electricity, and contract work	$22,521	$7,937	$64,643	$82,142	$17,171	$11,022	$16,628
Materials, parts, containers, and supplies	20,665	7,719	63,431	76,230	16,022	10,902	16,191
Fuels, total	127	43	215	52	32	42	43
Bituminous coal	29	19	112	10	11	29	15
Anthracite	4	1	5	9	2	----	6
Coke	2	----	----	----	----	----	----
Fuel oils	55	8	56	21	14	2	17
Gas	30	12	32	9	2	10	3
Other fuels	7	3	10	3	2	1	2
Purchased electric energy	103	38	334	299	81	61	117
Contract and commission work	1,626	137	663	5,561	1,036	17	277
Value of inventories:							
Beginning of year, total	$10,543	$3,492	$18,698	$13,147	$6,613	$5,485	$4,989
Finished products	3,211	1,174	n. a.	4,632	1,753	2,744	2,181
Materials, supplies, and work in process	7,332	2,318	n. a.	8,515	4,860	2,741	2,808
End of year, total	9,844	3,773	19,669	13,623	5,992	5,365	4,828
Finished products	3,345	1,523	n. a.	5,048	1,876	2,978	2,165
Materials, supplies, and work in process	6,499	2,250	n. a.	8,575	4,116	2,387	2,663
Expenditures for plant and equipment:							
New plant and equipment	$302	$226	$1,842	$799	$314	$194	$474
Construction and major alteration of fixed plants	41	80	610	47	40	103	84
Buildings	35	48	438	39	32	95	76
Other construction	6	32	172	8	8	8	8
Machinery and equipment	261	146	1,232	752	274	91	390
Production machinery and equipment	176	111	1,008	601	199	65	355
Other machinery and equipment	85	35	224	151	75	26	35
Used plant and equipment, and land	10	10	242	46	5	47	43
Number of highway-type motor vehicles owned or leased:							
Trucks	47	13	66	22	9	48	12
By manufacturer's rated capacity:							
Under 1½ tons	39	9	23	15	5	32	9
1½ tons	6	4	34	5	3	11	1
Over 1½ tons and less than 3½ tons	2	----	7	2	1	3	2
3½ tons and less than 5 tons	----	----	2	----	----	2	----
5 tons and over	----	----	----	----	----	----	----
By body type:							
Van	1	----	10	2	2	4	----
Stake or platform	3	3	19	1	1	22	2
Panel or light delivery	39	9	29	17	6	16	9
All other trucks	4	1	8	2	----	6	1
Truck tractors	----	----	4	----	----	2	----
Trailers and semitrailers	----	----	4	----	----	2	----

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Leather dress gloves:											
Number of establishments	[1] 252	75	37	48	46	24	14	8			
Number of employees (average for the year)	8,968	174	240	633	1,475	1,095	1,821	2,930			
Value added by manufacture	$24,042	$617	$727	$1,640	$4,121	$4,539	$5,081	$7,317			
Leather work gloves:											
Number of establishments	[2] 89	12	18	20	24	10	5				
Number of employees (average for the year)	2,576	24	122	299	655	666	810				
Value added by manufacture	$7,869	$196	$372	$983	$1,814	$2,159	$2,345				
Luggage:											
Number of establishments	592	162	114	142	107	36	21	7	3		
Number of employees (average for the year)	16,066	370	769	1,980	3,199	2,558	3,160	2,173	1,857		
Value added by manufacture	$68,078	$1,422	$3,061	$7,731	$13,705	$11,944	$11,930	$7,887	$10,398		
Handbags and purses:											
Number of establishments	[2] 734	176	139	140	163	70	43	3			
Number of employees (average for the year)	20,301	431	963	1,925	5,120	4,809	6,056	997			
Value added by manufacture	$76,586	$2,025	$3,726	$8,165	$21,356	$16,794	$21,173	$3,347			
Small leather goods:											
Number of establishments	246	90	52	36	40	17	3	3			
Number of employees (average for the year)	5,606	200	351	519	1,227	1,095	1,074	1,140			
Value added by manufacture	$19,490	$850	$1,079	$1,961	$3,766	$3,157	$3,903	$4,774			
Saddlery, harness, and whips:											
Number of establishments	140	42	27	30	31	7	2	1			
Number of employees (average for the year)	2,861	84	178	400	980	*1,219*	(d)	(d)			
Value added by manufacture	$9,437	$336	$275	$1,265	$3,316	*$4,245*	(d)	(d)			
Leather goods, n.e.c.:											
Number of establishments	405	165	100	68	47	15	9	1			
Number of employees (average for the year)	6,168	348	682	964	1,378	1,085	*1,711*	(d)			
Value added by manufacture	$22,299	$1,423	$2,414	$3,368	$5,414	$3,848	*$5,832*	(d)			

[1] Includes 2 establishments with no employees accounting for a small amount of value added.
[2] Includes 1 establishment with no employees accounting for a small amount of value added.

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[**Money figures in thousands of dollars**]

LEATHER DRESS GLOVES INDUSTRY	Shipped by—		
	Leather dress gloves industry	Other industries	All industries
Total shipments by the industry	$47,308		
A. Dress and semidress leather gloves and mittens	43,177	$2,098	$45,275
B. Secondary products	2,915		
Women's and misses' warp-knit fabric gloves, cotton	1,150		
Other gloves and mittens	1,765		
C. Miscellaneous receipts	1,216		
Contract and commission work	1,178		
Scrap and salable refuse	38		

LEATHER WORK GLOVES INDUSTRY	Shipped by—		
	Leather work gloves industry	Other industries	All industries
Total shipments by the industry	$15,530		
A. Leather work gloves and mittens	12,657	$3,319	$15,976
B. Secondary products	2,742		
Work gloves and mittens, leather and fabric combination	1,562		
Other secondary products	1,180		
C. Miscellaneous receipts	131		

LUGGAGE INDUSTRY	Shipped by—		
	Luggage industry	Other industries	All industries
Total shipments by the industry	$134,173		
A. Luggage	125,172	$3,996	$129,168
B. Secondary products	8,261		
Small leather goods	1,370		
Other secondary products	6,891		
C. Miscellaneous receipts	740		
Contract and commission work	518		
Other miscellaneous receipts	222		

HANDBAGS AND PURSES INDUSTRY	Shipped by—		
	Handbags and purses industry	Other industries	All industries
Total shipments by the industry	$161,919		
A. Women's handbags and purses	154,520	$5,173	$159,693
B. Secondary products	1,373		
C. Miscellaneous receipts	6,026		
Contract and commission work	5,877		
Other miscellaneous receipts	149		

SMALL LEATHER GOODS INDUSTRY	Shipped by—		
	Small leather goods industry	Other industries	All industries
Total shipments by the industry	$37,649		
A. Small leather goods	33,212	$3,848	$37,060
B. Secondary products	3,711		
C. Miscellaneous receipts	726		

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947 —Continued

SADDLERY, HARNESS, AND WHIPS INDUSTRY	Shipped by— Saddlery, harness, and whips industry	Other industries	All industries
Total shipments by the industry	$20,459		
A. Saddlery, harness, and whips	17,345	$1,472	$18,817
B. Secondary products	2,771		
C. Miscellaneous receipts	343		

LEATHER GOODS, N. E. C., INDUSTRY	Shipped by— Leather goods, n. e. c., industry	Other industries	All industries
Total shipments by the industry	$41,017		
A. Leather goods, n.e.c.	36,106	$9,215	$45,321
B. Secondary products	4,146		
C. Miscellaneous receipts	765		
Contract and commission work	560		
Other miscellaneous receipts	205		

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[All figures in thousands]

PRODUCT	1947 Total shipments and interplant transfers: Quantity	1947 Total shipments and interplant transfers: Value f.o.b. plant	1947 Production: Quantity	1939 Production: Quantity	1939 Production: Value
	(units)		(units)	(units)	
Suitcases, briefcases, bags, trunks, and other luggage, total		$129,168			
Leather hand luggage	1,619	24,597	1,621	1,597	$8,911
Men's	536	11,083	532		
Women's	1,083	13,514	1,089		
Nonleather hand luggage	5,579	36,583	5,815	5,178	12,893
Men's	1,305	9,285	1,295		
Women's	4,274	27,298	4,520		
Other leather hand luggage	737	8,887	716	369	1,248
Men's	426	5,181	408		
Women's	311	3,706	308		
Other nonleather hand luggage	4,662	11,429	5,017	2,170	1,596
Men's	287	1,539	300		
Women's	4,375	9,890	4,717		
Occupational luggage cases	1,127	6,787	1,131	n.a.	n.a.
Leather	396	3,273	397		
Nonleather	731	3,514	734		
Trunks, hand trunks, and lockers	1,244	14,045	1,298	648	4,045
Leather	68	2,078	69		
Nonleather	1,176	11,967	1,229		
Briefcases	2,297	11,130	2,299	1,421	3,255
Leather	1,762	10,021	1,763		
Nonleather	535	1,109	536		
School bags	1,531	1,459	1,537	n.a.	n.a.
Dressing cases	797	2,656	796	n.a.	n.a.
All other luggage		11,595			2,117
Women's handbags and purses, total		159,693			
All leather and chiefly leather	16,466	74,306	16,854	20,576	27,856
Chiefly nonleather	37,348	75,991	37,488	43,931	27,653
Other products of the handbag industry		9,396		n.a.	n.a.
Saddlery, harness, and whips, total		18,817			
Harness and harness parts (excluding collars)		8,099			7,603
Horse collars	542	2,011	474		1,722
Saddles	103	5,229	109		1,278
Other saddlery, and harness products		3,478			
	(dozens)		(dozens)	(dozens)	
Leather gloves and mittens, dress and semidress, total		45,275			
Men's and boys':					
All leather, including fur	866	22,887	862	814	9,095
Table cut	96	3,591	89	[1] 90	1,924
Pattern and pulldown cut	144	5,333	138	[1] 143	2,043
Block cut	626	13,963	635	581	5,128
Women's, misses', and children's:					
All leather, including fur	653	21,521	649	727	10,559
Table cut	452	16,914	443	[1] 444	7,587
Pattern and pulldown cut	112	3,074	113	[1] 192	2,271
Block cut	89	1,533	93	91	701
Other gloves	54	867	48	n.a.	n.a.
Leather work gloves and mittens, total		15,976			5,859
Welders'	91	1,782			
All-grain, except welders'	615	8,494		1,064	5,859
All-split, except welders'	344	3,617			
Grain and split, except welders'	112	1,514			
Other and not specified by type		569			
	(units)			(units)	
Small leather goods, total		37,060			13,965
Billfolds and wallets, all leather and chiefly leather	16,336	28,532			(2)
Key cases	5,911	2,363		10,879	1,724
Small leather goods, not specified by type		6,165			[2] 12,241
Leather goods, not elsewhere classified, total		45,321			
Leather novelties		21,433			9,294
Other leather goods, not elsewhere classified		23,888			

n.a.—Not available.

[1] In 1947 gloves cut by the pulldown method were combined with pattern cut gloves; in 1939 pulldown gloves were combined with table cut gloves. It is not believed that this discrepancy affects the comparison of the two years significantly.

[2] Billfolds are included in "Small leather goods, not specified by type," in 1939.

Major Group 32.—STONE, CLAY, AND GLASS PRODUCTS

This major group includes establishments engaged in manufacturing flat glass and other glass products, cement, structural clay products, pottery, concrete and gypsum products, cut-stone products, abrasive and asbestos products, etc., principally from stone, clay, and sand. This major group excludes mines and quarries except common clay pits operated in conjunction with structural-clay products establishments. Also excluded are establishments manufacturing cut-stone products in conjunction with the operation of quarries.

GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

CENSUS YEAR	Number of establishments	All employees [1]		Production workers		Value added by manufacture [2]
		Number (average for the year)	Wages and salaries, total	Number (average for the year)	Wages, total	
1947	11,650	462,072	$1,210,768	405,755	$994,884	$2,306,480
1939 [3]	6,678	313,467	410,365	267,004	307,248	856,323
1937 [4]	6,114	330,709	419,452	297,404	345,524	860,063
1935	5,846	265,065	202,773	234,781	227,777	599,530
1933	4,657	n.a.	n.a.	175,145	144,078	404,148
1931	6,549	n.a.	n.a.	233,744	249,551	615,728
1929 [5]	8,688	371,950	548,216	330,708	435,865	1,053,908
1927	8,574	389,733	574,850	348,142	403,015	1,022,786
1925	8,391	391,797	565,247	351,136	466,357	1,042,452
1923	8,209	388,603	543,474	348,578	450,660	990,128
1921	8,227	282,113	377,080	251,157	305,449	605,136
1919	12,326	330,605	396,901	294,590	323,718	680,214
1914	14,693	404,738	248,926	335,325	206,161	379,247
1909	16,207	371,734	223,715	343,864	189,992	352,306
1904	10,744	304,725	170,693	285,740	148,846	270,915
1899	11,471	242,873	115,553	230,013	102,351	185,273

n.a.—Not available.

[1] The figures for 1947 and 1939 include data for employees of manufacturing establishments who were engaged in distribution and construction work. The extent to which data for such employees are included in the figures for earlier years is not known. See GENERAL EXPLANATIONS—Manufacturing employees—Classifications used.

[2] Value of products less cost of materials, supplies, fuel, electricity, and contract work. For 1899–1933, cost of contract work was not subtracted from value of products in calculating value added by manufacture. See GENERAL EXPLANATIONS—Value added by manufacture.

[3] Figures for 1939 include the production of ready-mixed concrete by establishments primarily engaged in making precast concrete products; the value of such products in 1939 represented less than 2 percent of the total value of products for the "Stone, clay, and glass products" group. Figures for years prior to 1939 also include establishments primarily engaged in producing ready-mixed concrete, quarries operated in conjunction with lime plants, and establishments producing cut stone or "Minerals: ground or treated" in conjunction with the operation of quarries; if such establishments had been included in the figures for the "Stone, clay, and glass products" group in 1939, the total for "Number of employees" would have been increased by about 4 percent and the total for "Value added by manufacture" would have been increased by about 5 percent.

[4] Figures for years prior to 1937 include some establishments primarily engaged in producing wallboard and plaster, building insulation, and floor composition. If such establishments had been included in the figures for the "Stone, clay, and glass products" group in 1937, value of products would have been increased by about 3 percent.

[5] Figures for years prior to 1929 include quarries operated in conjunction with cement plants and exclude the "Minerals: ground or treated" industry. (A majority of the operations classified in the "Minerals: ground or treated" industry prior to 1929 seem to have been quarries.) The net change in the figures for the "Stone, clay, and glass products" group in 1929, which would have resulted if figures comparable with prior years had been shown, amounts to less than 1 percent both for "Number of employees" and for "Value added by manufacture."

GLASS PRODUCTS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of glass, glassware, and glass products. These establishments have been classified in four industries as described below. The Flat Glass; Glass Containers; and Pressed and Blown Glassware, N.E.C. Industries represent manufacturers of glass products from molten glass produced in the establishment. The basic raw materials used in making the glass are glass sand, soda ash, salt cake, limestone, lime, and cullet (broken glass). The products of the Flat Glass Industry are made by drawing and rolling molten glass. The products of the Glass Containers and Pressed and Blown Glassware, N.E.C., Industries are made by pressing and blowing molten glass by machine and hand methods.

For 1939, the industry classifications were essentially the same as in 1947. But prior to 1939, census data for the first three industries were combined. Reports for 1937 were retabulated to show figures comparable with 1939 and 1947, but no comparable information is available separately for the first three industries for earlier years.

Flat Glass *(Standard Industrial Classification No. 3211.)*—This industry comprises establishments primarily engaged in manufacturing flat glass, including plate glass, clear window glass, rolled glass, figured and wire glass, opalescent and obscured glass, spectacle glass, and cathedral and skylight glass. The industry also produces laminated glass, but establishments primarily engaged in manufacturing laminated glass from purchased flat glass are classified in Industry 3231.

Some sheet and plate glass is shipped from one plant to another in the industry for the making of such products as laminated glass, consequently the value of shipments figure for the industry contains some duplication.

Glass Containers *(Standard Industrial Classification No. 3221.)*—This industry comprises establishments primarily engaged in manufacturing glass containers for commercial packing and bottling, and for home canning.

A monthly survey on Census Form M77C, "Glass Containers," collects statistics on machine-made containers in the same detail that is presented in this report. These statistics are summarized and published monthly in Facts For Industry, Series M77C, "Glass Containers." The figure for total quantity of containers shipped obtained in the 1947 Census of Manufactures exceeds the total shipments published in the Facts for Industry reports by less than 2 percent. Moreover, for each type of container the 1947 census figures differ from the corresponding totals obtained from the monthly survey by four percent or less.

Pressed and Blown Glassware, N.E.C. *(Full Standard Industrial Classification title and number: Pressed and Blown Glass and Glassware, Not Elsewhere Classified, 3229.)*—This industry comprises establishments primarily engaged in manufacturing pressed and blown glass and glassware, not elsewhere classified. Important products of this industry include machine-made or hand-made glass tableware; glass blanks for electric light bulbs, light shades and reflectors, and other lighting glassware; glass tubing and other technical, scientific, and industrial pressed and blown glassware; glass cooking and oven ware; glass brick; and glass insulators. Establishments primarily engaged in the production of pressed lenses for headlights, beacons, and lanterns are also included in this industry, but establishments primarily engaged in the production (grinding) of optical lenses are classified in Industry 3831. Establishments primarily engaged in manufacturing glass containers are classified in Industry 3221, and complete electric light bulbs in Industry 3651.

Annual figures for quantity and value of shipments comparable with the Census of Manufactures statistics on pressed and blown glassware are available for 1945 and 1946 in the Facts For Industry, Series M77E, "Pressed and Blown Glassware."

Products of Purchased Glass *(Full Standard Industrial Classification title and number: Glass Products Made of Purchased Glass, 3231.)*—This industry comprises establishments primarily engaged in manufacturing glass products from purchased glass, including laminated or safety glass, stained, leaded, ornamented, and decorated glass; mirrors, cutware; scientific-apparatus glass; glass novelties; mosaic glass; ground glass; cut, beveled, and etched glass; and glass watch crystals. Establishments primarily engaged in manufacturing optical lenses and ophthalmic lenses are classified in Major Group 38.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees: Number (average for the year)	All employees: Salaries and wages, total	Production and related workers: Number (average for the year)	Production and related workers: Wages, total	Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work	Value of products shipped [2]
Flat glass:								
1947	34	27,241	$84,067	24,325	$73,252	$173,754	$68,818	$242,805
1939	37	18,638	28,161	16,739	24,009	68,540	33,849	102,389
1937 [3]	39	n.a.	n.a.	20,583	30,598	82,903	44,450	127,353
Glass containers:								
1947	87	47,132	126,503	41,943	107,101	252,069	191,961	422,614
1939	77	29,357	43,023	25,753	34,181	98,378	59,894	158,272
1937 [3]	80	n.a.	n.a.	28,422	37,288	93,581	69,136	162,717
Pressed and blown glassware, n.e.c.:								
1947	126	42,170	103,784	37,474	86,853	169,449	69,863	234,795
1939	115	31,320	38,975	27,330	30,115	70,284	27,033	97,317
1937 [3]	113	n.a.	n.a.	30,046	33,701	70,521	27,119	97,640
Total for the flat glass and pressed and blown glass and glassware industries: [3]								
1947	247	116,543	314,354	103,742	267,206	595,272	330,642	900,214
1939	229	79,315	110,159	69,822	88,305	237,202	120,776	357,978
1937	232	87,007	119,391	79,051	101,587	247,005	140,705	387,710
1935	213	73,350	85,828	67,138	71,443	173,884	110,041	283,925
1933	213	54,297	53,858	49,707	45,222	128,538	63,410	191,948
1931	229	n.a.	n.a.	49,917	57,882	142,690	73,575	216,265
1929	263	73,396	103,382	67,527	87,795	200,525	103,294	303,819
1927	269	71,454	95,207	65,825	81,353	172,483	109,911	282,394
1925	310	74,786	100,637	69,371	86,736	182,307	113,652	295,959
1923	333	79,629	105,417	73,335	89,898	196,183	113,170	309,353
1921	329	59,741	80,665	54,748	68,224	127,435	86,036	213,471
1919	371	83,596	100,891	77,520	87,527	171,104	90,780	261,884
1914	348	78,711	55,205	74,502	48,656	77,068	46,017	123,085
1909	363	72,486	44,293	68,911	39,300	59,976	32,119	92,095
1904	399	67,009	41,228	63,969	37,288	53,462	26,146	79,608
1899	355	55,086	29,877	52,818	27,085	39,809	16,731	56,540
Products of purchased glass:								
1947	1,054	22,357	56,644	19,298	43,739	118,107	81,300	199,828
1939	557	12,195	15,168	10,012	10,615	23,432	26,454	49,886
1937	534	14,442	17,885	12,652	13,081	47,265	40,744	88,009
1935	532	12,256	13,967	10,687	10,896	30,438	29,300	68,738
1933	425	7,435	6,910	6,520	5,559	14,292	18,585	32,877
1931	610	n.a.	n.a.	7,183	8,650	19,077	17,250	36,327
1929	735	12,721	19,987	10,811	14,757	33,138	31,978	65,116
1927	650	10,430	16,839	8,773	12,575	28,786	24,967	53,753
1925	628	10,841	16,871	9,013	12,621	29,848	33,044	62,892
1923	629	10,230	14,403	8,621	10,921	26,595	31,900	58,495
1921	642	8,395	11,579	7,050	8,807	18,059	20,890	38,949
1919	802	10,865	12,494	9,079	8,974	22,417	26,857	49,274
1914	817	12,902	8,613	11,251	6,638	13,478	13,157	26,635
1909	731	13,851	8,758	12,356	7,013	13,521	12,151	25,672
1904	572	12,073	6,842	11,028	5,734	11,534	9,209	20,743
1899	514	8,213	4,390	7,469	3,625	8,223	8,531	16,754

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture, and Method of calculating value added by manufacture for selected industries in 1947.

[2] For 1947 and 1929, value of products shipped; for all other years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[3] "Flat glass," "Glass containers," and "Pressed and blown glassware, n. e. c.," formerly constituted a single classification "Glass." The separate industry figures shown for 1937–47 have been combined in order that comparable statistics can be shown for the period 1899–1947.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Flat glass, total [1]	34	27,241	$84,067	24,325	46,966	$73,252	$173,754	$68,818	$242,805	$11,618
Middle Atlantic	10	9,872	28,880	8,685	16,842	24,602	56,144	21,406	78,323	6,054
Pennsylvania	10	9,872	28,880	8,685	16,842	24,602	56,144	21,406	78,323	6,054
North Central	12	10,271	32,276	9,208	18,037	28,345	79,518	26,616	105,860	2,099
South	12	7,098	22,911	6,432	12,087	20,305	38,092	20,796	58,622	3,465
West Virginia	7	4,193	13,637	3,781	7,014	11,942	22,710	12,297	35,047	904
Glass containers, total [1]	87	47,132	126,503	41,943	87,530	107,101	252,069	191,961	422,614	32,775
Northeast	30	15,689	41,028	14,144	28,990	34,805	74,287	64,868	133,504	10,343
East North Central	19	15,710	41,838	13,865	29,778	35,704	85,073	60,577	140,388	7,976
Ohio	4	2,255	5,941	1,985	4,050	5,035	9,836	8,206	17,873	(d)
Indiana	8	6,401	16,066	5,729	11,747	13,934	34,636	19,805	52,133	(d)
Illinois	7	7,054	19,831	6,151	13,981	16,735	40,601	32,566	70,382	4,106
South	25	10,872	28,106	9,700	20,285	23,723	65,143	44,740	101,637	5,562
Maryland	4	1,904	4,648	1,662	3,508	3,683	7,679	4,425	11,162	379
West Virginia	7	5,258	14,217	4,639	9,312	12,230	38,323	25,016	57,973	2,532
Texas	3	1,064	2,737	961	2,140	2,372	6,283	4,357	10,024	660
West	13	4,861	15,531	4,234	8,477	12,869	27,566	21,776	47,085	8,894
Pressed and blown glassware, n.e.c., total [1]	126	42,170	103,784	37,474	75,249	86,853	169,449	69,863	234,795	16,321
Northeast	40	19,940	48,987	17,319	34,568	40,557	77,643	33,738	109,843	6,983
North Central	33	12,892	32,865	11,562	23,559	27,445	56,591	23,716	78,150	7,012
Ohio	19	10,355	26,703	9,249	18,848	22,287	45,942	18,929	63,488	(d)
Indiana	10	1,991	4,787	1,825	3,756	4,000	8,406	3,535	11,321	(d)
South	48	8,981	20,909	8,270	16,564	18,026	33,733	11,358	44,269	2,193
West Virginia	39	8,214	19,138	7,570	14,882	16,489	30,540	9,713	39,605	1,627
Pacific	5	357	1,023	323	558	825	1,482	1,051	2,533	133
California	5	357	1,023	323	558	825	1,482	1,051	2,533	133
Products of purchased glass, total [1]	1,054	22,357	56,644	19,298	38,884	43,739	118,107	81,300	199,828	6,398
New England	57	2,789	7,562	2,172	4,406	5,097	12,221	6,995	19,216	591
Massachusetts	25	756	2,524	471	973	1,279	1,662	1,839	3,501	175
Rhode Island	10	104	197	97	196	173	326	186	512	9
Middle Atlantic	527	8,653	20,808	7,669	15,256	16,526	37,571	21,823	59,357	1,243
New York	343	4,563	11,572	3,995	7,958	8,994	20,468	10,922	31,355	651
New Jersey	95	2,085	4,885	1,893	3,905	4,062	9,083	4,831	13,912	336
Pennsylvania	89	2,005	4,351	1,781	3,393	3,470	8,020	6,070	14,090	256
East North Central	196	6,730	18,414	5,832	11,602	14,457	50,055	36,969	87,482	2,180
Ohio	47	2,287	6,557	1,986	3,984	5,285	21,934	14,658	36,671	778
Indiana	20	857	1,866	785	1,592	1,584	3,741	3,414	7,155	219
Illinois	86	2,485	6,885	2,104	4,040	5,238	17,922	13,149	31,476	787
Michigan	25	651	1,921	569	1,210	1,393	4,520	4,085	8,585	197
Wisconsin	18	450	1,185	388	776	957	1,938	1,663	3,595	199
West North Central	45	448	982	380	763	767	1,938	1,075	3,010	31
Missouri	27	281	669	230	473	496	1,452	555	2,004	24
South Atlantic	64	1,940	4,430	1,679	3,551	3,101	8,945	8,435	17,380	996
Maryland	15	266	523	210	454	334	1,086	488	1,574	62
Virginia	8	725	1,830	651	1,466	1,312	3,678	4,839	8,517	568
West Virginia	20	518	950	463	880	758	1,399	962	2,361	(d)
North Carolina	9	322	778	269	580	507	1,895	1,839	3,734	117
East South Central	18	442	798	367	754	619	1,212	1,364	2,576	614
Kentucky	7	128	277	106	214	208	453	289	742	(d)
Tennessee	7	230	366	196	409	289	522	825	1,347	(d)
West South Central	34	357	832	300	673	649	1,410	1,322	2,732	81
Texas	25	202	438	163	351	345	847	450	1,297	60
Mountain	8	41	125	35	73	112	202	131	333	69
Pacific	105	957	2,693	864	1,806	2,411	4,553	3,186	7,742	593
California	89	816	2,267	740	1,557	2,032	3,802	2,719	6,524	548

[d] Withheld to avoid disclosing figures for individual companies.

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Flat glass: *North Central*, Ohio, 5 (4,720); Indiana, 2; Illinois, 1; Michigan, 1; Minnesota, 1; Missouri, 2; *South*, Tennessee, 1; Arkansas, 1; Louisiana, 1; Oklahoma, 2.

Glass containers: *Northeast*, Massachusetts, 2; New York, 4; New Jersey, 7 (6,086); Pennsylvania, 17 (7,601); *South*, South Carolina, 1; Florida, 1; Tennessee, 1; Mississippi, 1; Arkansas, 1; Oklahoma, 6 (1,260); *West*, Colorado, 1; Washington, 1; California, 11.

Pressed and blown glassware, n. e. c.: *Northeast*, Massachusetts, 1; Rhode Island, 1; New York, 11 (6,586); New Jersey, 3; Pennsylvania, 24 (10,410); *North Central*, Illinois, 3; Missouri, 1; *South*, Maryland, 1; Kentucky, 2; Mississippi, 1; Arkansas, 2; Oklahoma, 2; Texas, 1.

Products of purchased glass: *New England*, Maine, 1; Vermont, 1; Connecticut, 20; *West North Central*, Minnesota, 9 (42); Iowa, 6 (110); North Dakota, 1; Nebraska, 1; Kansas, 1; *South Atlantic*, South Carolina, 4; Georgia, 2; Florida, 6 (37); *East South Central*, Alabama, 2; Mississippi, 2; *West South Central*, Arkansas, 3; Louisiana, 2; Oklahoma, 4 (30); *Mountain*, Montana, 1; Colorado, 3 (19); Arizona, 2; Utah, 2; *Pacific*, Washington, 12 (87); Oregon, 4 (54).

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry: Flat glass	Glass containers	Pressed and blown glassware, n.e.c.	Products of purchased glass
ALL ESTABLISHMENTS				
Number of establishments	34	87	126	1,054
All employees:				
Number (average for the year)	27,241	47,132	42,170	22,357
Salaries and wages, total	$84,067	$126,503	$103,784	$56,644
Production and related workers:				
Number (average for the year)	24,325	41,943	37,474	19,298
Man-hours, total ... thousands	46,966	87,530	75,249	38,884
Wages, total	$73,252	$107,101	$86,853	$43,739
Value added by manufacture	$173,754	$252,069	$169,449	$118,107
ESTABLISHMENTS REPORTING DETAILED STATISTICS				
Number of establishments	34	87	126	704
All employees:				
Number (average for the year)	27,241	47,132	42,170	20,869
Salaries and wages, total	$84,067	$126,503	$103,784	$53,529
Production and related workers:				
Number (average for the year)	24,325	41,943	37,474	17,852
Man-hours, total ... thousands	46,966	87,530	75,249	36,081
Wages, total	$73,252	$107,101	$86,853	$40,763
Value added by manufacture	$173,754	$252,069	$169,449	$113,005
Number of employees for pay period ended nearest Oct. 15:				
All employees	27,377	46,994	41,981	20,683
Male	24,974	32,768	29,790	13,740
Female	2,403	14,226	12,191	6,943
Production and related workers	24,196	41,887	37,350	17,590
Male	22,520	29,094	26,759	11,792
Female	1,676	12,793	10,591	5,798
Force-account construction workers	176	324	----------	118
Administrative, supervisory, sales, and all other	3,005	4,783	4,631	2,975
Male	2,278	3,350	3,031	1,830
Female	727	1,433	1,600	1,145
All employees, number by month:				
January	27,216	47,485	43,887	21,638
February	26,970	46,999	42,270	21,641
March	26,808	47,154	43,400	21,680
April	27,035	47,452	44,069	21,460
May	26,903	47,609	43,978	21,028
June	27,009	47,252	42,585	20,462
July	26,927	47,393	37,496	19,700
August	27,359	47,616	40,213	20,004
September	27,382	48,081	40,688	20,077
October	27,377	46,994	41,981	20,683
November	27,511	46,062	42,653	20,982
December	28,388	45,478	42,753	20,774

ITEM	Industry: Flat glass	Glass containers	Pressed and blown glassware, n.e.c.	Products of purchased glass
ESTABLISHMENTS REPORTING DETAILED STATISTICS—Continued				
Cost of materials, fuel, electricity, and contract work	$68,818	$101,061	$69,863	$77,827
Materials, parts, containers, and supplies	50,139	104,111	54,305	75,566
Fuels, total	10,017	21,738	12,761	860
Bituminous coal	2,905	2,390	1,094	170
Anthracite	14	105	11	25
Coke	4	2	6	7
Fuel oils	208	6,779	3,493	194
Gas	6,857	11,855	7,040	389
Other fuels	29	607	217	75
Purchased electric energy	2,527	6,108	2,602	953
Contract and commission work	135	4	195	448
Value of inventories:				
Beginning of year, total	$27,432	$30,382	$20,212	$10,222
Finished products	6,405	9,741	8,960	7,241
Materials, supplies, and work in process	20,967	20,641	11,252	11,981
End of year, total	28,571	47,799	28,368	24,548
Finished products	5,621	23,048	14,193	9,943
Materials, supplies, and work in process	22,950	24,751	14,175	14,605
Expenditures for plant and equipment:				
New plant and equipment	$11,018	$32,775	$16,321	$6,398
Construction and major alteration of fixed plants	5,302	14,767	7,338	2,318
Buildings	3,611	9,201	5,803	2,030
Other construction	1,691	5,566	1,535	288
Machinery and equipment	6,316	18,008	8,983	4,080
Production machinery and equipment	5,993	17,178	8,085	3,505
Other machinery and equipment	323	830	898	575
Used plant and equipment, and land	27	1,157	211	322
Number of highway-type motor vehicles owned or leased:				
Trucks	97	189	95	623
By manufacturer's rated capacity:				
Under 1½ tons	23	37	24	306
1½ tons	31	72	52	199
Over 1½ tons and less than 3½ tons	19	49	14	90
3½ tons and less than 5 tons	10	10	1	10
5 tons and over	14	21	4	18
By body type:				
Van	1	24	11	21
Stake or platform	24	67	37	258
Panel or light delivery	11	27	17	197
All other trucks	61	71	30	147
Truck tractors	3	27	12	24
Trailers and semitrailers	4	33	23	25

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of— 1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Flat glass:											
Number of establishments	34	----------	----------	----------	4	1	5	4	9	9	2
Number of employees (average for the year)	27,241	----------	----------	----------	*211*	(d)	888	1,610	6,128	*18,404*	(d)
Value added by manufacture	$173,754	----------	----------	----------	*$1,000*	(d)	$4,520	$7,855	$35,404	*$124,975*	(d)
Glass containers:											
Number of establishments	87	----------	1	1	4	3	23	26	12	16	1
Number of employees (average for the year)	47,132	----------	(d)	(d)	*142*	204	4,146	10,180	7,016	*24,844*	(d)
Value added by manufacture	$252,069	----------	(d)	(d)	*$591*	$410	$19,404	$49,233	$41,602	*$140,739*	(d)
Pressed and blown glassware, n. e. c.:											
Number of establishments	126	9	6	5	12	19	31	20	15	8	1
Number of employees (average for the year)	42,170	23	40	73	380	1,434	5,519	7,114	10,014	*17,573*	(d)
Value added by manufacture	$169,449	$55	$107	$193	$1,456	$4,941	$21,933	$30,532	$42,543	*$67,689*	(d)
Products of purchased glass:											
Number of establishments	1,054	383	235	193	143	62	28	6	4	----------	----------
Number of employees (average for the year)	22,357	855	1,573	2,618	4,479	4,266	3,837	(d)	*4,789*	----------	----------
Value added by manufacture	$118,107	$3,890	$6,715	$10,813	$21,075	$16,957	$18,678	(d)	*$39,979*	----------	----------

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

FLAT GLASS INDUSTRY	Shipped by— Flat glass industry	Other industries	All industries
Total shipments by the industry	$242,805		
A. Primary products of the industry	241,233	$56,503	$297,736
Sheet (window) glass	72,525		72,525
Laminated glass	44,530	56,503	101,033
Other flat glass	124,178		124,178
B. Secondary products	1,500		
C. Miscellaneous receipts	72		

PRODUCTS OF PURCHASED GLASS INDUSTRY	Shipped by— Products of purchased glass industry	Other industries	All industries
Total shipments by the industry	$199,828		
A. Primary products of the industry	188,985	$54,435	$243,420
Laminated glass	56,503	44,530	101,033
Mirrors	51,921	3,507	55,428
All other products of purchased glass	71,986	6,398	78,384
Products of purchased glass, not specified by kind	8,575		8,575
B. Secondary products (principally electrical appliances)	6,199		
C. Miscellaneous receipts	4,644		
Contract and commission work	4,472		
Other receipts	172		

PRESSED AND BLOWN GLASSWARE, N.E.C., INDUSTRY	Shipped by— Pressed and blown glassware, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$234,795		
A. Primary products of the industry	226,324	$23,908	$250,232
Hand-made table, art, and novelty glassware	33,106		33,106
Machine-made table, kitchen, art, and novelty glassware	193,218	23,908	62,455
Lighting glassware			58,425
All other pressed and blown glassware			96,246
B. Secondary products (principally glass containers)	8,354		
C. Miscellaneous receipts	117		

GLASS CONTAINERS INDUSTRY	Shipped by— Glass containers industry	Other industries	All industries
Total shipments by the industry	$422,614		
A. Primary products of the industry	(d)	(d)	$422,963
Domestic shipments of machine-made glass containers	(d)	(d)	404,954
Domestic shipments of hand-made glass containers	(d)	(d)	1,663
Export shipments of all types of glass containers	(d)	(d)	16,346
B. Secondary products (principally pressed and blown glassware)	(d)		
C. Miscellaneous receipts	(d)		

d Withheld to avoid disclosing figures for individual companies.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947							1939	
		Shipments and interplant transfers						Production (quantity)	Production	
		Total		Interplant transfers		All other shipments				
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant
Flat glass, total			$297,736		n.a.		n.a.			$111,758
Sheet (window) glass (including colored and bent sheet glass), **total**	M boxes of 50 sq. ft.	18,947	72,525	2,045	$8,432	16,902	$64,093	19,058	9,498	24,326
Thin glass, including picture glass (less than 16 ounces per square foot)	do	722	2,132	13	42	709	2,090	708	n.a.	n.a.
Single strength	do	11,720	34,821	1,172	4,066	10,548	30,755	11,772	n.a.	n.a.
Double strength and greenhouse glass	do	5,218	24,863	832	4,034	4,386	20,829	5,308	n.a.	n.a.
Heavy sheet	do	1,287	10,709	28	290	1,259	10,419	1,270	n.a.	n.a.
Laminated glass (including safety glass), **total**	M sq. ft.	130,807	101,033	n.a.	n.a.	n.a.	n.a.	130,142	n.a.	40,395
Made in the flat-glass industry	do	58,866	44,530	18,407	13,441	40,459	31,089	58,763	53,612	30,930
Made in the products-of-purchased-glass industry	do	71,941	56,503	n.a.	n.a.	n.a.	n.a.	71,379	n.a.	9,465
Laminated plate, ¼-inch and under	do	55,094	49,353	n.a.	n.a.	n.a.	n.a.	54,505	n.a.	n.a.
Laminated plate, over ¼-inch	do	5,043	5,023	n.a.	n.a.	n.a.	n.a.	5,043	n.a.	n.a.
Laminated sheet (window) glass	do	69,788	44,536	n.a.	n.a.	n.a.	n.a.	69,741	n.a.	n.a.
Other laminated glass	do	882	2,121	n.a.	n.a.	n.a.	n.a.	853	n.a.	n.a.
Other flat glass, total			124,178		(d)		(d)			47,037
Obscured glass, translucent but not transparent (excluding wire glass):										
Rolled glass, rough, fluted, figured, etc.	M sq. ft.	64,197	9,658	19,307	3,485	44,890	6,173	68,429	18,967	1,154
Colored cathedral, opalescent, and antique glass	do	3,682	682			3,682	682	3,764	2,950	1,081
Wire glass:										
Rough-rolled and obscured	do	29,553	4,458	(d)	(d)	(d)	(d)	[1] 32,140	16,197	2,292
Polished	do	1,897	1,106	(d)	(d)	(d)	(d)	1,780		
Other flat glass (including plate glass; multiple-glazed sealed insulating units; plate glass blanks; ophthalmic lens blanks; and structural opaqued glass, except glass block and tile)			108,274		21,165		81,191			42,510

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947			1939	
		Shipments and interplant transfers		Production (quantity)	Production	
		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant
Glass containers, total	M gross	**111,981**	**$422,963**	**116,215**	**52,535**	**$156,365**
Domestic shipments of machine-made glass containers, total	do	**107,437**	**404,954**	**116,143**	(1)	(1)
Narrow neck:						
Food	do	11,013	43,061	34,788	3,085	12,269
Medicinal and health supplies	do	11,021	32,484		[3] 17,995	[3] 38,172
Toiletries and cosmetics	do	5,043	13,056			
Chemical, household, and industrial	do	5,491	26,251		[4] 2,156	[4] 6,789
Beverage, returnable and nonreturnable	do	10,513	53,493	11,788	3,449	14,204
Beer, returnable	do	10,010	37,029	11,302	2,574	7,451
Beer, nonreturnable	do	3,002	8,584	3,260		
Liquor	do	9,932	47,610	10,531	8,213	29,563
Wine	do	2,438	14,064	2,666		
Wide mouth:						
Food	do	24,718	69,986	33,484	10,342	28,774
Medicinal and health supplies	do	3,204	8,543		(5)	(5)
Toiletries and cosmetics	do	1,375	4,478		(5)	(5)
Chemical, household, and industrial	do	1,047	3,535		(5)	(5)
Dairy products	do	4,010	24,965	4,137	2,536	13,068
Packers' tumblers	do	1,529	4,842	1,611		
Fruit jars	do	2,023	12,376	2,376	1,285	6,075
Domestic jelly glasses	do	168	597	210		
Domestic shipments of hand-made glass containers, total	do	71	1,663	72	(2)	(2)
Perfume and toiletries	do	59	1,277	60	(2)	(2)
Other hand-made containers	do	12	386	12	(2)	(2)
Export shipments of all types of glass containers	do	4,473	16,346			
Net weight of containers packed	M lbs	*10,215,315*				
Pressed and blown glassware (except glass containers), total			**250,232**			**95,454**
Machine-made table, kitchen, art, and novelty glassware (including glassware made by machines with automatic and semiautomatic feeds), **total**						
Tumblers, goblets, and other stemware			62,455			n.a.
Tableware (designed for serving food and drink; excluding tumblers, goblets, and other stemware)	M doz	68,711	31,684	74,203	45,209	14,108
Kitchenware (designed for preparing and storing food in homes and commercial establishments; excluding cooking ware)	do	31,131	17,848	33,443	24,045	9,564
Ornamental, decorative, and novelty glassware; and smokers' accessories	do	9,096	8,630	9,620	n.a.	(6)
	do	4,379	4,293	4,442	[6] 17,926	[6] 4,694
Hand-made table, art, and novelty glassware, total			33,106			n.a.
Pressed ware:						
Tumblers, goblets, and other stemware	M doz	755	2,738	778	1,305	2,400
Tableware (excluding tumblers, goblets, and other stemware)	do	1,250	7,615	1,293	1,287	1,584
Ornamental, decorative, and novelty glassware; and smokers' accessories			4,491			[6] 2,653
Blown ware:						
Tumblers	M doz	1,180	3,607	1,193	2,882	3,863
Goblets and other stemware	do	2,131	11,199	2,158		
Ornamental, decorative, and novelty glassware; and smokers' accessories (including ornamental tableware)			3,456			[7] 1,155
Lighting glassware, total						
Bowls, all types			58,425			21,484
Enclosing globes, all types			3,438			
Shades, reflectors, and torcheres			3,708			9,166
Lantern globes (oil and electric)			4,753			
Lamp chimneys	M doz	609	1,040	610	283	521
	do	1,379	1,116	1,500	1,063	817
Lamp parts			2,880			
Railroad, marine, and traffic lighting glassware			1,661			
Shields and plates for fluorescent lighting fixtures			277			
Electrical discharge tubing (including fluorescent and neon)	M lin. ft	591,365	9,363	670,101	n.a.	10,980
Other interior and exterior lighting glassware (including electric-light-bulb blanks [8]; radio, X-ray, radar, and other electronic-tube blanks; oil founts; and prisms)			30,189			
All other pressed and blown glassware, total			96,246			[8] 33,949
Technical and scientific glassware:						
Tubing (excluding fluorescent and industrial tubing)	M lbs	24,695	6,107	24,101	27,623	4,727
Scientific and laboratory glassware [8]			21,423			
Insulators and other technical glassware, except electronic-tube blanks (including rods and canes, all types)			2,892			8,025
Industrial glassware (including gauge glass, instrument faces, machine parts, industrial tubing, glass knobs, meter covers, pumps, battery jars, etc.)			12,377			
Cooking ware (heat-resistant, heat-treated, and annealed):						
Machine-made custard cups, cake and bread bakers, casseroles, and pie plates	M pieces	58,831	7,153	60,744	n.a.	
Hand- and machine-made coffee and beverage makers (complete units only; excluding tea kettles)	do	10,106	6,603	10,220	n.a.	
Other machine-made and hand-made cooking ware (including top-of-stove ware)	do	18,704	5,610	18,739	n.a.	
Sun-glass lenses and other eye-protective lenses [8]			6,412			21,197
All other pressed and blown glassware:						
Machine-made (including glass block, brick, and tile; Christmas-tree ornaments; stationers' ware, marbles, nursery bottles, lantern and searchlight lenses, automotive lenses including sealed beam, ophthalmic lens blanks, optical-instrument lens blanks, etc.)			25,013			
Hand-made (including kitchenware other than cooking ware, stationers' ware, and nursery bottles)			2,656			

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947			1939	
		Shipments and interplant transfers		Production (quantity)	Production	
		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant
Products of purchased glass (except laminated glass, electric-light-bulb blanks, scientific and laboratory glassware, and sun-glass lenses and other eye-protective lenses), **total**			$125,254			$37,171
Mirrors (framed and unframed, decorated and undecorated), **total**	M sq. ft.	67,294	55,428			19,203
Plate glass	do	37,177	40,793			14,250
Other glass	do	30,117	14,635			4,953
All other products of purchased glass, total			[9] 61,251			n.a.
Cutware			5,445			2,940
Decorated glassware (including bent glassware, engraved, etched, sand-blasted, applied color, etc.)			10,837			2,508
Watch crystals			3,334			890
Other glass products, including stained and leaded glass, automobile glass other than safety (cut, beveled, and polished), beveled and polished plate glass, bent plate and sheet glass, etc.			41,635			11,630
Products of purchased glass, not specified by kind			8,575			

n.a.—Not available.
[d] Withheld to avoid disclosing figures for individual companies.
[1] Includes 1,554 M sq. ft. of rough-rolled and obscured wire glass consumed in the plant where made in the manufacture of other products.
[2] No separate figures for machine-made and hand-made glass containers were collected in 1939. All figures shown for machine-made containers represent the combined data.
[3] Figures for wide-mouth medicinal, health supplies, toiletries, and cosmetics containers are included with the corresponding figures for narrow-neck containers.
[4] Figures for wide-mouth chemical, household, and industrial containers are included with the corresponding figures for narrow-neck containers.
[5] Figures for kitchenware are included with "All other pressed and blown glassware."
[6] Represents "Other tableware" only.
[7] Represents "Other tableware (bowls, vases, jugs, etc.)" only.
[8] Includes products made from glass produced in the establishment and from purchased glass.
[9] Excludes shipments of electric-light-bulb blanks, scientific and laboratory glassware, and sun-glass lenses and other eye-protective lenses made from purchased glass and valued at $17,133,000. These products are included in the figures for "Pressed and blown glassware" (see footnote [5]).

TABLE 7.—SELECTED MATERIALS CONSUMED, BY KIND

[Money figures in thousands of dollars]

MATERIAL	FLAT GLASS INDUSTRY		GLASS CONTAINERS INDUSTRY		PRESSED AND BLOWN GLASSWARE, N.E.C., INDUSTRY		PRODUCTS OF PURCHASED GLASS INDUSTRY	
	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
	(*tons*)		(*tons*)		(*tons*)			
Sodium carbonate (98-100% Na_2CO_3)	231,693	$5,347	1,042,526	$24,603	164,591	$3,751		
Salt cake, crude (technical basis)	67,437	1,638	14,018	380	2,184	78		
Glass sand	n.a.	n.a.	3,220,631	n.a.	588,627	n.a.		
Cullet	n.a.	n.a.	1,105,877	n.a.	571,309	n.a.		
							(*M sq. ft.*)	
Plate glass							121,070	$28,550
Sheet glass							143,390	12,917

n.a.—Not available.

CEMENT; STRUCTURAL CLAY PRODUCTS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of hydraulic cement, clay brick, tile, sewer pipe, and other structural-clay products and clay refractories. These establishments have been classified in six industries described separately below.

Producers of brick, tile, and other clay-construction products were requested to include data relating to the mining of common clay and shale in pits operated in conjunction with the plants, even where the pits were located at some distance from the plants. Producers of cement and clay refractories, however, were requested to exclude all data relating to mining or quarrying activities in conjunction with their manufacturing operations. This distinction was made in recognition of the relative importance of mining and the availability of data. The operation of common-clay pits represents a very small portion of the activities at brick, tile, and other structural-clay-products plants, and the Bureau of the Census has found that very few companies maintain separate records for such pits. The quarrying of limestone for cement manufacture and the mining of fire clay for the production of refractories represent a much larger segment of the industrial activity of the companies involved and, in general, it has been found that separate records for such mining activities are maintained by the companies.

The Census of Manufactures figures for cement for 1939 and 1929 have been revised on the basis of Census of Mineral Industries data to exclude limestone quarries operated in conjunction with cement plants; such quarrying activities have been excluded, by estimate, for the intervening years. For 1939, the industry classifications for the structural-clay-products industries were essentially the same as for 1947; but prior to 1939, only the combined figures for the five industries, and for the nonclay-refractories industry, were published. Reports for 1937 have been retabulated to show figures comparable with 1939 and 1947, but no comparable statistics are available for earlier years.

A monthly survey on Census Form M26B, "Clay Construction Products," obtains production and shipments of unglazed brick, hollow facing tile, unglazed structural tile, vitrified clay sewer pipe, drain tile, and floor and wall tile and accessories, including quarry tile. These are major products of Industries 3251, 3253, 3254, and 3259, as described below. The monthly statistics are summarized and published in Facts for Industry, Series M26B, "Clay Construction Products." A few more producers of these items are included in the 1947 Census of Manufactures than in the current survey for 1947. Census quantity figures for brick and sewer pipe differ from the current survey quantities by only 1 or 2 percent. Census values, however, are 6 to 7 percent higher. For the major producing States, the differences are similarly small. For structural tile, hollow facing tile, floor and wall tile, drain tile, and for brick in some of the smaller producing States the differences are somewhat larger. Final figures were reported in the Census of Manufactures for some plants for which the current survey obtained preliminary figures only.

Cement, Hydraulic *(Standard Industrial Classification No. 3241.)*—This industry comprises establishments primarily engaged in manufacturing hydraulic cement, including portland, natural, masonry, and puzzolan cements.

The 1947 figures include 148 plants which produced portland cement in the continental United States and also producers of natural, masonry-natural, and puzzolan cements. This census report shows the quantity and value of "portland cement" and of "natural, masonry-natural, and puzzolan cements" shipped in 1947, and also shipments of "masonry mortars" made from portland, natural, and related cements. In its annual report, "Minerals Yearbook," the Bureau of Mines of the Department of the Interior publishes figures on production, stocks, and shipments for the plants covered in this release, including details for special portland cements. The sum of the census figures for portland cement shipped and portland cement used in making the masonry mortars shipped differ from the total shipments of portland cement published by the Bureau of Mines by less than 1 percent. The small variation is due, primarily, to minor differences in the reports from individual companies submitted to the two agencies. Bureau of the Census and Bureau of Mines figures for natural, masonry-natural, and puzzolan cements are not comparable, since the producers of these cements indicated to the Bureau of the Census that the major portion of their products were shipped as masonry mortars, and the Census Bureau did not ask for the quantity of such cements used in the production of mortars. Bureau of Mines figures for masonry mortars include only mortars made from portland cement, whereas the census figures include mortars made from portland, natural, and other cements.

Brick and Hollow Tile *(Standard Industrial Classification No. 3251.)*—This industry comprises establishments primarily engaged in manufacturing clay building brick, vitrified paving brick, and hollow structural tile. Establishments primarily engaged in manufacturing fire brick are classified in Industry 3255, sand-lime brick in Industry 3296, and glass brick in Industry 3229. Concrete brick is classified in Industry 3271.

Floor and Wall Tile *(Full Standard Industrial Classification title and number: Floor and Wall Tile, Except Quarry Tile, 3253.)*—This industry comprises establishments primarily engaged in manufacturing ceramic tile, mosaic tile, glazed and enameled tile, including faience and other types of ceramic floor and wall tile (except quarry tile—Industry 3259). Establishments primarily engaged in manufacturing hollow structural tile are classified in Industry 3251, and drain tile in Industry 3259.

Sewer Pipe *(Standard Industrial Classification No. 3254.)*—This industry comprises establishments primarily engaged in manufacturing sewer pipe and kindred products made of clay. Concrete sewer pipe is classified in Industry 3271 and cast-iron sewer pipe in Industry 3321.

Clay Refractories *(Standard Industrial Classification No. 3255.)*—This industry comprises establishments primarily engaged in manufacturing fire brick, crucibles, and other heat-resisting clay products such as glass-house tank blocks, stoppers, floaters, and rings. Establishments primarily engaged in manufacturing nonclay refractories are classified in Industry 3297.

Annual figures on production, quantity and value of shipments, and stocks of clay refractories comparable with the Census of Manufactures statistics on clay refractories are available for 1945 and 1946 in the Census Facts for Industry, Series M27C, "Refractories."

Structural Clay Products, Not Elsewhere Classified *(Standard Industrial Classification No. 3259.)*—This industry comprises establishments primarily engaged in manufacturing structural clay products, not elsewhere classified, such as architectural terra cotta, roofing tile, stove lining, flue lining, chimney pipes and tops, wall coping, segment blocks, drain tile, and quarry or promenade tile.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, supplies, fuel, electricity, and contract work	Value of products shipped [2]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Cement, hydraulic:								
Excluding quarries operated in conjunction with cement plants: [3]								
1947	155	35,662	$98,626	30,639	$79,861	$247,936	$160,992	$408,928
1939	160	24,539	37,618	20,249	26,870	115,209	77,402	192,611
1937	158	25,100	35,800	22,300	29,000	104,100	79,100	183,201
1935	153	20,100	24,200	17,500	17,800	71,700	48,700	120,417
1933	148	15,400	16,100	13,400	11,800	56,500	30,400	86,921
1931	164	n.a.	n.a.	20,500	25,400	85,400	63,400	148,845
1929	174	33,177	55,010	27,954	41,412	159,803	107,706	267,509
Including quarries operated in conjunction with cement plants:								
1929	174	38,752	62,834	33,368	48,849	172,267	95,242	267,509
1927	161	42,878	69,442	36,322	53,111	173,553	120,012	293,565
1925	145	45,033	68,658	38,437	53,912	186,726	114,169	300,895
1923	133	40,537	60,940	35,091	49,708	163,331	100,767	264,093
1921	125	30,891	44,958	26,231	34,416	101,267	102,360	203,627
1919	123	30,238	42,691	25,524	33,195	95,755	79,510	175,265
1914	133	31,948	24,258	27,916	18,192	49,769	51,987	101,756
1909	135	29,494	18,973	26,775	15,320	33,861	29,344	63,205
1904 [4]	129	18,861	10,672	17,478	8,814	17,658	12,215	29,873
Brick and hollow tile:								
1947	674	29,617	69,399	27,002	59,876	110,867	37,640	144,497
1939	800	32,962	33,877	29,069	26,349	55,684	22,469	78,153
1937 [5]	781	n.a.	n.a.	27,742	24,685	45,887	20,014	65,901
Floor and wall tile:								
1947	37	6,828	16,335	6,250	13,774	31,238	10,684	40,966
1939	49	6,434	7,523	5,681	5,931	12,517	5,142	17,659
1937 [5]	53	n.a.	n.a.	6,288	6,531	11,762	5,324	17,086
Sewer pipe:								
1947	69	9,105	22,421	8,310	19,552	38,362	11,702	47,854
1939	65	7,051	8,276	6,406	6,818	13,668	4,628	18,296
1937 [5]	64	n.a.	n.a.	6,270	6,271	11,607	4,288	15,895
Clay refractories:								
1947	169	17,978	47,074	15,950	38,684	76,054	35,296	109,369
1939	165	13,655	15,404	12,211	12,324	28,978	13,213	42,191
1937 [5]	163	n.a.	n.a.	15,449	16,409	34,827	17,823	52,650
Structural clay products, n. e. c.:								
1947	161	5,745	13,950	5,177	12,154	23,871	6,757	28,814
1939 [5]	127	3,891	4,375	3,378	3,408	7,273	2,177	9,450
1937 [5]	137	n.a.	n.a.	3,835	3,949	8,203	3,527	11,730
Total for Clay Products (other than pottery) and nonclay refractories: [7]								
1937	1,238	70,460	75,330	65,226	64,175	128,206	63,513	191,719
1935	1,074	49,296	44,000	44,583	34,603	73,114	38,083	111,197
1933	928	34,962	23,535	31,944	18,967	44,609	19,994	64,603
1931	1,264	n.a.	n.a.	51,128	44,368	90,367	36,969	127,336
1929	1,760	101,938	128,989	93,657	107,348	215,145	82,734	297,879
1927	1,857	109,743	144,550	101,230	122,311	221,248	100,642	321,890
1925	1,950	111,662	148,914	103,061	127,508	235,054	100,768	335,822
1923	1,996	112,504	146,346	103,239	124,400	232,340	104,544	336,884
1921	1,898	76,247	90,915	69,171	74,222	127,196	69,103	196,299
1919	2,436	85,887	95,545	77,763	79,179	143,996	69,721	213,717
1914 [8]	3,249	108,407	65,769	100,484	55,079	93,815	43,993	137,808

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture. For the "Structural clay products" industries, see GENERAL EXPLANATIONS—Method of calculating value added by manufacture for selected industries in 1947.

[2] For 1947 and 1929, value of products shipped; for all other years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[3] Figures for 1931–37 have been adjusted to exclude statistics for limestone quarries operated in conjunction with cement plants on the basis of separate figures for such quarries collected in the Census of Mineral Industries for 1929 and 1939.

[4] In 1899, "Cement, hydraulic" was included in the industry formerly designated "Lime and cement" and separate figures are not available.

[5] "Brick and hollow tile," "Floor and wall tile," "Sewer pipe," "Clay refractories," and "Structural clay products, n. e. c.," together with "Nonclay refractories" formerly constituted a single industry classification, "Clay products (other than pottery) and nonclay refractories," for which figures are shown in this table for the period 1914–37.

[6] Includes "Terra cotta" and "Roofing tile," for which separate statistics were tabulated in 1939 only.

[7] Data for establishments engaged primarily in manufacture of nonclay refractories are included in the figures for all years. For 1937, the statistics included for these establishments are as follows: Number of establishments, 40; all employees, number, 5,590 and wages and salaries, $7,217,795; production and related workers, number (average for the year), 5,641 and wages, $6,330,518; value added by manufacture, $15,919,199; cost of materials, etc., $12,538,634; and value of products, $28,457,233.

[8] The figures available prior to 1914 represent "Brick and tile" (including sewer and pipe) and "Pottery, terra-cotta, and fire clay products," which do not yield series sufficiently comparable with later years to be shown in this table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Cement, hydraulic, total [1]	155	35,662	$98,626	30,639	66,341	$79,861	$247,936	$160,992	$408,928	$42,488
Northeast	38	8,967	25,556	7,609	16,689	20,487	57,186	40,413	97,599	5,384
Pennsylvania	24	6,610	18,732	5,601	12,022	14,964	41,720	29,023	70,743	3,829
East North Central	27	7,387	21,278	6,338	13,980	17,435	49,426	30,743	80,169	8,716
Ohio	9	1,842	5,567	1,577	3,593	4,477	11,582	7,628	19,210	1,950
Indiana	4	2,223	6,055	1,829	3,820	4,757	13,018	8,703	21,721	1,843
Michigan	9	1,884	5,481	1,615	3,688	4,506	13,431	8,230	21,661	2,934
West North Central	22	5,211	13,343	4,559	9,540	10,984	33,865	20,040	53,905	4,192
Iowa	5	1,369	3,639	1,212	2,601	2,985	8,588	4,937	13,525	1,920
Missouri	5	1,647	4,097	1,448	3,053	3,452	9,541	6,856	16,397	648
Kansas	7	1,361	3,485	1,162	2,369	2,727	10,424	4,749	15,173	1,220
South Atlantic	11	2,073	5,083	1,813	4,084	4,165	12,223	10,023	22,246	(d)
Virginia	3	477	1,208	384	836	861	2,454	1,555	4,009	229
East South Central	16	3,240	8,101	2,823	6,042	6,388	22,946	16,139	39,085	2,538
Alabama	9	1,744	4,303	1,520	3,191	3,357	12,982	9,204	22,186	1,524
West South Central	14	3,242	8,430	2,776	6,002	6,626	27,039	11,533	38,572	4,897
Texas	10	2,167	5,861	1,838	3,998	4,431	19,326	8,607	27,933	3,602
Mountain	7	1,019	2,764	892	1,908	2,351	8,407	3,966	12,373	(d)
Pacific	20	4,523	14,071	3,829	8,096	11,425	36,844	28,135	64,979	8,800
California	11	3,455	10,775	2,864	6,163	8,536	30,039	20,919	50,958	6,587
Brick and hollow tile, total [1]	674	29,617	69,399	27,002	58,367	59,876	110,867	37,640	144,497	13,266
New England	38	906	2,463	821	1,854	2,127	3,314	1,071	4,226	405
New Hampshire	5	94	236	81	186	203	266	70	297	53
Middle Atlantic	101	4,939	13,547	4,482	9,816	11,666	19,138	6,985	25,462	2,148
Pennsylvania	62	2,801	7,215	2,536	5,505	6,210	10,283	4,063	14,049	1,438
East North Central	119	7,448	19,984	6,862	14,614	17,884	33,018	11,221	42,153	3,374
Ohio	52	3,407	9,220	3,148	7,033	8,340	16,150	5,191	20,247	1,463
Indiana	23	1,460	3,464	1,342	2,762	3,042	5,335	1,966	7,055	558
Illinois	29	2,072	5,952	1,905	3,854	5,292	9,844	3,383	12,509	1,250
West North Central	58	2,118	4,963	1,881	4,270	4,088	8,699	2,616	11,007	887
Iowa	14	856	2,003	752	1,708	1,627	3,718	1,266	4,984	187
Missouri	15	451	1,037	412	903	908	1,794	546	2,226	103
South Atlantic	120	5,771	11,251	5,301	11,462	9,595	19,749	7,331	26,884	3,065
Maryland	13	612	1,382	538	1,199	1,119	2,652	986	3,606	(d)
West Virginia	12	519	1,208	444	998	999	1,950	642	2,491	246
Georgia	14	1,156	2,199	1,073	2,376	1,898	3,544	1,171	4,714	741
East South Central	66	2,820	5,133	2,612	5,616	4,470	8,211	2,794	11,060	1,187
Kentucky	15	383	670	355	717	570	1,019	324	1,325	88
West South Central	74	3,295	5,927	2,972	6,407	4,956	9,757	2,988	12,369	1,270
Arkansas	10	647	1,224	608	1,398	1,125	1,980	730	2,573	231
Louisiana	12	306	548	272	566	421	757	246	993	(d)
Oklahoma	12	413	789	380	820	694	1,476	393	1,825	(d)
Texas	40	1,929	3,366	1,712	3,623	2,716	5,544	1,619	6,978	711
Mountain	43	909	2,037	810	1,642	1,703	3,279	909	4,122	306
Colorado	18	308	668	275	589	538	1,188	297	1,482	64
Pacific	55	1,411	4,094	1,261	2,686	3,387	5,702	1,725	7,214	624
California	35	908	2,534	819	1,780	2,118	3,651	1,044	4,487	444
Floor and wall tile, total [1]	37	6,828	16,335	6,250	13,088	13,774	31,238	10,684	40,966	2,277
Northeast and North Central	18	5,018	11,941	4,554	9,604	9,932	23,145	7,921	30,282	1,410
New Jersey	5	527	1,585	480	1,497	1,282	2,999	1,268	4,025	285
Ohio	4	2,835	6,111	2,616	5,023	5,221	12,387	3,689	15,776	501
South	5	720	1,509	677	1,396	1,279	3,158	878	4,047	134
West	14	1,090	2,885	1,019	2,088	2,563	4,935	1,885	6,637	733
Sewer pipe, total [1]	69	9,105	22,421	8,310	17,013	19,552	38,362	11,702	47,854	4,183
Middle Atlantic	7	997	2,352	955	1,721	2,217	4,200	1,358	4,916	203
Pennsylvania	7	997	2,352	955	1,721	2,217	4,200	1,358	4,916	203
East North Central	29	4,361	11,147	4,070	8,341	10,094	18,744	5,201	22,790	899
Ohio	22	3,556	9,099	3,325	6,732	8,345	14,784	4,105	17,724	767
Indiana	4	410	1,037	380	797	880	2,135	521	2,713	104
West North Central	8	893	2,256	801	1,696	1,883	3,498	1,183	4,791	1,158
Iowa	3	329	841	302	644	685	1,468	459	1,970	61
South	12	1,696	3,550	1,447	3,076	2,717	6,010	2,215	8,032	1,040
Mountain	3	331	835	298	614	689	1,327	492	1,768	166
Pacific	10	827	2,281	739	1,565	1,952	4,583	1,253	5,557	717
Clay refractories, total [1]	169	17,978	47,074	15,950	31,830	38,684	76,054	35,296	109,369	5,875
New England	3	103	185	83	140	138	245	54	293	2
Middle Atlantic	57	5,489	14,072	4,908	9,781	12,106	22,138	11,137	33,044	1,097
Pennsylvania	47	5,113	12,970	4,618	9,099	11,331	20,274	10,132	30,216	1,021
East North Central	52	3,430	9,123	3,083	6,311	7,833	15,957	6,058	21,408	1,361
Ohio	38	2,738	7,275	2,483	5,083	6,341	12,499	4,436	16,307	905
Illinois	7	531	1,474	470	976	1,232	2,839	1,418	4,296	(d)
West North Central	11	4,530	12,770	3,851	7,648	9,061	19,644	9,681	29,181	1,446
Missouri	11	4,530	12,770	3,851	7,648	9,061	19,644	9,681	29,181	1,446
South Atlantic	15	1,550	4,018	1,399	3,000	3,433	7,323	2,899	9,850	947
Maryland	3	375	967	325	735	812	1,679	430	2,030	(d)
East South Central	13	1,721	4,077	1,613	2,856	3,698	6,390	3,103	9,193	(d)
Kentucky	8	1,368	3,312	1,306	2,281	3,083	5,205	2,381	7,274	201
Alabama	5	353	765	307	575	615	1,185	722	1,919	(d)
West South Central	3	209	373	165	354	276	686	277	867	(d)
Texas	3	209	373	165	354	276	686	277	867	(d)
West	15	946	2,456	848	1,740	2,139	3,671	2,087	5,533	536

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947—Continued

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Structural clay products, n. e. c., total [1]	161	5,745	$13,950	5,177	10,932	$12,154	$23,871	$6,757	$28,814	$2,031
Northeast and North Central	105	4,029	9,901	3,668	7,676	8,708	17,322	5,059	20,751	1,319
Ohio	41	1,919	4,740	1,753	3,577	4,251	8,599	2,333	10,148	466
Indiana	17	482	1,090	452	948	994	2,075	712	2,616	138
Michigan	6	193	504	171	333	448	759	233	963	(d)
Iowa	12	325	831	296	694	724	1,682	583	2,252	137
South	17	609	1,145	562	1,249	914	1,810	615	2,199	123
West	39	1,107	2,904	947	2,007	2,532	4,739	1,083	5,864	589
California	25	851	2,286	720	1,518	1,992	3,522	829	4,440	441

[d] Withheld to avoid disclosing figures for individual companies.

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Cement, hydraulic: *Northeast*, Maine, 1; New York, 13; *East North Central*, Illinois, 4; Wisconsin, 1; *West North Central*, Minnesota, 2; South Dakota, 1; Nebraska, 2; *South Atlantic*, Maryland, 2; West Virginia, 3 (465); Georgia, 2; Florida, 1; *East South Central*, Kentucky, 1; Tennessee, 6; *West South Central*, Arkansas, 1; Louisiana, 1; Oklahoma, 2; *Mountain*, Montana, 1; Idaho, 1; Wyoming, 1; Colorado, 2; Utah, 2; *Pacific*, Washington, 6; Oregon, 3.

Brick and hollow tile: *New England*, Maine, 11; Vermont, 2; Massachusetts, 8 (252); Connecticut, 12 (431); *Middle Atlantic*, New York, 24 (1318); New Jersey, 15 (820); *East North Central*, Michigan, 5 (379); Wisconsin, 10 (130); *West North Central*, Minnesota, 9 (216); North Dakota, 2; South Dakota, 1; Nebraska, 7 (150); Kansas, 10 (384); *South Atlantic*, Delaware, 3 (75); District of Columbia, 1; Virginia, 22 (788); North Carolina, 38 (1,659); South Carolina, 15 (822); Florida, 2; *East South Central*, Tennessee, 13 (881); Alabama, 23 (1074); Mississippi, 15 (482); *Mountain*, Montana, 6 (66); Idaho, 3 (38); Wyoming, 2; New Mexico, 4 (97); Arizona, 5 (158); Utah, 4 (202); Nevada, 1; *Pacific*, Washington, 13 (349); Oregon, 7 (154).

Floor and wall tile: *Northeast and North Central*, New York, 1; Pennsylvania, 5 (914); Indiana, 1; Wisconsin, 1; Minnesota, 1; *South*, West Virginia, 2; Georgia, 1; Texas, 2; *West*, Arizona, 1; California, 13.

Sewer pipe: *East North Central*, Illinois, 2; Michigan, 1; *West North Central*, Minnesota, 1; Missouri, 3; Kansas, 1; *South*, North Carolina, 2; South Carolina, 1; Georgia, 1; Kentucky, 2; Tennessee, 1; Alabama, 1; Texas, 4 (468); *Mountain*, Wyoming, 1; Colorado, 1; Utah, 1; *Pacific*, Washington, 2; California, 8.

Clay refractories: *New England*, Massachusetts, 2; Connecticut, 1; *Middle Atlantic*, New York, 1; New Jersey, 9; *East North Central*, Indiana, 3 (84); Michigan, 3; Wisconsin, 1; *South Atlantic*, West Virginia, 4 (493); North Carolina, 1; South Carolina, 2; Georgia, 5 (642); *West*, Montana, 1; Idaho, 1; Colorado, 4 (363); Washington, 1; California, 8 (441).

Structural clay products, n. e. c.: *Northeast and North Central*, New Jersey, 1; Pennsylvania, 6 (204); Illinois, 15 (525); Wisconsin, 4 (17); Missouri, 2; Kansas, 1; *South*, District of Columbia, 2; Virginia, 2; West Virginia, 1; South Carolina, 1; Georgia, 1; Florida, 2; Kentucky, 4 (73) Tennessee, 3 (167); Mississippi, 1; *West*, Colorado, 2; Washington, 3 (83); Oregon, 9.

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TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry					
	Cement, hydraulic	Brick and hollow tile	Floor and wall tile	Sewer pipe	Clay refractories	Structural clay products, n. e. c.
Number of establishments	155	674	37	69	169	161
All employees:						
Number (average for the year)	35,662	29,617	6,828	9,105	17,978	5,745
Salaries and wages, total	$98,626	$69,399	$16,335	$22,421	$47,074	$13,950
Production and related workers:						
Number (average for the year)	30,639	27,002	6,250	8,310	15,950	5,177
Man-hours, total ... thousands	66,341	58,367	13,088	17,013	31,830	10,932
Wages, total	$79,861	$59,876	$13,774	$19,552	$38,684	$12,154
Value added by manufacture	$247,936	$110,867	$31,238	$38,362	$76,054	$23,871
Number of employees for pay period ended nearest Oct. 15:						
All employees	36,820	30,896	7,311	9,149	18,143	6,231
Male	35,834	30,340	4,549	8,969	17,592	6,063
Female	986	556	2,762	180	551	168
Production and related workers	31,680	28,125	6,696	8,363	16,001	5,635
Male	31,362	27,995	4,145	8,337	15,874	5,600
Female	318	130	2,551	26	127	35
Force-account construction workers	525	339	13	23	238	17
Administrative, supervisory, sales, and all other	4,615	2,432	602	763	1,904	579
Male	3,947	2,006	391	609	1,480	446
Female	668	426	211	154	424	133
All employees, number by month:						
January	34,657	27,492	5,966	8,739	17,731	5,397
February	34,746	27,220	6,053	8,809	17,800	5,379
March	34,869	27,439	6,275	8,970	17,828	5,358
April	35,216	28,920	6,572	8,889	17,951	5,673
May	33,014	29,526	6,678	9,129	18,032	5,255
June	35,526	30,385	6,776	9,383	17,999	5,400
July	35,992	30,779	6,980	9,082	17,891	5,469
August	36,855	30,940	7,072	9,212	18,020	6,041
September	36,797	30,907	7,197	9,196	18,146	6,175
October	36,820	30,896	7,311	9,149	18,143	6,231
November	36,734	30,757	7,504	9,231	18,092	6,211
December	36,618	30,037	7,486	9,404	18,035	6,241
Cost of materials, fuel, electricity, and contract work	$160,992	$37,640	$10,684	$11,702	$35,296	$6,757
Materials, parts, containers, and supplies	81,322	12,416	8,959	5,524	24,006	2,616
Fuels, total	62,649	21,158	1,289	5,685	8,718	3,006
Bituminous coal	44,703	10,967	95	4,261	4,575	2,393
Anthracite	216	667	1	150	151	76
Coke	19	39	----------	1	42	1
Fuel oils	8,327	4,573	189	458	1,334	288
Gas	9,241	4,257	902	757	2,590	785
Other fuels	143	655	102	58	26	63
Purchased electric energy	17,021	3,658	371	455	1,634	506
Contract and commission work	----------	408	65	38	38	29
Value of inventories:						
Beginning of year, total	$59,390	$10,349	$2,411	$3,762	$16,488	$2,762
Finished products	12,484	6,762	673	2,104	8,938	1,159
Materials, supplies, and work in process	46,906	3,587	1,738	1,658	7,550	1,603
End of year, total	72,487	13,488	3,495	4,481	19,215	3,746
Finished products	13,365	9,100	1,238	2,559	10,244	1,396
Materials, supplies, and work in process	59,122	4,388	2,257	1,922	8,971	2,350
Expenditures for plant and equipment:						
New plant and equipment	$42,488	$13,266	$2,277	$4,183	$6,875	$2,031
Construction and major alteration of fixed plants	9,229	6,039	1,014	1,945	2,058	905
Buildings	7,031	3,314	807	1,334	1,300	666
Other construction	2,198	2,725	207	611	758	239
Machinery and equipment	33,259	7,227	1,263	2,238	3,817	1,126
Production machinery and equipment	30,635	5,470	1,198	1,685	3,420	918
Other machinery and equipment	2,624	1,757	65	553	397	208
Used plant and equipment, and land	1,449	772	24	94	328	674
Number of highway-type motor vehicles owned or leased:						
Trucks	777	1,537	43	243	323	232
By manufacturer's rated capacity:						
Under 1½ tons	135	208	10	67	59	68
1½ tons	279	640	25	111	118	104
Over 1½ tons and less than 3½ tons	168	410	6	32	93	47
3½ tons and less than 5 tons	34	85	----------	14	23	8
5 tons and over	161	194	2	19	30	5
By body type:						
Van	11	28	----------	8	4	2
Stake or platform	176	476	22	106	48	86
Panel or light delivery	125	137	6	27	41	29
All other trucks	465	896	15	102	230	115
Truck tractors	137	150	1	138	16	51
Trailers and semitrailers	176	172	1	185	21	72

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Cement, hydraulic:											
Number of establishments	155			4	3	10	88	43	6	1	
Number of employees (average for the year)	35,662			(d)	*172*	697	16,353	13,812	*4,628*	(d)	
Value added by manufacture	$247,936			(d)	*$1,523*	$3,595	$118,509	$90,196	*$54,115*	(d)	
Brick and hollow tile:											
Number of establishments	674	48	58	102	246	170	46	4			
Number of employees (average for the year)	29,617	132	406	1,450	8,213	11,572	6,615	1,229			
Value added by manufacture	$110,867	$364	$1,088	$3,973	$27,704	$45,589	$28,305	$3,844			
Floor and wall tile:											
Number of establishments	37	4	2	2	5	5	10	7	1	1	
Number of employees (average for the year)	6,828	11	(d)	*42*	159	367	1,625	*4,624*	(d)	(d)	
Value added by manufacture	$31,238	$43	(d)	*$77*	$689	$1,731	$7,573	*$21,125*	(d)	(d)	
Sewer pipe:											
Number of establishments	69			1	4	21	37	6			
Number of employees (average for the year)	9,105			(d)	*163*	1,653	5,655	1,634			
Value added by manufacture	$38,362			(d)	*$720*	$7,110	$22,877	$7,655			
Clay refractories:											
Number of establishments	169	12	10	10	34	36	57	6	3	1	
Number of employees (average for the year)	17,978	30	73	157	1,163	2,752	7,911	2,221	*3,671*	(d)	
Value added by manufacture	$76,054	$81	$279	$544	$5,170	$10,880	$34,089	$9,049	*$15,962*	(d)	
Structural clay products, n. e. c.:											
Number of establishments	161	40	29	33	25	18	13	2	1		
Number of employees (average for the year)	5,745	104	186	497	868	1,246	1,717	*1,127*	(d)		
Value added by manufacture	$23,871	$436	$549	$1,904	$3,725	$5,239	$7,028	*$4,990*	(d)		

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

CEMENT, HYDRAULIC, INDUSTRY	Shipped by—		
	Cement, hydraulic, industry	Other industries	All industries
Total shipments by the industry	$408,928		
A. Hydraulic cement	406,734	[1] $182	$406,916
B. Secondary products	1,663		
Lime	1,460		
Other	203		
C. Miscellaneous receipts	531		

BRICK AND HOLLOW TILE INDUSTRY	Shipped by—		
	Brick and hollow tile industry	Other industries	All industries
Total shipments by the industry	$144,497		
A. Brick and hollow tile	137,571	$4,547	$142,118
B. Secondary products	6,813		
Structural clay products, n. e. c.	3,119		
Concrete block and brick	2,464		
Other	1,230		
C. Miscellaneous receipts	113		

FLOOR AND WALL TILE INDUSTRY	Shipped by—		
	Floor and wall tile industry	Other industries	All industries
Total shipments by the industry	$40,966		
A. Floor and wall tile, except quarry tile	39,901	$2,075	$41,976
B. Secondary products	1,046		
C. Miscellaneous receipts	19		

SEWER PIPE INDUSTRY	Shipped by—		
	Sewer pipe industry	Other industries	All industries
Total shipments by the industry	$47,854		
A. Sewer pipe	39,633	$3,351	$42,984
B. Secondary products	8,206		
Clay refractories	1,274		
Structural clay products, n. e. c.	5,807		
Other	1,125		
C. Miscellaneous receipts	15		

CLAY REFRACTORIES INDUSTRY	Shipped by—		
	Clay refractories industry	Other industries	All industries
Total shipments by the industry	$109,369		
A. Clay refractories	104,567	$6,330	$110,897
B. Secondary products	4,699		
Nonclay refractories	1,659		
Other	3,040		
C. Miscellaneous receipts	103		

STRUCTURAL CLAY PRODUCTS, N. E. C., INDUSTRY	Shipped by—		
	Structural clay products, n. e. c., industry	Other industries	All industries
Total shipments by the industry	$28,814		
A. Structural clay products, n. e. c.	23,809	$10,017	$33,826
B. Secondary products	4,952		
Brick and hollow tile	2,811		
Sewer pipe	1,802		
Other	339		
C. Miscellaneous receipts	53		

[1] Represents masonry mortars and natural cement made in the lime industry.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947		1939 [1]	
		Shipments and interplant transfers		Shipments	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Hydraulic cement, total			$406,916	n.a.	n.a.
Portland cement	M bbls. of 376 lbs.	184,903	349,231	[2] 122,303	[2] $180,322
Natural, masonry-natural, and puzzolan cements	do	715	1,426	[2] 2,405	[2] 3,362
Masonry mortars (prepared or mixed hydraulic and masonry cements other than special portlands)	do	11,347	24,454	(2)	(2)
Portland cement used in their production	do	4,261		(2)	
Cost of containers for above cements and mortars			31,805		n.a.

PRODUCT	Unit of measure	1947			1939	
		Shipments and interplant transfers		Production	Production	
		Quantity	Value f.o.b. plant	Quantity	Quantity	Value f.o.b. plant
Brick and hollow tile, total			$142,118			$75,123
Unglazed brick (common or back-up, and facing):						
Red burning clay	M std. brick	4,528,350	99,199	4,646,928	4,209,797	49,136
Light burning clay	do	434,866	11,338	449,622	516,082	7,690
Other burning clay	do	48,340	1,378	45,793	(3)	(3)
Ceramic- and salt-glazed brick	do	12,158	750	12,537	(4)	(4)
Vitrified paving brick	do	20,727	769	24,771	61,008	1,540
Other brick (flooring brick, acid-proof brick, etc.)	do	29,326	1,166	30,180	n.a.	777
Unglazed hollow facing tile	M std. brick equiv.	129,860	3,985	135,386	58,846	1,242
Glazed hollow facing tile:						
Ceramic glazed	do	148,786	7,826	156,230	[4] 70,943	[4] 2,427
Salt glazed	do	65,487	2,505	73,622	[4] 123,368	[4] 3,420
Nonload-bearing and load-bearing structural tile	Ton	1,183,659	12,319	1,237,239	[5] 130,326	8,528
Other hollow building tile (including silo and cornerib tile)	do	54,606	883	58,658	n.a.	363
Floor and wall tile, except quarry tile, total	M sq. ft.	101,051	41,976	103,818	66,393	16,540
Glazed floor and wall tile and accessories	do	75,601	33,702	77,387	66,393	16,540
Unglazed floor and wall tile and accessories, except quarry tile	do	25,450	8,274	26,431		
Vitrified sewer pipe and fittings	Ton	1,341,523	42,984	1,394,687	1,076,184	15,743
Clay refractories, total			110,897			40,497
Fire-clay brick, standards and special shapes, except superduty	M 9-inch equiv.	696,364	56,000	719,603	507,324	[6] 25,169
Superduty fire-clay brick, standards and special shapes	do	65,653	6,777	71,704		
Insulating fire brick, standards and special shapes	do	42,147	6,027	44,805		
High-alumina brick, standards and special shapes (50 percent Al_2O_3 and over, except fused alumina and mullite)	do	24,504	5,347	25,184	[7] 16,714	[7] 1,512
Ladle brick	do	152,393	6,775	151,619	59,783	1,575
Glass-house pots, tank blocks, upper structure, and floaters	Ton	31,829	3,689	30,963	26,956	2,339
Hot-top refractories	M 9-inch equiv.	47,466	4,044	48,104		[6] 9,902
Sleeves, nozzles, runner brick, and tuyeres	do	48,347	4,498	48,223		
High-temperature bonding mortars	Ton	73,720	4,615	75,644		
Plastic refractories (including wet and dry ramming mixtures)	do	79,447	3,384	80,451		
Cast and castables (hydraulic setting)	do	47,794	2,987	48,870		
Ground crude fire clay and high-alumina material	do	404,355	3,319	406,695		
Other clay refractories			3,435			
Structural clay products, n. e. c., total			33,826			15,121
Drain tile	Ton	894,920	13,048	933,960	487,119	3,951
Terra cotta (architectural)	do	12,072	2,670	15,422	28,009	2,861
Quarry tile	M sq. ft.	6,847	1,674	7,374	11,946	1,037
Roofing tile	Sq. (100 sq. ft.)	150,532	3,047	156,567	243,040	2,376
Flue lining	Ton	226,832	6,286	233,512	177,064	2,539
Other structural clay products, n. e. c., including conduit; stove lining; chimney pipe, tops, and thimbles; and wall coping			7,101			2,357

[1] Source: Bureau of Mines, Department of the Interior.

[2] Separate figures were not collected in 1939 for quantity and value of masonry mortars. The quantity and value of cements used in their production were included in 1939 under "Portland cement" and "Natural, masonry-natural, and puzzolan cements."

[3] The schedule used in 1939 specified brick of "red burning clays" and "buff burning clays" only; probably any brick of other colors produced was included in one of these items.

[4] Figures for glazed brick are included with the figures for glazed tile.

[5] Represents thousands of square feet produced; figures for production in short tons are not available.

[6] All special shapes, valued at $3,832,951 in 1939, are included in the bracketed item for "Hot-top refractories" through "Other clay refractories."

[7] Represents 40 percent Al_2O_3 and over high-alumina brick. See also footnote 6.

TABLE 6-B.—COMMON BRICK—QUANTITY PRODUCED AND QUANTITY AND VALUE OF SHIPMENTS, BY DIVISIONS AND STATES: 1947

[Money figures in thousands of dollars]

DIVISION, STATE, AND KIND OF BRICK	Shipments		Production (M std. brick)
	M std. brick	Value f.o.b. plant	
United States, total	**5,011,556**	**$111,915**	**5,142,343**
Red burning clay	4,528,350	99,199	4,646,928
Light and other burning clay	483,206	12,716	495,415
New England, total	**155,047**	**4,226**	**167,795**
Maine and Vermont	12,793	414	16,614
New Hampshire	6,856	298	8,862
Massachusetts and Connecticut	135,398	3,514	142,319
Middle Atlantic, total	**976,853**	**22,609**	**997,763**
New York	379,429	7,603	380,653
New Jersey	125,477	3,053	134,632
Pennsylvania:			
Red burning clay	407,176	9,976	415,460
Light burning clay	64,771	1,977	67,018
East North Central, total	**1,206,124**	**27,181**	**1,246,874**
Ohio:			
Red burning clay	375,233	8,950	379,242
Light burning clay	87,899	2,448	90,439
Indiana	132,472	3,044	134,084
Illinois:			
Red burning clay	450,239	8,971	480,017
Light and other burning clay	58,727	1,442	58,747
Michigan	80,532	1,828	81,362
Wisconsin	21,022	498	22,983
West North Central, total	**225,734**	**5,538**	**241,824**
Minnesota	34,139	820	37,541
Iowa	49,530	1,396	49,445
Missouri	75,629	1,829	81,849
North Dakota, South Dakota, and Nebraska	19,126	483	20,679
Kansas	47,310	1,010	52,310
South Atlantic, total	**1,107,465**	**24,690**	**1,112,758**
Maryland, Delaware, and District of Columbia	172,364	4,549	172,917
Virginia and North Carolina	499,088	11,602	499,940
West Virginia	70,531	1,788	74,529
South Carolina	144,866	2,879	145,236
Georgia and Florida	220,616	3,872	221,136
East South Central, total	**501,089**	**8,923**	**498,792**
Kentucky	49,920	1,012	51,788
Tennessee	153,339	3,116	151,108
Alabama	214,834	3,181	212,563
Mississippi	82,996	1,614	83,333
West South Central, total	**422,546**	**8,043**	**430,879**
Arkansas:			
Red burning clay	38,665	765	40,580
Light and other burning clay	44,593	891	47,629
Louisiana	44,603	868	44,093
Oklahoma	54,598	1,148	54,586
Texas:			
Red burning clay	163,940	2,864	167,889
Light burning clay	76,147	1,507	76,102
Mountain, total	**158,839**	**4,058**	**163,870**
Montana	8,061	209	9,055
Idaho	5,673	124	6,567
Wyoming	2,809	71	2,857
Colorado:			
Red burning clay	44,256	1,077	43,104
Light and other burning clay	15,154	527	16,387
Arizona, Utah, and Nevada	76,367	1,914	80,289
New Mexico	6,519	136	5,611
Pacific, total	**257,859**	**6,647**	**281,788**
Washington	50,701	1,593	51,209
Oregon	22,390	692	22,431
California	184,768	4,362	208,148

POTTERY AND RELATED PRODUCTS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of vitreous china, earthenware, stoneware, and related products made from kaolin and other ceramic materials. These establishments have been classified in six industries described separately below.

For 1939, the industry classifications were approximately the same as for 1947; but prior to 1939, only combined figures for the five industries other than "China decorating for the trade" were published. Reports for 1937 have been retabulated to show figures comparable with 1939 and 1947 and combined series for the five industries have been shown for 1914–47.

Vitreous Plumbing Fixtures *(Full Standard Industrial Classification title and number: Vitreous and Semivitreous Plumbing Fixtures, 3261.)*—This industry comprises establishments primarily engaged in manufacturing vitreous and semivitreous pottery plumbing fixtures and accessories. Important products of this industry include bathroom and toilet fixtures, closet bowls, flush tanks, lavatories and stalls, and accessories. Establishments primarily engaged in manufacturing enameled-iron plumbing fixtures are classified in Industry 3431, Enameled-Iron and Metal Sanitary Ware and Other Plumbers' Supplies.

A quarterly survey on Census Form M51H, "Plumbing Fixtures," obtains number of units shipped, value of shipments, and number of units in stock for each of the major plumbing-fixture items. The detailed quantity figures and the total value of vitreous-china and glazed earthenware plumbing fixtures are summarized and published in Facts For Industry, Series M51H, "Plumbing Fixtures." The 1947 Census of Manufactures collected only total value of "Vitreous-china and glazed earthenware plumbing fixtures" and total value of "Vitreous-china and glazed earthenware plumbing-fixture accessories and fittings." Detailed figures for quantity and value of 1947 shipments for each of the major plumbing-fixture items are shown in table 6. These figures are based on the quarterly survey reports, but include revisions made after publication of the Facts For Industry releases.

Vitreous-China Food Utensils *(Full Standard Industrial Classification title and number: Vitreous-China Table and Kitchen Articles, 3262.)*—This industry comprises establishments primarily engaged in manufacturing vitreous-china table and kitchen articles for use in households and in hotels, restaurants, and other commercial institutions for preparing, serving, or storing food or drink. Establishments primarily engaged in manufacturing fine (semivitreous) types of earthenware (whiteware) table and kitchen articles are classified in Industry 3263.

A quarterly survey on Census Form M77F, "China Tableware and Kitchenware," collected quantity and value of shipments of china tableware and kitchenware during 1947. Detailed figures for these products were summarized and published in Facts For Industry, Series M77F, "China Tableware." The 1947 Census of Manufactures totals include kitchenware, in addition to the products covered in this survey. Due to reductions in the budget for the Bureau of the Census, this survey was discontinued at the end of the second quarter of 1948.

Earthenware Food Utensils *(Full Standard Industrial Classification title and number: Fine Earthenware (Whiteware) Table and Kitchen Articles, 3263.)*—This industry comprises establishments primarily engaged in manufacturing fine (semivitreous) types of earthenware table and kitchen articles for preparing, serving, or storing food or drink. Establishments primarily engaged in manufacturing vitreous-china table and kitchen articles are classified in Industry 3262.

Porcelain Electrical Supplies *(Standard Industrial Classification No. 3264.)*—This industry comprises establishments primarily engaged in manufacturing porcelain electrical insulators, molded porcelain parts for electrical devices, sparkplug and steatitic porcelain, and other electrical supplies from clay and other ceramic materials.

China Decorating for the Trade *(Standard Industrial Classification No. 3265.)*—This industry comprises establishments primarily engaged in firing and decorating white china and earthenware for the trade. Establishments primarily engaged in firing and decorating china to individual order are classified in service industries. Many of the establishments classified in Industry 3265 in 1947 decorated purchased china or china transferred from other plants of the same company.

Pottery Products, Not Elsewhere Classified *(Standard Industrial Classification No. 3269.)*—This industry comprises establishments primarily engaged in manufacturing art and decorative pottery, industrial and laboratory ware, and miscellaneous crockery, earthenware, stoneware, and other pottery products not elsewhere classified. Important products of this industry include china, earthenware, and stoneware figures; vases, lamp bases, and garden pottery; chemical porcelain; industrial or laboratory ware; grinding media; forms for dipped rubber goods; filtering media; earthenware flower pots; and pyrometric cones and tubes. Stoneware table and kitchen articles are also included in this industry.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work	Value of products shipped [2]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Vitreous plumbing fixtures:								
1947	33	7,831	$24,615	6,996	$21,187	$45,677	$22,416	$68,093
1939	25	5,146	7,669	4,534	6,316	14,997	6,982	21,979
1937 [3]	30	n.a.	n.a.	4,577	6,481	14,547	5,846	20,393
Vitreous-china food utensils:								
1947	27	11,100	26,849	10,326	23,530	35,228	7,968	43,196
1939 [4]	17	4,798	5,716	4,350	4,639	7,653	1,707	9,360
1937 [3, 4]	18	n.a.	n.a.	4,671	5,030	8,438	1,977	10,415
Earthenware food utensils:								
1947	76	16,747	42,091	15,742	37,175	54,837	17,217	72,054
1939	31	12,773	15,600	11,728	13,150	19,644	8,157	27,801
1937 [3]	35	n.a.	n.a.	11,348	12,918	17,945	7,744	25,689
Porcelain electrical supplies:								
1947	50	11,547	30,463	10,447	25,454	52,832	18,652	71,484
1939 [5]	42	6,897	8,769	6,018	6,530	13,673	7,144	20,817
1937 [3, 5]	37	n.a.	n.a.	7,170	8,160	16,208	7,451	23,659
Pottery products, n.e.c.:								
1947	491	9,733	20,473	8,990	17,652	31,075	8,852	39,927
1939 [4]	151	6,972	8,549	6,054	6,398	12,775	3,818	16,593
1937 [3, 4]	131	n.a.	n.a.	5,294	5,740	11,335	3,235	14,570
Total for the Pottery and related products industries, except the China decorating for the trade industry:								
1947	677	56,958	144,491	52,501	124,998	219,649	75,105	294,754
1939	266	36,586	46,303	32,684	37,033	68,742	27,808	96,550
1937	251	35,687	44,810	33,060	38,329	68,473	26,253	94,726
1935	257	31,222	33,780	28,845	28,088	48,775	18,003	66,778
1933	231	25,399	21,002	23,632	17,891	31,539	12,179	43,718
1931	275	n.a.	n.a.	27,023	26,981	49,473	16,393	65,866
1929	313	38,493	52,583	35,409	43,656	83,615	27,007	110,622
1927	316	39,629	53,162	36,667	45,150	77,016	33,581	110,597
1925	309	39,823	55,376	36,536	46,769	77,152	33,926	111,078
1923	304	39,704	54,731	36,824	46,706	80,792	33,600	114,392
1921	271	30,728	41,256	28,458	35,356	58,990	25,227	84,217
1919	340	30,509	35,824	27,934	29,820	54,125	20,794	74,919
1914 [6]	350	28,546	19,373	26,705	16,666	24,911	12,032	36,943
China decorating for the trade:								
1947	65	1,048	2,471	875	1,679	5,143	3,234	8,377
1939	24	509	616	421	426	1,215	1,119	2,334
1937	16	350	480	306	359	928	762	1,690
1935	19	319	321	278	224	622	645	1,267
1933	14	174	154	152	127	384	378	762
1931	21	n.a.	n.a.	220	236	577	551	1,128
1929	27	385	566	317	420	914	640	1,554
1927	31	438	576	366	428	1,010	682	1,692
1925	31	401	525	333	386	918	672	1,590
1923	33	384	547	355	460	883	610	1,493
1921	34	355	479	325	398	738	504	1,242
1919	43	276	326	244	244	556	311	867
1914	51	340	216	295	159	397	330	727
1909	40	391	271	328	191	475	311	786
1904	28	243	115	225	99	219	108	327
1899	49	329	143	298	122	278	207	485

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] For 1947 and 1929, the figures represent value of products shipped except in the case of "China decorating for the trade" for 1929, where they represent value of products made; for all other years, the figures represent value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[3] "Vitreous plumbing fixtures," "Vitreous-china food utensils," "Earthenware food utensils," "Porcelain electrical supplies," and "Pottery products, n. e. c." formerly constituted a single classification "Pottery, including porcelain ware." The separate industry figures shown for 1937–47 have been combined in order that comparable statistics can be shown for the period 1914–35.

[4] Establishments primarily engaged in manufacturing vitreous-china *household* food utensils are excluded from the 1939 and 1937 figures for "Vitreous-china food utensils" and included in the figures for "Pottery products, n. e. c." Five establishments were primarily engaged in making these products in 1947.

[5] Excludes data for establishments which manufactured steatite and other ceramic electrical products.

[6] The figures for "Pottery and related products" prior to 1914 include statistics for clay refractories (fire-clay products) and terra cotta, and therefore are not sufficiently comparable with the figures for later years to be shown in this table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Vitreous plumbing fixtures, total [1]	33	7,831	$24,615	6,996	14,591	$21,187	$45,677	$22,416	$68,093	$2,850
Middle Atlantic	11	3,906	12,571	3,439	7,164	10,778	22,088	10,786	32,874	1,404
East North Central	12	2,968	9,400	2,707	5,567	8,252	18,096	9,142	27,238	955
Ohio	3	967	2,776	851	1,770	2,395	5,646	2,959	8,605	312
Illinois	4	900	2,568	825	1,702	2,228	4,351	2,581	6,932	217
South and West	10	957	2,644	850	1,860	2,157	5,493	2,488	7,981	491
Vitreous-china food utensils, total [1]	27	11,100	26,849	10,326	20,228	23,530	35,228	7,968	43,196	2,692
Middle Atlantic	11	7,199	17,181	6,655	13,137	15,010	21,429	5,022	26,451	1,714
Pennsylvania	5	3,667	8,417	3,462	6,646	7,564	9,436	2,838	12,274	1,053
Other divisions	16	3,901	9,668	3,671	7,091	8,520	13,799	2,946	16,745	978
Ohio	5	2,080	5,261	1,949	3,654	4,503	8,227	1,470	9,697	466
West Virginia	4	1,208	2,850	1,154	2,267	2,667	3,436	1,011	4,447	200
Earthenware food utensils, total [1]	76	16,747	42,091	15,742	29,733	37,175	54,837	17,217	72,054	4,784
Northeast	9	1,064	2,323	1,009	1,874	2,036	3,205	993	4,198	408
Pennsylvania	5	763	1,696	728	1,342	1,497	2,310	787	3,097	376
North Central	24	5,817	14,150	5,398	10,460	12,334	19,346	6,429	25,775	1,659
Ohio	17	4,468	11,040	4,128	7,855	9,579	15,248	5,271	20,519	987
South	9	7,328	18,856	6,945	12,575	16,701	21,246	7,514	28,760	1,447
Pacific	34	2,538	6,762	2,390	4,824	6,104	11,040	2,281	13,321	1,270
California	34	2,538	6,762	2,390	4,824	6,104	11,040	2,281	13,321	1,270
Porcelain electrical supplies, total [1]	50	11,547	30,463	10,447	21,553	25,454	52,832	18,652	71,484	2,904
Northeast	25	5,117	13,932	4,543	9,588	11,324	21,709	7,792	29,501	1,154
New York	5	1,723	5,007	1,485	3,312	3,944	8,354	4,588	12,942	501
New Jersey	14	1,926	5,051	1,750	3,645	4,142	6,742	1,688	8,430	320
North Central	16	3,571	9,908	3,227	6,463	8,212	18,962	4,708	23,670	1,211
Ohio	11	1,905	5,172	1,691	3,384	4,200	10,832	3,039	13,871	964
South and West	9	2,859	6,623	2,677	5,502	5,918	12,161	6,152	18,313	539
China decorating for the trade, total [1]	65	1,048	2,471	875	1,811	1,679	5,143	3,234	8,377	82
Northeast and North Central	57	999	2,409	832	1,734	1,629	5,015	3,152	8,167	82
New York	29	383	1,029	307	681	696	1,949	1,203	3,152	19
New Jersey	10	148	316	133	242	229	427	154	581	12
Illinois	6	363	916	292	633	570	2,314	1,417	3,731	48
South and West	8	49	62	43	77	50	128	82	210	----------
Pottery products, n. e. c., total [1]	491	9,733	20,473	8,990	19,148	17,652	31,075	8,852	39,927	2,628
New England	12	102	264	94	207	220	443	77	520	36
Middle Atlantic	71	1,144	2,796	1,035	2,142	2,285	4,256	949	5,205	321
New York	29	284	608	259	513	503	891	241	1,132	176
New Jersey	22	525	1,258	465	969	1,024	1,697	391	2,088	39
Pennsylvania	20	335	930	311	660	758	1,668	317	1,985	106
North Central	108	5,104	11,128	4,690	9,691	9,516	16,132	5,206	21,338	1,469
Ohio	60	3,577	7,856	3,275	6,782	6,710	11,240	3,699	14,939	1,041
Illinois	14	1,125	2,546	1,042	2,173	2,165	3,657	1,238	4,895	373
South	69	1,230	1 961	1,151	2,454	1,731	3,157	981	4,138	258
West Virginia	4	220	353	206	422	274	534	180	714	5
Tennessee	8	124	176	115	244	158	234	121	355	3
West	231	2,153	4,324	2,020	4,654	3,900	7,087	1,639	8,726	544
California	215	1,729	3,320	1,640	3,842	3,056	5,705	1,339	7,044	455

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments, and in parentheses, the number of employees for States represented by three or more companies, when possible.

Vitreous plumbing fixtures: *Middle Atlantic*, New Jersey, 9; Pennsylvania, 2; *East North Central*, Indiana, 4; Wisconsin, 1; *South and West*, West Virginia, 1; Georgia, 1; Texas, 2; California, 6 (546).

Vitreous-china food utensils: *Middle Atlantic*, New York, 4; New Jersey, 2; *Other divisions*, Illinois, 1; Missouri, 1; Arkansas, 1; California, 4 (400).

Earthenware food utensils: *Northeast*, Massachusetts, 2; New York, 1; New Jersey, 1; *North Central*, Indiana, 1; Illinois, 2; Michigan, 1; Minnesota, 1; Nebraska, 2; *South*, West Virginia, 5 (6,197); North Carolina, 1; Kentucky, 1; Tennessee, 1; Oklahoma, 1.

Porcelain electrical supplies: *Northeast*, Massachusetts, 2; Connecticut, 1; Pennsylvania, 3 (1,257); *North Central*, Illinois, 1; Michigan, 2; Wisconsin, 1; Iowa, 1; *South and West*, Maryland, 2; West Virginia, 3 (700); Tennessee, 3 (1,030); California, 1.

China decorating for the trade: *Northeast and North Central*, Massachusetts, 2; Pennsylvania, 5 (51); Ohio, 4 (17); Michigan, 1; *South and West*, Virginia, 2; West Virginia, 3 (23); California, 3.

Pottery products, n. e. c: *New England*, Maine, 2; Vermont, 1; Massachusetts, 6 (62); Rhode Island, 1; Connecticut, 2; *North Central*, Indiana, 7 (41); Michigan, 4 (97); Wisconsin, 4 (123); Minnesota, 1; Iowa, 1; Missouri, 10 (62); North Dakota, 1; Nebraska, 2; Kansas, 4 (24); *South*, Maryland, 1; District of Columbia, 1; Virginia, 2; North Carolina, 9 (62); South Carolina, 1; Georgia, 8 (54); Florida, 1; Kentucky, 7 (273); Alabama, 2; Mississippi, 2; Arkansas 4 (115); Louisiana, 2; Oklahoma, 1; Texas, 16 (285); *West*, Montana, 1; Colorado, 5 (362); Arizona, 1; Utah, 2; Washington, 6 (23); Oregon, 1.

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry					
	Vitreous plumbing fixtures	Vitreous-china food utensils	Earthenware food utensils	Porcelain electrical supplies	China decorating for the trade	Pottery products, n. e. c.
ALL ESTABLISHMENTS						
Number of establishments	33	27	76	50	65	491
All employees:						
Number (average for the year)	7,831	11,100	16,747	11,547	1,048	9,733
Salaries and wages, total	$24,615	$26,849	$42,091	$30,463	$2,471	$20,473
Production and related workers:						
Number (average for the year)	6,996	10,326	15,742	10,447	875	8,990
Man-hours, total ... thousands	14,591	20,228	29,733	21,553	1,811	19,148
Wages, total	$21,187	$23,530	$37,175	$25,454	$1,679	$17,652
Value added by manufacture	$45,677	$35,228	$54,837	$52,832	$5,143	$31,075
ESTABLISHMENTS REPORTING DETAILED STATISTICS						
Number of establishments	33	27	76	50	60	275
All employees:						
Number (average for the year)	7,831	11,100	16,747	11,547	1,009	8,771
Salaries and wages, total	$24,615	$26,849	$42,091	$30,463	$2,411	$19,017
Production and related workers:						
Number (average for the year)	6,996	10,326	15,742	10,447	836	8,055
Man-hours, total ... thousands	14,591	20,228	29,733	21,553	1,735	17,334
Wages, total	$21,187	$23,530	$37,175	$25,454	$1,619	$16,269
Value added by manufacture	$45,677	$35,228	$54,837	$52,832	$5,042	$28,811
Number of employees for pay period ended nearest Oct. 15:						
All employees	7,642	11,409	17,135	11,270	1,054	9,522
Male	7,070	5,993	10,097	7,713	404	5,424
Female	572	5,416	7,038	3,557	650	4,098
Production and related workers	6,803	10,601	16,007	10,150	877	8,792
Male	6,445	5,498	9,390	6,977	301	5,003
Female	358	5,103	6,617	3,173	576	3,789
Force-account construction workers	8	12	174			22
Administrative, supervisory, sales, and all other	831	796	954	1,120	177	708
Male	617	483	543	736	103	399
Female	214	313	411	384	74	309
All employees, number by month:						
January	7,709	10,502	16,464	11,850	1,132	9,175
February	7,683	10,728	16,717	11,906	1,097	8,954
March	7,739	10,821	16,811	11,743	1,066	8,879
April	7,741	10,996	16,890	11,697	999	8,550
May	7,816	10,996	16,554	11,771	889	7,932
June	7,855	11,177	16,525	11,559	863	7,587
July	7,912	11,069	15,383	11,427	878	7,970
August	7,947	11,218	16,690	11,483	896	8,410
September	7,524	11,253	16,892	11,209	969	8,853
October	7,642	11,409	17,135	11,270	1,054	9,522
November	8,082	11,502	17,342	11,278	1,125	9,790
December	8,293	11,525	17,504	11,352	1,110	9,569
Cost of materials, fuel, electricity, and contract work	$22,416	$7,968	$17,217	$18,652	$3,109	$8,054
Materials, parts, containers, and supplies	20,168	6,518	14,398	16,611	2,895	6,336
Fuels, total	1,844	1,142	2,335	1,473	132	1,236
Bituminous coal	283	210	200	372	52	205
Anthracite	171	31	19	6	3	24
Coke			25			
Fuel oils	785	245	588	662	20	292
Gas	593	609	1,330	420	56	686
Other fuels	12	47	173	13	1	29
Purchased electric energy	404	308	481	517	65	384
Contract and commission work			3	51	17	98
Value of inventories:						
Beginning of year, total	$5,519	$5,301	$7,910	$6,799	$962	$3,042
Finished products	1,494	1,877	2,954	2,086	337	1,548
Materials, supplies, and work in process	4,025	3,424	4,956	4,713	625	1,494
End of year, total	6,524	6,203	9,994	8,158	1,111	3,566
Finished products	2,041	2,127	4,171	2,276	534	1,790
Materials, supplies, and work in process	4,483	4,076	5,823	5,882	577	1,776
Expenditures for plant and equipment:						
New plant and equipment	$2,850	$2,692	$4,784	$2,904	$82	$2,628
Construction and major alteration of fixed plants	1,293	1,341	2,212	927	16	1,429
Buildings	951	1,031	1,772	685	13	1,098
Other construction	342	310	440	242	3	331
Machinery and equipment	1,557	1,351	2,572	1,977	66	1,199
Production machinery and equipment	1,402	1,215	2,364	1,792	39	803
Other machinery and equipment	155	136	208	185	27	396
Used plant and equipment, and land	32	162	300	69	1	56
Number of highway-type motor vehicles owned or leased:						
Trucks	48	18	74	55	8	129
By manufacturer's rated capacity:						
Under 1½ tons	16	5	20	11	5	31
1½ tons	12	8	18	31		58
Over 1½ tons and less than 3½ tons	11	4	21	11	1	23
3½ tons and less than 5 tons	7	1	2		1	6
5 tons and over	2		13	2	1	11
By body type:						
Van	3	1	1		2	4
Stake or platform	14	5	36	21		67
Panel or light delivery	10	5	9	11	4	33
All other trucks	21	7	28	23	2	25
Truck tractors		1	8		1	13
Trailers and semitrailers		1	11		1	13

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of— 1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Vitreous plumbing fixtures:											
Number of establishments	33	2	2	1	2	4	9	8	4	1	----------
Number of employees (average for the year)	7,831	(d)	*18*	(d)	*88*	204	1,436	2,659	*3,336*	(d)	----------
Value added by manufacture	$45,677	(d)	*$62*	(d)	*$483*	$1,342	$8,388	$15,763	*$19,639*	(d)	----------
Vitreous-china food utensils:											
Number of establishments	27	1	----------	1	4	2	7	5	4	2	1
Number of employees (average for the year)	11,100	(d)	----------	(d)	*124*	(d)	*1,517*	1,781	2,717	(d)	*4,961*
Value added by manufacture	$35,228	(d)	----------	(d)	*$238*	(d)	*$6,301*	$5,008	$10,013	(d)	*$13,668*
Earthenware food utensils:											
Number of establishments	76	23	8	3	8	6	9	9	7	2	1
Number of employees (average for the year)	16,747	53	50	46	316	474	1,884	3,460	5,125	(d)	*5,339*
Value added by manufacture	$54,837	$119	$107	$93	$1,257	$1,695	$5,877	$12,606	$16,121	(d)	*$16,962*
Porcelain electrical supplies:											
Number of establishments	50	5	1	4	4	4	15	11	4	2	----------
Number of employees (average for the year)	11,547	*19*	(d)	57	104	320	2,300	3,672	*5,075*	(d)	----------
Value added by manufacture	$52,832	*$59*	(d)	$255	$278	$1,004	$9,338	$14,794	*$27,104*	(d)	----------
China decorating for the trade:											
Number of establishments	65	23	10	18	9	4	1	----------	----------	----------	----------
Number of employees (average for the year)	1,048	55	68	247	236	*442*	(d)	----------	----------	----------	----------
Value added by manufacture	$5,143	$266	$304	$1,003	$850	*$2,720*	(d)	----------	----------	----------	----------
Pottery products, n. e. c.:											
Number of establishments	491	221	97	61	63	29	13	7	----------	----------	----------
Number of employees (average for the year)	9,733	430	620	840	1,949	1,914	1,743	2,237	----------	----------	----------
Value added by manufacture	$31,075	$1,349	$1,686	$2,712	$5,815	$6,509	$5,799	$7,205	----------	----------	----------

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[**Money figures in thousands of dollars**]

VITREOUS PLUMBING FIXTURES INDUSTRY	Shipped by— Vitreous plumbing fixtures industry	Other industries	All industries
Total shipments by the industry	$68,093	----------	----------
A. Vitreous and semivitreous plumbing fixtures and accessories	66,602	$563	$67,165
B. Secondary products	1,484	----------	----------
Art, decorative, and novelty pottery ware	1,077	----------	----------
Other	407	----------	----------
C. Miscellaneous receipts	7	----------	----------

VITREOUS-CHINA FOOD UTENSILS INDUSTRY	Shipped by— Vitreous-china food utensils industry	Other industries	All industries
Total shipments by the industry	$43,196	----------	----------
A. Vitreous-china table and kitchen articles	41,680	$1,103	$42,783
B. Secondary products	1,444	----------	----------
C. Miscellaneous receipts	72	----------	----------

EARTHENWARE FOOD UTENSILS INDUSTRY	Shipped by— Earthenware food utensils industry	Other industries	All industries
Total shipments by the industry	$72,054	----------	----------
A. Fine earthenware (whiteware) table and kitchen articles	65,906	$2,238	$68,144
B. Secondary products	6,081	----------	----------
Stoneware table and kitchen articles	1,010	----------	----------
Art, decorative, and novelty pottery ware	1,344	----------	----------
Other (including floor and wall tile and sewer pipe)	3,727	----------	----------
C. Miscellaneous receipts	67	----------	----------

PORCELAIN ELECTRICAL SUPPLIES INDUSTRY	Shipped by— Porcelain electrical supplies industry	Other industries	All industries
Total shipments by the industry	$71,484	----------	----------
A. Ceramic electrical supplies	63,832	$4,480	$68,312
B. Secondary products	7,588	----------	----------
All other pottery products, n. e. c.	2,680	----------	----------
Pole line and transmission hardware	2,288	----------	----------
Other	2,620	----------	----------
C. Miscellaneous receipts	64	----------	----------

CHINA DECORATING FOR THE TRADE INDUSTRY	Shipped by— China decorating for the trade industry	Other industries	All industries
Total shipments by the industry	$8,377	----------	----------
A. China decorating for the trade	7,971	$143	$8,114
B. Secondary products	19	----------	----------
C. Miscellaneous receipts (contract and commission work)	387	----------	----------

POTTERY PRODUCTS, N. E. C., INDUSTRY	Shipped by— Pottery products, n. e. c., industry	Other industries	All industries
Total shipments by the industry	$39,927	----------	----------
A. Primary products	37,969	$7,878	$45,847
Stoneware table and kitchen articles	1,621	1,010	2,631
Art, decorative, and novelty pottery ware	21,893	3,508	25,401
All other pottery products, n. e. c.	11,171	3,192	14,363
Pottery products, n. e. c., not specified by kind	3,284	168	3,452
B. Secondary products	1,909	----------	----------
Fine earthenware (whiteware) table and kitchen articles	1,277	----------	----------
Other	632	----------	----------
C. Miscellaneous receipts	49	----------	----------

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947		1939	
		Shipments and interplant transfers		Production	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Vitreous and semivitreous plumbing fixtures and accessories, total			$67,165		$22,105
Vitreous-china and glazed earthenware plumbing fixtures [1]			62,641		19,130
Drinking fountains (vitreous china)	Number	58,004	646	n.a.	(2)
Lavatories (vitreous china)	do	1,392,033	12,688	278,571	3,004
Water-closet bowls (vitreous china):					
Syphon jet	do	294,473	4,438	193,627	1,558
Washdown	do	1,428,636	10,449	904,637	3,365
Reverse trap	do	961,601	8,258	486,305	3,035
Flush tanks (vitreous china)	do	2,367,181	20,723	1,245,266	6,162
Urinals (vitreous china and glazed earthenware)	do	95,985	1,534	n.a.	(2)
Kitchen sinks (vitreous china and glazed earthenware)	do	170,777	1,254	n.a.	(2)
All other vitreous-china and glazed earthenware plumbing fixtures			2,651		[3] 2,006
Vitreous-china and glazed earthenware plumbing-fixture accessories and fittings (including towel racks, soap cups, etc.)			4,524		[3] 2,975
Vitreous-china table and kitchen articles (for serving, cooking, preparing, and storing food and drink), total	M doz. pieces	12,324	42,783	n.a.	[4] 12,087
Hotel and commercial	do	11,351	33,629	n.a.	n.a.
Decorated tableware	do	8,855	27,026	n.a.	n.a.
Undecorated tableware and kitchenware	do	2,496	6,603	n.a.	n.a.
Household	do	973	9,154	n.a.	n.a.
Decorated tableware	do	668	7,558	n.a.	n.a.
Undecorated tableware and kitchenware	do	305	1,596	n.a.	n.a.
Fine earthenware (whiteware) table and kitchen articles (for serving, cooking, preparing, and storing food and drink), total	do	42,285	68,144	n.a.	[4] 29,182
Hotel and commercial	do	4,454	7,608	n.a.	n.a.
Decorated tableware	do	4,140	6,855	n.a.	n.a.
Undecorated tableware and kitchenware	do	314	753	n.a.	n.a.
Household	do	37,831	60,536	n.a.	n.a.
Decorated tableware	do	24,470	46,597	n.a.	n.a.
Undecorated tableware	do	13,118	13,040	n.a.	n.a.
Kitchenware	do	243	899	n.a.	n.a.
Ceramic electrical supplies, total			[5] 68,312		n.a.
Porcelain electrical products			63,544		[5] 20,879
High-voltage porcelain products (wet process porcelain), including integral hardware parts			38,457		n.a.
All standard dry-process electrical porcelain, including cleats, knobs, tubes, outlet and switch-box covers, etc.			3,080		[6] 1,304
All special dry-process electrical porcelain, including porcelain parts for wiring devices, fuses, circuit breakers, radio receiving sets, spark plugs, etc., and electrical refractory porcelain			22,007		n.a.
Steatite electrical products			4,131		n.a.
Other ceramic electrical products, including aluminum oxide and zircon electrical products			637		n.a.
China decorating for the trade			[7] 8,114		[8] 2,334
Stoneware table and kitchen articles (for serving, cooking, preparing, and storing food and drink), total	M doz. pieces	1,179	2,631	n.a.	1,816
Hotel and commercial	do	664	608	n.a.	n.a.
Household	do	515	2,023	n.a.	n.a.
Art, decorative, and novelty pottery ware, total			25,401		5,667
China and porcelain			14,600		n.a.
Earthenware and stoneware			10,801		n.a.
All other pottery products, n.e.c., total			14,363		n.a.
Chemical, technical, and industrial pottery ware (including chemical stoneware and porcelain, pyrometric tubes, etc.)			11,000		[9] 2,303
Red unglazed earthenware (flower pots, etc.)			3,263		2,097
Other pottery products, n. e. c.			100		[4] 1,782
Pottery products n.e.c., not specified by kind			[10] 3,452		

n.a.—Not available.

[1] Only the total value of vitreous-china and glazed earthenware plumbing fixtures was called for in the 1947 Census of Manufactures reports. The detailed figures for 1947 are based on the quarterly reports on Census Form M51H, "Plumbing Fixtures." The figures for number of units and their value include revisions made after publication of the quarterly reports.

[2] "Drinking fountains," "Urinals," and "Kitchen sinks" are included with "All other vitreous-china and glazed earthenware plumbing fixtures."

[3] Represents "Other bathroom and toilet fixtures (recessed and attachable)."

[4] The 1939 data for these items have been retabulated for comparability with the 1947 statistics.

[5] Includes metal fittings, valued at $6,777,000 in 1947 and $2,519,000 in 1939.

[6] Represents cleats, knobs, and tubes only.

[7] In addition $387,000 was reported received by the "China decorating for the trade" industry for contract and commission work.

[8] Represents total value of products of the "China firing and decorating (for the trade)" industry.

[9] Represents "Gas radiants and backwalls for use in portable stoves," "Chemical stoneware," "Pyrometric cones," and "Saggers."

[10] Includes total shipments ($1.5 million) of 216 small establishments, classified in the "Pottery Products, n. e. c." industry, for which no detailed break-down of shipments was tabulated.

CONCRETE, GYPSUM, MINERAL WOOL, AND STONE PRODUCTS; LIME

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of concrete, gypsum, and mineral-wool products; lime; and monumental and building-stone products not made at plants operated in conjunction with quarries. These establishments have been classified in five industries, described separately below.

The 1939 industry classifications were somewhat different from those used in 1947. Comparable figures for the two years were obtained by retabulating the 1939 data. For earlier years comparable figures are not available, except as indicated for the Mineral Wool Industry.

Concrete Products *(Standard Industrial Classification No. 3271.)*—This industry comprises establishments primarily engaged in manufacturing concrete building blocks and shapes, pipe and conduit, and similar products such as poles, piling, septic tanks, garbage boxes, garden furniture, incinerators, and vaults made from a combination of stone or gravel, sand, and cement. Contractors engaged in concrete construction work are classified in the construction industries, and building-materials dealers engaged in mixing and delivering ready-mixed concrete in the trade industries.

Gypsum Products *(Standard Industrial Classification No. 3272.)*—This industry comprises establishments primarily engaged in manufacturing plaster, plaster board, and other products composed wholly or chiefly of gypsum.

The 1947 Census of Manufactures collected summary figures only for "Industrial plasters" and "Building plasters and prefabricated building materials." The Bureau of Mines of the U. S. Department of the Interior collects annually, and publishes in its "Minerals Yearbook," details on the various types of plasters and building materials. The Bureau of Mines figures for major classes of these products have been reproduced in table 6. The 1947 Census of Manufactures quantity and value totals for "Industrial plasters" exceed the Bureau of Mines figures by 3 and 7 percent, respectively. The Bureau of Mines covers only producers of plasters from material calcined at the same operation, whereas the Bureau of the Census includes, in addition, plants engaged only in mixing and packaging plasters. The total quantity and value of "Building plasters and prefabricated building materials," as reported by the Bureau of the Census, exceed the Bureau of Mines figures by 2 and 3 percent, respectively. This small variation is due to minor differences in the reports from the individual companies submitted to the two agencies.

Lime *(Standard Industrial Classification No. 3274.)*—This industry comprises establishments primarily engaged in manufacturing quicklime, hydrated lime, and dead-burned dolomite from limestone, dolomite, shells, or other substances.

Producers of lime were requested to exclude all data relating to mining or quarrying activities in conjunction with their manufacturing operations. The quarrying of limestone for lime manufacture represents a relatively large segment of the activities of companies engaged in producing lime. Although many of the companies failed to segregate mining activities in their initial reports to the Bureau of the Census and some had difficulty in furnishing completely segregated figures, the 1947 figures for the Lime Industry, as published in the following tables, furnish reasonably accurate summary statistics for the operation of lime kilns. The 1939 figures for the Lime Industry have been revised, on the basis of Census of Mineral Industries data, to exclude limestone quarries operated in conjunction with lime plants.

The number of plants for the Lime Industry shown in this Census report is 172 as compared with 179 plants shown in the 1947 report of the Bureau of Mines, Department of the Interior. The Bureau of the Census did not request separate reports from concerns engaged in producing lime for use in their own chemical plants, and no data on the lime production of these plants was obtained, since such lime is usually incorporated in the end products of the plant. The Census figures for total quantity and value of quicklime shipped in 1947 exceeded the Bureau of Mines figures by 2 percent; and the corresponding Census and Bureau of Mines figures for hydrated lime differed by only 0.1 percent.

Mineral Wool *(Standard Industrial Classification No. 3275.)*—This industry comprises establishments primarily engaged in manufacturing mineral wool and mineral-wool insulation products made of such materials as rock, slag, and silica. Producers of vermiculite products are classified in Industry 3299, Nonmetallic Mineral Products, Not Elsewhere Classified.

Cut-Stone and Stone Products *(Part of Standard Industrial Classification Industry, No. 3281.)*—This industry comprises establishments primarily engaged in cutting, shaping, and finishing marble, granite, limestone, and other stone for building and miscellaneous uses. Plants operated in conjunction with quarries are excluded. Important products of this industry include monuments and tombstones, dimension stone for buildings, slate blackboards, and stone furniture. Establishments primarily engaged in buying or selling partly finished monuments and tombstones, but performing no work on the stones other than lettering or finishing to custom order, are classified in trade industries. The quarrying of dimension stone and the operation of dimension-stone dressing plants in conjunction with such quarries are classified in the mining industries. Also, the cutting of grindstones, pulpstones, and whetstones at the quarry is classified in mining industries.

The Bureau of Mines, Department of the Interior, collects annual statistics for dimension stone from dressing plants operated in conjunction with quarries. In previous years these figures were partly duplicated in the Census of Manufactures, and the extent of duplication was unknown. Thus, for the first time, the sum of the Census and Bureau of Mines figures yield approximate totals for value of dressed dimension stone in the United States. The Census figures for 1947 show that the value of dressed building marble, granite, and limestone shipped by plants not operated in conjunction with quarries was $15.2 million compared with $11.2 million reported to the Bureau of Mines for finished, sawed, and cut building granite, marble, and limestone produced by plants operated in conjunction with quarries. Similarly, for dressed monumental marble and granite these sources show a total value of $45.7 million for plants not operated in conjunction with quarries compared with $12.3 million for plants operated in conjunction with quarries.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work	Value of products shipped [2]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Concrete products:								
1947	6,158	46,821	$106,484	41,537	$88,471	$202,789	$126,945	$329,734
1939 [3]	1,892	n.a.	n.a.	15,455	16,324	55,372	48,188	103,560
Gypsum products:								
1947	73	7,472	21,384	6,543	17,911	67,879	59,664	127,543
1939	68	5,863	8,541	4,936	6,666	29,548	16,694	46,242
1937	79	5,859	8,016	5,207	6,591	25,936	16,681	42,617
1935 [4]	72	3,894	4,513	3,382	3,444	17,367	8,921	26,288
Lime:								
1947	172	7,009	18,767	6,129	15,516	39,253	33,589	72,842
1939 [7]	316	n.a.	n.a.	6,708	6,688	18,574	24,901	43,475
Mineral wool:								
1947	91	8,874	22,924	7,363	18,134	36,840	36,291	73,131
1939 [5]	49	n.a.	n.a.	1,848	1,796	4,536	3,377	7,913
1937 [6]	32	n.a.	n.a.	1,701	1,835	4,330	3,129	7,459
Cut-stone and stone products:								
1947	640	9,880	25,922	8,312	20,605	45,940	21,313	67,253
1939 [7]	1,092	n.a.	n.a.	11,841	14,774	37,148	20,131	57,279

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] For 1947, value of products shipped; for all other years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[3] The figures for 1939 have been revised to exclude establishments primarily engaged in making ready-mixed concrete. The revised 1939 figures include, however, production of ready-mixed concrete, valued at about $25 million, by concerns primarily engaged in producing precast concrete products. All activities relating to the production of ready-mixed concrete are excluded for 1947.

[4] "Gypsum products" formerly were classified in the "Wallboard, insulating board, gypsum and other plasters, and floor composition" industry. Comparable figures are, therefore, not available for earlier years.

[5] The figures for "Mineral wool" for 1939, but not for 1937, have been revised to make them comparable with those for 1947. Value added for 1939, before revision, was $4.7 million.

[6] "Mineral wool" formerly was classified in the "Wallboard and plaster (except gypsum), building insulation, and floor composition" industry. Comparable figures are, therefore, not available for earlier years.

[7] The figures for 1939 have been revised to make them comparable with those for 1947. No comparable figures are available for prior years.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Concrete products, total [1]	6,158	46,821	$106,484	41,537	89,031	$88,471	$202,789	$126,945	$329,734	$35,692
New England	224	1,475	3,871	1,298	2,951	3,140	7,615	4,697	12,312	1,625
Massachusetts	100	759	1,974	669	1,444	1,595	4,039	2,164	6,203	784
Rhode Island	15	119	314	105	241	248	563	383	946	87
Middle Atlantic	863	7,413	18,109	6,534	14,183	14,906	34,487	21,332	55,819	7,394
New York	292	2,322	6,235	2,035	4,574	4,964	11,075	6,973	18,048	2,064
New Jersey	183	1,951	4,781	1,737	3,755	3,993	10,410	5,789	16,199	1,646
Pennsylvania	388	3,140	7,093	2,762	5,854	5,949	13,002	8,570	21,572	3,684
East North Central	1,562	9,861	25,009	8,595	18,669	20,454	48,728	28,925	77,653	7,989
Ohio	399	2,760	6,865	2,383	5,327	5,564	13,635	7,980	21,615	1,941
Indiana	240	1,450	3,369	1,277	2,748	2,734	5,808	3,385	9,193	869
Illinois	304	1,869	4,708	1,593	3,415	3,811	8,893	5,420	14,313	2,002
Michigan	418	2,525	6,726	2,264	4,699	5,723	13,835	8,643	22,478	1,920
Wisconsin	201	1,257	3,341	1,078	2,480	2,622	6,557	3,497	10,054	1,257
West North Central	751	4,521	10,110	3,984	9,155	8,179	18,603	11,392	29,995	3,560
Minnesota	241	1,512	3,453	1,363	3,586	2,928	6,512	3,825	10,337	1,089
Iowa	162	856	1,814	754	1,639	1,527	3,237	2,119	5,356	940
Missouri	138	1,042	2,416	882	1,798	1,718	4,359	2,682	7,041	665
Nebraska	54	360	823	312	697	674	1,466	823	2,289	292
Kansas	94	491	1,056	440	952	844	1,933	1,294	3,227	335
South Atlantic	1,039	8,833	16,480	7,977	16,514	13,677	31,871	22,347	54,218	5,608
Maryland	91	866	1,850	757	1,577	1,467	3,935	3,070	7,005	923
Virginia	161	1,510	2,858	1,341	2,681	2,249	5,724	3,337	9,061	1,210
West Virginia	106	739	1,386	686	1,404	1,201	2,633	1,827	4,460	494
North Carolina	160	1,437	2,421	1,283	2,654	2,052	4,734	3,709	8,443	799
South Carolina	91	722	1,115	663	1,264	899	1,797	1,452	3,249	368
East South Central	430	3,624	6,300	3,310	6,810	5,275	13,309	8,677	21,986	2,580
Tennessee	156	1,309	2,469	1,189	2,484	2,012	4,869	3,444	8,313	1,453
Alabama	114	1,163	1,998	1,062	2,159	1,745	4,219	2,605	6,824	537
West South Central	405	3,324	5,805	3,007	6,318	4,853	11,186	7,200	18,386	1,743
Texas	221	1,882	3,277	1,698	3,509	2,733	6,364	3,877	10,241	945
Mountain	248	1,814	4,243	1,554	3,228	3,419	7,927	5,017	12,944	1,414
Idaho	22	204	546	175	401	426	860	603	1,463	213
Colorado	51	370	912	338	695	774	1,875	1,146	3,021	265
Arizona	60	517	1,170	438	908	928	2,138	1,213	3,351	340
Utah	30	324	838	251	524	621	1,391	853	2,244	336
Pacific	636	5,956	16,557	5,278	11,203	14,568	29,063	17,358	46,421	3,779
California	457	4,620	12,875	4,112	8,801	11,451	22,542	13,634	36,176	2,916

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947—Continued

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Gypsum products, total [1]	73	7,472	$21,384	6,543	15,552	$17,911	$67,879	$59,664	$127,543	$24,386
Northeast	17	2,126	6,398	1,901	4,680	5,498	20,645	19,893	40,538	3,246
New York	7	1,482	4,620	1,322	3,345	3,953	15,453	12,581	28,034	(d)
North Central	21	1,996	5,799	1,732	4,066	4,765	18,904	14,847	33,751	2,089
Michigan	5	587	1,817	513	1,218	1,476	5,436	4,599	10,035	898
Iowa	4	694	2,031	593	1,509	1,681	7,759	5,245	13,004	658
South	15	1,961	5,130	1,721	4,075	4,343	17,601	14,927	32,528	(d)
Texas	6	859	2,384	761	1,860	2,063	8,843	7,736	16,579	1,104
Mountain	11	580	1,620	505	1,189	1,361	4,069	2,521	6,590	(d)
Pacific	9	809	2,437	684	1,542	1,944	6,660	7,476	14,136	(d)
California	9	809	2,437	684	1,542	1,944	6,660	7,476	14,136	(d)
Lime, total [1]	172	7,009	18,767	6,129	14,200	15,516	39,253	33,589	72,842	10,745
Northeast	44	1,435	4,032	1,229	3,078	3,209	8,583	6,411	14,994	1,854
Massachusetts	4	141	429	120	286	332	1,135	779	1,914	(d)
Pennsylvania	30	1,118	3,152	951	2,438	2,487	6,366	4,607	10,973	1,357
North Central	54	3,296	9,549	2,918	6,674	7,902	19,195	18,214	37,409	3,604
Ohio	20	1,914	5,841	1,692	3,919	4,910	11,156	12,206	23,362	2,975
South Atlantic	30	722	1,560	623	1,390	1,308	3,145	3,428	6,573	(d)
Virginia	14	283	535	248	517	442	1,123	1,125	2,248	(d)
East South Central	14	540	1,100	467	1,069	951	2,425	2,165	4,590	235
West South Central	6	398	811	362	821	710	1,959	777	2,736	(d)
Mountain	13	200	555	172	403	480	1,175	1,046	2,221	56
Pacific	11	418	1,160	358	765	956	2,771	1,548	4,319	(d)
Mineral wool, total [1]	91	8,874	22,924	7,363	15,519	18,134	36,840	36,291	73,131	13,191
Northeast	19	1,416	3,638	1,175	2,464	2,763	6,725	4,716	11,441	2,957
East North Central	33	4,931	13,235	4,083	8,640	10,687	21,153	19,717	40,870	4,536
Wisconsin	6	194	504	164	335	389	909	638	1,547	178
West North Central	7	1,503	3,851	1,213	2,538	2,905	5,025	8,632	13,657	(d)
South	15	630	1,182	548	1,177	925	2,146	1,836	3,982	483
Tennessee	4	274	474	242	540	379	951	720	1,671	(d)
Mountain	5	122	261	109	222	222	438	296	734	(d)
Pacific	12	272	757	235	478	632	1,353	1,094	2,447	572
Cut-stone and stone products, total [1]	640	9,880	25,922	8,312	17,257	20,605	45,940	21,313	67,253	2,274
New England	167	2,201	6,071	1,844	3,690	4,901	11,465	5,984	17,449	819
Maine	6	102	267	77	152	194	398	155	553	5
Vermont	96	1,558	4,348	1,316	2,632	3,540	8,443	4,586	13,029	712
Massachusetts	47	383	1,019	313	623	824	1,775	938	2,713	69
Middle Atlantic	139	1,473	4,256	1,179	2,457	3,322	7,634	3,949	11,583	170
New York	83	791	2,507	657	1,351	2,051	4,634	2,300	6,934	90
New Jersey	17	147	444	106	209	324	730	482	1,212	3
Pennsylvania	39	535	1,305	416	897	947	2,270	1,167	3,437	77
East North Central	109	2,000	6,007	1,737	3,673	4,754	9,297	4,096	13,393	283
Ohio	21	201	529	166	355	447	934	435	1,369	39
Indiana	26	1,020	2,738	905	1,804	2,300	3,945	1,441	5,386	54
Illinois	39	474	1,620	391	863	1,272	2,642	1,379	4,021	135
Michigan	12	146	529	112	230	352	930	458	1,388	33
Wisconsin	11	219	591	163	361	383	846	383	1,229	22
West North Central	41	738	1,929	605	1,257	1,467	3,420	1,552	4,972	169
Minnesota	24	421	1,042	361	760	853	1,995	992	2,987	149
Missouri	8	160	433	133	260	333	644	278	922	2
South Atlantic	90	2,230	4,952	1,978	4,206	4,065	9,176	3,287	12,463	640
Maryland	9	162	461	131	268	302	634	333	967	7
Virginia	10	112	276	86	166	166	456	242	698	25
North Carolina	16	240	508	213	423	423	941	467	1,408	21
South Carolina	10	179	375	156	333	311	722	319	1,041	46
Georgia	39	1,491	3,231	1,350	2,940	2,771	6,278	1,852	8,130	538
East South Central	29	545	1,128	457	930	842	2,029	924	2,953	41
Tennessee	11	260	535	212	433	380	1,010	222	1,232	15
Mississippi	5	131	230	119	246	192	496	357	853	18
West South Central	37	310	649	265	544	545	1,325	781	2,106	60
Texas	28	241	504	203	417	427	1,016	642	1,658	60
Mountain	7	52	127	41	78	101	187	131	318	3
Pacific	21	271	803	206	422	608	1,407	609	2,016	89
California	16	200	589	173	342	498	893	442	1,335	22

[d] Withheld to avoid disclosing figures for individual companies.

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Concrete products: *New England*, Maine, 21 (59); New Hampshire, 24 (77); Vermont, 12 (39); Connecticut, 52 (422); *West North Central*, North Dakota, 27 (113); South Dakota, 35 (147); *South Atlantic*, Delaware, 29 (166); District of Columbia, 4 (72); Georgia, 175 (1,252); Florida, 222 (2,069); *East South Central*, Kentucky, 99 (695); Mississippi, 61 (457); *West South Central*, Arkansas, 53 (303); Louisiana, 86 (655); Oklahoma, 45 (484); *Mountain*, Montana, 34 (121); Wyoming, 9 (27); New Mexico, 29 (214); Nevada, 13 (37); *Pacific*, Washington, 103 (894); Oregon, 76 (442).

Gypsum products: *Northeast*, New Hampshire, 1; Massachusetts, 1; Connecticut, 1; New Jersey, 3; Pennsylvania, 4 (239); *North Central*, Ohio, 5 (368); Indiana, 1; Wisconsin, 2; Missouri, 1; South Dakota, 1; Kansas, 2; *South*, Maryland, 1; Virginia, 3; Georgia, 1; Florida, 1; Kentucky, 2; Oklahoma, 1; *Mountain*, Montana, 2; Wyoming, 2; Colorado, 1; New Mexico, 1; Arizona, 1; Utah, 2; Nevada, 2.

Lime: *Northeast*, Maine, 1; Vermont, 2; Connecticut, 1; New York, 3 (72); New Jersey, 3 (16); *North Central*, Indiana, 2; Illinois, 6 (144); Michigan, 3 (123); Wisconsin, 10 (162); Minnesota, 1; Missouri, 11 (829); South Dakota, 1; *South Atlantic*, Maryland, 7; West Virginia, 7 (200); Georgia, 1; Florida, 1; *East South Central*, Tennessee, 8 (245); Alabama, 6 (295); *West South Central*, Arkansas, 1; Louisiana, 1; Oklahoma, 1; Texas, 3 (202); *Mountain*, Montana, 2; Colorado, 2; Arizona, 3 (89); Utah, 4 (34); Nevada, 2; *Pacific*, Washington, 2; Oregon, 1; California, 8 (293).

Mineral wool: *Northeast*, Massachusetts, 3 (87); New York, 4 (283); New Jersey, 5 (545); Pennsylvania, 7 (501); *East North Central*, Ohio, 5 (2,683); Indiana, 14 (1,595); Illinois, 5 (265); Michigan, 3 (194); *West North Central*, Minnesota, 3; Missouri, 3 (729); Kansas, 1; *South*, Virginia, 2; West Virginia, 1; Georgia, 2; Alabama, 3 (74); Oklahoma, 1; Texas, 2; *Mountain*, Colorado, 2; Arizona, 1; Utah, 2; *Pacific*, Washington, 3 (56); California, 9.

Cut-stone and stone products: *New England*, New Hampshire, 2; Rhode Island, 5; Connecticut, 11 (75); *West North Central*, Iowa, 3; Nebraska, 4 (77); Kansas, 2; *South Atlantic*, District of Columbia, 1; West Virginia, 1; Florida, 4; *East South Central*, Kentucky, 5 (87); Alabama, 8 (67); *West South Central*, Arkansas, 1; Louisiana, 4; Oklahoma, 4 (43); *Mountain*, Montana, 2; Idaho, 1; Colorado, 2; Arizona, 1; Utah, 1; *Pacific*, Washington, 2; Oregon, 3.

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry				
	Concrete products	Gypsum products	Lime	Mineral wool	Cut-stone and stone products
ALL ESTABLISHMENTS					
Number of establishments	6,158	73	172	91	640
All employees:					
Number (average for the year)	46,821	7,472	7,009	8,874	9,880
Salaries and wages, total	$106,484	$21,384	$18,767	$22,924	$25,922
Production and related workers:					
Number (average for the year)	41,537	6,543	6,129	7,363	8,312
Man-hours, total ... thousands	89,031	15,552	14,200	15,519	17,257
Wages, total	$88,471	$17,911	$15,516	$18,134	$20,605
Value added by manufacture	$202,789	$67,879	$39,253	$36,840	$45,940
ESTABLISHMENTS REPORTING DETAILED STATISTICS					
Number of establishments	5,168	73	172	91	434
All employees:					
Number (average for the year)	43,259	7,472	7,009	8,874	8,876
Salaries and wages, total	$100,790	$21,384	$18,767	$22,924	$23,742
Production and related workers:					
Number (average for the year)	37,664	6,543	6,129	7,363	7,325
Man-hours, total ... thousands	82,639	15,552	14,200	15,519	15,267
Wages, total	$88,241	$17,911	$15,516	$18,134	$18,494
Value added by manufacture	$190,913	$67,879	$39,253	$36,840	$42,571
Number of employees for pay period ended nearest Oct. 15:					
All employees	46,502	7,818	7,008	8,586	9,413
Male	45,345	7,598	6,807	7,885	8,934
Female	1,157	220	201	701	479
Production and related workers	41,014	6,823	6,131	7,140	7,834
Male	40,963	6,751	6,116	6,802	7,789
Female	51	72	15	338	45
Force-account construction workers	217	69	52	54	39
Administrative, supervisory, sales, and all other	5,271	926	825	1,392	1,540
Male	4,165	778	639	1,029	1,106
Female	1,106	148	186	363	434
All employees, number by month:					
January	37,406	7,423	6,710	9,147	8,881
February	37,345	7,396	6,821	9,373	8,896
March	39,219	7,105	6,846	9,290	9,016
April	42,487	7,149	7,048	8,942	8,950
May	43,949	6,915	7,096	8,933	7,997
June	44,899	7,318	7,147	8,625	7,728
July	45,495	7,447	7,179	8,332	8,084
August	46,475	7,165	7,120	8,458	9,274
September	46,439	7,345	7,104	8,439	9,396
October	46,502	7,818	7,008	8,586	9,413
November	44,432	8,138	7,023	9,012	9,387
December	41,904	8,407	6,992	9,274	9,314

ITEM	Industry				
	Concrete products	Gypsum products	Lime	Mineral wool	Cut-stone and stone products
ESTABLISHMENTS REPORTING DETAILED STATISTICS—Continued					
Cost of materials, fuel, electricity, and contract work	$114,303	$59,664	$33,589	$36,291	$18,769
Materials, parts, containers, and supplies	105,646	52,508	17,532	28,078	16,501
Fuels, total	4,367	4,588	13,878	6,974	346
Bituminous coal	1,356	1,321	10,560	1,172	126
Anthracite	169	-------	290	28	26
Coke	40	23	633	3,572	21
Fuel oils	1,077	2,485	829	912	96
Gas	312	711	1,020	1,236	23
Other fuels	1,413	48	546	54	54
Purchased electric energy	2,545	2,287	2,170	1,156	986
Contract and commission work	1,745	281	9	83	936
Value of inventories:					
Beginning of year, total	$25,810	$9,785	$6,585	$6,921	$6,729
Finished products	16,195	1,873	1,057	2,076	2,405
Materials, supplies, and work in process	9,615	7,912	5,528	4,845	4,324
End of year, total	34,806	11,918	8,605	8,368	7,873
Finished products	22,440	2,832	1,303	2,345	2,875
Materials, supplies, and work in process	12,366	9,086	7,302	6,023	4,998
Expenditures for plant and equipment:					
New plant and equipment	$35,692	$24,386	$10,745	$13,191	$2,274
Construction and major alteration of fixed plants	9,845	9,504	4,499	5,097	652
Buildings	7,918	6,754	3,816	4,025	600
Other construction	1,927	2,750	683	1,072	52
Machinery and equipment	25,847	14,882	6,246	8,094	1,622
Production machinery and equipment	20,149	14,370	5,775	7,594	1,280
Other machinery and equipment	5,698	512	471	500	342
Used plant and equipment, and land	2,538	424	530	109	126
Number of highway-type motor vehicles owned or leased:					
Trucks	8,959	188	498	117	425
By manufacturer's rated capacity:					
Under 1½ tons	1,644	30	86	23	105
1½ tons	4,424	57	195	80	195
Over 1½ tons and less than 3½ tons	2,026	52	70	8	100
3½ tons and less than 5 tons	366	13	42	2	15
5 tons and over	499	36	105	4	10
By body type:					
Van	238	-------	13	4	12
Stake or platform	4,571	37	34	22	292
Panel or light delivery	969	38	68	9	63
All other trucks	3,181	113	383	82	58
Truck tractors	645	11	66	54	19
Trailers and semitrailers	721	12	69	64	20

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Concrete products:											
Number of establishments	6,158	[1] 3,481	1,439	725	421	68	22	2	-------	-------	-------
Number of employees (average for the year)	46,821	7,471	9,184	9,736	12,406	4,388	*3,636*	(d)	-------	-------	-------
Value added by manufacture	$202,789	$23,655	$33,787	$41,914	$60,934	$20,200	*$22,299*	(d)	-------	-------	-------
Gypsum products:											
Number of establishments	73	6	14	3	9	7	27	7	-------	-------	-------
Number of employees (average for the year)	7,472	14	91	39	268	513	*6,547*	(d)	-------	-------	-------
Value added by manufacture	$67,879	$121	$346	$309	$1,897	$4,599	*$60,607*	(d)	-------	-------	-------
Lime:											
Number of establishments	172	28	19	31	50	28	13	3	-------	-------	-------
Number of employees (average for the year)	7,009	68	124	459	1,619	1,959	1,770	1,010	-------	-------	-------
Value added by manufacture	$39,253	$300	$682	$2,111	$9,109	$12,122	$9,202	$5,727	-------	-------	-------
Mineral wool:											
Number of establishments	91	5	10	10	30	19	10	5	1	1	-------
Number of employees (average for the year)	8,874	10	68	134	966	1,358	1,559	(d)	(d)	*4,779*	-------
Value added by manufacture	$36,840	$42	$190	$500	$4,247	$6,021	$7,752	(d)	(d)	*$18,088*	-------
Cut-stone and stone products:											
Number of establishments	640	166	174	163	106	21	8	2	-------	-------	-------
Number of employees (average for the year)	9,880	438	1,183	2,267	2,983	1,329	*1,080*	(d)	-------	-------	-------
Value added by manufacture	$45,940	$2,105	$5,666	$11,243	$14,405	$5,687	*$6,834*	(d)	-------	-------	-------

[1] Includes 3 establishments with no employees accounting for $10,000 value added.

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

CONCRETE PRODUCTS INDUSTRY	Shipped by— Concrete products industry	Other industries	All industries
Total shipments by the industry	$329,734		
A. Primary products of the industry	325,984	$3,746	$329,730
Concrete block and brick	177,305	2,975	180,280
Concrete pipe	82,446		82,446
Other precast concrete products	66,233	771	67,004
B. Secondary products	1,868		
C. Miscellaneous receipts	1,882		
Contract and commission work	1,726		
Other receipts	156		

CUT-STONE AND STONE PRODUCTS INDUSTRY	Shipped by— Cut-stone and stone products industry	Other industries	All industries
Total shipments by the industry	$67,253		
A. Primary products of the industry	65,641	$1,564	$67,205
Cut-marble products	(d)	(d)	14,535
Cut-granite products	(d)	(d)	40,453
Cut-limestone products	(d)	(d)	10,084
Other cut-stone products	(d)	(d)	2,133
B. Secondary products	77		
C. Miscellaneous receipts	1,535		
Contract and commission work	1,394		
Other receipts	141		

GYPSUM PRODUCTS INDUSTRY	Shipped by— Gypsum products industry	Other industries	All industries
Total shipments by the industry	$127,543		
A. Gypsum products	123,230	$2,680	$125,910
B. Secondary products	4,145		
Minerals and earths: ground or otherwise treated (uncalcined gypsum)	3,131		
Other secondary products	1,014		
C. Miscellaneous receipts	168		

LIME INDUSTRY	Shipped by— Lime industry	Other industries	All industries
Total shipments by the industry	$72,842		
A. Lime	67,165	$2,431	$69,596
B. Secondary products	5,322		
Minerals and earths: ground or otherwise treated (principally limestone)	1,144		
Other secondary products	4,178		
C. Miscellaneous receipts	355		

MINERAL WOOL INDUSTRY	Shipped by— Mineral wool industry	Other industries	All industries
Total shipments by the industry	$73,131		
A. Mineral wool	(d)	(d)	$79,094
B. Secondary products	(d)		
C. Miscellaneous receipts			

[d] Withheld to avoid disclosing figures for individual companies.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947 Shipments and interplant transfers Quantity	1947 Shipments and interplant transfers Value f.o.b. plant	1947 Production Quantity	1939 Production Quantity	1939 Production Value f.o.b. plant
Concrete products, total			$329,730			$76,963
Concrete block and brick, total			180,280			26,382
Block:						
Light-weight aggregate (cinder, expanded slag, etc.)	M block (8"x8"x16" equiv.)	473,164	79,442	484,041	406,555	25,515
Heavy-weight aggregate	do	565,338	94,546	572,584		
Brick	M brick	291,052	6,292	296,602	[1] 146,651	867
Concrete pipe, total						
Culvert pipe	M tons	4,333	82,446	4,463	n.a.	n.a.
Sewer pipe:						
Reinforced	do	1,589	28,111	1,648	712	8,861
Nonreinforced	do	525	10,908	551	880	10,511
Pressure pipe	do	560	9,528	580		
Irrigation pipe	do	422	15,470	423	n.a.	(2)
Other pipe (including drain tile and conduits)	do	721	10,268	742	159	1,881
	do	516	8,161	519	88	986
Other precast concrete products, total			67,004			n.a.
Roof-and-floor slabs and tile	M sq. ft	40,617	13,522	39,542	[1] 105,612	2,080
Burial vaults and boxes	Number	396,990	15,839	400,437	141,654	5,154
Laundry trays	do	506,007	3,823	511,073	207,109	976
Cast stone for architectural purposes (including window sills, lintels, ashlar, coping, posts, ornamental columns, interior facings, and other trim)			7,915			3,258
Roof-and-floor joists and beams	M lin. ft	2,319	1,481	2,364		
Silo staves	M staves	10,211	5,536	10,446		
Other products (including piling, posts and poles, crossing slabs, garden furniture, storage and septic tanks, catch-basin covers, shower receptors, gravestones, and prefabricated housing units)			18,888			[2] 16,874

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947		1939 [3]	
		Shipments and interplant transfers		Sold or used by producers	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Gypsum products, total			$125,910		n.a.
Industrial plasters	Tons	212,476	3,710	110,395	$1,374
Building plasters and prefabricated building materials:					
As reported to the Bureau of the Census	do	5,579,501	120,917	n.a.	n.a.
As reported to the Bureau of Mines, total [4]	do	5,459,187	117,706	3,113,821	42,627
Building plasters:					
Base-coat	do	1,724,888	18,788	1,413,291	12,769
Sanded	do	128,849	1,110	116,459	662
Gaging and molding	do	174,337	2,379	150,175	1,923
Other (including insulating, roof-deck, and prepared finishes)	do	130,131	2,800	72,588	1,312
Keene's cement	do	44,470	799	27,191	424
Prefabricated building materials:					
Lath	do	1,290,083	32,200	850,768	14,599
Wallboard	do	1,698,671	53,116	303,472	8,766
Sheathing board	do	111,895	3,535	5,097	106
Laminated board	do	1,877	203		
Tile	do	153,986	2,776	174,780	2,066
Other gypsum products (principally paints)			1,283		n.a.
Lime, total			69,596		n.a.
Quicklime (including dead-burned dolomite)	M tons	5,112	46,424	2,936	19,925
Hydrated lime	do	1,756	18,427	1,318	10,124
Other lime products (including lime plasters and lime putty)			356		n.a.
Cost of containers for lime products			4,389		n.a.

PRODUCT	Unit of measure	1947			1939
		Shipments and interplant transfers			Production (value f.o.b. plant)
		In designated units	In tons	Value f.o.b. plant	
Mineral wool (from rock, slag, and glass), total				$79,094	[5] $10,469
Structural insulation (for insulating homes and commercial and industrial buildings):					
Loose wool (shipped as such)			101,525	6,000	n.a.
Granulated wool			490,973	20,001	
Building batts, blankets, and rolls:					
Full thick (3 inches or more)	M sq. ft	345,544	136,758	12,994	
Less than 3 inches thick	do	198,055	44,090	5,269	
Industrial insulation (for insulating installed industrial equipment, such as boilers, hot ducts, etc.):					
Loose wool (shipped as such)			26,768	3,208	
Granulated wool			3,167	134	
Felts and felted products	M board ft	24,973	6,480	658	
Industrial batts	do	4,723	748	90	
Industrial blankets (with wire mesh or other facings)	do	11,865	5,973	1,099	
Blocks and boards	do	46,853	25,053	3,975	
Pipe insulation				1,472	
Acoustical pads and boards	M sq. ft	13,378	n.a.	2,061	
Insulating cements			10,965	944	
Equipment insulation (for installation as integral part of such domestic and commercial equipment as refrigerators, hot-water heaters, etc.)			107,847	18,170	
Mineral wool insulation, not specified by use				3,019	

PRODUCT	1947	1939
	Shipments and interplant transfers	Production
	Value f.o.b. plant	Value f.o.b. plant
Cut-stone and stone products, total	$67,205	[6] $57,279
Cut-marble products, total	14,535	n.a.
Building stone	3,634	
Monumental stone	7,758	
Other cut-marble products	3,143	
Cut-granite products, total	40,453	
Building stone	1,677	
Monumental stone	37,951	
Other cut-granite products	825	

PRODUCT	1947	1939
	Shipments and interplant transfers	Production
	Value f.o.b. plant	Value f.o.b. plant
Cut-limestone products, total	$10,084	n.a.
Building stone	9,848	
Other cut-limestone products	236	
Other cut-stone products, total	2,133	
Sandstone	359	
Slate	908	
Other cut-stone products	866	

n.a.—Not available.
[1] Represents tons.
[2] Pressure pipe is included with other precast concrete products.
[3] Source: Bureau of Mines, U. S. Department of the Interior.
[4] Represents gypsum products "sold or used by producer;" see text.
[5] For 1939, production was reported of 332,792 tons of rock-wool and slag-wool insulation, valued at $10,265,000. In addition, other mineral-wool products valued at $204,000 were reported for which no tonnage is available.
[6] Represents total value of products of the "Cut-stone and stone products" industry in 1939; see table 1.

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TABLE 6-B.—CONCRETE BLOCK AND BRICK, QUANTITY PRODUCED AND QUANTITY AND VALUE OF SHIPMENTS, BY DIVISIONS AND STATES: 1947

[Money figures in thousands of dollars]

DIVISION AND STATE	Concrete block (Quantities in M block 8" x 8" x 16" equivalent)						Concrete brick (Quantities in M brick)		
	Light-weight aggregate			Heavy-weight aggregate					
	Shipments		Production	Shipments		Production	Shipments		Production
	Quantity	Value	Quantity	Quantity	Value	Quantity	Quantity	Value	Quantity
United States	[1] 473,164	[1] $79,442	[1] 484,041	[1] 565,338	[1] $94,546	[1] 572,584	291,052	$6,292	296,602
New England	24,635	4,035	25,835	12,420	2,206	12,558	30,522	541	32,214
Maine	131	27	126	612	133	612	725	23	855
New Hampshire				1,271	205	1,289			
Vermont				651	119	616			
Massachusetts	9,312	1,269	9,793	6,268	1,047	6,503	29,797	518	31,359
Rhode Island	1,208	270	1,660	1,970	357	2,009			
Connecticut	13,984	2,469	14,256	1,648	285	1,529			
Middle Atlantic	140,555	21,797	144,015	77,827	12,503	79,199	22,168	446	22,633
New York	40,106	6,442	40,786	25,577	4,333	26,124	15,435	298	15,904
New Jersey	46,894	7,460	48,291	7,085	1,129	7,273	1,738	48	1,718
Pennsylvania	53,555	7,895	54,938	45,165	7,041	45,802	4,995	100	5,011
East North Central	84,203	14,625	85,974	169,922	27,232	172,167	59,681	1,257	60,354
Ohio	33,207	5,436	34,182	46,180	7,346	46,674	31,192	659	31,727
Indiana	5,338	945	5,412	25,620	4,010	25,909	3,670	93	3,756
Illinois	10,938	1,984	11,205	23,756	4,026	23,935	5,186	99	5,436
Michigan	24,090	4,351	24,140	52,625	8,118	53,411	10,867	251	10,584
Wisconsin	10,630	1,909	11,035	21,741	3,732	22,238	8,766	155	8,851
West North Central	15,459	2,694	15,702	77,074	12,769	78,286	17,726	341	17,685
Minnesota	3,328	576	3,427	25,739	4,400	25,988	5,707	108	5,702
Iowa	1,050	188	1,058	14,069	2,331	14,225	2,531	58	2,640
Missouri	8,970	1,507	9,005	15,524	2,579	15,700	4,501	86	4,515
North Dakota	73	16	73	2,126	411	2,246	1,209	33	1,239
South Dakota	456	88	456	2,854	521	2,843	3,688	56	3,689
Nebraska				9,895	1,555	10,252			
Kansas	1,582	319	1,683	6,807	972	7,032			
South Atlantic	96,840	16,492	98,608	107,580	18,543	108,143	82,316	1,743	82,682
Delaware	4,983	848	5,137	1,328	212	1,328	8,409	194	8,489
Maryland and District of Columbia	29,243	4,615	29,314	8,049	1,212	8,101			
Virginia	26,876	4,842	27,818	6,319	1,191	6,253	11,211	195	11,836
West Virginia	13,141	2,103	13,448	7,206	1,323	7,266			
North Carolina	12,498	2,306	12,728	15,334	2,976	15,536	18,995	443	19,554
South Carolina	839	145	839	12,522	2,004	12,627	11,667	231	12,633
Georgia	5,285	944	5,302	12,357	2,195	12,406	14,271	257	13,161
Florida	3,975	689	4,022	44,465	7,430	44,626	17,763	423	17,609
East South Central	33,943	5,416	34,507	46,639	7,634	47,528	24,544	478	25,511
Kentucky	3,338	478	3,465	15,313	2,482	15,464	710	14	850
Tennessee	15,252	2,550	15,456	15,530	2,728	15,827	13,450	272	13,682
Alabama	11,938	1,802	12,146	12,903	1,907	13,249	10,384	192	10,979
Mississippi	3,415	586	3,440	2,893	517	2,988			
West South Central	15,684	2,837	16,260	25,115	4,352	25,459	14,734	293	15,160
Arkansas	533	103	559	1,857	369	1,947	7,482	143	7,516
Louisiana	7,552	1,275	7,742	4,357	756	4,424	3,916	74	4,326
Oklahoma				6,850	1,046	6,983			
Texas	7,599	1,459	7,959	12,051	2,181	12,105	3,336	76	3,318
Mountain	24,825	4,493	25,160	17,249	3,242	17,417	7,473	200	7,465
Montana	618	148	618	2,696	548	2,612	1,103	30	1,103
Idaho	5,139	870	5,145	233	55	233			
Wyoming	173	62	184						
Colorado	9,669	1,718	9,323	2,374	396	2,404	6,370	170	6,362
New Mexico	3,746	641	3,826	245	50	247			
Arizona	1,598	299	1,674	9,751	1,797	9,815			
Utah	3,740	720	3,748	1,249	227	1,305			
Nevada	142	35	142	801	169	801			
Pacific	24,638	4,907	25,377	29,524	5,747	29,828	31,888	993	32,898
Washington	2,978	652	3,113	7,739	1,570	8,078	12,045	323	12,307
Oregon	3,229	640	3,349	2,296	510	2,362	2,667	64	2,683
California	18,431	3,615	18,915	19,489	3,667	19,388	17,176	606	17,908

[1] Figures for concrete block produced in the "Brick and hollow tile" industry are included in the total, but are not distributed by State.

ABRASIVE, ASBESTOS, AND MISCELLANEOUS NONMETALLIC MINERAL PRODUCTS

This report shows the 1947 Census of Manufactures statistics for establishments primarily engaged in the production of abrasive and asbestos products, ground or treated nonmetallic minerals, nonclay refractories, and other nonmetallic mineral products. These establishments have been classified in nine industries described separately below.

The 1939 industry classifications were similar for most of the industries. Where classifications have changed, the 1939 data have been retabulated to yield figures roughly comparable with the 1947 statistics.

Abrasive Products *(Standard Industrial Classification No. 3291.)*—This industry comprises establishments primarily engaged in manufacturing abrasive grinding wheels of natural or synthetic materials; abrasive sticks, stones, bricks, paper, and cloth; abrasive grains, natural or manufactured; and buffing and polishing wheels. The cutting of grindstones, pulpstones, and whetstones at the quarry is classified in the mining industries. The mining of abrasive grains is also excluded.

Asbestos Products *(Standard Industrial Classification No. 3292.)*—This industry comprises establishments primarily engaged in manufacturing asbestos textiles, asbestos building materials (except asbestos paper—Industry 2613), and other commodities composed wholly or chiefly of asbestos, except steam and other packing, pipe and boiler covering, and gaskets (Industry 3293).

Gaskets and Asbestos Insulations *(Full Standard Industrial Classification title and number: Steam and Other Packing, and Pipe and Boiler Covering, 3293.)*—This industry comprises establishments primarily engaged in manufacturing packing for steam, water, and other pipe joints, and for engines, air compressors, etc.; and [asbestos] insulating materials for covering boilers and pipes; and gaskets. The industry includes gaskets made of all materials, but excludes rubber, leather, and metal packings (these packings are classified in Industries 3099, 3121, and 3599).

Graphite: Ground or Blended *(Full Standard Industrial Classification title and number: Natural Graphite: Ground, Refined, or Blended, 3294.)*—This industry comprises establishments primarily engaged in grinding, refining, or blending natural graphite (plumbago).

Minerals: Ground or Treated *(Full Standard Industrial Classification title and number: Minerals and Earths: Ground or Otherwise Treated, 3295.)*—This industry comprises establishments primarily engaged in grinding, pulverizing, or otherwise treating certain earths, rocks, or minerals, such as barytes, borax, chalk, clays, Cornwall stone, feldspar, kaolin, mica, pumice, quartz, silica, and talc. Establishments primarily engaged in crushing or grinding purchased slag are also included in this industry. The industry excludes plants operated in conjunction with mines, and plants engaged in cleaning coal and in dressing metallic ores; such operations are classified in the mineral industries.

Sand-Lime Products *(Full Standard Industrial Classification title and number: Sand-Lime Brick, Block, and Tile, 3296.)*—This industry comprises establishments primarily engaged in manufacturing sand-lime brick, block, and tile.

Nonclay Refractories *(Standard Industrial Classification No. 3297.)*—This industry comprises establishments primarily engaged in manufacturing refractories and crucibles made of materials other than clay. Establishments primarily engaged in manufacturing clay refractories and crucibles are classified in Industry 3255.

Annual figures on production, quantity and value of shipments, and stocks of nonclay refractories comparable with the Census of Manufactures statistics are available for 1945 and 1946 in the Census Facts for Industry, Series M27C, "Refractories."

The Bureau of Mines of the United States Department of the Interior collects figures on dead-burned magnesia and magnesite which are comparable with the census statistics. The slight differences between the figures tabulated by the two agencies are due to minor differences in reports submitted by the individual companies.

Statuary and Art Goods *(Full Standard Industrial Classification title and number: Statuary and Art Goods (Factory Production), 3298.)*—This industry comprises establishments primarily engaged in the factory production of statuary and art goods made of plaster of Paris and papier-maché. Important products of this industry include such articles as statuary, small images, and architectural sculptures; ornamental plaster work such as mantels, columns, panels, moldings, brackets, vases, urns, and pedestals; and scagliola and papier-maché articles.

Nonmetallic Mineral Products, Not Elsewhere Classified *(Not provided for in the Standard Industrial Classification.)*—This industry comprises establishments primarily engaged in manufacturing nonmetallic mineral products, not elsewhere classified. Principal products of the industry are sheet mica products, except radio parts; exfoliated vermiculite; stucco; and magnesite floor composition.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work	Value of products shipped [2]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Abrasive products:								
1947	253	20,754	$66,158	15,864	$45,031	$126,659	$97,391	$223,386
1939	124	11,321	20,491	7,734	10,683	44,765	26,506	71,271
1937	103	11,376	18,771	9,670	14,250	48,615	29,339	77,954
1935	94	8,693	12,806	6,776	8,351	33,133	20,734	53,867
1933	77	5,867	6,653	4,890	4,981	18,810	11,349	30,159
1931 [3]	73	n.a.	n.a.	4,614	5,540	19,920	11,727	31,647
Asbestos products:								
1947	111	21,463	60,119	18,140	47,429	112,571	97,660	204,686
1939 [4]	85	n.a.	n.a.	10,415	12,148	38,522	25,354	63,876
1937	73	14,442	17,113	13,023	14,157	34,300	29,494	63,794
1933	58	6,982	6,701	6,084	5,075	14,466	10,789	25,255
1929	67	9,228	13,896	8,092	10,777	30,756	25,408	56,164
1921	40	2,418	2,827	2,026	1,948	6,954	6,076	13,030
1919	40	4,184	5,332	3,654	3,732	11,030	12,948	23,978
1914 [5]	32	1,121	703	962	484	1,454	1,360	2,814

See footnotes at end of table.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS—Continued

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees: Number (average for the year)	All employees: Salaries and wages, total	Production and related workers: Number (average for the year)	Production and related workers: Wages, total	Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work	Value of products shipped [2]
Gaskets and asbestos insulations:								
1947	191	12,960	$36,047	10,743	$27,038	$65,303	$52,919	$118,244
1939	134	7,531	11,169	5,907	7,190	19,562	17,608	37,170
1937	125	7,038	9,537	5,934	6,930	17,506	15,048	32,554
1935	124	5,755	7,062	4,774	4,742	12,490	11,768	24,258
1933	118	n.a.	n.a.	4,285	3,785	10,662	8,728	19,390
1931	131	n.a.	n.a.	4,120	4,545	12,394	10,253	22,647
1929	163	7,799	12,714	6,477	8,740	22,454	20,602	43,056
1927 [6]	159	7,479	12,142	5,946	7,905	23,251	19,794	43,045
1925	172	7,680	12,066	6,086	8,072	23,499	20,372	43,871
1923	142	6,322	9,311	5,064	6,432	17,142	15,849	32,991
1921	157	6,074	8,447	4,877	5,329	13,128	15,984	29,112
1919	169	7,689	10,366	6,147	7,103	17,800	22,725	40,525
1914	149	5,260	4,000	4,213	2,525	6,037	8,176	14,213
1909 [5]	153	4,886	3,168	3,648	1,811	5,510	6,650	12,160
1904	106	3,184	1,868	2,734	1,273	5,056	3,896	8,952
1899	97	1,437	851	1,147	525	1,948	1,546	3,494
Graphite: ground or blended:								
1947	12	853	2,799	618	1,625	4,945	4,051	8,996
1939 [7]	6	88	163	56	66	399	852	1,251
Minerals: ground or treated:								
1947	206	7,955	21,328	6,729	16,798	51,058	30,444	81,502
1939 [4]	223	n.a.	n.a.	5,173	5,281	23,046	13,644	36,690
1937	157	5,231	6,611	4,539	4,898	15,548	11,613	27,161
1935	161	4,951	5,292	4,258	3,614	12,626	8,919	21,545
1933	107	2,186	2,166	1,874	1,565	5,295	4,389	9,684
1931	88	n.a.	n.a.	1,090	1,127	3,478	3,817	7,295
1929 [8]	88	2,046	3,390	1,679	2,188	8,471	8,938	17,409
Sand-lime products:								
1947	26	303	746	250	591	1,186	544	1,730
1939	27	429	580	346	414	1,278	638	1,916
1937	23	483	597	414	460	1,073	545	1,618
1935	20	269	268	227	199	384	270	654
1933	10	107	97	84	61	131	74	205
1931	31	n.a.	n.a.	322	357	807	461	1,268
1929	40	703	1,147	566	776	2,026	945	2,971
1927	45	933	1,425	790	1,051	2,458	1,158	3,616
1925	41	938	1,426	801	1,119	2,522	1,238	3,760
1923	31	696	917	582	698	1,462	946	2,408
1921	26	435	483	374	361	719	501	1,220
1919	32	597	638	504	502	1,088	575	1,663
1914 [9]	45	652	421	557	322	644	360	994
Nonclay refractories:								
1947	63	10,273	27,783	8,951	22,063	58,022	35,774	90,337
1939 [10]	41	n.a.	n.a.	4,542	4,936	13,464	9,760	23,224
Statuary and art goods:								
1947	272	2,025	4,268	1,829	3,534	7,391	2,607	9,998
1939	126	1,172	1,533	983	1,150	2,465	975	3,440
1937	99	1,027	1,491	858	1,126	2,316	1,015	3,331
1935	105	896	1,093	719	803	2,116	776	2,892
1933	84	798	983	686	780	1,853	721	2,574
1931	150	n.a.	n.a.	1,325	2,328	4,429	1,271	5,700
1929	171	2,505	5,432	2,112	4,236	8,090	2,045	10,045
1927	136	2,346	5,534	2,028	4,404	7,772	2,415	10,187
1925	137	2,314	4,999	2,033	4,188	7,252	2,078	9,330
1923	150	2,057	3,863	1,807	3,244	5,652	1,898	7,550
1921	138	1,839	3,269	1,634	2,741	4,952	1,715	6,667
1919	195	1,673	2,071	1,466	1,716	3,641	1,379	5,020
1914	190	2,207	1,887	1,988	1,583	3,068	842	3,910
1909	194	1,897	1,564	1,699	1,339	2,762	680	3,442
1904	135	1,621	1,157	1,507	1,030	2,025	392	2,417
Nonmetallic mineral products, n.e.c.:								
1947	74	3,589	10,274	3,003	7,715	20,145	20,471	40,616
1939 [10]	53	n.a.	n.a.	1,217	1,053	3,724	2,707	6,431

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. For "Abrasive products," "Asbestos products," "Gaskets and asbestos insulations," and "Nonclay refractories," see GENERAL EXPLANATIONS—Method of calculating value added by manufacture for selected industries in 1947.

[2] For 1947 and 1929, value of products shipped; for all other years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[3] Because of a change in the 1931 classification of an important manufacturer of abrasives, the figures prior to 1931 are not sufficiently comparable with those for later years to be shown in this table.

[4] The figures for 1939, but not for earlier years, have been revised to make them comparable with those for 1947. Value added in 1939, prior to revision and on a basis comparable with earlier years, amounted to $36.8 million for "Asbestos products" and $24.2 million for "Minerals: ground or treated." Figures for 1935, 1931, 1927, 1925, and 1923 may be found in Sixteenth Census of the United States: 1940, Manufactures: 1939, volume II, part 2, p. 157.

[5] Prior to 1914, "Asbestos products" are included with "Gaskets and asbestos insulations."

[6] The figures for 1927 and earlier years include data for mineral wool, whereas those for 1929 and later years exclude data for this product. Value added in 1929, including data for mineral wool, was $23.8 million.

[7] For 1939, excludes 3 plants which were classified in other industries but were primarily engaged in producing ground or blended graphite products.

[8] The figures for "Minerals: ground or treated" prior to 1929 are not sufficiently comparable with those for later years to be shown in this table because they include data for establishments which mine and quarry, as well as grind and treat, minerals.

[9] Prior to 1914, "Sand-lime products" are included with "Clay products, other than pottery."

[10] The returns for 1939 have been retabulated to provide figures comparable with those for 1947. No comparable figures are available for earlier years.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Abrasive products, total [1]	253	20,754	$66,158	15,864	31,246	$45,031	$126,659	$97,391	$223,386	$11,820
New England	53	6,689	21,531	5,041	9,625	14,899	38,399	27,868	65,410	4,515
Massachusetts	32	6,000	19,587	4,511	8,547	13,661	35,450	24,609	59,201	3,748
Connecticut	16	354	1,101	268	552	686	1,885	2,173	4,059	209
Middle Atlantic	86	9,802	31,569	7,570	15,005	22,036	60,860	45,250	106,300	5,524
New York	49	7,669	24,705	6,006	11,982	17,724	49,598	36,376	86,159	5,054
New Jersey	14	638	2,011	508	1,009	1,401	4,025	3,563	7,588	83
Pennsylvania	23	1,495	4,853	1,056	2,014	2,911	7,237	5,311	12,553	387
East North Central	93	4,118	12,666	3,140	6,392	7,844	26,669	23,571	50,243	1,734
Ohio	23	943	2,626	716	1,462	1,672	5,511	6,038	11,549	418
Illinois	37	1,599	4,896	1,242	2,632	3,043	11,402	8,160	19,572	798
Michigan	25	1,473	4,877	1,094	2,130	2,932	8,943	8,015	16,951	512
West North Central	7	53	145	40	68	73	272	286	558	13
South	6	35	88	28	59	57	148	238	386	2
Pacific	8	57	159	45	97	122	311	178	489	32
Asbestos products, total [1]	111	21,463	60,119	18,140	37,486	47,429	112,571	97,660	204,686	12,960
New England	13	2,800	8,025	2,283	4,881	6,873	12,136	11,744	22,733	1,061
Massachusetts	7	305	688	271	584	583	1,982	1,198	2,695	202
Middle Atlantic	40	8,181	22,846	6,824	13,811	17,888	47,830	40,361	86,044	3,986
New York	10	1,121	3,586	862	1,831	2,466	5,847	12,507	18,345	1,380
New Jersey	16	4,300	11,888	3,751	7,358	9,611	28,385	17,981	45,350	1,832
Pennsylvania	14	2,670	7,372	2,211	4,622	5,811	13,598	9,873	22,349	774
North Central	28	6,562	19,036	5,534	11,389	14,966	34,715	29,108	62,907	2,507
Ohio	5	463	1,068	370	560	617	1,769	1,598	3,367	173
Indiana	6	1,103	2,815	941	1,914	2,168	4,914	3,553	8,347	173
Illinois	9	2,934	8,680	2,442	5,128	6,876	16,826	15,729	32,376	1,728
South	19	3,536	8,134	3,184	6,679	6,750	15,128	13,595	27,430	5,177
North Carolina	4	589	1,210	526	1,077	968	1,549	2,537	4,069	255
Texas	5	369	812	337	764	710	1,776	1,747	3,505	702
Pacific	11	384	1,178	315	726	952	2,762	2,852	5,572	229
Gaskets and asbestos insulations, total [1]	191	12,960	36,047	10,743	21,780	27,038	65,303	52,919	118,244	3,366
New England	11	926	2,106	739	1,538	1,576	4,319	2,720	7,039	127
Middle Atlantic	67	4,999	13,438	4,208	8,397	10,242	24,278	16,323	40,619	1,807
New York	32	1,791	4,710	1,632	3,068	3,944	12,029	4,917	16,946	918
New Jersey	15	541	1,638	373	764	1,012	2,034	1,269	3,303	184
Pennsylvania	20	2,667	7,090	2,203	4,565	5,286	10,215	10,137	20,370	705
East North Central	67	6,222	18,313	5,149	10,526	13,548	32,592	29,564	62,134	1,730
Ohio	14	287	917	243	588	655	2,222	1,560	3,781	40
Illinois	31	3,089	9,522	2,403	5,053	6,554	17,325	12,270	29,574	688
Michigan	1	2,823	7,817	2,488	4,859	6,311	12,863	15,587	28,450	997
West North Central	6	68	144	48	110	106	272	255	527	11
South	14	310	755	252	493	610	1,287	2,127	3,414	82
Texas	6	111	326	86	178	236	627	630	1,257	34
West	26	435	1,291	347	716	956	2,555	1,930	4,511	209
California	23	423	1,256	336	691	924	2,502	1,904	4,432	208
Graphite: ground or blended, total [1]	12	853	2,799	618	1,291	1,625	4,945	4,051	8,996	366
Middle Atlantic	6	123	433	94	219	286	1,694	1,791	3,485	82
Other Divisions	6	730	2,366	524	1,072	1,339	3,251	2,260	5,511	284
Minerals: ground or treated, total [1]	206	7,955	21,328	6,729	15,492	16,798	51,058	30,444	81,502	8,414
Northeast	63	1,604	4,717	1,404	3,505	3,879	10,653	6,822	17,475	1,563
New York	20	632	1,787	545	1,287	1,427	5,003	1,617	6,620	580
New Jersey	7	149	515	124	329	411	1,169	1,549	2,718	114
Other Divisions	143	6,351	16,611	5,325	11,987	12,919	40,405	23,622	64,027	6,851
Illinois	14	413	1,206	343	752	895	2,022	1,970	3,992	328
Georgia	6	1,031	2,134	857	1,874	1,675	3,981	2,330	6,311	935
Texas	10	228	517	188	425	373	967	424	1,391	97
California	18	1,050	3,222	817	1,699	2,346	8,420	3,904	12,324	860
Sand-lime products, total [1]	26	303	746	250	531	591	1,186	544	1,730	171
Northeast	5	79	188	66	120	144	277	81	358	72
North Central	15	150	398	125	291	315	703	372	1,075	83
South	3	45	83	42	84	74	121	53	174	1
Mountain	3	29	77	17	36	58	85	38	123	15
Nonclay refractories, total [1]	63	10,273	27,783	8,951	17,626	22,963	58,022	35,774	90,337	5,772
New England	4	260	639	204	459	475	1,786	955	2,410	208
Middle Atlantic	32	6,030	16,376	5,340	10,217	13,495	33,523	20,266	50,813	2,037
Pennsylvania	27	5,282	13,876	4,808	9,137	11,933	26,652	16,590	41,609	1,392
East North Central	11	1,569	4,139	1,463	2,757	3,771	7,415	4,104	11,513	532
South	8	1,465	3,863	1,181	2,607	3,120	8,853	6,889	15,858	2,129
West	8	949	2,766	763	1,586	2,102	6,445	3,560	9,743	866

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947—Continued

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Statuary and art goods, total [1]	272	2,025	$4,268	1,829	3,640	$3,534	$7,391	$2,607	$9,998	$138
New England	14	108	241	97	207	194	339	139	478	2
Massachusetts	11	103	233	92	196	186	333	131	464	2
Middle Atlantic	68	532	1,191	489	984	1,028	1,806	784	2,590	18
New York	43	301	701	279	566	614	1,101	359	1,460	3
Pennsylvania	20	176	363	161	320	310	543	180	723	15
East North Central	97	925	1,960	813	1,573	1,545	3,553	1,088	4,641	101
Ohio	18	118	276	104	201	188	399	139	538	10
Illinois	40	546	1,236	462	923	954	2,404	627	3,031	63
West North Central	31	174	350	156	335	270	550	231	781	----------
Missouri	18	106	214	97	204	174	308	126	434	----------
South Atlantic	8	54	108	52	113	102	263	57	320	----------
East South Central	7	51	74	49	102	70	118	51	169	14
West South Central	8	19	22	19	36	22	50	30	80	----------
Mountain	11	56	77	53	99	71	155	59	214	1
Pacific	28	106	245	101	191	232	557	168	725	2
Nonmetallic mineral products, n.e.c., total [1]	74	3,589	10,274	3,003	6,298	7,715	20,145	20,471	40,616	1,999
New England	5	826	1,932	759	1,597	1,600	4,019	1,867	5,886	157
Massachusetts	5	826	1,932	759	1,597	1,600	4,019	1,867	5,886	157
Middle Atlantic	21	1,828	6,117	1,457	3,108	4,541	10,800	13,009	23,809	1,331
East North Central	13	234	695	171	362	435	2,050	1,733	3,783	174
West North Central	8	73	208	54	110	121	699	693	1,392	68
South	9	491	953	456	909	759	1,442	1,653	3,095	(d)
Mountain	6	26	61	20	36	46	115	131	246	(d)
Pacific	12	111	308	86	176	213	1,020	1,385	2,405	92

[d] Withheld to avoid disclosing figures for individual companies.

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Abrasive products: *New England*, New Hampshire, 2; Vermont, 1; Rhode Island, 2; *East North Central*, Indiana, 4 (49); Wisconsin, 4 (54); *West North Central*, Minnesota, 1; Missouri, 6; *South*, Delaware, 1; Kentucky, 1; Tennessee, 1; Oklahoma, 1; Texas, 2; *Pacific*, Washington, 2; California, 6.

Asbestos products: *New England*, New Hampshire, 1; Vermont, 1; Connecticut, 4; *North Central*, Michigan, 1; Missouri, 6; Kansas, 1; *South*, South Carolina, 1; Georgia, 1; Florida, 1; Alabama, 1; Mississippi, 1; Louisiana, 5 (1,154); *Pacific*, Washington, 1; Oregon, 1; California, 9.

Gaskets and asbestos insulations: *New England*, Massachusetts, 7 (391); Connecticut, 4 (535); *East North Central*, Wisconsin, 5 (23); *West North Central*, Minnesota, 2; Missouri, 3 (60); Kansas, 1; *South*, Maryland, 3 (7); Virginia, 1; Georgia, 1; Alabama, 2; Oklahoma, 1; *West*, Colorado, 1; Washington, 2.

Graphite: ground or blended: *Middle Atlantic*, New Jersey, 3; Pennsylvania, 3; *Other Divisions*, Ohio, 1; Illinois, 2; Michigan, 2; California, 1.

Minerals: ground or treated: *Northeast*, Maine, 2; New Hampshire, 2; Vermont, 4 (326); Massachusetts, 3 (58); Connecticut, 3 (37); Pennsylvania, 22 (292); *Other Divisions*, Ohio, 12 (367); Indiana, 3 (44); Michigan, 2; Wisconsin, 3 (384); Iowa, 1; Missouri, 2; Nebraska, 1; Delaware, 1; Maryland, 4 (120); Virginia, 4 (70); West Virginia, 4 (412); North Carolina, 12 (437); South Carolina, 2; Kentucky, 1; Tennessee, 5 (290); Alabama, 11 (506); Mississippi, 1; Arkansas, 3 (158); Colorado, 4 (36); New Mexico, 1; Arizona, 4 (25); Utah, 4 (29); Nevada, 4 (38); Washington, 4 (60); Oregon, 2.

Sand-lime products: *Northeast*, Massachusetts, 2; New York, 1; New Jersey, 2; *North Central*, Indiana, 2; Illinois, 3; Michigan, 4 (54); Wisconsin, 2; Minnesota, 2; Missouri, 1; South Dakota, 1; *South*, Maryland, 1; Mississippi, 1; Texas, 1; *Mountain*, Colorado, 1; Arizona, 2.

Nonclay refractories: *New England*, Massachusetts, 2; Connecticut, 2; *Middle Atlantic*, New York, 1; New Jersey, 4; *East North Central*, Ohio, 5; Indiana, 1; Illinois, 4 (660); Michigan, 1; *South*, Maryland, 2; West Virginia, 1; North Carolina, 1; Georgia, 1; Kentucky, 2; Alabama, 1; *West*, Utah, 2; Washington, 1; California, 5 (533).

Statuary and art goods: *New England*, Rhode Island, 1; Connecticut, 2; *Middle Atlantic*, New Jersey, 5 (55); *East North Central*, Indiana, 5 (9); Michigan, 9 (29); Wisconsin, 25 (223); *West North Central*, Minnesota, 7 (38); Iowa, 2; Nebraska, 2; Kansas, 2; *South Atlantic*, District of Columbia, 3 (44); West Virginia, 2; Georgia, 1; Florida, 2; *East South Central*, Kentucky, 6; Alabama, 1; *West South Central*, Louisiana, 1; Oklahoma, 2; Texas, 5 (15); *Mountain*, Montana, 1; Colorado, 7 (45); New Mexico, 2; Utah, 1; *Pacific*, Washington, 2; Oregon, 1; California, 25 (98).

Nonmetallic mineral products, n.e.c.: *Middle Atlantic*, New York, 10 (731); New Jersey, 7 (89); Pennsylvania, 4 (1,008); *East North Central*, Ohio, 3 (66); Indiana, 3 (67); Illinois, 5; Michigan, 1; Wisconsin, 1; *West North Central*, Minnesota, 2; Missouri, 2; North Dakota, 1; Nebraska, 2; Kansas, 1; *South*, Maryland, 1; Virginia, 1; North Carolina, 2; South Carolina, 1; Texas, 4 (18); *Mountain*, Montana, 2; Colorado, 1; New Mexico, 1; Arizona, 1; Utah, 1; *Pacific*, Washington, 1; California, 11.

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry								
	Abrasive products	Asbestos products	Gaskets and asbestos insulations	Graphite: ground or blended	Minerals: ground or treated	Sand-lime products	Nonclay refractories	Statuary and art goods	Nonmetallic mineral products, n.e.c.
ALL ESTABLISHMENTS									
Number of establishments	253	111	191	12	206	26	63	272	74
All employees:									
Number (average for the year)	20,754	21,463	12,960	853	7,955	303	10,273	2,025	3,589
Salaries and wages, total	$66,158	$60,119	$36,047	$2,799	$21,328	$746	$27,783	$4,268	$10,274
Production and related workers:									
Number (average for the year)	15,864	18,140	10,743	618	6,729	250	8,951	1,829	3,003
Man-hours, total ... thousands	31,246	37,486	21,780	1,291	15,492	531	17,626	3,640	6,298
Wages, total	$45,031	$47,429	$27,038	$1,625	$16,798	$591	$22,963	$3,534	$7,715
Value added by manufacture	$126,659	$112,571	$65,303	$4,945	$51,058	$1,186	$58,022	$7,391	$20,145
ESTABLISHMENTS REPORTING DETAILED STATISTICS									
Number of establishments	253	111	191	12	201	26	63	112	74
All employees:									
Number (average for the year)	20,754	21,463	12,960	853	7,924	303	10,273	1,513	3,589
Salaries and wages, total	$66,158	$60,119	$36,047	$2,799	$21,249	$746	$27,783	$3,400	$10,274
Production and related workers:									
Number (average for the year)	15,864	18,140	10,743	618	6,699	250	8,951	1,326	3,003
Man-hours, total ... thousands	31,246	37,486	21,780	1,291	15,432	531	17,626	2,676	6,298
Wages, total	$45,031	$47,429	$27,038	$1,625	$16,722	$591	$22,963	$2,693	$7,715
Value added by manufacture	$126,659	$112,571	$65,303	$4,945	$50,849	$1,186	$58,022	$5,722	$20,145
Number of employees for pay period ended nearest Oct. 15:									
All employees	19,540	21,710	13,038	827	7,857	291	10,413	1,609	3,669
Male	14,772	18,352	8,372	616	7,486	279	10,126	984	2,311
Female	4,768	3,358	4,666	211	371	12	287	625	1,358
Production and related workers	14,608	18,281	10,821	590	6,574	246	9,033	1,425	3,064
Male	11,641	15,908	7,011	439	6,424	245	8,987	871	1,914
Female	2,967	2,373	3,810	151	150	1	46	554	1,150
Force-account construction workers	64	99	3	3	258	----	231	----	2
Administrative, supervisory, sales, and all other	4,868	3,330	2,214	234	1,025	45	1,149	184	603
Male	3,067	2,345	1,358	174	804	34	908	113	395
Female	1,801	985	856	60	221	11	241	71	208
All employees, number by month:									
January	22,114	21,580	12,992	798	7,713	311	10,095	1,547	3,531
February	22,178	21,678	13,230	828	7,863	295	10,145	1,588	3,530
March	22,226	21,211	13,101	861	7,855	293	10,154	1,492	3,565
April	22,081	21,039	12,891	866	7,918	333	10,233	1,477	3,674
May	21,861	21,400	12,931	871	8,019	340	9,925	1,401	3,637
June	20,995	21,559	12,572	872	8,041	288	10,066	1,415	3,383
July	19,894	20,685	12,757	885	8,062	287	10,380	1,442	3,464
August	19,345	21,294	12,856	846	7,941	304	10,450	1,489	3,557
September	19,343	21,551	12,875	843	7,889	307	10,439	1,554	3,531
October	19,540	21,710	13,038	827	7,857	291	10,413	1,609	3,669
November	19,610	21,759	13,056	850	7,869	290	10,406	1,614	3,696
December	19,778	21,983	13,109	845	8,001	291	10,544	1,502	3,781
Cost of materials, fuel, electricity, and contract work	$97,391	$97,660	$52,919	$4,051	$30,388	$544	$35,774	$1,733	$20,471
Materials, parts, containers, and supplies	92,771	93,151	50,126	3,896	24,943	407	28,215	1,630	19,972
Fuels, total	2,266	2,472	1,935	73	2,484	101	6,275	56	341
Bituminous coal	765	921	1,250	44	508	40	3,737	18	133
Anthracite	37	149	142	3	28	4	18	3	1
Coke	434	271	123	1	10	----	3	1	----
Fuel oils	833	906	226	6	1,240	27	1,641	10	109
Gas	181	185	184	11	548	5	871	19	61
Other fuels	16	40	10	8	150	25	5	5	37
Purchased electric energy	1,600	1,707	616	82	2,294	36	1,284	37	118
Contract and commission work	754	630	242	----	667	----	----	10	40
Value of inventories:									
Beginning of year, total	$42,605	$24,134	$18,392	$1,517	$7,517	$85	$11,666	$638	$6,819
Finished products	17,175	7,957	5,792	433	1,125	33	5,530	214	1,245
Materials, supplies, and work in process	25,430	16,177	12,600	1,084	6,392	52	6,136	424	5,574
End of year, total	53,509	32,932	20,602	1,720	9,746	109	14,635	641	7,448
Finished products	21,212	11,216	6,854	488	1,735	33	5,775	229	1,560
Materials, supplies, and work in process	32,297	21,716	13,748	1,232	8,011	76	8,860	412	5,888
Expenditures for plant and equipment:									
New plant and equipment	$11,820	$12,960	$3,966	$366	$8,414	$171	$5,772	$138	$1,999
Construction and major alteration of fixed plants	6,089	3,913	1,210	84	2,737	55	1,573	64	923
Buildings	5,936	3,120	1,180	84	2,412	48	1,224	64	877
Other construction	153	793	30	----	325	7	349	----	46
Machinery and equipment	5,731	9,047	2,756	282	5,677	116	4,199	74	1,076
Production machinery and equipment	5,257	8,561	2,495	252	5,248	100	3,909	47	972
Other machinery and equipment	474	486	261	30	429	16	290	27	104
Used plant and equipment, and land	710	473	266	----	338	10	91	30	68
Number of highway-type motor vehicles owned or leased:									
Trucks	132	112	111	15	401	50	139	44	54
By manufacturer's rated capacity:									
Under 1½ tons	39	34	39	----	68	3	28	26	15
1½ tons	49	40	47	5	148	26	55	16	25
Over 1½ tons and less than 3½ tons	31	22	21	5	106	9	37	1	10
3½ tons and less than 5 tons	3	12	----	3	29	5	6	----	1
5 tons and over	10	4	4	2	50	7	13	1	3
By body type:									
Van	11	4	9	1	5	----	2	4	9
Stake or platform	46	45	48	11	49	13	28	14	27
Panel or light delivery	27	24	35	----	47	5	23	19	11
All other trucks	48	39	19	3	300	32	86	7	7
Truck tractors	7	3	10	----	22	3	2	1	4
Trailers and semitrailers	6	3	8	----	24	4	2	1	7

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Abrasive products:											
Number of establishments	253	65	44	41	42	32	16	9	1	1	2
Number of employees (average for the year)	20,754	144	300	547	1,268	2,097	2,602	(d)	(d)	(d)	*13,796*
Value added by manufacture	$126,659	$766	$2,114	$3,022	$7,555	$16,218	$16,504	(d)	(d)	(d)	*$80,480*
Asbestos products:											
Number of establishments	111	10	12	15	17	11	20	15	6	5	----------
Number of employees (average for the year)	21,463	26	81	232	540	790	3,345	5,285	(d)	*11,156*	----------
Value added by manufacture	$112,571	$148	$321	$1,232	$3,213	$5,475	$16,554	$27,435	(d)	*$58,193*	----------
Gaskets and asbestos insulations:											
Number of establishments	191	43	40	36	34	14	10	8	3	3	----------
Number of employees (average for the year)	12,060	122	257	496	1,099	967	1,276	2,628	2,071	4,044	----------
Value added by manufacture	$65,303	$694	$1,236	$2,350	$5,929	$6,739	$4,547	$13,077	$8,231	$22,500	----------
Graphite: ground or blended:											
Number of establishments	12	1	2	2	5	----------	1	----------	1	----------	----------
Number of employees (average for the year)	853	(d)	(d)	*41*	(d)	----------	(d)	----------	*812*	----------	----------
Value added by manufacture	$4,945	(d)	(d)	*$358*	(d)	----------	(d)	----------	*$4,587*	----------	----------
Minerals: ground or treated:											
Number of establishments	206	24	30	64	53	17	14	3	1	----------	----------
Number of employees (average for the year)	7,955	61	215	917	1,640	1,145	2,356	*1,621*	(d)	----------	----------
Value added by manufacture	$51,058	$316	$1,484	$6,400	$10,212	$6,340	$14,285	*$12,021*	(d)	----------	----------
Sand-lime products:											
Number of establishments	26	8	3	10	5	----------	----------	----------	----------	----------	----------
Number of employees (average for the year)	303	*39*	(d)	136	128	----------	----------	----------	----------	----------	----------
Value added by manufacture	$1,186	*$267*	(d)	$396	$523	----------	----------	----------	----------	----------	----------
Nonclay refractories:											
Number of establishments	63	3	3	7	6	10	18	13	3	----------	----------
Number of employees (average for the year)	10,273	(d)	*28*	103	227	857	2,897	*6,161*	(d)	----------	----------
Value added by manufacture	$58,022	(d)	*$161*	$519	$1,672	$4,725	$13,553	*$37,392*	(d)	----------	----------
Statuary and art goods:											
Number of establishments	272	[1] 156	68	22	24	----------	2	----------	----------	----------	----------
Number of employees (average for the year)	2,025	310	452	294	*969*	----------	(d)	----------	----------	----------	----------
Value added by manufacture	$7,391	$1,257	$1,775	$881	*$3,478*	----------	(d)	----------	----------	----------	----------
Nonmetallic mineral products, n.e.c.:											
Number of establishments	74	24	16	16	10	3	----------	3	2	----------	----------
Number of employees (average for the year)	3,589	54	109	214	279	192	----------	(d)	*2,741*	----------	----------
Value added by manufacture	$20,145	$318	$796	$1,597	$2,060	$1,440	----------	(d)	*$13,934*	----------	----------

[1] Includes 1 establishment with no employees accounting for $1,000 value added.

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

ABRASIVE PRODUCTS INDUSTRY	Shipped by— Abrasive products industry	Other industries	All industries
Total shipments by the industry	$223,386		
A. Primary products	206,157	$34,584	$240,741
Nonmetallic abrasives	180,228	34,391	190,313
Metal abrasives			24,306
Buffing and polishing wheels and laps (containing no abrasives)	25,929	193	26,122
B. Secondary products	15,959		
Nonclay refractories	4,378		
Other secondary products, including processed waste and reconverted fabrics, machine tools, and coated fabrics and paper	11,581		
C. Miscellaneous receipts	1,270		

ASBESTOS PRODUCTS INDUSTRY	Shipped by— Asbestos products industry	Other industries	All industries
Total shipments by the industry	$204,686		
A. Primary products	176,988	$17,468	$194,456
Asbestos-cement products	69,764	646	70,410
Asbestos textiles	14,806	2,185	16,991
Asphalt floor tile	33,144	4,681	37,825
Asbestos friction materials	59,274	9,956	58,606
Other asbestos products, n.e.c.			10,624
B. Secondary products, including asbestos insulations and packing, gaskets, mineral wool, mechanical rubber goods, and asphalt roofing	27,326		
C. Miscellaneous receipt	372		

GASKETS AND ASBESTOS INSULATIONS INDUSTRY	Shipped by— Gaskets and asbestos insulations industry	Other industries	All industries
Total shipments by the industry	$118,244		
A. Primary products	94,816	$26,914	$121,730
Gaskets	66,485	10,389	76,874
Packing, except leather, rubber, and metal	28,331	16,525	20,368
Asbestos insulations			24,488
B. Secondary products	19,894		
Asbestos textiles	1,651		
Other asbestos products	1,280		
Other secondary products, including rubber and metal packing and beverage caps	16,963		
C. Miscellaneous receipts	3,534		
Scrap and salable refuse	2,573		
Other miscellaneous receipts	961		

GRAPHITE: GROUND OR BLENDED INDUSTRY	Shipped by— Graphite: ground or blended industry	Other industries	All industries
Total shipments by the industry	$8,996		
A. Natural graphite: ground, refined, or blended	6,547	$480	$7,027
B. Secondary products, including oilless bearings	2,402		
C. Miscellaneous receipts	47		

MINERALS: GROUND OR TREATED INDUSTRY	Shipped by— Minerals: ground or treated industry	Other industries	All industries
Total shipments by the industry	$81,502		
A. Primary products	77,838	$7,816	$85,654
Light-weight aggregate (except *vermiculite*)	77,838	7,816	10,671
Other minerals and earths: ground or otherwise treated			74,983
B. Secondary products, including vermiculite	3,299		
C. Miscellaneous receipts	365		

SAND-LIME PRODUCTS INDUSTRY	Shipped by— Sand-lime products industry	Other industries	All industries
Total shipments by the industry	$1,730		
A. Sand-lime products	1,630	$677	$2,307
B. Secondary products	99		
C. Miscellaneous receipts	1		

NONCLAY REFRACTORIES INDUSTRY	Shipped by— Nonclay refractories industry	Other industries	All industries
Total shipments by the industry	$90,337		
A. Nonclay refractories	85,042	$8,273	$93,315
B. Secondary products	5,290		
Clay refractories	2,599		
Other secondary products	2,691		
C. Miscellaneous receipts	5		

STATUARY AND ART GOODS INDUSTRY	Shipped by— Statuary and art goods industry	Other industries	All industries
Total shipments by the industry	$9,998		
A. Statuary and art goods (factory production)	9,012	$260	$9,272
B. Secondary products	875		
C. Miscellaneous receipts	111		

NONMETALLIC MINERAL PRODUCTS, N.E.C., INDUSTRY	Shipped by— Nonmetallic mineral products, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$40,616		
A. Primary products	36,545	$6,476	$43,021
Exfoliated vermiculite	5,094	1,388	6,482
Sheet mica products, except radio parts	31,451	5,088	30,247
Miscellaneous nonmetallic mineral products, n.e.c.			6,292
B. Secondary products, principally laminated plastics and varnished fabrics and papers	3,931		
C. Miscellaneous receipts	140		

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947					1939	
		Shipments and interplant transfers		Production			Production	
		Quantity	Value f.o.b. plant	Total for all purposes, including further manufacture (quantity)	Made and consumed in the same plant for the manufacture of other products (quantity)	For all other purposes (quantity)	Quantity	Value f.o.b. plant
Abrasive products, total			$240,741					$71,519
Nonmetallic abrasives, total			190,313					64,055
Lump abrasives (crude silicon carbide, aluminum oxide, and other artificial—synthetic—abrasives)	Ton	6,401	545	31,052	24,055	6,997	n.a.	
Sized grains, powders, and flour (graded products only):								
Artificial abrasives:								
Silicon carbide	do	22,228	6,188	33,876	11,451	22,425	n.a.	
Aluminum oxide	do	71,943	12,920	113,250	39,092	74,158	n.a.	[1] 8,744
Other (including combinations of silicon carbide and aluminum oxide, boron carbide, tungsten carbide, etc.)	do	28	249	28	(d)	(d)	n.a.	
Natural abrasives:								
Emery and garnet	do	11,360	1,440	13,321		13,321	n.a.	
Other (including corundum, silica, pumice, and pumicite)	do	13,300	1,402	12,276		12,276	n.a.	
Coated abrasive products (coated or impregnated with abrasive materials):								
Abrasive cloth:								
Made from artificial abrasive materials	Ream	317,611	19,159				279,673	7,427
Made from natural abrasive materials	do	147,777	5,214					
Abrasive paper:								
Made from artificial abrasive materials	do	791,360	19,440				1,038,038	9,028
Made from natural abrasive materials	do	737,902	6,823					
Other coated abrasive products (including paper-cloth combinations, wood, cloth wheels, etc.):								
Made from artificial abrasive materials			11,073					(2)
Made from natural abrasive materials			888					(2)
Bonded abrasive materials:								
Sticks, stones, hones, balls, and brick (excluding refractory brick, floor and stair brick, and similar byproducts):								
Made from artificial abrasive materials			5,246					[3] 454
Made from natural abrasive materials			509					
Grinding and cutting wheels:								
Made from artificial abrasive materials:								
Silicon carbide wheels			19,357					
Aluminum oxide wheels			55,061					
Other artificial abrasive wheels (including combinations of silicon carbide and aluminum oxide)			3,119					20,437
Made from natural abrasive materials:								
Diamond wheels			6,566					
Other natural abrasive wheels			293					
Other nonmetallic abrasive products (including grinding, lapping, and buffing compounds):								
Made from artificial abrasive materials			7,857					
Made from diamond abrasive materials			2,487					[4] 8,965
Made from other natural abrasive materials, except diamonds			4,477					
Metal abrasives, total			24,306					3,079
Steel and iron grit, shot, and sand	Ton	150,218	11,497				n.a.	1,758
Steel wool	do	5,284	3,308				n.a.	1,054
Other metal abrasives			9,501					267
Buffing and polishing wheels and laps (containing no abrasive grains, powders, or flour), total			26,122					4,385
Cloth, leather, etc., except felt			25,911					n.a.
Felt			211					n.a.
Asbestos products (except paper, gaskets, packing, and insulations,) total			194,456					62,352
Asbestos-cement products, total			70,410					n.a.
Siding shingles and clapboard	M squares	4,889	30,682	4,928			n.a.	(5)
Roofing shingles	do	881	6,846	900			664	4,599
Flat sheets and wallboard (all thicknesses converted to ¼-inch basis)	M sq. ft.	147,516	13,419	157,238	(d)	(d)	n.a.	(5)
Corrugated sheets	do	41,321	5,140	45,839			7,551	845
Other asbestos-cement products (including pipe, conduits, and ducts)			14,323					[5] 11,207
Asbestos textiles, total			16,991					[1] 8,685
Carded fibre	M lbs.	506	178				n.a.	(6)
Roving and lap	do	4,960	1,819	23,358	18,383	4,975	[1] 4,437	[1] 1,018
Wick and rope	do	2,785	1,291	3,221	(d)	(d)	n.a.	(6)
Yarn, cord, and thread	do	9,748	4,815	25,285	16,014	9,271	[1] 7,923	[1] 2,683
Cloth	do	7,998	5,624	11,940	4,802	7,138	[1] 5,263	[1] 1,813
Tape	do	3,266	2,469	6,543	(d)	(d)	[1] 2,212	[1] 1,174
Other asbestos textiles	do	1,036	795	1,039	(d)	(d)	n.a.	[6] 1,997
Asbestos friction materials, total			58,606					n.a.
Brake linings:								
Woven (containing asbestos yarn, tape, or cloth)	M lin. ft.	19,589	6,968	19,601			(7)	[7] 14,377
Molded (including all nonwoven types)	Cu. ft.	[8] 425,859	31,787	[8] 454,215			(7)	
Clutch facings:								
Woven (containing asbestos yarn, tape, or cloth)	M pieces	20,004	9,851	20,732			9,084	2,446
Molded (including all nonwoven types)	do	40,296	10,000	39,513			n.a.	(9)
Asphalt floor tile	M sq. yds.	40,981	37,825	41,479			4,933	3,633
Other asbestos products (except asbestos paper, gaskets, packing, and insulations), total			10,624					n.a.
Asbestos millboard	Ton	19,355	2,812	20,218			9,137	867
Other asbestos products			[10] 7,812					[11] 15,693
Asbestos paper [12]	Ton	96,760	10,592	97,119			42,615	4,476

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947					1939	
		Shipments and interplant transfers		Production			Production	
		Quantity	Value f.o.b. plant	Total for all purposes, including further manufacture (quantity)	Made and consumed in the same plant for the manufacture of other products (quantity)	For all other purposes (quantity)	Quantity	Value f.o.b. plant
Gaskets and asbestos insulations (including packing, except rubber, leather, and metal), total			$121,730					[13] $37,966
Asbestos insulations, total			24,488					11,712
Pipe insulation:								
Cellular and laminated			6,687					
85 percent magnesia			6,578					
Other pipe insulation			2,998					
Block insulation (including sheet and lagging):								
Cellular and laminated	M bd. ft.	13,529	1,558	13,073			n.a.	11,712
85 percent magnesia	do	31,888	4,573	31,343			n.a.	
Other block insulation	do	11,442	2,094	10,652			n.a.	
Gaskets (for sealing nonmoving parts), total			76,874					[13] 19,537
Asbestos, asbestos-metallic, and asbestos-rubber			31,915					
Cork			14,887					
Rubber (except asbestos-rubber)			11,276					[13] 19,537
Paper and felt base			10,855					
Metal			3,047					
Other			4,894					
Packing, except rubber, leather, and metal (for sealing moving parts), total			20,368					6,717
Asbestos compressed sheet	M lbs.	7,639	2,795	10,779	(d)	(d)	5,448	1,205
Asbestos (except compressed sheet), asbestos-metallic, and asbestos-rubber	do	8,937	9,459	8,919			n.a.	5,512
Other			8,114					
Rubber, leather, and metal packing, total [14]			30,568					17,503
Rubber	M lbs.	17,664	12,451	17,740			[15] 32,271	[15] 10,092
Leather			9,305					4,305
Metal			8,812					3,106

PRODUCT	Unit of measure	1947			1939	
		Shipments and interplant transfers		Production (quantity)	Production	
		Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant
Natural graphite: ground, refined, or blended			$7,027			[16] $2,176
Light-weight aggregate (such as treated diatomaceous earth, expanded clays and slag, and cinders; excludes vermiculite)			10,671			
Other minerals and earths: ground or otherwise treated, total			74,983			
Crushed slag			10,304			
Ground talc			5,574			
Ground feldspar			3,553			[17] 36,690
Ground uncalcined gypsum			3,358			
Ground mica			2,221			
Other minerals and earths: ground or otherwise treated (including roofing granules, activated clays, pulverized limestone, silica, and pyrophyllite)			49,973			
Sand-lime products, total			2,307			1,798
Sand-lime brick	M brick	102,553	1,840	103,504	153,280	1,588
Other sand-lime products (including block and mortars)			467			210
Nonclay refractories, total			93,315			25,380
Silica brick and shapes	M 9" equiv.	311,136	29,407	313,001	175,376	9,086
Magnesite and magnesite-chrome (magnesite predominating) brick and shapes	do	21,992	9,507	22,461	21,549	6,403
Chrome and chrome-magnesite (chrome predominating) brick and shapes	do	38,838	13,822	38,762		
Graphite and other carbon crucibles and retorts	Ton	10,466	4,653	10,449	4,976	1,667
Other graphite and carbon refractories	do	2,793	1,116	2,874	1,111	379
High-temperature bonding mortars	do	47,584	4,011	48,415	72,216	2,523
Plastic refractories (including wet and dry ramming mixtures)	do	60,671	3,848	61,181		
Dead-burned magnesia and magnesite	do	294,741	9,134	293,535		
Other nonclay brick and shapes (including silicon carbide, fused alumina, fused magnesia, mullite, kyanite, sillimanite, zirconia, forsterite, etc.)			12,802			[16] 5,322
Other nonclay refractory materials sold in lump or ground form (including ground silica and nonclay cast and castables)			5,015			
Statuary and art goods (factory production)			9,272			[18] 3,440

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947 Shipments and interplant transfers: In designated units	In tons	Value f.o.b. plant	1939 Production: Value f.o.b. plant
Exfoliated vermiculite, total				$6,482	$325
Building insulation	M cu. ft	26,237	88,341	5,089	
Loose fill	do	14,686	47,398	2,940	
Aggregate	do	11,376	40,174	2,092	325
Accoustical	do	175	769	57	
Industrial insulation	do	359	3,112	296	
Other exfoliated vermiculite products				1,097	
Sheet mica products, except radio parts				30,247	n.a.
Miscellaneous nonmetallic mineral products, n.e.c., total				6,292	n.a.
Magnesite floor composition				1,668	665
Stucco				2,413	n.a.
Other nonmetallic mineral products, n.e.c., including sapphire boule				2,211	n.a.

n.a.—Not available.

[d] Withheld to avoid disclosing figures for individual companies.

[1] Probably represents production for sale only.

[2] Probably included, in part, under "Abrasive cloth" and "Abrasive paper," and in part under "Other nonmetallic abrasive products."

[3] Represents "Oilstones, scythestones, whetstones, hones, and other rubbing stones" only.

[4] Represents "Masking tape" and "Artificial abrasive sticks, stones, and bricks," and miscellaneous abrasive products for which figures are not shown separately.

[5] Figures for "Siding shingles and clapboard" and "Flat sheets and wallboard" are included with asbestos flexible roofing under "Other asbestos-cement products." Asbestos conduits and ducts are included with "Other asbestos products."

[6] "Carded fibre" and "Wick and rope" are included under "Other asbestos textiles." See also footnote 1.

[7] For 1939, the following figures were tabulated for brake linings:"Brake lining, not molded," 28,570,000 feet, valued at $6,051,000; "Molded asbestos brake lining," 32,243,000 feet, valued at $5,265,000 and "Brake lining, quantity or kind not reported," valued at $3,061,000.

[8] Quantity figures were partly estimated.

[9] Included under "Other asbestos products."

[10] Represents asbestos dryer felts, fabricated asbestos paper products, stove mats and table pads, asbestos insulating cement, asbestos gloves, and miscellaneous asbestos products, except asbestos paper, gaskets, packing, and insulations.

[11] Represents asbestos conduits and ducts, molded clutch facings, paper, table mats and protectors, asbestos insulating cement, 85 percent magnesia cement, and high-temperature cements.

[12] Figures for establishments producing asbestos paper are not included in the totals for the Asbestos Products Industry; asbestos paper is classified in the Building-Paper and Building-Board Mills Industry and the figures for asbestos paper are included in the totals for that industry. In 1947, the 11 establishments making asbestos paper had 1,479 employees, paid $3,843,000 for salaries and wages, and shipped products value at $23,960,000.

[13] Excludes indeterminate amounts for rubber gaskets made in the "Rubber products, n.e.c." industry (see footnote 15), nonferrous metal gaskets made in the "Nonferrous metal products, n.e.c." industry, and felt gaskets made in the "Felt goods, wool, hair, and jute" industry.

[14] Figures for establishments primarily engaged in producing rubber, leather, and metal packing are not included in the totals for the Gaskets and Asbestos Insulations Industry; rubber packing is classified in the Rubber Industries, N.E.C., Industry, leather packing in the Industrial Leather Belting and Packing Industry, metal packing in the Machine Shops (jobbing and repair) Industry, and the figures for such packings are included in the totals for those industries.

[15] Represents: "Rubber packing," 13,483,000 pounds, valued at $2,955,000, and rubber "washers, gaskets, valves, pump sleeves, and liner strips," 18,787,000 pounds, valued at $7,137,000.

[16] The 1939 data for these items have been retabulated for comparability with 1947 statistics.

[17] Represents total value of products of the Minerals: Ground or Treated Industry in 1939.

[18] Represents total value of products of the Statuary and Art Goods Industry in 1939.

Major Group 33.—PRIMARY METAL INDUSTRIES

This major group includes establishments engaged in the smelting and refining of ferrous and nonferrous metals from ore, pig, or scrap; in the rolling, drawing, and alloying of ferrous and nonferrous metals; and in the manufacture of castings, forgings, and other basic products of ferrous and nonferrous metals.

GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

CENSUS YEAR	Number of establishments	All employees [1]		Production workers		Value added by manufacture [2]
		Number (average for the year)	Wages and salaries, total	Number (average for the year)	Wages, total	
1947	5,363	1,157,124	$3,594,548	1,010,055	$2,976,507	$5,765,434
1939 [3]	3,512	n.a.	n.a.	672,438	978,355	2,168,899
1937	3,245	n.a.	n.a.	792,096	1,204,929	2,519,978

n.a.—Not available.

[1] The figures for 1947 and 1939 include data for employees of manufacturing establishments who were engaged in distribution and construction work. The extent to which data for such employees are included in the figures for 1937 is not known. See GENERAL EXPLANATIONS—Manufacturing employees—Classifications used.

[2] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[3] The figures for 1947 and 1939 are not entirely comparable with those for 1937 because the 1937 figures (a) include data for establishments primarily engaged in producing certain nonferrous bearings and aluminum products (ship bunks, ornamental metal work, stampings, novelties, valves and fittings, machined castings, and tags), and (b) exclude data for establishments primarily engaged in making electrometallurgical products, nonferrous die castings and forgings, cast aluminum cooking ware, and in the heat treating of steel. Value added by manufacture for 1939 on a basis strictly comparable with 1937 was $2,131.2 million. Figures have not been compiled for 1935 and prior years because of large elements of noncomparability in the earlier statistics for a number of industries included in the "Primary metal" group.

BLAST FURNACE, STEEL MILL AND IRON AND STEEL FOUNDRY PRODUCTS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of pig iron, ferro-alloys, steel mill products, and iron and steel castings. These establishments have been classified in the six industries described separately below.

Blast Furnaces *(Standard Industrial Classification No. 3311.)*—This industry comprises establishments primarily engaged in manufacturing pig iron and blast furnace ferro-alloys from iron ore and scrap. Establishments primarily engaged in manufacturing ferro and nonferrous additive alloys by electrometallurgical processes are classified in Industry 3313. Statistics are included for all blast furnaces, both those which were privately owned and operated in 1947 and those which were Government owned although privately operated during the year.

In many cases, blast furnaces are operated in conjunction with coke ovens and steel works, but each of these three operations has been reported as a separate establishment in the census. In general, the companies which operate such integrated works at a single location keep detailed statistical data on the activities of each of these three departments. However, for certain types of data, some estimating was necessary in order to supply the required information.

In view of the integration of operations in this industrial area, it is difficult to establish a satisfactory value for the iron ore and coke transferred to the blast furnace and for the pig iron transferred to the steel furnace. In an effort to achieve uniformity in this regard and to conform to the reporting by independent blast furnaces, the instructions accompanying the 1947 report forms specified that such transfers should be reported at approximate commercial value with adjustments made so that general company expenses and profits were allocated over the entire range of the company's activities, rather than concentrated at any one stage. In practice, this instruction was not and probably could not be followed by all respondents. For example, there does not exist a commercial value for hot metal, which is exclusively a phenomenon of integrated operations. In other instances, to convert to an approximate commercial value would have been unrealistic in view of the actual operations of the various establishments of an integrated company.

A more accurate measure of the value added by manufacture can be obtained by combining the value added of the four industries—Beehive Coke Ovens, Industry 2931; Byproduct Coke Ovens, Industry 2932; Steel Works and Rolling Mills, Industry 3312, and Blast Furances, Industry 3311. Although the value added for the four industries combined is still an approximation due to the fact that some of the companies own mines and fabricating facilities, the effect of these additional activities is small considering the size of the steel industry as a whole.

Certain other figures reported by the Blast Furnaces Industry have some limitations. A high proportion of the pig iron produced in blast furnaces is transferred as hot metal to steel-making furnaces at the same location. Hot metal in transit and other pig iron inventories in such integrated works can be considered either as finished product inventories of the blast furnaces or material inventories of the steel works and rolling mills. In practice, they appear to have been generally reported as material inventories of the steel works. Similarly, certain types of capital expenditures cannot be specifically allocated to the coke ovens, blast furnaces, or steel works and rolling mills. These include such improvements as roads, docks, etc. These have been generally reported as capital expenditures for the steel works and rolling mills.

Actual wage and salary payments made by blast furnace establ shments during 1947, as shown in tables 1, 2, and 3, do not necessarily apply to work performed during that year. In accordance with labor-management agreements, wage and salary payments were made during 1947 which applied to work performed in 1946 and earlier years. In addition, reserves were set aside during 1947 for payment in 1948 or later for work performed during 1947. The retroactive payments and reserves are shown in the table below. The expected final compensation for work actually performed in 1947 is obtained by adding the reserves to the actual wage and salary payments made in 1947 and subtracting the figures on retroactive payments during the year. Establishments whose wages and salaries amounted to about 57 percent of the total for the Blast Furnaces Industry had such retroactive payments or reserves during 1947.

TABLE A

Retroactive Wage and Salary Payments and Reserves Set Aside for Future Wage and Salary Payments by Blast Furnaces: 1947

[In thousands of dollars]

ITEM	All employees	Production and related workers
Total wage and salary payments in 1947	$112,018	$93,598
Retroactive wage and salary payments made in 1947 for work performed in earlier years	1,255	1,214
Reserves set aside in 1947 for future payment for work performed in 1947	650	582
Net expected compensation for work performed in 1947 (total wage and salary payment minus retroactive payments plus reserves)	111,413	92,966

Data on the tonnages of pig iron and ferro-alloys produced are also published by the Bureau of Mines, in its "Minerals Yearbook." Minor variations exist between the data reported in the census and those published by the Bureau of Mines. Only total shipments of pig iron and ferro-alloys were reported to the Census. Data on pig iron by grade and ferro-alloys by type are compiled by the Bureau of Mines and these are reprinted in tables 6–B and 6–D.

Steel Works and Rolling Mills *(Standard Industrial Classification No. 3312.)*—This industry comprises establishments primarily engaged in converting pig iron, scrap iron, and scrap steel into steel, and in hot rolling iron and steel into basic shapes such as plates, sheets, strips, rods, bars, and tubing. In many such establishments, the manufacturing processes are carried beyond the hot-rolling stage.

A substantial proportion of the value of shipments of the steel works industry consists of products processed beyond the hot rolled stage, such as drawn wire, cold rolled sheet and strip, cold finished bars, tinplate, etc. Not all of the establishments in this industry make their own steel since establishments which hot roll steel shapes from purchased ingots,

blooms, billets, etc., are included in the industry. However, establishments which perform only cold rolling or drawing operations; those which draw wire from purchased rod and bar; and pipe mills which produce welded or riveted pipe from purchased skelp or plate are not classified in the Steel Works and Rolling Mills Industry, but are included in the Primary Metal Industries, N.E.C.; Wire Drawing; and Welded and Heavy-Riveted Pipe Industries, respectively. It should be noted, though, that all establishments producing seamless pipe are included in the Steel Works and Rolling Mills Industry regardless of whether they melt the steel or produce the pipe from tube rounds received at the establishment.

As was indicated in the section under "Blast furnaces," where the steel works are integrated with blast furnaces and coke ovens, separate reports were received covering the steel works and rolling mills. In addition to the problem of integration with blast furnaces and coke ovens, some of the steel works are also operated in conjunction with further fabricating facilities, such as the production of fabricated structural steel, fabricated wire products, nuts and bolts, forgings, etc. In general, the further fabricating processes were treated as separate establishments and data for these departments were not included in the figures for the steel industry. An important exception is the fabricated wire product departments producing nails, spikes, wire rope, fencing, etc. These processes are so integrated with the steel mill activities proper that a separation could not be made and the wire products departments are generally included as part of the rolling mill. An additional exception, although not so important, are a few forge shops which melt their own steel and produce forgings from their own ingots. Such establishments were considered as part of the Steel Works and Rolling Mills Industry even though they sold only forgings.

The limitations in the value figures which have been discussed in the section on blast furnaces apply to steel works and rolling mills also. In addition, the total cost of materials and the total value of shipments in the steel works industry include extensive duplications resulting from the use of the products of some establishments as materials by others. Considerable quantities of steel ingots, billets, blooms, and finished shapes and forms, such as hot rolled sheets, bars, etc., are transferred from one steel mill to another for further processing. In 1947, steel mills reported receipts of about 22 million tons of steel shapes and forms, usually for further processing into other steel mill shapes. The value of this tonnage appears twice in the total value of shipments; and a corresponding duplication enters into the total cost of materials. Therefore, figures on the total value of shipments and the total cost of materials are not shown for this industry. This duplication does not exist in the data on value added by manufacture. (See General Explanations—Value Added by Manufacture.)

A comparable series of data on the industry is available for 1929 and the period 1937–47. In other years, however, independent steel foundries were classified in the same industry with steel works and rolling mills, and, consequently, except for 1929, comparable data for steel works and rolling mills alone are not available for years prior to 1937. Table 1, however, does show data from 1899 to the present for the combined steel works and rolling mills and steel castings industries.

Retroactive wage and salary payments were made in 1947 and reserves were set aside during that year in the Steel Works and Rolling Mills Industry, as in the Blast Furnaces Industry. Establishments whose wages and salaries amounted to about 51 percent of the total wages and salaries in the entire industry had such retroactive payments and reserves during 1947. The extent of retroactive payments and reserves in the Steel Works and Rolling Mills Industry during 1947 is shown below.

Table B

Retroactive Wage and Salary Payments and Reserves Set Aside for Future Wage and Salary Payments by Steel Works and Rolling Mills: 1947

[In thousands of dollars]

ITEM	All employees	Production and related workers
Total wage and salary payments in 1947	$1,593,808	$1,337,938
Retroactive wage and salary payments made in 1947 for work performed in earlier years	13,961	13,372
Reserves set aside in 1947 for future payment for work performed in 1947	7,273	6,174
Net compensation for work performed in 1947 (total wage and salary payment minus retroactive payments plus reserves)	1,587,120	1,330,740

Steel mills are operated with varying degrees of integration. Some mills produce only ingots; some produce semifinished forms such as blooms and billets; others produce ingots, semifinished forms, finished steel mill shapes and in some cases, fabricated products; still others do not produce any ingots but purchase semifinished forms and further roll them.

The 1947 census obtained data on the total production of steel as of three broad levels of output: ingots; semifinished shapes and forms (blooms, billets, wire rods, skelp, etc.); and finished mill shapes and forms. For each of these groups, the steel mills were requested to report production in the form in which the steel shape (a) passed from one group to the next, (b) was shipped from the establishment, or (c) was consumed in the establishment in the manufacture of fabricated products. The production figures shown in table 6–E include data on production derived from this method of reporting. Production figures shown for ingots represent the total production of ingots. Production figures shown for finished shapes and forms are the tonnages of these shapes produced at the steel mills for shipment (either outside the steel industry, or to other steel mills) or for consumption in the manufacture of fabricated products. The production of all semifinished shapes and forms combined represent total production of semifinished shapes and forms for sale and transfer and also for use in the same plant in the manufacture of either other steel mill shapes or fabricated products.

Net shipments of steel mill products out of the industry including both the shipments to establishments outside the steel industry and the amounts consumed in the steel mills in the production of fabricated products and for maintenance, repair, and operating supplies, are shown in table 6–G.

The figures on steel mill shapes shown in table 6–E, include the manufacture of these products in separate cold rolling or drawing establishments, wire drawing plants, and pipe mills as well as steel mills. The receipt of steel at these cold rolling, etc., plants has been taken into account in deriving the "net shipments" figures shown in table 6–G.

Substantial tonnages of steel are transferred from steel mills to other plants of the same company, in some cases to other steel mills and in other cases to fabricating plants. In order to simplify the reporting of the companies, only a single value of interplant transfers was requested from each establishment. This value has been apportioned among the various mill shapes on the basis of the tonnages shipped, in order to include interplant transfers in the class of product figures in table 5. However, no values for interplant transfers in 1947 are shown in tables 6–E and 6–F.

All quantity figures shown in this report are in units of short tons of 2,000 pounds. In the 1939 census, the steel mill data were reported in tons of 2,240 pounds, but all of the comparable 1939 figures included in this report have been converted to short tons.

Electrometallurgical Products *(Standard Industrial Classification No. 3313.)*—This industry comprises establishments primarily engaged in manufacturing ferro and nonferrous additive alloys by electrometallurgical processes, including high-percentage ferro-alloys such as ferromanganese, ferrochromium, ferrovanadium, and ferrotitanium, and high-percentage nonferrous additive alloys.

All establishments primarily engaged in manufacturing ferro-alloys by electrometallurgical processes are included in this industry. A few establishments engaged primarily in producing related oxides, such as molybdic oxide, have been classified in the chemical group of industries though the oxides are mainly used for alloying purposes in the steel industry. In addition, there are a number of establishments which produce ferro-alloys or other additives as byproducts of other chemical processes.

Only a single total on ferro-alloys shipped was requested in the 1947 census. Shipments by type of ferro-alloys shown in table 6–D were obtained from the Bureau of Mines and represent the total shipments of ferro-alloys and other additives, both those made in electric furnaces and in other types of furnaces. More detailed information on ferro-alloy production is available in the "Minerals Yearbook" published by the Bureau of Mines.

The industry as presently constituted did not exist in the 1939 Census of Manufactures. Establishments primarily engaged in manufacturing ferro and nonferrous additive alloys by electrometallurgical processes were classified in the Chemicals, Not Elsewhere Classified, Industry. The 1939 data have been retabulated in order to present comparable data for that year, but figures for earlier years are not available.

Gray-Iron Foundries *(Standard Industrial Classification No. 3321.)*—This industry comprises establishments primarily engaged in manufacturing gray-iron castings, including cast gray-iron pipe and fittings.

In 1939 and in prior censuses, foundries manufacturing cast gray-iron pipe and fittings comprised a separate industry. The 1939 and 1937 data for the two industries—Cast Iron Pipe and Gray-Iron Castings (Except Pipe)—have been combined in an effort to present statistics comparable with 1947. Statistics for other years are not available since malleable-iron foundries were combined with gray-iron foundries in a single industry for 1935 and earlier years.

The general statistics on the Gray-Iron Foundries Industry for 1939 are not strictly comparable with those for 1947. A number of motor vehicle companies which operated gray-iron foundries submitted consolidated reports for their motor vehicle and foundry operations in 1939. The consolidated reports were classified in the motor vehicle industry and consequently the employment, wage, etc., data of these gray-iron foundries were included with the statistics for the motor vehicle industry. In 1947, separate reports were received for these foundries, and their activities are included in the Gray-Iron Foundries Industry.

Gray-iron castings are made to a considerable extent by establishments, classified in other industries, that operate foundry departments for production of gray-iron castings for incorporation into such products as motor vehicles, stoves, furnaces, plumbing fixtures, machinery, etc., and also for sale as castings. Special reports were requested in the 1947 census from foundry departments of establishments classified in industries other than one of the four foundry industries. These reports obtained information on the number of employees and wages in the foundry department, the production of castings, and the materials consumed in the foundry.

The table which follows shows employment and wage data for foundries primarily engaged in making gray-iron castings, divided between those classified in the Gray-Iron Foundries Industry and those which are departments of establishments classified in other industries. Similar tables for malleable-iron and steel foundries are included in the sections of the text describing those industries, and one for nonferrous foundries is included in the report on "Nonferrous metal mill and foundry products."

TABLE C

Average Number of Production and Related Workers in Gray-Iron Foundries and Their Wages: 1947

These data represent employment in foundries which accounted for 94 percent of all gray-iron castings produced; reports were not received from all foundry departments of establishments classified outside the foundry industries]

[Wages in thousands of dollars]

ITEM	Average number of production and related workers	Wages paid to production and related workers
All gray-iron foundries	244,988	$689,095
Establishments classified as gray-iron foundries	157,361	441,657
Gray-iron foundry departments of establishments classified outside the foundry industries	87,627	247,438

Statistics for gray-iron foundries in tables 1 to 4 which follow the text conform to the general Census pattern and include only data for establishments classified as gray-iron foundries. However, the product data shown in tables 6–L, 6–M, and 6–N include data for all foundries.

Of the total value of $1,229 million of gray-iron castings, 13 percent was shipped by establishments classified in other industries. Establishments classified in the Gray-Iron Foundries Industry shipped $1,066 million of gray-iron castings and $98 million of other products such as steel castings, nonferrous castings, foundry machinery and equipment, valves and fittings, etc.

Malleable-Iron Foundries *(Standard Industrial Classification No. 3322.)*—This industry comprises establishments primarily engaged in manufacturing malleable-iron castings. No statistics for the industry exist prior to 1937 since malleable-iron foundries were combined with gray-iron foundries in earlier years.

Malleable-iron foundries operated by motor-vehicle manufacturers were included in the Motor Vehicle Industry in 1939. For this reason, the 1939 general statistics are not strictly comparable to those for 1947. Since consolidated reports for foundry and motor vehicle activities were received in 1939, retabulations of the 1939 data to obtain comparable figures are not possible.

A similar situation exists with regard to departmental reports in malleable-iron foundries as in the case of gray-iron foundries. In the 1947 census such departmental reports were treated in a manner similar to those of the gray-iron foundries. Data on employment and wage payments in malleable-iron departments of establishments classified in other than one of the four foundry industries follow.

TABLE D

Average Number of Production and Related Workers in Malleable-Iron Foundries and Their Wages: 1947

[These data represent employment in foundries which accounted for 99 percent of all malleable-iron castings produced; reports were not received from all foundry departments of establishments classified outside the foundry industries]

[Wages in thousands of dollars]

ITEM	Average number of production and related workers	Wages paid to production and related workers
All malleable-iron foundries	32,748	$93,771
Establishments classified as malleable-iron foundries	26,659	76,750
Malleable-iron foundry departments of establishments classified outside the foundry industries	6,089	17,021

Of the total value of $178 million of malleable-iron castings, 9 percent was shipped by establishments classified in other industries. Establishments classified in the Malleable-Iron Foundries Industry shipped $162 million of malleable-iron castings and $22 million of other products such as gray-iron castings, steel castings, etc.

Steel Foundries *(Standard Industrial Classification No. 3323.)*—This industry comprises establishments primarily engaged in manufacturing steel castings. Included in this industry are establishments which produce heat and corrosion resistant castings as well as those making carbon and low alloy steel castings. With the exception of 1929, separate statistics for this industry prior to 1937 are not available since steel foundries were considered as part of the Steel Works and Rolling-Mills Industry in those censuses.

Departmental reports were secured from steel foundries in the same way as for gray-iron foundries indicated above. Employment and wage statistics for steel foundries follow.

TABLE E

Average Number of Production and Related Workers in Steel Foundries and Their Wages: 1947

[These data represent employment in foundries which accounted for 98 percent of all steel castings produced; reports were not received from all foundry departments of establishments classified outside the foundry industries]

[Wages in thousands of dollars]

ITEM	Average number of production and related workers	Wages paid to production and related workers
All steel foundries	63,184	$177,702
Establishments classified as steel foundries	55,252	153,709
Steel foundry departments of establishments classified outside the foundry industries	7,932	23,993

Of the total value of $434 million of steel castings, 17 percent was shipped by establishments classified in other industries. Establishments classified in the Steel Foundries Industry shipped $50 million of other products such as gray-iron castings, machined castings, machine parts, etc.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Blast furnaces:								
1947	86	36,937	$112,018	32,697	$93,598	$328,060	$1,385,885	$1,713,945
1939	81	22,027	34,498	19,537	28,312	87,083	463,719	550,802
1937	87	24,935	43,479	23,075	38,001	127,644	544,881	672,525
1935	72	16,699	22,729	15,178	18,916	73,993	300,658	374,651
1933	72	13,185	13,774	12,098	11,564	29,728	183,957	213,685
1931	80	n.a.	n.a.	13,572	19,259	52,239	259,132	311,371
1929	105	27,376	48,805	24,960	41,959	161,131	610,294	771,425
1927	116	30,514	51,594	27,958	44,258	129,349	579,555	708,904
1925	122	31,696	52,200	29,188	45,312	147,869	617,417	765,286
1923	169	41,460	71,212	36,712	58,935	179,983	827,630	1,007,613
1921	134	22,942	40,633	18,698	29,370	58,721	361,050	419,771
1919	209	48,741	90,416	43,296	76,446	180,362	644,021	824,383
1914	160	33,179	28,895	29,356	22,781	53,074	264,580	317,654
1909	208	43,013	31,131	38,429	24,607	70,791	320,638	391,429
1904	190	37,309	21,825	35,078	18,935	52,881	178,942	231,823
1899	223	40,998	20,789	39,241	18,484	75,253	131,504	206,757
Steel works and rolling mills:								
1947	215	500,799	1,593,808	438,088	1,337,938	2,275,697	(4)	(4)
1939	253	413,280	674,846	368,904	569,724	1,147,548		
1937 [5]	265	n.a.	n.a.	438,043	717,425	1,376,314		
1929	318	n.a.	n.a.	354,877	622,556	1,319,419		
Steel foundries:								
1947	204	63,668	190,497	55,252	153,709	267,214	145,880	413,094
1939	164	35,567	55,415	30,088	41,942	90,234	45,232	135,466
1937 [5]	145	n.a.	n.a.	41,299	62,351	120,432	63,796	184,228
1929	168	n.a.	n.a.	39,697	66,459	142,287	63,063	205,350

See footnotes at end of table.

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TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS—Continued

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Total for Steel works and rolling mills and Steel foundries: [5]								
1947	419	564,467	$1,784,305	493,340	$1,491,647	$2,542,911		
1939	417	448,847	730,261	398,992	611,666	1,237,782		
1937	410	519,838	888,857	479,342	779,776	1,496,746		
1935	396	389,438	512,951	359,630	439,669	819,687		
1933	394	300,234	304,099	276,847	258,803	451,800		
1931	446	n.a.	n.a.	264,634	338,387	570,959		
1929	486	431,511	792,448	394,574	689,015	1,401,706		
1927	486	397,331	698,475	361,312	601,275	1,090,185		
1925	473	406,758	705,949	370,726	614,985	1,134,107	(4)	(4)
1923	489	428,474	737,880	388,201	637,825	1,109,927		
1921	494	262,487	413,862	235,515	324,987	476,534		
1919	500	421,826	737,518	375,088	637,637	1,148,326		
1914	427	274,110	225,658	248,716	188,142	327,839		
1909	446	260,715	189,392	240,076	163,201	328,222		
1904	415	221,892	140,352	207,562	122,492	232,761		
1899	445	190,703	111,769	183,249	102,336	206,317		
Electrometallurgical products:								
1947	19	9,628	29,285	8,175	23,449	55,493	$95,411	$150,904
1939 [6]	18	n.a.	n.a.	2,774	4,234	15,868	25,119	40,987
Gray-iron foundries:								
1947	1,654	173,776	512,177	157,361	441,657	732,647	440,024	1,172,671
1939 [7]	1,254	n.a.	n.a.	75,680	89,047	169,278	108,564	277,842
1937 [8]	1,227	n.a.	n.a.	91,573	112,148	200,155	122,405	322,560
Malleable-iron foundries:								
1947	78	29,862	90,811	26,659	76,750	121,661	62,739	184,400
1939	83	20,186	26,415	18,041	21,556	35,500	17,951	53,451
1937 [8]	84	n.a.	n.a.	23,713	28,819	45,512	24,004	69,516

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] Figures for years prior to 1935 do not include cost of contract work.

[3] For 1947, value of products shipped; for prior years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[4] Value of products shipped and cost of materials, etc. are omitted for this industry because each of these measures contains extensive duplication. The duplication arises because the products of some establishments are used as materials by other establishments classified in the same industry. (See text on industry and also GENERAL EXPLANATIONS—Duplication in cost of materials and value of products.)

[5] Prior to 1939 "Steel works and rolling mills" and "Steel foundries" constituted a single industry. The figures for 1937 and 1929 were obtained from special tabulations of the returns for those years. The separate industry figures for 1947, 1939, 1937, and 1929 have been combined in order that statistics can be shown for other years.

[6] The returns for 1939 have been retabulated to provide figures comparable with those for 1947. No comparable figures are available for prior years.

[7] The figures for 1939 and 1937 have been obtained by combining the figures for the former industries, "Gray-iron and semisteel castings" and "Cast-iron pipe and fittings." The figures for 1939 have also been adjusted for change in industry classifications of several establishments.

[8] "Malleable-iron foundries" and part of "Gray-iron foundries" formerly constituted one industry. Separate figures for each industry are, therefore, not available for years prior to 1937.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[**Money figures and man-hours in thousands.** For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Blast furnaces, total [1]	86	36,937	$112,018	32,697	66,065	$93,598	$328,060	$1,885,885	$1,713,945	$45,033
Northeast	29	13,813	42,272	12,244	24,550	35,224	120,704	538,129	658,833	13,818
New York	6	2,400	7,781	2,084	4,372	6,279	18,413	83,551	101,964	1,413
North Central	36	16,095	50,001	14,315	29,254	42,143	147,241	599,475	746,716	20,428
Illinois	6	3,454	9,704	3,000	6,312	7,721	34,083	132,591	166,674	9,332
South and West	21	7,029	19,745	6,138	12,261	16,231	60,115	248,281	308,396	10,787
Steel works and rolling mills, total [1]	215	500,799	1,593,808	438,088	871,625	1,337,938	2,275,697			318,037
Northeast	90	212,760	668,572	186,523	363,951	558,895	901,921			81,847
New York	12	26,032	83,176	22,759	45,881	70,155	99,925			8,738
Pennsylvania	69	178,623	558,721	156,987	304,187	467,141	772,272			70,318
North Central	79	198,843	655,888	174,051	353,283	555,491	968,448	(2)	(2)	131,866
Ohio	39	95,204	301,769	84,292	167,666	260,174	425,842			49,571
Illinois	17	33,165	112,422	28,954	62,105	94,668	171,104			14,711
Michigan	7	15,603	58,487	13,114	28,123	46,564	83,238			20,336
South	30	67,993	201,616	59,240	117,304	167,195	298,430			65,651
West	16	21,203	67,732	18,274	37,087	56,357	106,898			38,673

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947—Continued

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Electrometallurgical products, total [1]	19	9,628	$29,285	8,175	16,678	$23,449	$55,493	$95,411	$150,904	$5,295
Middle Atlantic	5	4,427	14,584	3,630	7,455	11,214	25,478	49,194	74,672	2,736
North Central	4	1,502	4,072	1,267	2,535	3,225	6,164	17,477	23,641	1,222
South and West	10	3,699	10,629	3,278	6,688	9,010	23,851	28,740	52,591	1,337
Gray-iron foundries, total [1]	1,654	173,776	512,177	157,361	328,474	441,657	732,647	440,024	1,172,671	54,097
New England	133	9,056	27,037	8,206	18,167	23,247	39,146	15,377	54,523	2,028
Vermont	7	620	1,555	569	1,232	1,319	1,944	865	2,809	99
Massachusetts	72	4,435	13,123	4,024	8,754	11,507	19,448	8,048	27,496	1,042
Connecticut	24	2,927	9,663	2,626	6,112	8,083	13,684	5,145	18,829	722
Middle Atlantic	323	29,791	88,827	27,020	57,442	76,992	128,293	80,952	209,245	8,648
New York	85	8,109	24,980	7,412	15,671	21,946	35,214	16,363	51,577	2,782
New Jersey	60	7,192	21,788	6,471	13,800	18,702	32,536	22,383	54,919	1,910
Pennsylvania	178	14,490	42,059	13,137	27,971	36,344	60,543	42,206	102,749	3,956
East North Central	566	89,413	276,882	80,232	164,801	237,796	378,201	229,402	607,603	28,261
Ohio	165	21,131	64,168	19,431	40,073	56,640	97,689	57,257	154,946	4,438
Indiana	92	8,889	26,658	8,115	16,904	23,288	39,496	19,052	58,548	2,921
Illinois	112	11,355	34,785	10,286	21,434	29,266	49,786	32,542	82,328	6,056
Michigan	131	40,146	127,052	35,862	71,947	108,677	155,539	101,791	257,330	12,874
Wisconsin	66	7,892	24,219	6,538	14,443	19,925	35,691	18,760	54,451	1,972
West North Central	137	8,924	24,548	8,138	17,596	21,369	36,993	20,360	57,353	2,661
Minnesota	45	2,241	6,369	2,052	4,232	5,529	10,357	5,421	15,778	750
Missouri	32	3,409	9,199	3,134	6,877	8,034	14,257	8,065	22,322	1,267
Nebraska	7	311	788	263	560	611	1,010	870	1,880	29
South	310	27,301	67,134	25,276	53,375	58,222	108,155	71,383	179,538	9,885
Maryland	16	1,339	3,390	1,218	2,560	2,930	6,104	3,743	9,847	310
Virginia	33	2,848	7,106	2,657	5,999	6,251	10,045	9,205	19,250	1,118
West Virginia	10	432	1,108	397	842	968	2,306	1,046	3,352	101
Florida	11	120	276	111	239	247	336	194	530	10
Kentucky	8	462	1,284	428	913	1,112	1,705	804	2,509	65
Mississippi	8	279	683	234	530	493	982	241	1,223	23
Texas	37	1,876	4,376	1,744	3,831	3,862	6,833	3,909	10,742	447
West	185	9,291	27,749	8,489	17,093	24,031	41,859	22,550	64,409	2,614
Oregon	20	675	1,913	613	1,091	1,708	2,937	1,604	4,541	59
California	111	6,176	19,035	5,630	11,440	16,465	28,907	13,863	42,770	2,132
Malleable-iron foundries, total [1]	78	29,862	90,811	26,659	54,650	76,750	121,661	62,739	184,400	8,184
New England	7	1,738	5,447	1,466	3,299	4,311	7,675	3,263	10,938	489
Middle Atlantic	18	5,087	14,736	4,548	9,149	12,700	19,637	8,811	28,448	876
Pennsylvania	7	2,463	6,316	2,223	4,261	5,499	8,140	4,124	12,264	337
East North Central	44	21,262	65,544	19,128	38,996	55,769	87,637	47,327	134,964	6,344
Ohio	13	5,931	17,964	5,332	10,630	15,153	25,423	13,515	38,938	1,430
Indiana	6	2,899	8,436	2,665	5,737	7,410	9,666	5,793	15,459	1,821
Illinois	11	4,881	14,918	4,386	8,847	12,680	19,146	9,584	28,730	1,441
Michigan	5	4,812	14,976	4,342	8,650	12,909	20,340	12,005	32,345	923
Wisconsin	9	2,739	9,250	2,403	5,132	7,617	13,062	6,430	19,492	729
West North Central	3	581	1,658	505	1,080	1,278	2,455	962	3,417	83
South and West	6	1,194	3,426	1,012	2,126	2,692	4,257	2,376	6,633	392
Steel foundries, total [1]	204	63,668	190,497	55,252	109,902	153,709	267,214	145,880	413,094	13,464
New England	7	883	2,768	762	1,663	2,283	4,018	2,093	6,111	(d)
Middle Atlantic	61	23,196	67,933	20,111	39,237	55,040	92,928	54,447	147,375	2,946
Pennsylvania	37	17,800	52,280	15,570	30,222	42,457	72,795	40,215	113,010	2,312
East North Central	72	29,271	91,098	25,360	50,546	72,829	129,977	68,615	198,592	8,018
Ohio	23	9,539	29,934	8,352	17,059	24,037	41,592	22,977	64,569	2,348
Indiana	7	4,824	15,063	4,040	8,256	11,475	17,189	12,876	30,065	2,799
Illinois	20	9,637	28,752	8,349	15,730	23,254	45,423	19,778	65,201	2,144
Michigan	13	2,912	9,230	2,598	5,213	7,659	12,345	8,078	20,423	395
Wisconsin	9	2,359	8,119	2,021	4,288	6,404	13,428	4,906	18,334	332
West North Central	12	3,243	8,927	2,825	5,740	7,202	12,567	6,929	19,496	(d)
South and West	52	7,075	19,771	6,194	12,716	16,355	27,724	13,796	41,520	(d)
Oregon	5	731	1,997	558	1,117	1,656	3,320	992	4,312	111

[d] Withheld to avoid disclosing figures for individual companies.

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Blast furnaces: *Northeast*, Massachusetts, 1; Pennsylvania, 22; *North Central*, Ohio, 23 (8,310); Indiana, 3; Michigan, 2; Minnesota, 2; *South and West*, Maryland, 1; Virginia, 1; West Virginia, 2; Kentucky, 1; Tennessee, 2; Alabama, 8 (3,336); Texas, 2; Colorado, 1; Utah, 2; California, 1.

Steel works and rolling mills: *Northeast*, Massachusetts, 3; Rhode Island, 1; Connecticut, 1; New Jersey, 4 (26,032); *North Central*, Indiana, 11 (46,860); Wisconsin, 2; Minnesota, 1; Missouri, 2; *South*, Delaware, 1; Maryland, 5 (22,436); Virginia, 1; West Virginia, 7 (14,595); Georgia, 1; Kentucky, 3 (4,979); Tennessee, 1; Alabama, 8 (19,308); Oklahoma, 1; Texas, 2; *West*, Colorado, 1; Utah, 1; Washington, 3 (1,722); Oregon, 1; California, 10 (10,866).

Electrometallurgical products: *Middle Atlantic*, New York, 3; Pennsylvania, 2; *North Central*, Ohio, 3; Iowa, 1; *South and West*, Virginia, 1; West Virginia, 1; South Carolina, 1; Tennessee, 2; Alabama, 1; Montana, 1; Washington, 1; Oregon, 1; California, 1.

Gray-iron foundries: *New England*, Maine, 11 (237); New Hampshire, 11 (413); Rhode Island, 8 (424); *West North Central*, Iowa, 30 (1,965); North Dakota, 2; South Dakota, 1; Kansas, 20 (984); *South*, North Carolina, 33 (1,104); South Carolina, 15 (524); Georgia, 20 (587); Tennessee, 31 (4,120); Alabama, 59 (12,884); Arkansas, 5 (74); Louisiana, 12 (214); Oklahoma, 12 (438); *West*, Montana, 2; Idaho, 1; Colorado, 18 (705); New Mexico, 1; Arizona, 2; Utah, 9 (623); Washington, 21 (824).

Malleable-iron foundries: *New England*, New Hampshire, 1; Massachusetts, 1; Rhode Island, 1; Connecticut, 4 (1,293); *Middle Atlantic*, New York, 9; New Jersey, 2; *West North Central*, Minnesota, 1; Iowa, 1; Missouri, 1; *South and West*, Delaware, 1; West Virginia, 1; North Carolina, 1; Texas, 1; California, 2.

Steel foundries: *New England*, Massachusetts, 5; Connecticut, 2; *Middle Atlantic*, New York, 17 (4,032); New Jersey, 7 (1,364); *West North Central*, Minnesota, 2; Iowa, 1; Missouri, 8 (2,316); Nebraska, 1; *South and West*, Delaware, 2; West Virginia, 2; North Carolina, 1; Georgia, 3 (198); Florida, 1; Alabama, 1; Arkansas, 1; Louisiana, 2; Oklahoma, 1; Texas, 5 (741); Colorado, 3 (363); Utah, 1; Washington, 6 (255); California, 18 (2,372).

[2] Value of products shipped and cost of materials, etc. are omitted for this industry because each of these measures contains extensive duplication. The duplication arises because the products of some establishments are used as materials by other establishments classified in the same industry. (See text on industry and also GENERAL EXPLANATIONS—Duplication in cost of materials and value of products.)

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry					
	Blast furnaces	Steel works and rolling mills	Electrometallurgical products	Gray-iron foundries	Malleable-iron foundries	Steel foundries
ALL ESTABLISHMENTS						
Number of establishments	86	215	19	1,654	78	204
All employees:						
Number (average for the year)	36,937	500,799	9,628	173,776	29,862	63,668
Salaries and wages, total	$112,018	$1,593,808	$29,285	$512,177	$90,811	$190,497
Production and related workers:						
Number (average for the year)	32,697	438,088	8,175	157,361	26,659	55,252
Man-hours, total ... thousands	66,065	871,625	16,678	328,474	54,650	109,902
Wages, total	$93,598	$1,337,938	$23,449	$441,657	$76,750	$153,709
Value added by manufacture	$328,060	$2,275,697	$55,493	$732,647	$121,661	$267,214
ESTABLISHMENTS REPORTING DETAILED STATISTICS						
Number of establishments	86	215	19	1,436	78	204
All employees:						
Number (average for the year)	36,937	500,799	9,628	171,764	29,862	63,668
Salaries and wages, total	$112,018	$1,593,808	$29,285	$507,962	$90,811	$190,497
Production and related workers:						
Number (average for the year)	32,697	438,088	8,175	155,510	26,659	55,252
Man-hours, total ... thousands	66,065	871,625	16,678	324,797	54,650	109,902
Wages, total	$93,598	$1,337,938	$23,449	$437,967	$76,750	$153,709
Value added by manufacture	$328,060	$2,275,697	$55,493	$727,297	$121,661	$267,214
Number of employees for pay period ended nearest Oct. 15:						
All employees	37,460	505,404	9,455	170,950	30,133	63,338
Male	36,962	487,271	9,067	165,014	28,028	60,490
Female	498	18,133	388	5,936	2,105	2,848
Production and related workers	33,340	440,946	8,016	154,798	26,808	54,932
Male	33,213	434,075	7,951	152,521	25,436	53,853
Female	127	6,871	65	2,277	1,372	1,079
Force-account construction workers	335	4,070	----	188	22	34
Administrative, supervisory, sales, and all other	3,785	60,388	1,439	15,964	3,303	8,372
Male	3,414	49,126	1,116	12,305	2,570	6,603
Female	371	11,262	323	3,659	733	1,769
All employees, number by month:						
January	35,367	491,706	9,429	170,881	29,586	65,175
February	35,623	493,882	9,577	172,351	30,138	63,603
March	35,926	494,547	9,700	173,630	30,090	64,496
April	36,086	497,038	9,775	172,828	30,046	64,320
May	36,717	499,689	9,772	172,767	30,168	64,095
June	37,586	508,152	9,790	172,938	30,046	63,225
July	37,537	502,138	9,553	170,363	27,511	62,368
August	37,881	508,280	9,614	171,625	29,810	62,981
September	37,583	503,923	9,608	171,039	29,536	63,444
October	37,460	505,404	9,455	170,950	30,133	63,338
November	37,706	502,049	9,559	170,430	30,450	63,079
December	37,696	502,567	9,684	170,623	30,736	63,780
Cost of materials, fuel, electricty, and contract work	$1,385,885	(1)	$95,411	$436,666	$62,739	$145,880
Materials, parts, containers, and supplies	[2] 751,673	(1)	74,193	383,478	50,982	120,604
Fuels, total	629,048	$345,407	7,699	37,939	8,803	10,589
Bituminous coal	4,776	42,699	3,157	2,333	3,715	1,440
Anthracite	1,207	1,882	8	387	170	38
Coke	[2] 617,472	9,973	4,229	28,881	2,509	479
Fuel oils	909	148,220	135	2,375	1,374	5,331
Gas	2,104	123,086	70	3,470	938	2,965
Other fuels	2,580	19,547	100	493	187	336
Purchased electric energy	5,060	74,581	13,519	11,967	2,655	11,538
Contract and commission work	104	12,322	----	3,282	209	3,149
Value of inventories:						
Beginning of year, total	$214,062	$611,588	$27,329	$73,373	$17,541	$49,386
Finished products	11,727	159,592	9,160	21,352	6,213	12,044
Materials, supplies, and work in process	202,335	451,996	18,169	52,021	11,328	37,342
End of year, total	223,015	742,827	31,826	88,854	23,400	66,313
Finished products	13,465	194,413	10,310	26,223	7,718	14,827
Materials, supplies, and work in process	209,550	548,414	21,516	62,631	15,682	51,486
Expenditures for plant and equipment:						
New plant and equipment	$45,033	$318,037	$5,295	$54,097	$8,184	$13,464
Construction and major alteration of fixed plants	35,981	112,274	1,571	16,217	1,573	2,874
Buildings	2,080	68,916	1,240	14,166	1,218	2,376
Other construction	33,901	43,358	331	2,051	355	498
Machinery and equipment	9,052	205,763	3,724	37,880	6,611	10,590
Production machinery and equipment	6,978	191,575	3,617	35,324	6,195	10,097
Other machinery and equipment	2,074	14,188	107	2,556	416	493
Used plant and equipment, and land	10,218	32,780	720	2,437	152	3,455
Number of highway-type motor vehicles owned or leased:						
Trucks	127	1,285	47	1,450	124	347
By manufacturer's rated capacity:						
Under 1½ tons	17	284	12	369	25	56
1½ tons	33	351	14	603	37	162
Over 1½ tons and less than 3½ tons	30	348	15	280	41	65
3½ tons and less than 5 tons	5	107	3	85	10	23
5 tons and over	42	195	3	113	11	41
By body type:						
Van	----	2	----	32	2	----
Stake or platform	19	497	14	614	37	144
Panel or light delivery	10	218	12	260	11	37
All other trucks	98	568	21	544	74	166
Truck tractors	3	118	2	71	16	19
Trailers and semitrailers	3	153	6	65	21	23

[1] Omitted because of duplication between cost of materials and value of products shipped. See text on industry.
[2] All coke used at blast furnaces is included with "Fuels" for census purposes.

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1–4 employees	5–9 employees	10–19 employees	20–49 employees	50–99 employees	100–249 employees	250–499 employees	500–999 employees	1,000–2,499 employees	2,500 employees and over
Blast furnaces:											
Number of establishments	86				1	2	32	27	18	6	
Number of employees (average for the year)	36,937				(d)	*192*	5,794	9,915	*21,056*	(d)	
Value added by manufacture	$328,060				(d)	*$2,003*	$49,027	$83,939	*$193,091*	(d)	
Steel works and rolling mills:											
Number of establishments	215				5	8	22	32	29	54	65
Number of employees (average for the year)	500,799				188	581	4,125	12,094	19,915	88,402	375,494
Value added by manufacture	$2,275,697				$891	$3,345	$20,068	$63,237	$107,035	$461,319	$1,619,802
Electrometallurgical products:											
Number of establishments	19			1	3	2	4	4	3	1	1
Number of employees (average for the year)	9,628			(d)	*122*	(d)	*931*	*8,575*	(d)	(d)	(d)
Value added by manufacture	$55,493			(d)	*$561*	(d)	*$7,391*	*$47,541*	(d)	(d)	(d)
Gray-iron foundries:											
Number of establishments	1,654	129	150	195	429	360	261	86	31	9	4
Number of employees (average for the year)	173,776	316	1,022	2,784	14,127	24,945	40,676	29,036	20,759	13,706	26,405
Value added by manufacture	$732,647	$1,064	$3,320	$9,395	$52,925	$106,254	$183,016	$136,271	$88,704	$56,598	$95,100
Malleable-iron foundries:											
Number of establishments	78		2			9	27	24	11	4	1
Number of employees (average for the year)	29,862		(d)			*687*	4,806	9,160	7,498	*7,711*	(d)
Value added by manufacture	$121,661		(d)			*$5,338*	$20,271	$36,985	$30,012	*$51,055*	(d)
Steel foundries:											
Number of establishments	204	7	8	8	24	21	56	45	22	12	1
Number of employees (average for the year)	63,668	19	50	111	742	1,378	9,710	15,686	15,260	*20,712*	(d)
Value added by manufacture	$267,214	$56	$182	$331	$2,750	$5,868	$39,116	$69,270	$61,066	*$88,575*	(d)

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[**Money figures in thousands of dollars**]

BLAST FURNACES INDUSTRY	Shipped by—		
	Blast furnaces industry	Other industries	All industries
Total shipments by the industry	$1,713,945		
A. Primary products of the industry	1,708,313		$1,708,313
Pig iron	1,551,397		1,551,397
Blast furnace ferro-alloys and other additives	85,884		85,884
Other blast furnace products (slag, blast furnace gas, sintered ore, and flue dust)	71,032		71,032
B. Secondary products	5,632		
C. Miscellaneous receipts			

ELECTROMETALLURGICAL PRODUCTS INDUSTRY	Shipped by—		
	Electrometallurgical products industry	Other industries	All industries
Total shipments by the industry	$150,904		
A. Electric furnace ferro-alloys and other additives [1]	133,363	$6,746	$140,109
B. Secondary products, scrap, and receipts for sintering ore owned by others	17,541		
C. Miscellaneous receipts			

STEEL WORKS AND ROLLING MILLS INDUSTRY [2]	Shipped by—		
	Steel works and rolling mills industry	Other industries	All industries
Total shipments by the industry	(3)		
A. Steel	(3)	(3)	(3)
Steel ingots	(d)	(d)	$140,376
Semifinished iron and steel shapes and forms	$1,029,528	$6,169	1,035,697
Plates	452,941		452,941
Steel hot rolled sheet and strip	1,141,018	263	1,141,281
Steel cold rolled sheet and strip	706,930	97,192	804,122
Tin and terne plate and black plate	(d)	(d)	499,053
Hot rolled bars and bar shapes	(d)	(d)	833,031
Steel cold finished bars and bar shapes	81,773	118,505	200,278
Pipe and tubes	661,760	161,764	823,524
Wire	212,446	101,347	313,793
All other steel works and rolling mill products	570,992		570,992
B. Secondary products	444,421		
Gray-iron castings	26,260		
Steel castings	22,047		
Closed die steel forgings	10,998		
Open die or smith steel forgings	47,637		
Nails, spikes, and brads	84,361		
Wire rope and cable	12,954		
Fence gates, fencing, etc.	38,362		
Wire cloth and woven wire products	18,326		
Miscellaneous wire products	63,484		
Bolts, nuts, washers, rivets, and screws, standard	33,572		
All other secondary products	86,420		
C. Miscellaneous receipts	135,172		
Contract and commission work	17,907		
Repair work	5,972		
Scrap and salable refuse	109,390		
Nonmanufacturing activities	1,903		

See footnotes at end of table.

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947 —Continued

GRAY-IRON FOUNDRIES INDUSTRY	Shipped by— Gray-iron foundries industry	Other industries	All industries
Total shipments by the industry	**$1,172,671**		
A. Gray-iron castings	1,066,061	$162,636	$1,228,697
B. Secondary products	98,114		
Malleable-iron castings	3,499		
Steel castings	20,710		
Nonferrous castings	11,796		
Foundry machinery and equipment	2,774		
Domestic cooking stoves, ranges, and appliances (except electric)	1,738		
All other secondary products	57,597		
C. Miscellaneous receipts	8,496		
Contract and commission work	3,236		
Repair work	2,972		
Scrap and salable refuse	1,042		
Nonmanufacturing activities	1,246		

MALLEABLE-IRON FOUNDRIES INDUSTRY	Shipped by— Malleable-iron foundries industry	Other industries	All industries
Total shipments by the industry	**$184,400**		
A. Malleable-iron castings	162,244	$16,180	$178,424
B. Secondary products	21,822		
Steel castings	9,697		
Gray-iron castings	6,304		
All other secondary products	5,821		
C. Miscellaneous receipts	334		

STEEL FOUNDRIES INDUSTRY	Shipped by— Steel foundries industry	Other industries	All industries
Total shipments by the industry	**$413,094**		
A. Steel castings	360,140	$73,941	$434,081
B. Secondary products	50,146		
Gray-iron castings	7,888		
All other secondary products (machined castings, etc.)	42,258		
C. Miscellaneous receipts	2,808		

[d] Withheld to avoid disclosing figures for individual companies.
[1] Including ferro-alloys produced in aluminothermic furnaces and as byproducts of chemical operations, but excluding blast furnace ferro-alloys.
[2] Values shown include values of interplant transfers and fees for processing materials owned by others, as well as value of shipments to other companies.
[3] Value of products shipped is omitted for this industry because it contains extensive duplication. The duplication arises because the products of some establishments are used as materials by other establishments classified in the same industry. (See text on industry and also GENERAL EXPLANATIONS—Duplication in cost of materials and value of products.)

TABLE 6-A.—SHIPMENTS OF BLAST FURNACE PRODUCTS IN THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars; quantity figures in short tons]

PRODUCT	1947 Quantity	1947 Value	1939 Quantity	1939 Value
Total		**$1,708,313**		**$543,800**
Pig iron (including pig iron with silicon content up to and including 6 percent silicon), total	58,339,942	1,551,397	34,711,800	492,672
For sale	8,094,413	251,982	[1] 4,660,123	[1] 87,915
For interplant transfer	50,245,529	1,299,415	[1] 30,640,143	[1] 433,293
Blast furnace ferro-alloys and other additives, total	986,647	85,884	588,466	28,536
For sale	691,528	49,867	(2)	(2)
For interplant transfer	295,119	36,017	(2)	(2)
Blast furnace gas (coal equivalent), total	10,072,830	52,925	6,817,285	21,088
For sale	233,943	1,503	6,817,285	21,088
For interplant transfer	9,838,887	51,422		
Slag, total	15,537,008	7,586	n.a.	1,504
For sale	13,965,774	6,732	n.a.	1,504
For interplant transfer	1,571,234	854		
Sintered ore and flue dust, total	2,806,522	10,521	n.a.	n.a.
For sale	626,917	1,031		
For interplant transfer	2,179,605	9,490		

n.a.—Not available.
[1] Includes shipments of blast furnace ferro-alloys.
[2] Included with shipments of pig iron.

TABLE 6-B.—PIG IRON SHIPPED FROM BLAST FURNACES IN THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars; quantity figures in short tons]

GRADE	1947 Quantity	1947 Value [1]	1939 Quantity	1939 Value [1]
Total	**58,367,510**	**$1,770,659**	**35,942,463**	**$626,825**
Charcoal			64,711	1,405
Foundry	3,156,157	95,147	2,414,579	40,820
Basic	44,947,995	1,356,926	26,386,348	448,264
Bessemer	6,850,065	209,790	5,172,653	98,823
Low-phosphorus	361,806	12,607	329,589	6,839
Malleable	2,787,901	88,359	1,438,583	27,776
All other (not ferro-alloys)	263,586	7,828	136,000	2,898

SOURCE: Bureau of Mines of the Department of the Interior.
[1] Value of pig iron shipped differs appreciably from the value shown in table 6-A, in that commercial values are reported by the Bureau of Mines. See text on Blast Furnaces for statement on Census valuation of pig iron.

TABLE 6-C.—SHIPMENTS OF PIG IRON, BY DIVISIONS AND STATES: 1947

[Money figures in thousands of dollars; quantity figures in short tons]

DIVISION AND STATE	Total shipments		Interplant transfers		Shipments to other companies	
	Quantity	Value	Quantity	Value	Quantity	Value
United States	**58,339,942**	**$1,551,397**	**50,245,529**	**$1,299,415**	**8,094,413**	**$251,982**
Middle Atlantic and South Atlantic	24,916,902	652,495	22,317,277	570,494	2,599,625	82,001
Pennsylvania	17,576,207	470,758	15,998,514	421,064	1,577,693	49,694
New York, Maryland, and West Virginia	7,340,695	181,737	6,318,763	149,430	1,021,932	32,307
East North Central	25,681,351	682,545	22,360,947	577,170	3,320,404	105,375
Ohio	12,303,040	321,735	10,481,647	263,370	1,821,393	58,365
Illinois	5,608,966	160,899	11,879,300	313,800	1,499,011	47,010
Indiana and Michigan	7,769,345	199,911				
East South Central (Kentucky, Tennessee, and Alabama)	4,622,553	126,501	3,202,942	86,301	1,419,611	40,200
Mountain and Pacific (Colorado, Utah, and California)	2,242,346	63,322	(d)	(d)	(d)	(d)
All other divisions (Massachusetts, Minnesota, and Texas)	876,790	26,534	(d)	(d)	(d)	(d)

d Withheld to avoid disclosing figures for individual companies.

TABLE 6-D.—FERRO-ALLOYS PRODUCED AND SHIPPED FROM FURNACES IN THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars; quantity figures in short tons. The quantity figures represent the gross weight of the ferro-alloys. The data below include production and shipments from blast furnaces, electric furnaces, and all other types of furnaces]

ALLOY	1947			1939		
	Production (quantity)	Shipments		Production (quantity)	Shipments	
		Quantity	Value		Quantity	Value
Total	**1,813,783**	**1,841,682**	**$220,022**	**823,392**	**942,101**	**$76,157**
Ferromanganese	614,626	614,647	79,973	302,524	332,226	24,137
Spiegeleisen	134,329	124,517	4,980	102,470	94,908	2,484
Ferrosilicon	769,653	766,316	53,271	313,560	385,081	16,850
Ferrophosphorus	33,072	81,169	2,016	17,321	14,918	898
Ferrotungsten	2,094	2,101	6,677	1,776	1,802	4,846
Ferrotitanium	7,681	8,189				
Ferrovanadium						
Ferromolybdenum	13,195	13,142	73,104	85,741	113,166	26,940
Molybdic oxide						
Calcium molydate and compounds						
Other varieties	239,133	231,601				
Ferroalloys reported to the Census	n.a.	*1,877,357*	*225,993*	*877,649*	[1] *877,649*	[1] *63,738*

SOURCE: Bureau of Mines of the Department of the Interior.
n.a.—Not available.
[1] Census data for 1939 represent production; 1939 data on shipments not available.

TABLE 6-E.—STEEL MILL PRODUCTS—PRODUCED, SHIPPED, TRANSFERRED, AND CONSUMED BY STEEL WORKS AND ROLLING MILLS, INDEPENDENT PIPE MILLS, AND WIRE DRAWING AND COLD ROLLING AND FINISHING ESTABLISHMENTS: 1947

[Tonnage figures shown in italics in "Shipments to other companies" include the quantities transferred to other plants of the same company as well as those shipped to other companies. The tonnage of each of these items transferred is a negligible part of the total, except for alloy steel mechanical tubing]

[Money figures in thousands of dollars; quantity figures in short tons]

PRODUCT	Receipts (quantity)	Production (quantity)	Products consumed in this plant: In the manufacture of *other steel* basic shapes and forms (quantity)	Products consumed in this plant: *In the manufacture of fabricated products* (quantity)	Products consumed in this plant: For maintenance, repair, and operating supplies (quantity)	Total shipments and interplant transfers: Shipments to other companies: Quantity	Total shipments and interplant transfers: Shipments to other companies: Value f.o.b. plant	Total shipments and interplant transfers: Transfers to other plants of the same company (quantity)
CARBON STEEL								
Ingots	1,994,833	77,244,331	76,828,386	37,460	12,966	1,178,805	$66,009	1,120,466
Semifinished shapes and forms:								
Blooms, billets, slabs, sheet bars, and tinplate bars	13,055,654	55,456,669	54,347,661	121,620	54,929	4,054,951	200,535	9,869,575
Tube rounds	1,107,835	2,671,942	2,685,483	----------	1,049	259,848	16,689	*661,111*
Skelp	1,427,483	3,350,686	3,753,096	44,328	2,381	568,336	28,108	*405,162*
Wire rods	574,983	5,361,660	4,229,861	30,356	2,896	981,639	71,943	658,405
Finished shapes and forms:								
Plates:								
Floor plates	416	229,179	----------	8	934	*226,268*	19,181	(1)
Plates, other than floor plates	44,432	6,213,516	16,010	108,504	61,037	5,342,427	347,138	700,901
Sheets and strip:								
Sheets:								
Hot rolled	1,719,669	8,367,015	1,319,834	49,806	16,658	6,749,814	448,221	1,806,868
Cold rolled	625,057	5,913,391	605,467	8,610	9,824	4,878,723	376,838	982,744
Galvanized	3,777	1,501,761	33	65,623	2,721	1,325,794	136,938	118,280
Electrical and enameling	----------	398,755	----------	----------	412	*393,051*	35,217	(1)
Long ternes	----------	148,678	----------	----------	----------	*148,363*	14,916	(1)
Strip:								
Hot rolled	906,849	2,240,343	912,003	8,747	10,465	2,015,685	165,101	193,955
Cold rolled	140,562	1,578,800	136,346	45,127	700	1,400,248	175,890	103,441
Galvanized	32	62,019	----------	4,572	90	*57,461*	9,463	(1)
Tin mill products:								
Black plate:								
Chemically treated	8,399	27,312	----------	----------	----------	*39,044*	3,796	(1)
Except chemically treated	173,579	980,140	152,095	----------	3,791	740,209	60,153	264,350
Tin plate:								
Hot dipped	207	1,894,896	435	----------	233	1,900,411	226,330	2,471
Electrolytic	1,931	1,791,216	----------	----------	102	1,678,900	167,318	99,723
Terne plate (short ternes)	----------	100,449	----------	----------	----------	*99,280*	10,025	(1)
Structural shapes and piling	54,825	5,075,193	58,175	23,987	28,242	4,191,792	246,464	808,205
Bars:								
Hot rolled bars, except concrete reinforcing	1,150,642	7,267,973	1,139,634	445,882	43,618	5,890,995	404,975	862,364
Concrete reinforcing bars:								
Rolled from new billets	4,831	1,277,318	----------	156,804	6,451	1,040,071	68,892	81,707
Rolled from old materials (rails, axles, etc.)	444	*255,756*	----------	----------	524	*256,743*	20,664	(1)
Cold finished bars	7,668	1,354,148	3,787	4,355	549	1,327,919	140,813	33,448
Tool steel bars	834	*21,410*	118	14	121	20,031	7,449	1,588
Rails, wheels, and track accessories:								
Rails:								
Standard tee (over 60 lb. per yard)	3,775	2,233,770	1,758	12,404	7,337	2,175,265	119,876	37,781
Light tee (60 lb. per yard and under)	64	*194,222*	----------	5,014	315	181,185	12,626	10,565
All other (girder, guard, etc.)	----------	*30,780*	----------	903	129	29,383	2,505	2,263
Rail joints and tie plates	2,697	760,827	----------	3,450	1,019	747,750	49,373	11,837
Wheels, rolled (including tires and rims)	148	411,963	591	12	1,706	*388,944*	47,614	26,823
Pipe and tubes:								
Standard pipe	17,504	2,361,126	1,419	30	10,938	2,242,945	202,385	119,604
Line pipe	4,367	*1,502,882*	----------	----------	121	1,491,299	129,104	21,669
Oil country goods	9,565	*1,169,982*	----------	598	111	*1,190,510*	122,789	(1)
Pressure tubing	651	344,361	552	----------	168	*338,311*	62,031	(1)
Mechanical tubing	16,143	555,996	15,359	1,300	490	541,159	94,045	5,203
Miscellaneous	61,470	211,892	8,216	1,285	74	195,016	27,955	59,638
Steel pipe and tubes, not reported by kind: [2]								
Welded steel pipe	n.a.	*158,666*	----------	n.a.	n.a.	158,666	32,380	----------
Heavy riveted steel pipe	n.a.	1,357	----------	n.a.	n.a.	1,357	408	----------
Welded steel tubing	n.a.	22,668	----------	n.a.	n.a.	22,668	8,244	----------
Wire:								
Plain wire	81,259	3,271,927	102,073	1,327,308	6,492	1,732,083	197,930	[3] 206,932
Galvanized wire	2,452	1,054,033	9,528	723,645	1,783	327,266	44,143	[3] 51,149
Other coated wire	136	117,757	----------	25,468	291	84,634	15,994	[3] 5,324
Other rolled and drawn carbon steel products (axles, track spikes and bolts, etc.)	3,630	406,110	3,980	----------	1,296	296,356	30,339	49,980

See footnotes at end of table.

TABLE 6-E.—STEEL MILL PRODUCTS—PRODUCED, SHIPPED, TRANSFERRED, AND CONSUMED BY STEEL WORKS AND ROLLING MILLS, INDEPENDENT PIPE MILLS, AND WIRE DRAWING AND COLD ROLLING AND FINISHING ESTABLISHMENTS: 1947—Continued

PRODUCT	Receipts (quantity)	Production (quantity)	Products consumed in this plant			Total shipments and interplant transfers		
			In the manufacture of other steel basic shapes and forms (quantity)	In the manufacture of fabricated products (quantity)	For maintenance, repair, and operating supplies (quantity)	Shipments to other companies		Transfers to other plants of the same company (quantity)
						Quantity	Value f.o.b. plant	
ALLOY STEEL (EXCEPT STAINLESS)								
Ingots	45,120	6,737,548	6,602,252	66,268	3,097	23,949	$2,184	56,322
Semifinished shapes and forms:								
Blooms, billets, slabs, sheet bars, and skelp	997,031	4,700,130	4,510,954	71,387	2,969	283,680	25,023	852,682
Tube rounds	277,391	440,692	425,924		114	40,849	4,561	257,289
Finished shapes and forms:								
Plates	1,317	182,047	9,663	7,925	1,390	166,193	20,493	7,439
Sheets and strip:								
Sheets:								
Hot rolled	162,407	672,983	154,727	3,000	119	491,637	63,954	179,627
Cold rolled	16,418	226,443	15,033		231	208,661	23,395	16,494
Electrical and enameling	8,194	310,327			7	*315,225*	45,458	(1)
Strip:								
Hot rolled	71,981	71,024	72,333		15	53,842	6,235	16,757
Cold rolled	5,644	103,252	5,549			89,593	19,427	10,482
Bars:								
Hot rolled	154,007	2,032,651	137,410	24,018	1,891	1,790,108	180,351	208,892
Cold finished	1,343	239,111	635	265	230	217,644	38,958	18,266
Tool steel bars:								
High speed	255	18,506		367	86	17,295	21,942	1,073
Other than high speed	847	45,301		190	194	43,868	27,534	2,485
Pipe and tubes:								
Oil country goods	223	229,364			29	*232,232*	29,398	(1)
Pressure tubing		26,906			3	*27,260*	9,290	(1)
Mechanical tubing	20,115	175,080	13,932		50	*181,002*	27,321	(1)
Miscellaneous (including standard and line)	5	23,090				8,400	2,450	11,707
Wire	1,024	72,534	1,426	12,707		46,407	14,573	[3] 7,694
Other rolled and drawn alloy steel products (structural steel, etc.)	289	80,151	1,318	10,419	215	65,279	5,890	2,992
STAINLESS STEEL								
Ingots	92,516	541,628	535,637	2,363		14,942	3,268	78,983
Semifinished shapes and forms (blooms, billets, slabs, sheet bars, tube rounds, and wire rods)	264,421	428,941	442,684	1,000	466	51,262	16,104	205,781
Finished shapes and forms:								
Plates	16,274	34,056	15,939	148	375	16,730	14,705	15,717
Sheets and strip:								
Sheets:								
Hot rolled	81,654	127,552	80,937		29	59,701	44,006	65,778
Cold rolled	4,921	71,779	4,168		40	70,741	58,347	647
Strip:								
Hot rolled	10,102	10,430	10,010			9,835	4,271	199
Cold rolled	1,844	110,228	1,786	188	509	103,744	71,314	3,028
Bars:								
Hot rolled	4,498	29,249	4,570	280	125	23,491	14,964	4,730
Cold finished	25	23,364			13	22,483	16,933	580
Pipe and tubes:								
Pressure tubing		7,082			2	*6,701*	10,114	(1)
Mechanical tubing	348	8,866	345		5	8,813	16,349	
Wire	1,009	11,577	451	854	11	11,018	10,948	[3] 472
Other rolled and drawn stainless steel products	39	1,000				150	326	864
WROUGHT IRON								
Wrought iron products	n.a.	n.a.	n.a.	n.a.	n.a.	128,643	22,191	n.a.

n.a.—Not available.
[1] Included in "Shipments to other companies."
[2] Includes a small quantity of alloy and stainless steel pipe and tubes.
[3] Includes a small quantity of wire drawn on a toll basis.

TABLE 6-F.—STEEL MILL PRODUCTS—TOTAL SHIPMENTS AND INTERPLANT TRANSFERS: 1947 AND 1939

[Figures shown in italics in "Shipments to other companies" include transfers to other plants of the same company as well as those shipped to other companies]

[Money figures in thousands of dollars; quantity figures in short tons]

PRODUCT	1947			1939			
	Shipments to other companies		Interplant transfers	Shipments to other companies		Interplant transfers	
	Quantity	Value f.o.b. plant	Quantity	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Ingots	1,217,696	$71,461	1,255,771	135,056	$6,257	325,422	$7,725
Carbon steel	1,178,805	66,009	1,120,466	n.a.	n.a.	n.a.	n.a.
Alloy steel	23,949	2,184	56,322				
Stainless steel	14,942	3,268	78,983				
Semifinished shapes and forms	6,240,565	362,963	12,910,005	5,091,037	172,620	7,529,639	198,681
Carbon steel blooms, billets, slabs, sheet bars, and tin plate bars	4,054,951	200,535	9,869,575	n.a.	n.a.	n.a.	n.a.
Carbon steel tube rounds	259,848	16,689	661,111				
Carbon steel skelp	568,336	28,108	405,162				
Carbon steel wire rods	981,639	71,943	658,405				
Alloy steel blooms, billets, slabs, sheet bars, and skelp	283,680	25,023	852,682				
Alloy steel tube rounds	40,849	4,561	257,289				
Stainless steel blooms, billets, slabs, sheet bars, tube rounds, and wire rods	51,262	16,104	205,781				
Finished shapes and forms:							
Plates	5,751,618	401,967	[1] 724,057	[3] *3,246,066*	[3] *104,581*	(2)	(2)
Carbon steel floor plates	*226,208*	19,181	(2)	n.a.	n.a.	n.a.	n.a.
Other carbon steel plates	5,342,427	347,138	700,901				
Alloy steel plates	166,193	20,943	7,439				
Stainless steel plates	16,730	14,705	15,717				
Hot rolled sheets and strip	11,620,408	973,780	[1] 2,381,464	7,693,064	406,388	[1] 1,445,405	[1] 47,104
Sheets:							
Carbon steel	6,749,814	448,221	1,806,868	4,612,207	215,278	1,291,541	38,737
Alloy steel	491,637	63,954	179,627				
Stainless steel	59,701	44,006	65,778	(4)	(4)	(4)	(4)
Galvanized	1,325,794	136,938	118,280	*1,619,476*	*111,832*	(2)	(2)
Electrical and enameling:							
Carbon steel	*393,051*	35,217	(2)	(5)	(5)	(5)	(5)
Alloy steel	*315,225*	45,458	(2)				
Long ternes	*148,963*	14,916	(2)				
Strip:							
Carbon steel	2,015,685	165,101	193,955	1,424,898	65,981	153,864	8,367
Alloy steel	53,842	6,235	16,757				
Stainless steel	9,835	4,271	199	*36,483*	*13,297*	(2)	(2)
Galvanized	*57,401*	9,463	(2)	(6)	(6)	(6)	(6)
Cold rolled sheets and strip	6,751,710	725,211	1,116,836	*3,524,814*	*209,642*	(2)	(2)
Sheets:							
Carbon steel	4,878,723	376,838	982,744	*2,767,526*	*137,285*	(2)	(2)
Alloy steel	208,661	23,395	16,494				
Stainless steel	70,741	58,347	647				
Strip:							
Carbon steel	1,400,248	175,890	103,441	*757,288*	*72,357*	(2)	(2)
Alloy steel	89,593	19,427	10,482				
Stainless steel	103,744	71,314	3,028				
Tin and terneplate and black plate	4,457,844	467,622	[1] 366,544	3,338 076	288,855	[1] 495,144	[1] 18,001
Black plate:							
Chemically treated	*39,044*	3,796	(2)	482,413	29,193	495,144	18,001
Except chemically treated	740,209	60,153	264,350				
Tin plate:							
Hot dipped	1,900,411	226,330	2,471	*2,560,721*	*235,946*	(2)	(2)
Electrolytic	1,678,900	167,318	99,723				
Terneplate (short ternes)	*99,280*	10,025	(2)	*294,942*	*23,716*	(2)	(2)
Hot rolled bars	9,082,602	746,771	[1] 1,162,839	4,810,339	261,963	[1] 715,438	[1] 35,435
Hot rolled bars, except concrete reinforcing:							
Carbon steel	5,890,995	404,975	862,364	[7] 2,809,554	[7] 133,598	[7] 603,941	[7] 26,958
Alloy steel	1,790,108	180,351	208,892	752,637	73,176	111,497	8,477
Stainless steel	23,491	14,964	4,730	[8] *22,739*	[8] *10,528*	(2)	(2)
Concrete reinforcing bars:							
Rolled from new billets	1,040,071	68,892	81,707	*1,225,409*	*44,661*	(2)	(2)
Rolled from old materials (rails, axles, etc.)	*256,743*	20,664	(2)				
Tool steel bars:							
Carbon steel	20,031	7,449	1,588	(9)	(9)	(9)	(9)
Alloy steel:							
High speed	17,295	21,942	1,073	(9)	(9)	(9)	(9)
Other than high speed	43,868	27,534	2,485	(9)	(9)	(9)	(9)
Cold finished bars	1,568,046	196,704	52,294	*692,847*	*62,456*	(2)	(2)
Carbon steel	1,327,919	140,813	33,448	n.a.	n.a.	n.a.	n.a.
Alloy steel	217,644	38,958	18,266				
Stainless steel	22,483	16,933	580				

See footnotes at end of table.

TABLE 6-F.—STEEL MILL PRODUCTS—TOTAL SHIPMENTS AND INTERPLANT TRANSFERS: 1947 AND 1939—Continued

PRODUCT	1947			1939			
	Shipments to other companies		Interplant transfers	Shipments to other companies		Interplant transfers	
	Quantity	Value f.o.b. plant	Quantity	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Finished shapes and forms:—Continued							
Pipe and tubes	**6,646,139**	**$774,263**	[1] 217,821	[10] *3,886,513*	*$321,814*	(2)	(2)
Standard pipe, carbon steel	2,242,945	202,385	119,604				
Line pipe, carbon steel	1,491,299	129,104	21,669				
Oil country goods:							
Carbon steel	*1,190,310*	122,789	(2)				
Alloy steel	*232,232*	29,398	(2)				
Pressure tubing:							
Carbon steel	*338,311*	62,031	(2)				
Alloy steel	*27,260*	9,290	(2)	n.a.	n.a.	n.a.	n.a.
Stainless steel	*6,701*	10,114	(2)				
Mechanical tubing:							
Carbon steel	541,159	94,045	5,203				
Alloy steel	*181,002*	27,321	(2)				
Stainless steel	8,813	16,349	----------				
Miscellaneous pipe and tubes:							
Carbon steel	195,016	27,955	59,638				
Alloy steel (including standard and line)	8,400	2,450	11,707				
Steel pipe and tubes, not reported by kind:							
Welded steel pipe	158,666	32,380	----------	----------	----------	----------	----------
Heavy riveted steel pipe	1,357	408	----------	----------	----------	----------	----------
Welded steel tubing	22,668	8,244	----------	----------	----------	----------	----------
Wire	**2,201,408**	**283,588**	[11] 271,571	[12] **1,183,052**	**96,706**	**192,210**	**$14,061**
Carbon steel plain wire	1,732,083	197,930	[11] 206,932				
Carbon steel galvanized wire	327,266	44,143	[11] 51,149				
Carbon steel other coated wire	84,634	15,994	[11] 5,324	n.a.	n.a.	n.a.	n.a.
Alloy wire	46,407	14,573	[11] 7,694				
Stainless steel wire	11,018	10,948	[11] 472				
All other steel mill products	**8,204,747**	**537,204**	[13] **951,310**	n.a.	n.a.	n.a	n.a.
Structural shapes and piling	4,191,792	246,464	808,205	*3,140,866*	*131,578*	(2)	(2)
Rails, wheels, and track accessories:							
Rails:							
Standard tee (over 60 lb. per yard)	2,175,265	119,876	37,781				
Light tee (60 lb. per yd. and under)	181,185	12,626	10,565	*1,316,272*	*48,162*	(2)	(2)
All other (girder, guard, etc.)	29,383	2,505	2,263				
Rail joints and tie plates	747,750	49,373	11,837	*517,420*	*25,159*	(2)	(2)
Wheels, rolled (including tires and rims)	388,944	47,614	26,823	*159,484*	*13,129*	(2)	(2)
Other rolled and drawn steel products:							
Carbon steel	296,356	30,339	49,980	n.a.[4]	n.a.	n.a.	n.a.
Alloy steel	65,279	5,890	2,992	n.a.	n.a.	n.a.	n.a.
Stainless steel	150	326	864	n.a.	n.a.	n.a.	n.a.
Wrought iron products	128,643	22,191	n.a.	n.a.	n.a.	n.a.	n.a.

NOTE: Values of interplant transfers for individual items are not available; however, interplant transfers by product classes are as follows: Ingots, $113,721,000; semifinished shapes and forms, $627,928,000; plates, $50,974,000; hot rolled sheets and strip, $200,501,000; cold rolled sheets and strip, $45,911,000; tin and terneplate and black plate, $31,431,000; hot rolled bars, $86,260,000; cold finished bars, $3,574,000; pipe and tubes, $49,261,000; wire, $26,234,000; all other steel mill products, $33,788. See table 5 for total shipments by product class.

n.a.—Not available.

[1] Does not include the interplant transfers of the items indicated by footnote [3]. For 1947, the tonnage of these interplant transfers is included with shipments to other companies, but the value of these transfers is not included with the value of shipments to other companies. For 1939, both quantity and value of interplant transfers are included with shipments to other companies.

[2] Included in shipments to other companies.

[3] Includes interplant transfers and a small quantity of stainless steel sheets.

[4] Included with steel plates.

[5] Electrical and enameling sheets are included with carbon and alloy steel sheets; long ternes are included with terneplates (short ternes).

[6] Included in galvanized sheets.

[7] Includes bolt and nut rods and chain and spike rods.

[8] Includes a small quantity of stainless steel rods.

[9] Included in hot rolled bars.

[10] Does not include a small quantity of mechanical tubing valued at $3,725,382.

[11] Includes a small quantity of wire produced on a toll basis for other companies.

[12] Includes 21,917 tons of cold rolled wire made from drawn wire valued at $3,164,491 for sale and interplant transfer.

[13] Does not include interplant transfers of wrought iron products.

TABLE 6-G.—NET SHIPMENTS OUT OF STEEL WORKS AND ROLLING MILLS AND INDEPENDENT PIPE MILLS, COLD ROLLING AND DRAWING ESTABLISHMENTS, AND WIRE DRAWING ESTABLISHMENTS: 1947

[The tonnage figures have been derived by subtracting the steel mills' receipts of each steel mill shape from the total of their shipments, transfers to other plants, consumption for use in the production of manufactured products, and consumption as maintenance, repair, and operating supplies in the steel mill. The term "steel mill" as used here, includes independent pipe mills, cold rolling and drawing establishments, and wire drawing establishments, in addition to steel works and rolling mills. Net shipment figures include wire produced on a toll basis]

[All figures in short tons]

PRODUCT	Net shipments
Total	**63,366,149**
CARBON STEEL	
Ingots	354,864
Semifinished shapes and forms	[1] 1,550,631
Finished shapes and forms:	
Plates:	
Floor plates	226,794
Plates, other than floor plates	6,184,447
Sheets and strip:	
Sheets:	
Hot rolled	6,903,477
Cold rolled	5,254,844
Galvanized	1,508,641
Electrical and enameling	393,463
Long ternes	148,363
Strip:	
Hot rolled	1,322,003
Cold rolled	1,408,954
Galvanized	62,091
Tin mill products:	
Black plate:	
Chemically treated	30,645
Except chemically treated	834,771
Tin plate:	
Hot dipped	1,902,968
Electrolytic	1,776,794
Terneplate (short ternes)	99,280
Structural shapes and piling	4,997,401
Bars:	
Hot rolled bars, except concrete reinforcing	6,092,217
Concrete reinforcing bars:	
Rolled from new billets	1,280,202
Rolled from old materials (rails, axles, etc.)	256,823
Cold finished bars	1,358,603
Tool steel bars	20,920
Rails, wheels, and track accessories:	
Rails:	
Standard tee (over 60 lb. per yd.)	2,229,012
Light tee (60 lb. per yd. and under)	197,015
All other (girder, guard, etc.)	32,678
Rail joints and tie plates	761,359
Wheels, rolled (including tires and rims)	417,337
Pipe and tubes:	
Standard pipe	2,356,013
Line pipe	1,508,722
Oil country goods	1,181,454
Pressure tubing	337,828
Mechanical tubing	532,009
Miscellaneous	194,543
Steel pipe and tubes, not reported by kind: [2]	
Welded steel pipe	158,666
Heavy riveted steel pipe	1,357
Welded steel tubing	22,668
Wire:	
Plain wire	3,191,556
Galvanized wire	1,101,391
Other coated wire	115,581
Other rolled and drawn carbon steel products (axles, track spikes and bolts, etc.)	344,002
ALLOY STEEL (EXCEPT STAINLESS)	
Ingots	104,516
Semifinished shapes and forms	234,548
Finished shapes and forms:	
Plates	181,630
Sheets and strip:	
Sheets:	
Hot rolled	511,976
Cold rolled	208,968
Electrical and enameling	307,038
Strip:	
Hot rolled	(1)
Cold rolled	94,431
Bars:	
Hot rolled	1,870,902
Cold finished	235,062
Tool steel bars:	
High speed	18,566
Other than high speed	45,890
Pipe and tubes:	
Oil country goods	232,038
Pressure tubing	27,263
Mechanical tubing	160,937
Miscellaneous (including standard and line)	20,102
Wire	65,784
Other rolled and drawn alloy steel products (structural steel, etc.)	78,616
STAINLESS STEEL	
Ingots	3,772
Semifinished shapes and forms	(1)
Finished shapes and forms:	
Plates	16,696
Sheets and strip:	
Sheets:	
Hot rolled	43,854
Cold rolled	66,507
Strip:	
Hot rolled	(1)
Cold rolled	105,625
Bars:	
Hot rolled	24,128
Cold finished	23,051
Pipe and tubes:	
Pressure tubing	6,703
Mechanical tubing	8,470
Wire	11,346
Other rolled and drawn stainless steel products	975
WROUGHT IRON PRODUCTS	
Wrought iron products	128,643

[1] Net shipments amount to zero for all practical purposes for some products. Due to material in transit, this results in negative figures for a few items. Negative figures have been replaced by footnote [1] where these occur, but they have been subtracted from the total net shipments. A few individual types of carbon steel semifinished products also resulted in negative figures, although net shipments were positive for carbon steel semifinished products as a whole.

[2] Includes a small quantity of alloy and stainless steel pipe and tubes.

TABLE 6-H.—CONSUMPTION OF STEEL MILL PRODUCTS FOR FURTHER MANUFACTURED PRODUCTS AND FOR MAINTENANCE, REPAIR, AND OPERATING SUPPLIES, IN STEEL WORKS AND ROLLING MILLS, INDEPENDENT PIPE MILLS, WIRE DRAWING ESTABLISHMENTS, AND COLD ROLLING, DRAWING, AND FINISHING ESTABLISHMENTS: 1947

[All figures in short tons]

CLASS OF PRODUCT	Consumption		
	Total	For further manufactured products	For maintenance, repair, and operating supplies
Steel mill shapes and forms, total	**3,763,777**	**3,458,599**	**305,178**
Carbon steel:			
Bars and bar shapes	658,318	607,055	51,263
Sheets and strip	223,355	182,485	40,870
Structural shapes and piling	52,229	23,987	28,242
Plates	170,483	108,512	61,971
Wire	2,084,987	2,076,421	8,566
All other mill shapes and forms	360,811	258,760	102,051
Steel mill shapes and forms—Continued			
Alloy steel, except stainless:			
Bars and bar shapes	27,241	24,840	2,401
All other mill shapes and forms	179,945	171,706	8,239
Stainless steel	6,408	4,833	1,575

TABLE 6-I.—PRODUCTION OF STEEL INGOTS AND STEEL FOR CASTINGS, BY TYPE OF FURNACE: 1947 AND 1939

[All figures in short tons]

PRODUCT	Total		Steel ingots		Steel for castings	
	1947	1939	1947	1939	1947	1939
Total	**84,714,857**	**53,522,122**	**84,523,507**	**52,700,402**	**191,350**	**821,720**
Open hearth:	76,765,307	48,728,924	76,621,229	48,206,338	144,078	522,586
Basic	76,156,743	48,066,786	76,096,052	47,803,180	60,691	263,606
Acid	608,564	662,138	525,177	403,158	83,387	258,980
Electric arc [2]	3,717,195	[1] 1,322,686	3,628,445	1,028,552	47,272	[1] 294,134
Electric induction [2]			41,478			
Bessemer and crucible [2]	4,232,355	3,470,512	4,232,355	3,465,512		5,000

[1] Includes 4,547 short tons of steel for castings not reported by kind of furnace.
[2] Crucible ingots and steel for castings were combined with electric furnace steel in 1939.

TABLE 6-J.—PRODUCTION OF STEEL INGOTS AND STEEL FOR CASTINGS, BY GRADE OF STEEL AND TYPE OF PROCESS: 1947

[All figures in short tons]

TYPE OF PROCESS	Steel ingots				Steel for castings			
	Total	Carbon	Alloy, except stainless	Stainless	Total	Carbon	Alloy, except stainless	Stainless
Total	**84,523,507**	**77,244,331**	**6,737,548**	**541,628**	**191,350**	**161,819**	**28,182**	**1,349**
Open hearth:								
Basic	76,096,052	70,602,345	5,493,707		60,691	58,462	2,229	
Acid	525,177	430,515	94,662		83,387	76,544	6,843	
Electric arc	3,628,445	1,978,588	1,126,848	523,009	47,272	26,813	19,110	1,349
Electric induction	41,478	528	22,331	18,619				
Bessemer and crucible	4,232,355	4,232,355						

TABLE 6-K.—PRODUCTION OF STEEL INGOTS, BY GRADE OF STEEL, FOR DIVISIONS AND STATES: 1947

[All figures in short tons]

DIVISION AND STATE	Total	Carbon	Alloy, including stainless
United States	**84,523,507**	**77,244,331**	**7,279,176**
Middle Atlantic	29,361,702	26,405,343	2,956,359
New York and New Jersey	4,299,848	3,893,224	406,624
Pennsylvania	25,061,854	22,512,119	2,549,735
East North Central	37,783,110	33,820,418	3,962,692
Ohio	17,262,285	15,240,962	2,021,323
Indiana and Michigan	13,472,631	12,287,450	1,185,181
Illinois	7,048,194	6,292,006	756,188
South Atlantic	6,636,826	(d)	(d)
East South Central	4,421,866	(d)	(d)
Mountain and Pacific	4,309,108	4,247,340	52,686
California	1,771,737	(d)	(d)
Colorado, Utah, Washington, and Oregon	2,528,371	(d)	(d)
Other divisions	2,019,895	1,958,789	61,106

[d] Withheld to avoid disclosing figures for individual companies.

TABLE 6-L.—QUANTITY AND VALUE OF IRON AND STEEL CASTINGS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars; quantity figures in short tons]

PRODUCT	1947							1939		
	Shipments and interplant transfers						Produced and consumed in the same plant (quantity)	Total shipments and interplant transfers		Produced and consumed in the same plant (quantity)
	Total		Interplant transfers		All other shipments					
	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant	
Gray-iron castings, total	**9,323,615**	**$1,228,697**	**2,401,242**	**$257,018**	**6,922,373**	**$971,679**	**3,537,141**	**5,274,056**	**$370,439**	**1,848,122**
Gray-iron castings, shipped by establishments classified in foundry industries, total	7,415,863	1,085,932	1,126,625	191,654	6,289,238	894,278	147,139	n.a.	n.a.	n.a.
Miscellaneous gray-iron castings	4,180,927	843,643	970,428	183,329	3,210,499	660,314	139,791			
Ingot molds and stools for heavy steel ingots	869,205	45,813	86,523	4,144	782,682	41,669	----------			
Chilled iron railroad car wheels:										
Made on a conversion basis	529,761	15,418	228	7	529,533	15,411	----------			
Made from manufacturer-owned metal	222,851	18,491	69,073	4,133	153,778	14,358	----------			
Cast iron pipe (including fittings that do not require machining, threading, or assembling):										
Pressure pipe	1,035,930	93,677	373	41	1,035,557	93,636	7,348			
Soil pipe	577,189	68,890	----------	----------	577,189	68,890	----------			
Malleable-iron castings, total	**694,661**	**178,424**	**165,541**	**28,316**	**529,120**	**150,108**	**207,466**	**427,040**	**58,898**	**81,000**
Malleable-iron castings, shipped by establishments classified in foundry industries	641,951	169,658	148,187	26,561	493,764	143,097	17,249	n.a.	n.a.	n.a.
Steel castings, total	**1,413,412**	**434,081**	**180,271**	**36,719**	**1,233,141**	**397,362**	**212,369**	**[1] 691,913**	**[1] 129,726**	**129,807**
Steel castings, shipped by establishments classified in foundry industries, total	1,237,804	391,090	111,436	30,226	1,126,368	360,864	24,444	n.a.	n.a.	n.a.
Carbon steel castings:										
Railway specialties	324,437	67,240	6,826	1,454	317,611	65,786	----------			
Other carbon steel castings	672,224	214,199	95,800	25,512	576,424	188,687	20,230			
Alloy steel castings, other than heat, corrosion, and wear resistant:										
Railway specialties	19,627	5,180	----------	----------	19,627	5,180	----------			
Other alloy steel castings	194,608	72,496	8,498	2,839	186,110	69,657	4,099			
High alloy steel castings (heat, corrosion, and wear resistant)	26,908	31,975	312	421	26,596	31,554	115			

n.a.—Not available.
[1] Includes 7,104 tons valued at $6,735,000 of high alloy steel castings (heat, corrosion, and wear resistant) shipped to other companies.

TABLE 6-M.—IRON AND STEEL CASTINGS SHIPPED, TRANSFERRED, AND PRODUCED AND CONSUMED IN THE SAME PLANT: 1947

[All figures in short tons]

PRODUCT	Sold to other companies	Transferred to other plants of the same company	Produced and consumed in the same plant
Gray-iron castings:			
Miscellaneous gray-iron castings	3,843,634	2,245,076	2,525,591
Ingot molds and stools for heavy steel ingots	782,682	86,523	1,004,171
Chilled iron railroad car wheels:			
Made on a conversion basis	529,533	228	----------
Made from manufacturer-owned metal	153,778	69,073	----------
Cast iron pipe (including fittings that do not require machining, threading, or assembling):			
Pressure pipe	1,035,557	373	7,348
Soil pipe	577,189	----------	----------
Malleable iron castings, total	529,120	165,541	207,466
Steel castings:			
Carbon steel castings:			
Railway specialties	317,611	6,826	----------
Other carbon steel castings	663,174	157,984	145,423
Alloy steel castings, other than heat, corrosion, and wear resistant:			
Railway specialties	19,627	----------	----------
Other alloy steel castings	197,170	13,168	44,585
High alloy steel castings (heat, corrosion, and wear resistant)	35,559	2,293	22,361

NOTE: The distribution of iron and steel castings between those sold to other companies and those transferred to other plants of the same company or further machined or assembled in the same plant reported in the census varies to some extent from the distribution reported for 1947 in the Bureau of the Census monthly reports on iron and steel castings. This is essentially due to varying interpretations by some companies of the extent of machining and assembling necessary to consider castings as finished products rather than as rough castings. For example, in the monthly reports, sales of cast iron radiators were considered by some companies as shipments for sale of gray-iron castings; in the census, the radiators were considered as finished products, and the castings were reported as further machined and assembled in the same establishment.

TABLE 6-N.—PRODUCTION OF IRON AND STEEL CASTINGS, BY TYPE OF CASTING AND FURNACE: 1947 [1]

[All figures in short tons]

TYPE OF FURNACE	Gray-iron castings	Malleable-iron castings	Steel castings		
			Total	Carbon steel	Alloy steel, including high alloy
Total	**12,101,864**	**920,666**	**1,625,516**	**1,280,920**	**344,596**
Cupola	10,128,728	163,425	4,210	2,472	1,738
Open hearth:					
Basic	700	10,409	431,666	400,769	30,897
Acid	558		366,671	281,709	84,962
Electric arc:					
Basic	25,803	2,584	271,420	162,251	109,169
Acid	23,851		496,803	404,392	92,411
Electric induction	2,737		23,755	7,305	16,450
Converter			20,298	15,962	4,336
Air furnace (cold melting only)	136,466	265,503	4,640	7	4,633
Duplex and triplex melting	50,605	464,337	5,679	5,679	
All other furnaces (specify kind)	1,732,416	14,408	374	374	

[1] The production of castings by type of furnace represents the production by foundries which produced the following percentages of the total castings shipped: gray-iron—94 percent; malleable-iron—99 percent; steel—98 percent.

TABLE 7.—MATERIALS CONSUMED: 1947

[Information not published for these industries]

TABLE 8-A.—NUMBER OF STEEL WORKS AND ROLLING MILLS PERFORMING SELECTED METALWORKING OPERATIONS: 1947

[The figures in the table represent the number of establishments maintaining the metalworking operation specified, according to the usual number of production workers employed in the operation during 1947]

METALWORKING OPERATION	Total	Distribution by number of production workers in the operation				
		1–4	5–19	20–49	50–99	100 and over
Foundry	45	2	9	8	9	17
Die casting	1			1		
Forging—presses, hammers, or upsetters	59	3	14	23	9	10
Electroplating	31	8	9	5	3	6
Galvanizing and other hot dip coating	58	3	5	13	20	17
Heat treating or annealing of metals	115	7	26	36	21	25
Automatic screw-machine department	2	1	1			
Machine shop	117	8	15	24	18	52
Tool and die room	38	3	15	14		6
Pattern shop	43	16	17	8	1	1
Plate or structural fabrication	16		4	3	1	8
Stamping, blanking, forming, or drawing	41		9	10	5	17

TABLE 8-B.—NUMBER OF IRON AND STEEL FOUNDRIES WITH MACHINE SHOPS AND PATTERN SHOPS: 1947

[The figures in the table represent the number of establishments maintaining the operation specified, according to the usual number of production workers employed in the operation during 1947]

TYPE OF FOUNDRY AND OPERATION	Total	Distribution by number of production workers in the operation				
		1–4	5–19	20–49	50–99	100 and over
GRAY-IRON FOUNDRIES						
Machine shop	407	141	164	64	29	9
Pattern shop	470	360	90	13	3	4
MALLEABLE-IRON FOUNDRIES						
Machine shop	24	4	11	5	2	2
Pattern shop	63	25	33	4	1	
STEEL FOUNDRIES						
Machine shop	72	17	25	13	8	9
Pattern shop	112	43	47	16	6	

NOTE: Approximately 250 establishments, mainly with less than 10 employees, did not supply any information as to whether they operated machine shops or pattern shops.

SMELTING AND REFINING OF NONFERROUS METALS AND ALLOYS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the smelting and refining of nonferrous metals. These establishments have been classified in six industries, five of which relate to primary smelting and refining and the sixth to secondary smelting and refining.

Primary Smelting and Refining

Definition of Primary Smelters and Refiners. Establishments classified in the five primary industries (Standard Industrial Classification numbers, 3331–3339) are chiefly engaged in extracting nonferrous metals from ores, concentrates, precipitates, etc. They include establishments which perform smelting operations only and produce metals that are not yet of commercial grade such as blister copper and lead base bullion; establishments which refine the products of the smelters and produce commercially pure metal; and those which produce refined metals from the ores and concentrates in a single continuous operation. The industries do not include milling or concentrating operations since these are generally located at mine sites and are not considered as manufacturing operations. Also excluded are establishments which produce alumina from bauxite and those which process ores and concentrates primarily for the purpose of producing chemicals, such as zinc oxide. Such establishments are included in the chemical group of manufacturing industries. Many primary smelters and refiners also produce considerable quantities of such chemicals as sulfuric acid, zinc oxide, etc., but these establishments are classified as primary smelters and refiners as long as the production of refined metal is their major activity.

Establishments producing primary copper, lead, and zinc also produce considerable quantities of other refined metals, particularly precious metals. These establishments have been included in the copper, lead, or zinc industries, even though in a few cases the value of the precious metals shipped exceeded that of the base metal considered primary to the establishment.

Comparability With Prior Censuses. Separate industries have been established for establishments making the principal commercial types of nonferrous metals. Accordingly, the classification of this group of industries differs from 1939 when all establishments engaged in the primary smelting and refining of nonferrous metals were included in a single industry. In order to make such a classification possible for the 1947 census, those establishments which produce substantial quantities of metal classified in more than one industry and having separate departments producing these types, as occurs in the production of copper, lead, and zinc, have treated each of these departments as separate establishments. Since this practice was not followed in 1939, comparable 1939 figures for each industry cannot be obtained. Similarly, although in the 1937 and previous censuses, the industry classification was similar to that for 1947, those figures are not comparable because single reports were received from locations producing copper and lead, zinc and copper, etc. In order to present a comparable series of data over a period of years, table 1 contains data from 1899 to 1947 for all primary smelters and refiners combined, in addition to the 1947 figures for each industry separately.

Duplication in Cost of Materials and Value of Shipments. The total cost of materials and the total value of shipments in the copper and lead industries include extensive duplications resulting from the use of the products of certain establishments as materials by others. Considerable quantities of blister copper and lead base bullion, produced by smelters, are used as materials by refiners. Thus, the value of this blister copper and lead base bullion, which represent intermediate states in the production of refined copper and lead, appears twice in the total value of shipments; and a corresponding duplication enters into the total cost of materials. Therefore, figures on the total value of shipments and the total cost of materials are not shown for these industries. This duplication does not exist in the data on value added by manufacture (see GENERAL EXPLANATIONS on Value added by manufacture).

The duplication is largely eliminated by treating smelters and refiners separately and by presenting individual figures for each of these groups. The following table shows separate general statistics—employment, value added, value of shipments, etc., for the smelters and for the refiners of copper and lead. In order to have the necessary data to prepare this table, where the smelting and refining operations at a single location are distinctly separate stages in the production of the metal, separate reports for the smelting and refining departments were obtained. Where separate smelting and refining stages are not necessary, as is the case with Missouri lead, copper produced by leaching, and the production of Lake Superior copper, the establishments have been classified as refineries.

General Statistics for the United States for Primary Copper and Lead Smelters and Refiners: 1947

[Money figures and man-hours in thousands]

ITEM	Primary copper producers		Primary lead producers	
	Smelters	Refiners	Smelters	Refiners
Number of establishments	16	11	9	7
All employees:				
Number (average for the year)	6,070	8,559	3,173	1,490
Salaries and wages, total	$18,745	$26,045	$9,653	$4,429
Production and related workers:				
Number (average for the year)	5,409	7,656	2,724	1,298
Man-hours, total	12,275	17,476	6,048	2,831
Wages, total	$16,195	$22,772	$7,937	$3,673
Value added by manufacture	$77,930	$56,728	$20,077	$15,825
Cost of materials, fuel, electricity, and contract work	$180,736	$173,594	$118,089	$153,739
Value of shipments	$258,666	$230,322	$138,166	$169,564

NOTE—The value of shipments of the smelters and refiners shown above include shipments of some purely intermediate stages in the production of refined metal, which have been excluded from tables 5 and 6. These include shipments of products such as matte, speiss, flue dust, and sludge which are shipped to other smelters or refiners for processing.

The cost of materials reported by primary copper refiners is substantially less than the value of output of copper smelters even though practically all of the products of the latter are shipped to refineries. The reason for this is that a large part of the product of the refineries is processed on a toll basis, for which the refineries were requested to report only their toll charges. The cost of materials and value of shipments of the refineries therefore cover only their operations for their own account with the minor exception that receipts for toll work are included in the value of shipments. Of the 1,433,000 tons of refined copper produced during 1947, only 344,000 tons, or 24 percent, was on own account. This compares with the figure of 619,000 tons, or 58 percent, produced on own account by copper smelters. While the tonnage figures in tables 6-A and 6-B are not affected by this situation, there are no total values for smelted or refined copper in tables 6-A and 6-B and the value of blister copper shipped as shown in table 5 exceeds the value of primary refined unalloyed copper.

The treatment of smelters and refiners as separate establishments also results in making the separation between inventories of finished products and those of materials and work in process meaningless. The decision as to whether to treat blister copper inventories of a combined copper smelter and refinery as products of the smelter or materials of the refinery is partially arbitrary. For this reason, product inventories and material and work in process inventories have not been shown separately in the primary copper and lead industries.

Limitations of Value Added by Manufacture Data. Although the figures on value added by manufacture do not contain the duplication inherent in figures on cost of materials and value of shipments in the copper and lead industries, there are certain deficiencies in the value added data resulting from the methods used by individual companies in reporting value of shipments and cost of materials.

Many of the companies in the smelting and refining field operate their own mines and milling and concentrating plants. Consequently, it is difficult at best to establish a satisfactory value of the ore or concentrate transferred from the mine to the smelter. In an effort to achieve uniformity in this regard and to conform to reporting by smelters purchasing ore from outside companies, the instructions accompanying the 1947 report forms specified that such transfers should be reported at an approximate commercial value and not at the cost of production or other book valuation maintained by the company. In practice, this instruction was not and probably could not be followed by all respondents. In many instances, there does not exist a comparable commercial form of the ore or concentrate transferred. In others, to convert to an approximate commercial value would have been unrealistic in view of the actual operations of the various establishments of an integrated company.

In addition to the vertical integration of mine and smelter, other companies maintain both smelters and refineries while some are fully integrated from mine through refinery. The transfers of smelter products to refineries operated by the same company was often reported at other than a commercial value for the reasons cited above. Inasmuch as both the smelter and refinery are classified in the same industry, this latter situation does not cause a distortion of value added for the industry as a whole. However, it does influence the geographic division and smaller area data for the industries concerned. Furthermore, the commodity data on shipments of smelter products and materials data on the consumption of these items are affected. The value of shipments and cost of materials figures shown in the text table above for primary copper and lead smelters must also be interpreted in the light of the limitations of the data described above.

While a few of the companies transfer the product of their refineries to fabricating plants under their own ownership, the effect of transfer values on the total figures is much less in this area. Often, while the refinery and fabricating plants may be under the same general financial control, the organizations are so distinct that the transfer of materials is made on the same basis as a commercial transaction.

Method of Reporting Toll Work. A considerable portion of the metal produced by primary smelters and refiners is handled on a toll basis, i.e., is processed by the smelter or the refinery for the owner of the metal for a fee. The fee may be a money payment or may be a combination of a money payment and a provision that the processing plant keep some of the metal. If the processing plant kept some of the metal as part of the fee, no distinction was made between this metal and the metal produced from company-owned material. The sales of the metal kept as part payment for toll work, therefore, appear in the tables which follow as part of the shipments to other companies or transfers to other plants of the same company.

The metal produced on a toll basis includes metal processed by the smelter or refinery for affiliated companies.

Comparability With Bureau of Mines Data. Data on the tonnages of metal produced by plants engaged in the primary smelting and refining of nonferrous metals are also published by the Bureau of Mines of the Department of the Interior, in its "Minerals Yearbook." Minor variations exist between the data shown here and those published by the Bureau of Mines. In addition to minor differences occurring from the submittal of separate reports to different agencies, reasons for the variations are the use by the Bureau of the Census of gross weight of the metal as contrasted with metal content by the Bureau of Mines for some metals; adjustments made by the Bureau of Mines for the amount of metal estimated as produced from scrap instead of ores or concentrates; and the reporting of fiscal year figures to the Bureau of the Census in a few cases.

In general, the same definitions were used by the Bureau of the Census in the collection of product statistics as are used by the Bureau of Mines. In particular, it might be noted that the tonnages of refined lead and copper, produced by plants making refined lead and copper directly from ores and concentrates, are included in the lead base bullion and blister copper figures in order to arrive at a balance between the blister copper and refined copper figures and base bullion and refined lead figures. These tonnages have been considered as base bullion and blister copper produced and consumed in the same plant. In addition, copper cathodes and other forms of refined copper, which are transferred to other establishments for remelting into commercial shapes, are only counted once as shipments of refined copper.

Product and Materials Data on Primary and Secondary Nonferrous Metals. Table 6 contains data on the production and shipments of the more important nonferrous metals and their alloys. The production and shipments figures for primary smelters and refiners represent total production from materials of both domestic and foreign origin and include the production from scrap as well as from primary sources such as ores, concentrates, etc. In order to show the extent of secondary production by primary smelters and refiners, table 7 contains information on the consumption of scrap by primary smelters and refiners. From these data, estimates can be made as to the proportion of secondary production by primary producers.

The commodity data shown in tables 6-A and 6-B contain the tonnage and value of the specified metals in the form of ingots, cast billets, etc., but exclude the substantial tonnages of ingot produced by nonferrous rolling mills and further rolled, drawn, or extruded within the same establishments. Although the tonnages of ingots produced by the nonferrous rolling mills

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were not collected in the census, the tonnages of the finished rolled, drawn, or extruded products as well as the materials consumed in their production are shown in the report for those industries. Also excluded from tables 6-A and 6-B is the secondary recovery of metal by nonferrous foundries in the production of castings. The consumption of both scrap and ingots by nonferrous foundries is shown in the tables for nonferrous foundries.

The figures shown in tables 6-A and 6-B for the production of metal alloys include a certain amount of duplication due to the fact that many of the secondary smelters consume considerable quantities of unalloyed metals in the production of the alloys. The extent of the duplication can be measured by the quantities of ingots consumed, as shown in table 7.

Descriptions of the five primary industries included in this report are as follows:

Primary Copper *(Full Standard Industrial Classification title and number: Primary Smelting and Refining of Copper, 3331.)*—Establishments primarily engaged in smelting copper from the ore, and in refining copper by electrolytic or other processes. Important products of this industry include copper blocks, slabs, pigs, ingots, or refinery bars. Establishments primarily engaged in rolling and drawing copper are classified in Industry 3351.

Primary Lead *(Full Standard Industrial Classification title and number: Primary Smelting and Refining of Lead, 3332.)*—Establishments primarily engaged in smelting lead from ore, and in refining lead by any process. Important products of this industry include lead blocks, slabs, pigs, or ingots. Establishments primarily engaged in rolling and drawing lead are classified in Industry 3359.

Primary Zinc *(Full Standard Industrial Classification title and number: Primary Smelting and Refining of Zinc, 3333.)*—Establishments primarily engaged in smelting zinc from the ore, and in refining zinc by any process. Important products of this industry include zinc blocks, slabs, spelter, pigs, or ingots. Establishments primarily engaged in rolling and drawing zinc are classified in Industry 3359.

Primary Aluminum *(Full Standard Industrial Classification title and number: Primary Refining of Aluminum, 3334.)*—Establishments primarily engaged in producing aluminum from the ore or from alumina, and in refining aluminum by any process. Important products of this industry include aluminum blocks, slabs, pigs, or ingots. Establishments primarily engaged in rolling and drawing aluminum are classified in Industry 3352.

Primary Nonferrous Metals, Not Elsewhere Classified *(Includes Two Standard Industrial Classification Industries: Full Standard Industrial Classification titles and numbers: Primary Refining of Magnesium, 3335 and Primary Smelting and Refining of Nonferrous Metals, Not Elsewhere Classified, 3339.)*—Establishments primarily engaged in smelting and refining nonferrous metals, not elsewhere classified, including magnesium, gold, silver, platinum, iridium, cobalt, nickel, tin, and antimony. Establishments primarily engaged in rolling and drawing these nonferrous primary metals are classified in Industry 3359, and the production of bullion at the site of the mine is classified in the mining industries. Standard Industrial Classification Industry 3335, Primary Refining of Magnesium, has been combined with Industry 3339 inasmuch as publication of the separate data would have disclosed figures for individual companies.

The industry does not include a few establishments processing ores and concentrates of such metals as tungsten and molybdenum, and also rolling or drawing the metal in the same establishment. These establishments are included in the Rolling and Drawing of Nonferrous Metals, Not Elsewhere Classified, Industry, or if the final shape of the metal is used by the establishment itself to produce fabricated products (such as filaments for electric lamps), in the appropriate fabricated product industry.

Secondary Smelting and Refining

Secondary Nonferrous Metals *(Standard Industrial Classification title and number: Secondary Smelting and Refining of Nonferrous Metals and Alloys, 3341 and part of Industry 3351, 3352, and 3359.)*—This industry comprises establishments primarily engaged in recovering nonferrous metals and alloys from new and used scrap and dross, but which are not engaged in further fabrication. According to the Standard Industrial Classification, the industry includes establishments engaged in both the recovery and alloying of precious metals, but does not include establishments primarily engaged in alloying primary copper (Industry 3351), primary aluminum (Industry 3352) or other nonferrous primary metals (Industry 3359). The 1947 census has deviated from the Standard Industrial Classification by including in Industry 3341 alloyers of all nonferrous metals, both precious metals and others. This has been done because the operations of the alloyers are much more closely related to the operations of secondary smelters than to those of nonferrous rolling mills. In addition, it has not been found possible to identify producers of nonferrous alloys who perform alloying operations only.

Plants engaged in the recovery of tin through secondary smelting and refining, and detinners who produce and sell tin, are classified in this industry, but those primarily engaged in detinning cans by chemical processes without the production of tin are classified in Industry 2819. Establishments primarily engaged in assembling, sorting, and breaking up scrap metal without smelting and refining are not classified as manufacturers.

In 1939 and prior censuses, the industry as now constituted did not exist. Establishments primarily engaged in the secondary smelting and refining of gold, silver, and platinum constituted one industry; the secondary smelting and refining of other nonferrous metals represented another industry; establishments engaged in alloying nonferrous metals were classified in the Alloying, Rolling and Drawing of Nonferrous Metals Industry. The general statistics for 1939 for these establishments have been retabulated in order to present statistics comparable with those for 1947.

Although the secondary smelting and refining of precious metals and other nonferrous metals are now included in a single industry, the characteristics of these two types of establishments are quite different. The precious metal producers manufacture small quantities of metals with extremely high unit values. The value of shipments per employee reported by these manufacturers is very large, but is compensated for by a high cost of materials. However, this results in markedly different relationships in the ratio of wages and salaries to value of shipments and cost of materials to value of shipments for precious metal producers as compared with producers of other nonferrous metals. Secondary smelters and refiners of gold, silver, and other precious metals are concentrated in a few States such as New York, New Jersey, and Connecticut.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work	Value of products shipped [2]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Primary copper:								
1947 [3]	27	14,629	$44,790	13,065	$38,967	$134,658	(4)	(4)
Primary lead:								
1947 [3]	16	4,663	14,082	4,022	11,610	35,902	(4)	(4)
Primary zinc:								
1947 [3]	20	12,424	35,476	11,088	30,475	77,068	$113,928	$190,996
Primary nonferrous metals, n.e.c.:								
1947 [3]	14	2,169	6,280	1,885	5,309	12,753	9,429	22,182
Total for primary copper, primary lead, primary zinc, and primary nonferrous metals, n.e.c.:								
1947	77	33,885	100,628	30,060	86,361	260,381	(4)	(4)
1939	59	29,561	44,703	24,328	34,483	100,117		
1937 [5]	62	33,485	51,876	29,815	43,255	129,789		
1935	62	25,267	31,001	22,478	24,887	77,974		
1933	59	16,564	17,418	14,567	13,549	41,401		
1931	76	n.a.	n.a.	18,477	22,716	72,876		
1929	75	34,928	60,057	30,981	49,239	146,775		
1927	69	33,916	52,923	30,510	44,800	135,493		
1925	71	36,251	55,226	32,992	47,948	155,061		
1923	84	n.a.	n.a.	34,889	51,123	121,803		
1921	80	21,889	30,704	18,580	24,401	58,695		
1919	98	41,910	63,146	37,579	52,686	118,220		
1914	88	37,952	35,573	34,733	28,983	96,395		
1909	95	32,037	27,925	29,707	23,037	69,692		
1904	103	28,540	23,055	26,853	20,058	68,674		
1899	117	25,633	18,124	24,512	15,974	79,131		
Primary aluminum:								
1947	11	8,919	26,398	7,336	20,930	65,262	95,748	161,010
1939 [6]	4	3,345	5,120	2,802	3,928	36,885	27,715	64,600
Secondary nonferrous metals:								
1947	322	18,402	56,576	14,750	39,046	119,667	604,360	724,027
1939 [6]	280	n.a.	n.a.	8,109	11,320	41,381	212,182	253,563

n. a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] For 1947, value of products shipped; for prior years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[3] The separate industry figures for 1947 for "Primary copper," "Primary lead," "Primary zinc," and "Primary nonferrous metals, n.e.c.," have been combined in order to show statistics for the period 1899-1939. See text on SMELTING AND REFINING OF NONFERROUS METALS AND ALLOYS—Comparability with prior censuses.

[4] Value of products shipped and cost of materials, etc. are omitted for this industry because each of these measures contains extensive duplication. The duplication arises because the products of some establishments are used as materials by other establishments classified in the same industry. (See text on industry and also GENERAL EXPLANATIONS—Duplication in cost of materials and value of products.)

[5] The figures for 1937 and earlier years have been obtained by combining the separate figures for the former industries "Smelting and refining copper," "Smelting and refining lead," and "Smelting and refining zinc."

[6] The returns for 1939 have been retabulated to provide figures comparable with those for 1947. No comparable figures are available for prior years.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Primary copper, total [1]	27	14,629	$44,790	13,065	29,751	$38,967	$134,658	(2)	(2)	$4,176
West	16	6,072	19,296	5,426	12,548	16,695	86,099	(2)	(2)	1,642
Other Divisions	11	8,557	25,494	7,639	17,203	22,272	48,559	(2)	(2)	2,534
Primary lead, total [1]	16	4,663	14,082	4,022	8,879	11,610	35,902	(2)	(2)	2,649
Primary zinc, total [1]	20	12,424	35,476	11,088	22,232	30,475	77,068	$113,928	$190,996	6,739
Northeast and North Central	9	6,060	17,380	5,339	10,475	14,709	37,320	49,198	86,518	5,966
South and West	11	6,364	18,096	5,749	11,757	15,766	39,748	64,730	104,478	773
Oklahoma	3	2,199	5,730	2,055	4,057	5,246	11,311	18,628	29,939	220
Primary aluminum, total [1]	11	8,919	26,398	7,336	16,014	20,930	65,262	95,748	161,010	2,791
Primary nonferrous metals, n.e.c., total [1]	14	2,169	6,280	1,885	3,666	5,309	12,753	9,429	22,182	951
Northeast and North Central	6	394	1,255	321	593	960	2,243	1,951	4,194	244
South and West	8	1,775	5,025	1,564	3,073	4,349	10,510	7,478	17,988	707
Secondary nonferrous metals, total [1]	322	18,402	56,576	14,750	31,475	39,046	119,667	604,360	724,027	7,225
New England	28	804	2,722	655	1,485	1,877	5,775	85,373	91,148	303
Middle Atlantic	117	5,756	17,678	4,426	9,244	11,394	31,461	248,984	280,445	2,366
New York	53	1,427	4,744	1,072	2,325	3,027	9,470	104,900	114,370	344
New Jersey	29	1,350	4,405	1,100	2,327	3,016	8,748	81,623	90,371	1,005
Pennsylvania	35	2,979	8,529	2,254	4,592	5,351	13,243	62,461	75,704	1,017
East North Central	92	7,231	23,666	5,748	12,255	15,974	47,781	194,609	242,390	2,569
Indiana	11	1,614	4,987	1,241	2,623	3,468	10,059	36,722	46,781	465
Illinois	36	3,199	10,786	2,582	5,506	7,093	21,177	98,341	119,518	1,117
Michigan	16	847	2,828	702	1,485	2,009	6,394	26,320	32,714	407
West North Central	16	469	1,194	336	714	774	3,744	12,919	16,663	197
Missouri	8	213	522	135	287	308	1,029	5,019	6,048	21
South Atlantic	14	261	718	225	490	505	1,860	7,391	9,251	63
East South Central	5	228	665	196	444	498	1,535	4,368	5,903	48
West South Central	10	2,158	5,298	2,043	4,407	4,981	14,112	12,365	26,477	818
West	40	1,495	4,635	1,121	2,436	3,043	13,399	38,351	51,750	861
California	30	1,342	4,170	1,003	2,202	2,721	11,434	30,526	41,960	731

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Primary copper: *West*, Montana, 2; New Mexico, 2; Arizona, 7 (2,224); Utah, 2; Nevada, 1; Washington, 2; *Other Divisions*, New York, 2; New Jersey, 4 (4,886); Michigan, 1; Maryland, 1; Tennessee, 1; Texas, 2.

Primary lead: New Jersey, 1; Indiana, 1; Illinois, 1; Missouri, 1; Nebraska, 1; Kansas, 1; Texas, 1; Montana, 1; Idaho, 2; Colorado, 1; Utah, 3 (1,132); California, 2.

Primary zinc: *Northeast and North Central*, Pennsylvania, 4 (3,630); Illinois, 5 (2,430); *South and West*, West Virginia, 1; Arkansas, 1; Texas, 3; Montana, 2; Idaho, 1.

Primary aluminum: New York, 2; North Carolina, 1; Tennessee, 1; Alabama, 1; Arkansas, 1; Washington, 4; Oregon, 1.

Primary nonferrous metals, n.e.c.: *Northeast and North Central*, Rhode Island, 1; New York, 2; Pennsylvania, 1; Ohio, 1; Illinois, 1; *South and West*, Texas, 3 (1,480); Montana, 2; Colorado, 1; Oregon, 1; California, 1.

Secondary nonferrous metals: *New England*, Maine, 1; Massachusetts, 11 (179); Rhode Island, 8; Connecticut, 8 (562); *East North Central*, Ohio, 23 (1,527); Wisconsin 6 (44); *West North Central*, Minnesota, 3 (62); Iowa, 2; Nebraska, 2; Kansas, 1; *South Atlantic*, Maryland, 4 (96); Virginia, 3 (42); West Virginia, 1; North Carolina, 3 (41); Georgia, 2; Florida, 1; *East South Central*, Kentucky, 2; Tennessee, 2; Alabama, 1; *West South Central*, Arkansas, 2; Louisiana, 1; Oklahoma, 2; Texas, 5 (225); *West*, Colorado, 1; Utah, 1; Washington, 5 (130); Oregon, 3.

[2] Value of products shipped and cost of materials, etc. are omitted for this industry because each of these measures contains extensive duplication. The duplication arises because the products of some establishments are used as materials by other establishments classified in the same industry. (See text on industry and also GENERAL EXPLANATIONS—Duplication in cost of materials and value of products.)

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry					
	Primary copper	Primary lead	Primary zinc	Primary aluminum	Primary nonferrous metals, n.e.c.	Secondary nonferrous metals
Number of establishments	27	16	20	11	14	322
All employees:						
Number (average for the year)	14,629	4,663	12,424	8,919	2,169	18,402
Salaries and wages, total	$44,790	$14,082	$35,476	$26,398	$6,280	$56,576
Production and related workers:						
Number (average for the year)	13,065	4,022	11,088	7,336	1,885	14,750
Man-hours, total ... thousands	29,751	8,879	22,232	16,014	3,666	31,475
Wages, total	$38,967	$11,610	$30,475	$20,930	$5,309	$39,046
Value added by manufacture	$134,658	$35,902	$77,068	$65,262	$12,753	$119,667
Number of employees for pay period ended nearest Oct. 15:						
All employees	14,902	4,841	12,370	8,082	2,126	18,151
Male	14,547	4,731	12,131	7,818	2,000	16,864
Female	355	110	239	264	126	1,287
Production and related workers	13,296	4,188	11,019	6,607	1,850	14,530
Male	13,227	4,157	10,958	6,601	1,784	14,247
Female	69	31	61	6	66	283
Force-account construction workers	8		41			15
Administrative, supervisory, sales, and all other	1,598	653	1,310	1,475	276	3,606
Male	1,312	574	1,132	1,217	216	2,602
Female	286	79	178	258	60	1,004
All employees, number by month:						
January	14,222	4,581	12,519	9,686	2,184	18,563
February	13,976	4,391	12,428	9,745	2,186	18,647
March	14,475	4,600	12,556	9,583	2,250	18,901
April	14,593	4,560	12,502	9,377	2,210	18,898
May	14,733	4,673	12,566	9,027	2,149	18,931
June	14,808	4,726	12,699	8,920	2,183	18,821
July	14,915	4,838	12,785	8,729	2,172	18,011
August	14,637	4,722	12,428	8,586	2,176	17,759
September	14,651	4,650	12,428	8,296	2,107	17,873
October	14,902	4,841	12,370	8,082	2,126	18,151
November	14,558	4,645	11,927	8,304	2,147	18,101
December	15,072	4,733	11,895	8,693	2,127	18,009
Cost of materials, fuel, electricity, and contract work	(1)	(1)	$113,928	$95,748	$9,429	$604,360
Materials, parts, containers, and supplies	(1)	(1)	99,453	72,503	8,388	595,345
Fuels, total	$11,754	$5,533	8,284	1,335	747	6,626
Bituminous coal	1,635	663	2,493	426	276	770
Anthracite	233		2,144	7	143	50
Coke	763	4,012	901	2	95	978
Fuel oils	5,848	332	148	425	16	3,809
Gas	3,036	502	2,563	470	217	888
Other fuels	239	24	35	5		131
Purchased electric energy	3,015	981	6,102	21,910	294	1,671
Contract and commission work			89			718
Value of inventories:						
Beginning of year, total	$61,740	$56,013	$31,356	$17,643	$2,679	$80,129
Finished products	n.a.	n.a.	3,120	3,243	667	22,629
Materials, supplies, and work in process	n.a.	n.a.	28,236	14,400	2,012	57,500
End of year, total	61,307	52,146	38,505	19,794	5,208	80,864
Finished products	n.a.	n.a.	6,558	3,568	2,935	25,957
Materials, supplies, and work in process	n.a.	n.a.	31,947	16,226	2,273	54,907
Expenditures for plant and equipment:						
New plant and equipment	$4,176	$2,649	$6,739	$2,791	$951	$7,225
Construction and major alteration of fixed plants	1,388	1,046	2,172	1,551	371	2,625
Buildings	773	899	1,658	756	240	1,696
Other construction	615	147	514	795	131	929
Machinery and equipment	2,788	1,603	4,567	1,240	580	4,600
Production machinery and equipment	2,667	1,562	4,466	1,049	553	3,530
Other machinery and equipment	121	41	101	191	27	1,070
Used plant and equipment, and land	1	8	372	3,120	676	1,018
Number of highway-type motor vehicles owned or leased:						
Trucks	105	52	37	87	36	345
By manufacturer's rated capacity:						
Under 1½ tons	39	10	5	33	14	49
1½ tons	31	21	27	40	9	114
Over 1½ tons and less than 3½ tons	15	8	3	12	8	115
3½ tons and less than 5 tons	9	6		2	5	18
5 tons and over	11	7	2			49
By body type:						
Van	1	13	2			13
Stake or platform	25		5	29	7	171
Panel or light delivery	28	6	2	33	17	43
All other trucks	51	33	28	25	12	118
Truck tractors	4			11		43
Trailers and semitrailers	3			11		57

n.a.—Not available.

[1] Omitted because of the extent of duplication in the value of shipments and the cost of materials. See text on SMELTING AND REFINING OF NONFERROUS METALS AND ALLOYS—Duplication in cost of materials and value of shipments.

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Primary copper:											
Number of establishments	27	----------	1	----------	----------	----------	7	7	7	5	----------
Number of employees (average for the year)	14,629	----------	(d)	----------	----------	----------	*1,161*	2,371	4,387	6,710	----------
Value added by manufacture	$134,658	----------	(d)	----------	----------	----------	*$28,568*	$41,213	$34,854	$30,023	----------
Primary lead:											
Number of establishments	16	----------	----------	----------	----------	1	4	10	1	----------	----------
Number of employees (average for the year)	4,663	----------	----------	----------	----------	(d)	(d)	*4,663*	(d)	----------	----------
Value added by manufacture	$35,902	----------	----------	----------	----------	(d)	(d)	*$35,902*	(d)	----------	----------
Primary zinc:											
Number of establishments	20	----------	----------	----------	----------	----------	----------	10	8	2	----------
Number of employees (average for the year)	12,424	----------	----------	----------	----------	----------	----------	3,712	*8,712*	(d)	----------
Value added by manufacture	$77,068	----------	----------	----------	----------	----------	----------	$23,119	*$53,949*	(d)	----------
Primary aluminum:											
Number of establishments	11	----------	----------	----------	----------	1	1	1	5	3	----------
Number of employees (average for the year)	8,919	----------	----------	----------	----------	(d)	(d)	(d)	(d)	*8,919*	----------
Value added by manufacture	$65,262	----------	----------	----------	----------	(d)	(d)	(d)	(d)	*$65,262*	----------
Primary nonferrous metals, n.e.c.:											
Number of establishments	14	2	1	2	2	1	3	2	1	----------	----------
Number of employees (average for the year)	2,169	(d)	(d)	*39*	(d)	(d)	*650*	*1,480*	(d)	----------	----------
Value added by manufacture	$12,753	(d)	(d)	*$255*	(d)	(d)	*$6,838*	*$5,660*	(d)	----------	----------
Secondary nonferrous metals:											
Number of establishments	322	63	61	51	69	27	37	10	3	1	----------
Number of employees (average for the year)	18,402	142	422	729	2,232	2,079	6,015	3,341	*3,442*	(d)	----------
Value added by manufacture	$119,667	$1,035	$4,178	$5,094	$17,562	$16,153	$38,285	$16,825	*$20,535*	(d)	----------

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

PRIMARY COPPER INDUSTRY	Shipped by— Primary copper industry	Other industries	All industries
Total shipments by the industry	(1)		
A. Primary products of the industry	(1)		(1)
Blister or anode copper	$255,999		$255,999
Primary refined unalloyed copper	166,777		166,777
B. Secondary products	40,786		
Precious metals	28,809		
Other secondary products	11,977		
C. Miscellaneous receipts			

PRIMARY LEAD INDUSTRY	Shipped by— Primary lead industry	Other industries	All industries
Total shipments by the industry	(1)		
A. Primary products of the industry	(1)		(1)
Lead base bullion	$130,694		$130,694
Primary refined unalloyed lead	72,173		72,173
B. Secondary products (includes antimonial lead, gold, silver, and other metals produced, and chemicals and pigments)	104,213		
C. Miscellaneous receipts			

PRIMARY ZINC INDUSTRY	Shipped by— Primary zinc industry	Other industries	All industries
Total shipments by the industry	$190,996		
A. Primary slab zinc, zinc dust, and other miscellaneous zinc smelter products	169,446		$169,446
Slab zinc (including remelt) and zinc dust	151,485		151,485
Zinc residues and other miscellaneous zinc smelter products	17,961		17,961
B. Secondary products (chemicals, pigments, zinc alloys, other nonferrous metals, and other products)	21,550		
C. Miscellaneous receipts			

PRIMARY ALUMINUM INDUSTRY	Shipped by— Primary aluminum industry	Other industries	All industries
Total shipments by the industry	$161,010		
A. Primary unalloyed aluminum ingot and pig	116,492		$116,492
B. Secondary products (aluminum alloys, etc.) } C. Miscellaneous receipts.	44,518		

PRIMARY NONFERROUS METALS, N.E.C., INDUSTRY	Shipped by— Primary nonferrous metals, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$22,182		
A. Primary nonferrous metals, n.e.c.	21,309	$109,335	$130,644
B. Secondary products	873		
C. Miscellaneous receipts			

SECONDARY NONFERROUS METALS INDUSTRY	Shipped by— Secondary nonferrous metals industry	Other industries	All industries
Total shipments by the industry	$724,027		
A. Secondary unalloyed and alloyed ingots	689,236	$78,008	$767,244
Shipments to other companies	606,459	74,872	681,331
Unalloyed copper ingots	9,269		[2] 9,269
Copper-base alloy ingots	118,542	855	119,397
Unalloyed lead ingots	16,666	[2] 1,351	[2] 18,017
Lead and tin-base alloy ingots	141,959	43,337	185,296
Unalloyed zinc ingots [3]	15,511		[2] 15,511
Zinc-base alloy ingots	21,028	1,820	22,848
Unalloyed aluminum ingots	7,957	[2] 5	[2] 7,962
Aluminum-base alloy ingots	60,619	1,087	61,706
All other nonferrous ingots (including precious metals)	214,908	[2] 26,417	[2] 241,325
Interplant transfers	65,808	[2] 3,136	[2] 68,944
Receipts for toll work performed	16,969		16,969
B. Secondary products	14,785		
Nonferrous rolled, drawn, and extruded products	11,280		
All other secondary products	3,505		
C. Miscellaneous receipts	20,006		
Scrap and salable refuse	17,086		
All other miscellaneous receipts	2,920		

NOTE: The figures in this table include the value of shipments and interplant transfers, and fees received for processing other companies' materials on a toll basis. However, for the primary copper and lead industries, this table excludes the value of shipments and interplant transfers of various copper and lead smelter residues such as matte, speiss, and flue dust, which are intermediate processing materials and are shipped to other smelters and refiners. Also excluded are receipts for recasting cathodes, ingot bars, etc., into other commercial shapes. The values reported for primary refined unalloyed copper, lead, zinc, and aluminum include the value of secondary production at the primary plants.

[1] Value of products shipped is omitted for this industry because it contains extensive duplication. The duplication arises because the products of some establishments are used as materials by other establishments classified in the same industry. (See text on industry and also GENERAL EXPLANATIONS—Duplication in cost of materials and value of products.)

[2] Does not include the value of these products made by primary smelters and refiners of nonferrous metals.

[3] Includes the value of interplant transfers, as well as shipments to other companies.

TABLE 6-A.—QUANTITY AND VALUE OF SELECTED NONFERROUS INGOTS, PIGS, ETC., TOTALS FOR THE UNITED STATES: 1947[1]

[Money figures in thousands of dollars; quantity figures in short tons]

PRODUCT	Unalloyed copper		Copper-base alloys		Unalloyed lead		Lead-base and tin-base alloys	
	Quantity (gross weight)	Value	Quantity (gross weight)	Value	Quantity (gross weight)	Value	Quantity (gross weight)	Value
Total shipments, interplant transfers, and quantity produced and consumed in the manufacture of other products	1,472,879		321,888		[2] 564,536		490,614	
Shipped by establishments classified as primary smelters and refiners of the specified metal, total	1,430,316				[2] 464,910			
Shipped to other companies	316,940	$129,197			[2] 254,616	$69,214	(3)	(3)
Interplant transfers and produced and consumed in the same establishment	26,802							
Toll shipments	1,086,574				210,294			
Shipped by secondary smelters and refiners, total	42,563		318,903		94,929		360,620	
Shipped to other companies	23,440	9,269	302,019	$118,542	54,711	16,666	353,215	$141,959
Interplant transfers, toll shipments, and produced and consumed in the same establishment	19,123		16,884		40,218		7,405	
Shipped by other establishments, total			2,985		4,697		[4] 129,994	
Shipped to other companies			1,782	855	4,535	1,497	[4] 123,784	[4] 43,010
Interplant transfers, toll shipments, etc.[5]			1,203		162		[4] 6,210	

PRODUCT	Unalloyed zinc		Zinc-base alloys		Unalloyed aluminum		Aluminum-base alloys	
	Quantity (gross weight)	Value	Quantity (gross weight)	Value	Quantity (gross weight)	Value	Quantity (gross weight)	Value
Total shipments, interplant transfers, and quantity produced and consumed in the manufacture of other products	871,785		84,925		674,209		478,146	
Shipped by establishments classified as primary smelters and refiners of the specified metal, total	822,048				560,838			
Shipped to other companies	580,641	$124,843	(3)	(3)	87,066	$24,031	(3)	(3)
Interplant transfers and produced and consumed in the same establishment	47,774				473,772			
Toll shipments	193,633							
Shipped by secondary smelters and refiners, total	49,737		78,260		113,371		311,148	
Shipped to other companies			76,663	$21,028	25,961	7,957	204,323	$60,619
Interplant transfers, toll shipments, and produced and consumed in the same establishment	49,737		1,597		87,410		106,826	
Shipped by other establishments, total			[4] 6,665				[4] 166,998	
Shipped to other companies			[4] 6,665	[4] 1,820			[4] 28,637	[4] 8,042
Interplant transfers, toll shipments, etc.[5]							[4] 138,361	

[1] This table does not include data on the quantity of ingots produced by establishments which also roll, draw, or extrude the ingots; see text on SMELTING AND REFINING OF NONFERROUS METALS AND ALLOYS—Product and materials data on primary and secondary nonferrous metals. There is some duplication between the quantities of unalloyed and alloyed metals reported in that some of the unalloyed metal reported as produced and consumed was consumed in the production of the alloys. In addition some of the shipments and interplant transfers of unalloyed metal were to secondary smelters and refiners for their use in producing alloys. See table 7 for the consumption of metals by secondary smelters and refiners.

[2] Does not include the quantity produced and consumed by primary smelters and refiners of lead, in the production of antimonial lead. See table 6-B for the total production by primary smelters and refiners of lead.

[3] Included in "shipped by other establishments."

[4] Includes the shipments and amounts produced and consumed by primary smelters and refiners of lead, zinc, and aluminum.

[5] Also includes the metal produced and consumed in the same plant, except that produced in nonferrous rolling mills.

TABLE 6-B.—QUANTITY AND VALUE OF SELECTED PRODUCTS MADE BY PRIMARY AND SECONDARY SMELTERS AND REFINERS OF NONFERROUS METALS

[Includes the quantities produced by primary and secondary smelters and refiners only; see table 6-A for the total shipments of these products]

[Money figures in thousands of dollars; quantity figures in short tons]

INDUSTRY AND PRODUCT	Total production (gross weight)	Shipments to other companies (gross weight)	Interplant transfers (gross weight)	Produced and consumed in the same establishment in the manufacture of other products (gross weight)	Shipments of products made from materials owned by others *Toll Shipments* (gross weight)	Value of shipments to other companies	Value of interplant transfers	Receipts for work done on toll basis
PRIMARY COPPER								
Blister or anode copper	[1] 1,075,875	319,915	299,576	(2)	459,015	$128,696	$109,521	$17,782
Refined unalloyed copper	1,433,330	316,940	26,802	(2)	1,086,574	129,197	7,461	30,119
PRIMARY LEAD								
Lead base bullion	486,551	301,623	(3)	(4)	184,553	130,011	(3)	683
Refined unalloyed lead	[5] 537,742	254,616	(3)	(4)	210,294	69,214	(3)	2,959
PRIMARY ZINC								
Slab zinc (including remelt)	829,512	580,641	47,774	(2)	193,633	124,843	[6] 10,199	14,842
PRIMARY ALUMINUM								
Refined unalloyed aluminum	559,215	87,066	473,772	(2)	----------	24,031	(d)	----------
SECONDARY NONFERROUS METALS								
Unalloyed nonferrous metals:								
Copper	41,934	23,440	19,123			9,269		
Lead	92,849	54,711	40,218			16,666		
Zinc:								
Slab zinc (except remelt)	36,243	35,953	(3)			[7] 7,843		
Remelt zinc	13,549	13,429	355			3,016		
Zinc dust	21,653	21,411	83			4,652		
Aluminum	115,815	25,961	87,410			7,957		
Nonferrous metal alloys:								
Copper-base alloys	323,196	302,019	16,884	(2)	(2)	118,542	(d)	(d)
Lead and tin-base alloys:								
Antimonial lead	197,198	192,075	3,921			60,631		
Babbitt metal:								
Lead-base	33,987	33,750	542			14,010		
Tin-base	3,431	3,120	220			4,244		
Solder	59,014	57,578	808			38,648		
Type metal	34,647	33,305	781			13,799		
Other lead and tin-base alloys	34,274	33,387	1,133			10,627		
Zinc-base alloys	77,022	76,663	1,597			21,028		
Aluminum-base alloys	315,188	204,323	106,828			60,619		

[d] Withheld to avoid disclosing figures for individual companies.
[1] The copper content of this quantity and of a small quantity of other smelter products such as matte, speiss, flue dust, etc., also shipped by primary smelters and refiners of copper was 1,015,524 short tons.
[2] Included with interplant transfers.
[3] Included with shipments to other companies.
[4] Included with shipments of products made from materials owned by others.
[5] Total shipments and interplant transfers vary from total production by the amount of refined lead produced but sold in the form of antimonial lead, and differences in stocks at the beginning and end of year.
[6] Includes the value of interplant transfers of a small amount of zinc dust.
[7] Includes the value of interplant transfers of slab zinc.

TABLE 7.—SELECTED MATERIALS CONSUMED BY PRIMARY AND SECONDARY SMELTERS AND REFINERS

[Money figures in thousands of dollars; quantity figures in short tons]

INDUSTRY AND MATERIAL	Total consumption (gross weight)	Company-owned material		Material consumed in processing metals on a toll basis (gross weight)
		Gross weight	Value	
PRIMARY COPPER				
Blister or anode copper [1]	1,237,917	265,023	$135,932	972,894
Copper and copper-base alloy scrap	279,530	43,960	10,743	232,942
PRIMARY LEAD				
Lead base bullion [1]	381,928	(d)	(d)	(d)
PRIMARY ZINC				
Zinc and zinc-base alloy scrap, including drosses and skimmings	54,997	54,143	5,805	854
PRIMARY ALUMINUM				
Alumina [2]	1,086,791	1,086,791	52,106	----------

INDUSTRY AND MATERIAL	Total consumption (gross weight)	Company-owned material		Material consumed in processing metals on a toll basis (gross weight)
		Gross weight	Value	
SECONDARY NONFERROUS METALS				
Aluminum:				
Refined aluminum	97,323	92,148	$26,001	5,175
Aluminum and aluminum-base alloy scrap	386,572	294,480	50,662	92,092
Copper:				
Refined copper	18,679	12,431	4,921	6,248
Copper and copper-base alloy scrap	390,420	377,950	97,104	12,470
Lead:				
Refined lead	62,316	(d)	(d)	(d)
Lead and lead-base alloy scrap	468,493	(d)	(d)	(d)
Zinc:				
Refined zinc	80,032	79,835	18,520	197
Zinc and zinc-base alloy scrap	91,626	90,935	10,417	691
Refined magnesium	591	591	214	----------
Refined nickel	183	183	108	----------
Refined tin	14,540	14,498	22,593	42

[d] Withheld to avoid disclosing figures for individual companies.
[1] Does not include the materials consumed by establishments producing copper by leaching or from Lake Superior ores, or those producing lead from Missouri ores. No distinct blister copper or base bullion stage exists in the production at those establishments.
[2] In addition to the alumina consumed at primary aluminum refineries, there was also a negligible amount of aluminum scrap consumed. Less than one-half of one percent of the total production of aluminum in the primary plants was produced from such scrap.

NONFERROUS METAL MILL AND FOUNDRY PRODUCTS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of copper, aluminum, and other nonferrous metal mill and foundry shapes, such as castings (including die castings), plate, sheet, strip, tubing, rod, wire, and other rolled and drawn products. These establishments have been classified in four industries described separately below.

A number of companies in the nonferrous rolling and drawing field maintain fabricating facilities in addition to their rolling and drawing operations. In most instances the rolling mill was reported as one establishment and the fabricating operation as a separate establishment even when the two activities occurred at one general location. For copper, the production of insulated wire and cable and other fabricated wire products constitutes the principal fabricating activities of companies operating rolling and drawing mills; for aluminum, they consist chiefly of the production of aluminum foil and aluminum cooking utensils.

Because of the extent of the integration of companies in this field, it is difficult to establish satisfactory values for the transfer of mill shapes and forms between establishments of the same company. In an effort to achieve uniformity in this regard and to conform to the reporting of commercial shipments, the instructions accompanying the 1947 census forms specified that such transfers should be reported at approximate commercial values and not at the cost of production or other book valuation maintained by the company. Although this instruction was followed by most respondents, some companies could not do so and reported transfer values on some other basis.

Besides transferring rolled and drawn shapes to their own fabricating plants, some companies transfer these shapes to another rolling mill which they operate, to be further processed into other rolled or drawn shapes. In addition, there are transfers of mill shapes from one company to another for further rolling or drawing. In 1947, establishments in the Copper Rolling and Drawing Industry reported receipts of approximately 55,000 tons of copper and brass mill shapes and forms, most of which was further processed into other rolled and drawn shapes. The same intra-industry shipments occur in the Aluminum Rolling and Drawing and the Nonferrous Metal Rolling, N.E.C., Industries, but on a much smaller scale. The value of such tonnages appears twice in the total value of shipments; and a corresponding duplication enters into the total cost of materials. This duplication does not exist in the data on value added by manufacture. (See GENERAL EXPLANATIONS on Value Added by Manufacture.)

This duplication of tonnage is also eliminated in the figures on net shipments of copper, aluminum, and magnesium, as shown in table 6–C. Net shipments have been derived by subtracting the nonferrous metal mill receipts of copper, aluminum, and magnesium rolled and drawn products from the corresponding total of shipments, transfers, and quantities produced and consumed in the output of fabricated products in the same establishment. Nonferrous metal mill receipts of rolled and drawn products for rerolling or redrawing, are shown in the first column of table 6–A.

The totals of shipments, transfers, etc., of rolled and drawn products shown in tables 6–A through 6–C include the manufacture of these products in separate wire drawing establishments, as well as copper, aluminum, and other rolling mills. The receipts of wire rods and bars by establishments classified in the Wire Drawing Industry have been included among the receipts shown in table 6–A and have been taken into account in deriving the "Net shipments" figures shown in table 6–C.

In view of the fact that many companies do not maintain records showing the value of interplant transfers for individual metal shapes, only a total value of interplant transfers was requested from each establishment. In the case of the Copper Rolling and Drawing and the Nonferrous Metal Rolling, N.E.C., Industries, this value has been apportioned among the various mill shapes on the basis of tonnages shipped in order to include interplant figures in the "class of product" figures in table 5. This was not done for the Aluminum Rolling and Drawing Industry since it would have disclosed the figures for individual companies. No values for interplant transfers are shown in table 6–A for these three industries.

Only a single figure was requested in each industry for all fees received for work done on materials owned by other companies. No attempt was made to apportion these fees on the basis of the products shipped, and although they are included in table 5, these fees also have been excluded from table 6–A.

Copper Rolling and Drawing *(Part of Industry No. 3351.)*—This industry comprises establishments primarily engaged in rolling, drawing, and extruding copper, brass, bronze, and other copper-base alloy basic shapes such as plates, sheets, strips, rods, and tubing. Establishments primarily engaged in drawing wire from purchased copper and copper-base alloy rods are classified in Industry 3392, and in manufacturing insulated wire from purchased copper wire are classified in Industry 3631.

According to the Standard Industrial Classification, this industry also includes establishments primarily engaged in producing primary copper alloys. However, based upon the returns in the 1947 census, it has not been possible to differentiate such alloyers from secondary smelters and refiners. Therefore, the 1947 census has included establishments producing primary copper alloys in Industry 3341, Secondary Smelting and Refining of Nonferrous Metals and Alloys rather than with copper and brass rolling mills.

In the 1939 census, establishments primarily engaged in rolling and drawing copper and copper-base alloys were combined in a single industry with those rolling and drawing other nonferrous metals, except aluminum, and with establishments alloying nonferrous metals. The 1939 data have been retabulated to provide comparable statistics. However, figures for earlier years are not available.

Aluminum Rolling and Drawing *(Part of Industry No. 3352.)*—This industry comprises establishments primarily engaged in rolling, drawing, and extruding aluminum and aluminum-base alloy basic shapes such as plates, sheets, rods, wire, and tubing. Establishments primarily engaged in drawing wire from purchased aluminum and aluminum-base alloy rods are classified in Industry 3392.

According to the Standard Industrial Classification, this industry also includes establishments primarily engaged in producing primary aluminum alloys. However, based upon the returns in the 1947 census, it has not been possible to differentiate such alloyers from secondary smelters and refiners. Therefore, the 1947 census has included establishments producing primary aluminum alloys in Industry 3341, Secondary Smelting and Refining of Nonferrous Metals and Alloys rather than with aluminum rolling mills.

In the 1939 census, establishments primarily engaged in rolling and drawing aluminum and aluminum-base alloys were combined with other processors of aluminum, including aluminum ingot manufacturers and producers of miscellaneous aluminum products. The 1939 data have been retabulated to provide comparable statistics but figures for earlier years are not available.

Nonferrous Metal Rolling, Not Elsewhere Classified *(Part of Industry No. 3359.)*—This industry comprises establishments primarily engaged in rolling and drawing nonferrous metals other than copper (Industry 3351) and aluminum (Industry 3352). The products of this industry are produced in the form of basic shapes such as sheets, strips, bars, rods, wire, and tubing. Establishments primarily engaged in recovering nonferrous metals and alloys from scrap and dross are included in Industry 3341, in manufacturing gold, silver, tin, and other foils in Industry 3497, and in drawing wire from purchased nonferrous rods in Industry 3392.

The industry, as defined for the 1947 census, departs from the Standard Industrial Classification in that the latter includes establishments primarily engaged in producing nonferrous metal alloys, other than aluminum and copper. The 1947 census includes these establishments in Industry 3341, Secondary Smelting and Refining of Nonferrous Metals and Alloys, for the same reasons as indicated above for alloyers of copper and aluminum.

The industry comprises establishments rolling or drawing many different types of nonferrous metals—gold and silver as well as other metals such as zinc, nickel, lead, and magnesium. However, not all establishments rolling or drawing such metals are included in the figures for this industry. Metal closure and battery producers, who roll zinc at the same location at which they perform their fabricating operations, did not in some cases submit separate reports on their zinc rolling operations. Such operations are classified in the industry in which the final products of the plant are classified and data for their rolling departments are, therefore, omitted from this industry. In addition, establishments which primarily roll or draw precious metals to be used in the production of jewelry (stock shop products) have been classified in the Jewelers' Findings and Materials Industry rather than in Nonferrous Metal Rolling, N.E.C.

Nonferrous Foundries *(Standard Industrial Classification No. 3361.)*—This industry comprises establishments primarily engaged in manufacturing castings and die castings of aluminum, brass, bronze, and other nonferrous metals and alloys.

In 1939 and in prior censuses, nonferrous foundries were included in a number of industries. Establishments producing aluminum castings were classified in the Aluminum Products, Not Elsewhere Classified, Industry; establishments producing die castings were included in the Nonferrous Metal Products, Not Elsewhere Classified, Industry; and all other nonferrous foundries constituted a separate industry. The 1939 data have been retabulated to provide statistics comparable with 1947, but data for earlier years are not available.

Nonferrous castings are made to a considerable extent by establishments, classified in other industries, that operate foundry departments for production of nonferrous castings for incorporation into their own products—such as motor vehicles, machiney, etc.—and also for sale as castings. Special reports were requested in the 1947 census from foundry departments of establishments classified in industries other than one of the four foundry industries. These reports obtained information on the number of production workers in the foundry department and their wages, the production of castings, and selected materials consumed in the foundry.

The table which follows shows employment and wage data for foundries primarily engaged in making nonferrous castings, divided between those classified in the nonferrous foundry industry and those which are departments of establishments classified in other industries. Similar tables for iron and steel foundries are included in the report on "Blast furnace, steel mill, and iron and steel foundry products."

Average Number of Production and Related Workers in Nonferrous Foundries and Their Wages: 1947

[These data represent employment in foundries which accounted for 95 per cent of all nonferrous castings produced; reports were not received from all foundry departments of establishments classified outside the foundry industries]

[Wages in thousands of dollars]

ITEM	Average number of production and related workers	Wages paid to production and related workers
All nonferrous foundries	75,799	$213,174
Establishments classified as nonferrous foundries	57,469	163,706
Nonferrous foundry departments of establishments classified outside the foundry industries	18,330	49,468

Statistics for nonferrous foundries, in tables 1 to 4 which follow this text, conform to the general census pattern and include only data for establishments classified as nonferrous foundries. However, the product and materials data shown in tables 6 and 7 include data for all foundries, including "captive" foundry departments.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work	Value of products shipped [2]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Copper rolling and drawing:								
1947	78	53,867	$166,076	45,924	$133,969	$302,592	$761,066	$1,063,658
1939 [3]	57	n.a.	n.a.	33,597	48,288	135,642	214,503	350,145
Aluminum rolling and drawing:								
1947	29	27,365	73,665	22,786	57,544	150,697	254,069	404,766
1939 [3]	13	n.a.	n.a.	9,926	14,848	34,331	81,012	115,343
Nonferrous metal rolling, n.e.c.:								
1947	55	7,592	24,376	6,086	18,144	50,074	143,016	193,090
1939 [3]	31	n.a.	n.a.	2,786	4,398	15,224	18,748	33,972
Nonferrous foundries:								
1947	1,724	65,342	198,988	57,469	163,706	295,834	266,303	562,137
1939 [3]	776	n.a.	n.a.	23,362	32,444	67,590	65,092	132,682

n.a.—Not available.
[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.
[2] For 1947, value of products shipped; for 1939, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.
[3] The returns for 1939 have been retabulated to provide figures comparable with those for 1947. No comparable figures are available for prior years.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Copper rolling and drawing, total [1]	78	53,867	$166,076	45,924	93,688	$133,969	$302,592	$761,066	$1,063,658	$21,617
New England	27	22,608	66,836	19,531	38,606	54,198	104,031	211,014	315,045	7,155
Middle Atlantic	23	14,019	44,890	12,024	25,355	36,765	99,715	279,396	379,111	5,184
New York	7	6,767	22,965	5,740	11,966	18,385	43,616	122,860	166,476	3,294
North Central	23	14,791	46,575	12,456	25,617	37,113	84,530	213,605	298,135	8,850
Illinois	4	4,317	13,487	3,622	7,615	10,524	26,935	41,735	68,670	2,038
Michigan	11	5,266	16,997	4,427	9,137	13,407	27,998	74,175	102,173	1,851
South and West	5	2,449	7,775	1,913	4,110	5,893	14,316	57,051	71,367	428
Aluminum rolling and drawing, total [1]	29	27,365	73,665	22,786	45,334	57,544	150,697	254,069	404,766	9,897
Northeast and North Central	17	12,031	34,214	9,700	19,433	25,648	57,025	93,793	150,818	3,860
South and West	12	15,334	39,451	13,086	25,901	31,896	93,672	160,276	253,948	6,037
Nonferrous metal rolling, n.e.c., total [1]	55	7,592	24,376	6,086	12,496	18,144	50,074	143,016	193,090	2,314
Northeast and North Central	45	5,563	17,458	4,528	9,458	13,363	37,164	113,886	151,050	1,968
New Jersey	7	2,408	7,444	1,887	4,064	5,825	13,169	55,889	69,058	842
South and West	10	2,029	6,918	1,558	3,038	4,781	12,910	29,130	42,040	346
Nonferrous foundries, total [1]	1,724	65,342	198,988	57,469	116,709	163,706	295,834	266,303	562,137	19,017
Northeast	540	19,553	59,412	17,250	35,880	49,646	86,429	76,706	163,135	3,839
Massachusetts	83	1,649	4,725	1,463	3,058	3,906	6,548	5,587	12,135	473
Rhode Island	17	118	258	107	220	231	504	445	949	29
New York	166	6,904	21,718	6,075	12,750	18,385	30,371	29,274	59,645	1,473
Pennsylvania	121	6,053	18,427	5,404	11,068	15,487	29,246	26,161	55,407	894
North Central	785	38,276	118,598	33,568	67,583	96,575	173,724	155,277	329,001	13,436
Ohio	207	14,625	47,354	12,901	26,367	39,159	65,910	56,394	122,304	6,588
Illinois	176	9,087	28,106	8,091	16,096	23,088	45,283	36,082	81,365	1,888
Michigan	160	6,696	20,854	5,831	11,525	16,768	28,349	26,643	54,992	2,470
Wisconsin	67	2,912	8,578	2,398	4,843	6,342	12,541	11,083	23,624	570
Missouri	50	2,042	5,892	1,802	3,544	4,900	10,134	13,410	23,544	931
South Atlantic	51	1,013	2,472	944	1,908	2,178	4,162	5,900	10,062	255
Maryland	10	283	673	261	555	569	992	1,633	2,625	26
West Virginia	8	131	368	113	218	284	821	541	1,362	93
East South Central	19	727	1,722	695	1,465	1,602	1,607	2,720	4,327	23
Kentucky	6	134	340	125	296	305	455	639	1,094	4
West South Central	52	683	1,590	628	1,260	1,365	2,830	4,069	6,899	357
Texas	36	445	1,012	409	808	865	1,923	3,355	5,278	92
Mountain	22	287	662	263	542	607	1,303	2,441	3,744	21
Pacific	255	4,803	14,532	4,121	8,071	11,733	25,779	19,190	44,969	1,086
Washington	15	164	470	145	273	381	644	279	923	14
Oregon	16	200	617	175	357	497	1,000	1,513	2,513	47
California	224	4,439	13,445	3,801	7,441	10,855	24,135	17,398	41,533	1,025

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Copper rolling and drawing: *New England*, Massachusetts, 4 (1,201); Rhode Island, 3 (1,122); Connecticut, 20 (20,285); *Middle Atlantic*, New Jersey, 7 (3,848); Pennsylvania, 9 (3,404); *North Central*, Ohio, 3 (2,507); Indiana, 2; Wisconsin, 2; Missouri, 1; *South and West*, Maryland, 2; Montana, 1; California, 2.

Aluminum rolling and drawing: *Northeast and North Central*, Connecticut, 1; New York, 2; New Jersey, 1; Pennsylvania, 4 (2,019); Ohio, 1; Indiana, 1; Illinois, 1; Michigan, 5 (1,303); Wisconsin, 1; *South and West*, West Virginia, 1; Kentucky, 2; Tennessee, 1; Alabama, 2; Arizona, 1; Washington, 1; California, 4 (934).

Nonferrous metal rolling, n.e.c.: *Northeast and North Central*, Maine, 1; Massachusetts, 4 (101); Rhode Island, 1; Connecticut, 1; New York, 7 (279); Pennsylvania, 3; Ohio, 3 (107); Indiana, 3; Illinois, 9 (973); Michigan, 3 (532); Wisconsin, 2; Missouri, 1; *South and West*, Maryland, 1; West Virginia, 1; Georgia, 2; Texas, 1; Colorado, 2; Washington, 1; California, 2.

Nonferrous foundries: *Northeast*, Maine, 3 (23); New Hampshire, 4 (86); Vermont, 3 (21); Connecticut, 55 (1,928); New Jersey, 88 (2,771); *North Central*, Indiana, 69 (1,603); Minnesota, 28 (768); Iowa, 16 (341); Nebraska, 3 (23); Kansas, 9 (179); *South Atlantic*, Delaware, 2; Virginia, 6 (355); North Carolina, 4 (11); South Carolina, 1; Georgia, 11 (137); Florida, 9 (77); *East South Central*, Tennessee, 6 (485); Alabama, 7 (108); *West South Central*, Arkansas, 6 (61); Louisiana, 4 (61); Oklahoma, 6 (116); *Mountain*, Colorado, 16 (261); New Mexico, 1; Arizona, 1; Utah, 4.

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry: Copper rolling and drawing	Aluminum rolling and drawing	Nonferrous metal rolling, n.e.c.	Nonferrous foundries
ALL ESTABLISHMENTS				
Number of establishments	78	29	55	1,724
All employees:				
Number (average for the year)	53,867	27,365	7,592	65,342
Salaries and wages, total	$166,076	$73,665	$24,376	$198,988
Production and related workers:				
Number (average for the year)	45,924	22,786	6,086	57,469
Man-hours, total ... thousands	93,688	45,334	12,496	116,709
Wages, total	$133,969	$57,544	$18,144	$163,706
Value added by manufacture	$302,592	$150,697	$50,074	$295,834
ESTABLISHMENTS REPORTING DETAILED STATISTICS				
Number of establishments	78	29	55	1,223
All employees:				
Number (average for the year)	53,867	27,365	7,592	63,131
Salaries and wages, total	$166,076	$73,665	$24,376	$193,740
Production and related workers:				
Number (average for the year)	45,924	22,786	6,086	55,321
Man-hours, total ... thousands	93,688	45,334	12,496	112,418
Wages, total	$133,969	$57,544	$18,144	$158,807
Value added by manufacture	$302,592	$150,697	$50,074	$288,051
Number of employees for pay period ended nearest Oct. 15:				
All employees	50,919	24,926	7,218	60,264
Male	47,555	23,164	6,464	54,403
Female	3,364	1,762	754	5,861
Production and related workers	43,044	20,661	5,770	52,565
Male	42,059	19,967	5,377	49,077
Female	985	694	393	3,488
Force-account construction workers	----------	12	----------	15
Administrative, supervisory, sales, and all other	7,875	4,253	1,448	7,684
Male	5,496	3,185	1,087	5,311
Female	2,379	1,068	361	2,373
All employees, number by month:				
January	56,809	32,866	8,307	69,167
February	57,322	32,375	8,285	68,205
March	57,151	31,762	8,213	68,125
April	56,644	30,463	8,134	66,711
May	55,414	28,279	7,714	63,272
June	54,536	25,735	7,402	61,731
July	51,588	23,208	7,028	59,104
August	51,798	23,313	7,158	58,949
September	51,374	24,247	7,135	59,309
October	50,919	24,926	7,218	60,264
November	50,959	25,291	7,224	60,781
December	51,543	25,914	7,309	61,394

ITEM	Industry: Copper rolling and drawing	Aluminum rolling and drawing	Nonferrous metal rolling, n.e.c.	Nonferrous foundries
ESTABLISHMENTS REPORTING DETAILED STATISTICS—Continued				
Cost of materials, fuel, electricity, and contract work	$761,066	$254,069	$143,016	$259,102
Materials, parts, containers, and supplies	742,706	241,984	140,321	239,127
Fuels, total	9,258	6,505	1,124	8,376
Bituminous coal	3,168	2,448	219	504
Anthracite	129	80	42	65
Coke	44	1,032	5	631
Fuel oils	3,328	2,021	185	3,742
Gas	2,309	781	657	3,119
Other fuels	280	143	16	315
Purchased electric energy	8,681	5,514	1,316	4,375
Contract and commission work	421	66	255	7,224
Value of inventories:				
Beginning of year, total	$111,076	$61,218	$36,676	$52,030
Finished products	11,444	7,698	14,612	10,533
Materials, supplies, and work in process	99,632	53,520	22,064	41,497
End of year, total	125,647	57,014	34,555	52,750
Finished products	19,921	6,371	12,686	13,068
Materials, supplies, and work in process	105,726	50,643	21,869	39,682
Expenditures for plant and equipment:				
New plant and equipment	$21,617	$9,897	$2,314	$19,017
Construction and major alteration of fixed plants	5,466	1,481	555	6,170
Buildings	5,119	1,368	535	5,442
Other construction	347	113	20	728
Machinery and equipment	16,151	8,416	1,759	12,847
Production machinery and equipment	15,552	7,711	1,501	11,807
Other machinery and equipment	599	705	258	1,040
Used plant and equipment, and land	1,213	4,138	107	2,124
Number of highway-type motor vehicles owned or leased:				
Trucks	246	161	54	594
By manufacturer's rated capacity:				
Under 1½ tons	29	47	11	315
1½ tons	40	58	17	165
Over 1½ tons and less than 3½ tons	58	49	5	79
3½ tons and less than 5 tons	21	2	5	17
5 tons and over	98	5	16	18
By body type:				
Van	14	1	1	22
Stake or platform	142	40	30	192
Panel or light delivery	32	52	11	268
All other trucks	58	68	12	112
Truck tractors	49	17	2	46
Trailers and semitrailers	72	23	4	53

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of— 1–4 employees	5–9 employees	10–19 employees	20–49 employees	50–99 employees	100–249 employees	250–499 employees	500–999 employees	1,000–2,499 employees	2,500 employees and over
Copper rolling and drawing:											
Number of establishments	78	1	5	1	4	9	14	11	14	15	4
Number of employees (average for the year)	53,867	(d)	(d)	*49*	133	663	2,480	3,725	9,852	24,828	12,137
Value added by manufacture	$302,592	(d)	(d)	*$228*	$1,400	$4,816	$21,886	$29,994	$49,154	$138,413	$56,701
Aluminum rolling and drawing:											
Number of establishments	29	----------	1	1	2	2	6	5	3	8	1
Number of employees (average for the year)	27,365	----------	(d)	(d)	(d)	*254*	(d)	*2,820*	*24,291*	(d)	(d)
Value added by manufacture	$150,697	----------	(d)	(d)	(d)	*$1,115*	(d)	*$14,704*	*$134,878*	(d)	(d)
Nonferrous metal rolling, n.e.c.:											
Number of establishments	55	3	7	5	14	9	9	5	2	1	----------
Number of employees (average for the year)	7,592	(d)	*59*	72	460	670	1,588	*4,748*	(d)	(d)	----------
Value added by manufacture	$50,074	(d)	*$448*	$494	$3,948	$4,158	$11,184	*$29,847*	(d)	(d)	----------
Nonferrous foundries:											
Number of establishments	1,724	520	331	322	309	116	84	20	16	6	----------
Number of employees (average for the year)	65,342	1,135	2,204	4,471	9,345	8,166	12,503	7,672	10,370	9,476	----------
Value added by manufacture	$295,834	$5,054	$8,809	$18,272	$41,084	$37,762	$60,987	$32,306	$45,912	$45,648	----------

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

COPPER ROLLING AND DRAWING INDUSTRY	Shipped by— Copper rolling and drawing industry	Other industries	All industries
Total shipments by the industry	$1,063,658		
A. Rolled, drawn, and extruded copper and copper-base alloy products	1,005,879	$81,504	$1,087,383
Rod, bar, shapes, plate, sheet, strip, and tubing [1]	771,019	11,347	782,366
Bare and tinned wire and cable [1]	206,057	70,157	276,214
Fees for copper and copper-base alloy mill products processed on a toll basis	28,803		28,803
B. Secondary products	53,231		
Aluminum rod, bar, structural shapes, tubing, and wire	6,650		
Copper and copper-base alloy forgings	5,829		
All other secondary products	40,752		
C. Miscellaneous receipts	4,548		

ALUMINUM ROLLING AND DRAWING INDUSTRY	Shipped by— Aluminum rolling and drawing industry	Other industries	All industries
Total shipments by the industry	$404,766		
A. Rolled, drawn, and extruded aluminum and aluminum-base alloy products	382,962	$14,436	$397,398
Plate, sheet, and strip [2]	(d)	(d)	245,212
Other rolled, drawn, and extruded products [2]	(d)	(d)	77,299
Value of transfers to other plants of the same company and fees received for processing metal owned by others	(d)	(d)	74,887
B. Secondary products } C. Miscellaneous receipts }	21,804		

NONFERROUS METAL ROLLING, N.E.C., INDUSTRY	Shipped by— Nonferrous metal rolling, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$193,090		
A. Rolled, drawn, and extruded nonferrous metal products, n.e.c.	153,102	$10,016	$163,118
Rolled, drawn, and extruded magnesium products [1]	(d)	(d)	3,175
Other rolled, drawn, and extruded nonferrous metal products [1]	(d)	(d)	159,943
B. Secondary products	37,944		
Lead and tin-base alloy ingots	16,744		
Other secondary products (nonferrous ingots, castings, etc.)	21,200		
C. Miscellaneous receipts	2,044		

NONFERROUS FOUNDRIES INDUSTRY	Shipped by— Nonferrous foundries industry	Other industries	All industries
Total shipments by the industry	$562,137		
A. Nonferrous castings [3]	522,021	$45,990	$568,011
B. Secondary products	33,865		
Plain bearings	6,641		
Small cutting tools	5,084		
Gray-iron castings	4,080		
Foundry machinery and equipment	2,938		
Other secondary products (alloy ingots, valves, plumbing fixture fittings and trim, steel castings, etc.)	14,222		
C. Miscellaneous receipts	6,251		
Contract and commission work	2,164		
Scrap and salable refuse	3,629		
Other miscellaneous receipts	458		

[d] Withheld to avoid disclosing figures for individual companies.
[1] Includes both shipments to other companies and transfers to other plants of the same company.
[2] Does not include the value of transfers to other plants of the same company.
[3] Includes the value of $20,668,000 of finished cast aluminum cooking utensils, other than pressure cookers. Differs from the total value of shipments of nonferrous castings shown in table 6-D, in that the latter does not include the value of these cast aluminum cooking utensils.

TABLE 6-A.—NONFERROUS METAL ROLLED, DRAWN, AND EXTRUDED PRODUCTS SHIPPED, TRANSFERRED, RECEIVED, AND PRODUCED AND CONSUMED BY NONFERROUS METAL MILLS AND WIRE DRAWING ESTABLISHMENTS: 1947

[Figures shown in italics under "Transfers to other plants of the same company" include shipments of products manufactured from materials owned by others or quantities produced and consumed in the same establishment in the production of fabricated products, as specified by footnote [1] for the item. The tonnage of copper products produced and consumed in the same plant which have been suppressed are negligible. Although the aluminum tonnages are more significant, as a whole they still amount to less than 10 percent of the totals shown in the "Transfers to other plants of the same company" column]

[Money figures in thousands of dollars; quantity figures in short tons]

PRODUCT	Receipts (quantity)	Produced and consumed in the same establishment in the production of fabricated products (quantity)	Shipments to other companies		Transfers to other plants of the same company (quantity)	Shipments of products manufactured from materials owned by others (quantity)
			Quantity	Value f.o.b. plant		
Copper and copper-base alloy wire and cable, bare and tinned	**17,207**	**385,566**	**295,941**	**$182,674**	**175,938**	**53,762**
Unalloyed copper:						
For electrical transmission	12,638	379,131	228,493	135,282	164,529	50,962
Other copper wire and cable	304	456	11,278	5,897	*1,078*	(1)
Copper-base alloys:						
For electrical transmission	325	974	11,362	7,842	*1,814*	(1)
Other copper-base alloy wire and cable	3,940	5,005	44,808	33,653	8,517	2,800
Other copper and copper-base alloy rolled, drawn, and extruded products	**508,538**	**15,214**	**1,031,200**	**659,046**	**250,814**	**229,555**
Unalloyed copper:						
Rod and bar	446,318	2,990	189,102	96,185	123,839	161,265
Plate, sheet, and strip	3,781	----------	128,361	83,191	11,319	25,758
Pipe and tube	27,436	----------	166,667	131,059	16,189	3,054
Copper-base alloys:						
Rod	9,279	8,762	172,963	92,648	44,434	16,383
Shapes, drawn and extruded	1,462	(1)	25,387	15,667	*5,224*	(1)
Plate, sheet, and strip	8,974	3,462	259,348	169,206	44,976	21,681
Pipe and tube	11,288	----------	89,372	71,090	6,833	1,414
Aluminum and aluminum-base alloy, plate, sheet, and strip	67,582	(1)	471,544	245,212	*152,748*	(1)
Other aluminum and aluminum-base alloy rolled, drawn, and extruded products	**13,243**	(1)	**94,429**	**77,299**	**61,716**	(1)
Rolled structural shapes, rod, bar, and wire	11,990	(1)	37,212	24,246	*55,213*	(1)
Extruded shapes, rod, bar, tube blooms, and tubing	1,253	(1)	57,217	53,053	*6,503*	(1)
Magnesium and magnesium-base alloy rolled, drawn, and extruded products	293	----------	2,240	3,052	*384*	(1)
All other nonferrous rolled, drawn, and extruded products	n.a.	n.a.	----------	127,935	n.a.	n.a.

n.a.—Not available.
[1] Included with "Transfers to other plants of the same company."

TABLE 6-B.—COPPER AND COPPER-BASE ALLOY ROLLED, DRAWN, AND EXTRUDED PRODUCTS SHIPPED, TRANSFERRED, AND PRODUCED AND CONSUMED IN THE SAME ESTABLISHMENT IN THE PRODUCTION OF FABRICATED PRODUCTS: 1947 AND 1939

[All figures in short tons]

PRODUCT	1947	1939
Copper and copper-base alloy wire and cable, bare and tinned	**911,207**	**381,666**
Unalloyed copper	835,927	336,603
Copper-base alloys	75,280	45,063
Other copper and copper-base alloy rolled, drawn, and extruded products	**1,526,783**	**842,027**
Unalloyed copper:		
Rod and bar	477,196	[1] 204,903
Plate, sheet, and strip	165,438	107,707
Pipe and tube	185,910	72,795
Other copper and copper-base alloy rolled, drawn, and extruded products—Continued		
Copper-base alloys:		
Rod	242,542	[1] 135,156
Shapes, drawn and extruded	28,611	[2] 6,357
Plate, sheet, and strip	329,467	221,224
Pipe and tube	97,619	93,885

NOTE: The 1939 data for copper-base alloys refer to brass and bronze products only; figures for other copper-base alloys are not included and to this extent the data are not comparable with 1947, but it is not believed that the omissions are serious. The data on shipments, interplant transfers, and produced and consumed in the same plant have been combined since the data are not comparable for each of these measures separately. Some establishments which reported rolling mill and fabricating operations at the same location in 1939 treated each of these operations as separate establishments in 1947. For this reason some of the tonnage reported as produced and consumed in the same establishment in 1939 was considered as interplant transfers in 1947.

[1] Does not include the tonnage of rods reported as produced and consumed in the same establishment in 1939, most of which was consumed in the production of wire, rather than fabricated products.

[2] Includes extruded shapes only.

TABLE 6-C.—NET SHIPMENTS OF NONFERROUS METAL ROLLED, DRAWN, AND EXTRUDED PRODUCTS: 1947

[The figures have been derived by subtracting nonferrous metal mill and wire drawing establishments' receipts of each mill shape from the total of the shipments, transfers to other plants of the same company, production on a toll basis, and consumption in the plant in the production of fabricated products]

[All figures in short tons]

PRODUCT	Net shipments
Copper and copper-base alloy wire and cable, bare and tinned	**894,000**
Unalloyed copper:	
For electrical transmission	810,477
Other copper wire and cable	12,508
Copper-base alloys:	
For electrical transmission	13,825
Other copper-base alloy wire and cable	57,190
Other copper and copper-base alloy rolled, drawn, and extruded products	**1,018,245**
Unalloyed copper:	
Rod and bar	30,878
Plate, sheet, and strip	161,657
Pipe and tube	158,474
Other copper and copper-base alloy rolled, drawn, and extruded products—Continued	
Copper-base alloys:	
Rod	233,263
Shapes, drawn and extruded	27,149
Plate, sheet, and strip	320,493
Pipe and tube	86,331
Aluminum and aluminum-base alloy plate, sheet, and strip	556,710
Other aluminum and aluminum-base alloy rolled, drawn, and extruded products	**142,902**
Rolled structural shapes, rod, bar and wire	80,435
Extruded shapes, rod, bar, tube blooms, and tubing	62,467
Magnesium and magnesium-base alloy rolled, drawn, and extruded products	2,331

TABLE 6-D.—NONFERROUS CASTINGS, SHIPPED AND TRANSFERRED: 1947

[Money figures in thousands of dollars; quantity figures in short tons]

PRODUCT	Shipments and interplant transfers						Produced and consumed in the same plant (quantity)
	Total		Interplant transfers		All other shipments		
	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	
Nonferrous castings, total		[1] **$547,343**		**$38,943**		**$508,400**	
Nonferrous castings produced by establishments classified in all foundry industries, total		517,494		37,098		480,396	
Aluminum and aluminum-base alloy castings:							
Sand	63,856	78,434	1,708	2,133	62,058	76,301	1,261
Permanent and semipermanent mold	46,090	37,532	5,307	4,429	40,783	33,103	7,098
Die	41,357	48,884	259	335	41,098	48,549	2,597
Other	1,028	1,972	181	258	847	1,714	12
Copper and copper-base alloy castings:							
Permanent and semipermanent mold	19,619	8,328	13,616	3,024	6,003	5,304	1,161
Die	1,889	2,835			1,889	2,835	9
Sand and other	238,220	181,585	27,669	15,703	210,551	165,882	7,746
Magnesium and magnesium-base alloy castings	2,974	10,721	(2)	(2)	2,974	10,721	
Zinc and zinc-base alloy castings:							
Die	152,303	118,026	14,322	9,576	137,981	108,450	613
Other	2,178	1,744	(2)	(2)	2,178	1,744	
Lead and lead-base alloy die castings	2,988	1,993			2,988	1,993	
All other nonferrous metal castings:							
Die		227				227	
Other		5,642		640		5,002	
Nonferrous castings, not specified by type		19,571		1,000		18,571	
Nonferrous castings shipped by establishments classified outside foundry industries, total		29,849		1,845		28,004	

[1] Differs from the total shipments of nonferrous castings shown in table 5, in that the latter includes the value of $20,668,000 of cast aluminum cooking utensils, other than pressure cookers. Part of the tonnage of castings shown as "Produced and consumed in the same plant" went into the production of the aluminum cooking utensils.
[2] Included with "All other shipments."

TABLE 6-E.—SELECTED NONFERROUS CASTINGS SHIPPED, TRANSFERRED, AND PRODUCED AND CONSUMED IN THE SAME ESTABLISHMENT: 1947

[All figures in short tons]

PRODUCT	Sold to other companies	Transferred to other plants of the same company	Further machined or assembled into other products in the same plant
Aluminum and aluminum-base alloy castings:			
Sand	67,912	3,273	16,768
Permanent and semipermanent mold	42,179	5,331	37,389
Die	44,614	281	6,641
Other	1,290	241	88
Copper and copper-base alloy castings:			
Permanent and semipermanent mold	6,184	14,230	7,890
Die	3,647		3,860
Sand and other	233,418	36,102	193,674
Magnesium and magnesium-base alloy castings	4,181	(1)	(1)
Zinc and zinc-base alloy castings:			
Die	144,049	16,228	50,364
Other	4,158	(1)	(1)

NOTE: These tonnages do not include the quantity of castings represented by $19,571,000 (nonferrous castings, not specified by type—see table 6-D), for which neither quantity nor type of nonferrous castings was reported.
[1] Included with "Sold to other companies."

TABLE 7.—SELECTED MATERIALS CONSUMED, BY KIND: 1947

[Money figures in thousands of dollars; quantity figures in short tons]

MATERIAL	COPPER ROLLING AND DRAWING INDUSTRY			ALUMINUM ROLLING AND DRAWING INDUSTRY [1]		NONFERROUS FOUNDRIES INDUSTRY [2]	
	Materials purchased or transferred from other plants of the same company		Materials processed on a toll basis (quantity)	Quantity	Cost	Quantity	Cost
	Quantity	Cost					
Refinery shapes and forms (ingot, pig, wire bars, slabs, etc.):							
Aluminum and aluminum-base alloys	8,699	$2,748	----------	673,125	$187,649	209,995	$63,237
Copper, unalloyed	1,202,554	507,167	260,089	}			
Copper-base alloys	26,665	10,453	6,127	} 815	269	240,314	93,910
Lead and lead-base alloys	8,200	2,384	----------	(3)	(3)	n.a.	n.a.
Magnesium and magnesium-base alloys	607	319	----------	2,450	958	n.a.	n.a.
Nickel and nickel-base alloys	3,452	2,371	----------	(3)	(3)	n.a.	n.a.
Zinc and zinc-base alloys	97,964	22,440	4,376	440	104	195,553	48,636
Nonferrous scrap (purchased scrap only):							
Aluminum and aluminum-base alloys	----------	----------	----------	72,767	14,884	11,054	2,673
Copper and copper-base alloys	375,602	120,114	7,887	(3)	(3)	162,656	50,989
Zinc and zinc-base alloys	[4] 11,305	[4] 3,268	(5)	----------	----------	8,306	2,345

n.a.—Not available.

[1] Includes materials purchased, transferred from other plants of the same company, and processed on a toll basis. The cost of the materials processed on a toll basis has been estimated to approximate the commercial value of that tonnage.

[2] Includes the consumption by establishments classified in the nonferrous foundry industry as well as by nonferrous foundry departments of establishments classified in other industries. The coverage of foundries operated by establishments classified in other industries is not quite complete and the consumption figures represent foundries which produced 95 percent of the total shipments of nonferrous castings in 1947. In addition, the consumption data, particularly for copper and copper-base alloys, are somewhat understated because some foundries filed reports on a form that did not provide for reporting such information.

[3] Negligible.

[4] Includes the quantity and estimated cost of zinc scrap processed on a toll basis.

[5] Included in "Materials purchased or transferred from other plants of the same company."

TABLE 8-A.—NUMBER OF ESTABLISHMENTS PERFORMING SELECTED METALWORKING OPERATIONS: 1947

[The figures in the table represent the number of establishments maintaining the metalworking operation specified, according to the usual number of production workers employed in the operation during 1947]

METALWORKING OPERATION	COPPER ROLLING AND DRAWING INDUSTRY						ALUMINUM ROLLING AND DRAWING INDUSTRY						NONFERROUS METAL ROLLING, N.E.C., INDUSTRY					
	Number of establishments performing selected metalworking operations																	
	Total	Distribution by number of production workers in the operation					Total	Distribution by number of production workers in the operation					Total	Distribution by number of production workers in the operation				
		1-4	5-19	20-49	50-99	100 and over		1-4	5-19	20-49	50-99	100 and over		1-4	5-19	20-49	50-99	100 and over
Foundry	4	1	1	2	------	------	1	------	------	1	------	------	7	2	4	------	1	------
Die casting	2	------	1	1	------	------	------	------	------	------	------	------	1	1	------	------	------	------
Forging—presses, hammers, or upsetters	6	------	1	3	2	------	1	1	------	------	------	------	6	4	1	1	------	------
Electroplating	7	6	1	------	------	------	2	1	1	------	------	------	2	2	------	------	------	------
Galvanizing and other hot-dip coating	12	4	6	1	1	------	1	------	------	1	------	------	2	2	------	------	------	------
Heat treating or annealing of metals	57	16	15	15	8	3	20	4	7	5	1	3	9	1	5	2	1	------
Automatic screw-machine department	2	1	------	1	------	------	1	1	------	------	------	------	------	------	------	------	------	------
Machine shop	40	4	14	6	9	7	12	2	2	4	2	2	9	5	3	------	------	1
Tool and die room	33	9	11	8	4	1	8	1	4	------	2	1	4	1	2	1	------	------
Pattern shop	1	1	------	------	------	------	1	1	------	------	------	------	1	------	1	------	------	------
Plate or structural fabrication	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Stamping, blanking, forming, or drawing	13	1	5	------	3	4	7	1	3	2	------	1	8	3	1	------	2	2

TABLE 8-B.—NUMBER OF NONFERROUS FOUNDRIES WITH MACHINE SHOPS AND PATTERN SHOPS [1]

[The figures in the table represent the number of establishments maintaining the metalworking operation specified, according to the usual number of production workers employed in the operation during 1947]

OPERATION	Total	Distribution by number of production workers in the operation				
		1-4	5-19	20-49	50-99	100 and over
Machine shop	292	100	112	47	15	18
Pattern shop	192	124	57	4	6	1

[1] Does not include data for the 504 small establishments which did not supply detailed information, including this inquiry, and a small number of other establishments, most of which had less than 5 employees.

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MISCELLANEOUS PRIMARY METAL INDUSTRIES

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of iron and steel forgings, steel and nonferrous wire, iron and steel pipe and tubing, cold-rolled sheets and strip, cold-finished bars, metal powders, and miscellaneous primary metal products. These establishments have been classified in the four industries described separately below.

Iron and Steel Forgings *(Standard Industrial Classification No. 3391.)*—This industry comprises establishments primarily engaged in manufacturing light and heavy board drop, steam hammer, upset, and press forgings with or without the use of dies. Rolling mills engaged in the production of iron and steel forgings are classified in Industry 3312.

Establishments producing frogs, switches, crossings, and similar railway-track accessories were formerly classified in the iron and steel forgings industry. For the 1947 census, these establishments have been included in the Fabricated Metal Products, N.E.C., Industry. The 1939 data have been revised to present statistics comparable with those published for 1947.

Shipments data in table 6–A cover only iron and steel forgings produced for sale or for interplant transfer. No data are available on forgings which are produced and consumed within the same establishment in the manufacture of further fabricated products. In some cases, the further manufactured products may require relatively little fabrication beyond the rough forging stage, e.g., some types of hand tools and agricultural implements. Nevertheless, establishments producing such items are classified as fabricated product plants in the appropriate industry in Major Groups 34–37.

Of the total value of $440 million of iron and steel forgings shipped, 77 percent was produced by establishments classified in the Iron and Steel Forgings Industry. Materials consumed in the production of forgings, shown in table 7–A, include only those materials consumed by establishments classified in the Iron and Steel Forgings Industry. For this reason they cannot be related directly to the tonnages of forgings shown in table 6–A which include the total shipments of steel forgings, both those made in the industry and those made by establishments classified in other industries. Establishments classified in the Iron and Steel Forgings Industry shipped 877,205 tons of carbon steel forgings, 370,672 tons of alloy (other than stainless) steel forgings and 3,858 tons of stainless steel forgings from the tonnages of materials shown in table 7–A.

Wire Drawing *(Standard Industrial Classification No. 3392.)*—This industry comprises establishments primarily engaged in drawing wire from purchased iron, steel, or nonferrous metal rods or bars, and which may be engaged in the further manufacture of products made from wire. Rolling mills engaged in the production of ferrous wire are classified in Industry 3312, and establishments primarily engaged in rolling and drawing nonferrous metals in Group 335. Establishments primarily engaged in manufacturing insulated wire and cable from purchased wire are classified in Industry 3631, and other wire products from purchased wire in Group 348.

In 1939, some large establishments drawing copper wire and fabricating the wire into insulated wire and cable were classified in the Insulated Wire and Cable Industry. The general statistics on the Wire Drawing Industry for 1947 and 1939 are, therefore, not strictly comparable.

Data shown on receipts, production, consumption, shipments, and transfers of wire in table 6–B are also included in the reports on "Blast furnace, steel mill, and iron and steel foundry products" and "Nonferrous metal mill and foundry products," and include data on wire reported by wire drawing establishments, steel works and rolling mills, copper and brass mills, aluminum rolling mills, and all other establishments which produced wire in 1947. The materials consumed data shown in table 7–B, however, include only the materials consumed by establishments classified in the Wire Drawing Industry and exclude consumption by steel works and other integrated establishments.

Of the total value of $595 million of wire drawn for sale, interplant transfer, or on a toll basis for other companies, 29 percent was drawn by establishments classified in the Wire Drawing Industry. Most of the remainder was produced by integrated establishments which roll their rods or bars at the same location. Establishments classified in the Wire Drawing Industry produced a substantial portion of the total fabricated wire products shipped in 1947. Of the total value of $895 million of insulated wire and cable shipped or transferred, 63 percent was produced by establishments classified in the Wire Drawing Industry and of the $822 million of other fabricated wire products, including nails and spikes, 16 percent was made by establishments in this industry. Due to the extent of wire fabricating operations performed by wire drawing establishments, data are shown in table 6–C on the shipments of wire products (including insulated wire and cable).

Welded and Heavy-Riveted Pipe *(Standard Industrial Classification No. 3393.)*—This industry comprises establishments primarily engaged in manufacturing welded pipe and tubes, and lock-joint and heavy-riveted pipe from purchased skelp. Rolling mills engaged in manufacturing welded and heavy-riveted pipe are classified in Industry 3312.

The data on receipts, production, consumption, shipments, and transfers of steel pipe in table 6–B are also included in the report on "Blast furnace, steel mill, and iron and steel foundry products" and include figures on steel pipe reported by welded and heavy-riveted pipe establishments, steel works and rolling mills, and all other establishments producing steel pipe. The materials consumed data shown in table 7–C, however, include only the materials consumed by establishments classified in the Welded and Heavy-Riveted Pipe Industry and exclude consumption by steel works or other establishments producing steel pipe.

Of the total value of $824 million of steel pipe and tubing, 25 percent was produced by establishments classified in the Welded and Heavy-Riveted Pipe Industry. Most of the remainder was made in the Steel Works and Rolling Mills Industry which includes all producers of seamless pipe and tubing, and establishments manufacturing welded pipe and tubing from skelp rolled at the same establishment.

Primary Metal Industries, Not Elsewhere Classified *(Standard Industrial Classification No. 3399.)*—This industry comprises establishments primarily engaged in manufacturing flat bright cold-rolled strip (including razor-blade strip), cold-rolled sheets, cold-finished steel bars, nonferrous forgings, ferrous and nonferrous flakes and powders, and other primary metal products, not elsewhere classified. Establishments primarily engaged in annealing and heat treating steel for the trade are also included in this industry.

A large proportion of the establishments in this industry are engaged in annealing and heat treating steel for others. However, in general, these are small establishments and they only contributed a minor part of the value of shipments of the industry. Most of the value of shipments of the industry consists of cold-rolled sheets and strip and cold-finished steel bars. Of the total value of $340 million of shipments and receipts reported by the industry, 63 percent consisted of cold-rolled sheets and strip and cold-finished bars.

The industry as presently constituted did not exist in 1939. Producers of cold-rolled sheets and strip and cold-finished bars constituted a separate industry; heat treating establishments were included in the Machine-Shop Products, N.E.C., Industry; establishments primarily engaged in producing copper and brass forgings were included in the Nonferrous Metal Products, N.E.C., Industry; and producers of aluminum forgings were included in the Aluminum Products, N.E.C., Industry. The 1939 data in table 1 have been compiled by retabulating the 1939 figures to obtain statistics comparable to those for 1947.

Materials consumed in cold-rolling and finished operations shown in table 7–D include only those materials consumed by establishments classified in Primary Metals Industries, N.E.C. These figures, therefore, represent the consumption by establishments which perform cold-rolling and finishing operations but which do not hot-roll sheets, strip, or bars.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Iron and steel forgings:								
1947	250	36,724	$128,198	32,384	$105,776	$197,111	$172,986	$370,097
1939 [4]	192	n.a.	n.a.	14,764	21,462	49,426	48,576	98,002
1937	194	20,235	33,797	18,255	27,659	59,611	63,224	122,835
1935	185	13,857	19,302	12,253	15,107	31,243	35,108	66,351
1933	181	9,137	9,655	7,953	7,354	15,627	16,896	32,523
1931	202	n.a.	n.a.	9,971	11,444	25,043	22,657	47,700
1929	218	23,512	43,221	20,882	34,505	84,642	71,607	156,249
1927	219	17,919	30,806	15,594	23,540	52,934	52,102	105,036
1925	227	23,202	39,202	20,483	31,588	67,342	68,577	135,919
1923	244	31,415	50,268	27,723	40,539	87,234	93,591	180,825
1921	252	20,173	29,946	16,947	20,950	39,792	45,291	85,083
1919	261	33,466	51,314	29,135	40,603	93,558	83,561	177,119
1914	213	12,638	10,052	11,277	7,850	15,447	15,300	30,747
1909	191	9,456	6,568	8,461	5,169	10,712	10,596	21,308
1904	146	6,542	4,433	5,897	3,555	6,901	6,008	12,909
1899	97	5,259	3,123	4,919	2,677	5,512	5,424	10,936
Wire drawing:								
1947	134	55,079	175,682	45,644	136,797	314,788	597,307	912,095
1939	95	25,980	40,382	21,969	29,966	76,521	99,982	176,503
1937	93	27,749	41,984	24,580	33,967	81,774	100,375	182,149
1935	88	24,210	30,719	21,550	24,452	58,695	68,722	127,417
1933	78	16,589	17,769	14,656	14,321	35,861	39,615	75,476
1931	82	n.a.	n.a.	14,476	17,179	38,183	45,187	83,370
1929	81	25,021	42,089	22,467	35,110	87,815	126,182	213,997
1927	73	22,213	36,239	19,866	30,038	62,618	128,092	190,710
1925	68	20,950	32,571	18,544	26,928	57,212	127,251	184,463
1923	64	23,601	35,494	21,310	29,862	62,481	133,883	196,364
1921	61	17,017	22,772	14,832	17,810	37,241	62,705	99,946
1919	66	22,223	34,744	19,741	29,290	59,337	102,814	162,151
1914	54	19,722	13,999	17,600	11,021	25,417	56,424	81,841
1909	56	19,930	12,515	18,084	10,316	23,944	60,543	84,487
1904	25	5,318	3,652	4,737	2,859	7,852	30,062	37,914
1899	29	1,697	996	1,603	860	2,407	7,014	9,421
Welded and heavy-riveted pipe:								
1947	50	13,144	43,115	11,306	34,348	89,614	129,261	218,875
1939	49	9,670	15,794	8,370	12,306	34,008	41,857	75,865
1937	53	15,267	22,690	14,125	19,436	45,140	68,629	113,769
1935	48	11,790	14,731	10,720	11,793	31,564	42,285	73,849
1933	44	7,269	6,890	6,552	5,580	14,136	20,821	34,957
1931	51	n.a.	n.a.	8,045	9,890	32,750	42,291	75,041
1929	50	12,836	23,157	11,417	18,762	54,538	70,121	124,659
1927	44	12,194	19,580	11,083	16,066	42,407	55,779	98,186
1925	42	12,042	20,615	10,871	17,157	35,554	59,142	94,696
1923	53	11,713	20,670	10,633	17,705	32,857	57,966	90,823
1921	57	9,814	13,746	8,728	11,234	19,569	37,093	56,662
1919	50	11,770	17,775	10,426	14,920	30,713	51,156	81,869
1914	36	9,680	6,995	8,845	5,750	11,359	26,296	37,655
1909	28	7,292	4,620	6,817	3,963	7,944	22,942	30,886
1904	27	5,712	2,841	5,416	2,473	4,654	12,747	17,401
1899	19	5,729	2,762	5,536	2,496	5,768	15,524	21,292
Primary metal industries, n.e.c.:								
1947	377	22,135	72,250	18,078	52,785	138,642	201,021	339,663
1939 [4]	103	n.a.	n.a.	6,901	10,094	32,263	50,233	82,496

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] Figures for years prior to 1935 do not include cost of contract work.

[3] For 1947 and 1929, the figures represent value of products shipped, except in the case of "Wire drawing" for 1929 where they represent value of products made; for all other years, the figures represent value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[4] The returns for 1939 have been retabulated to provide figures comparable with those for 1947. Value added for 1939, before retabulation and on a basis strictly comparable with earlier years, was $52.9 million for "Iron and Steel forgings." No comparable figures are available for prior years for "Primary metal industries, n.e.c."

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Iron and steel forgings, total [1]	250	36,724	$128,198	32,384	66,469	$105,776	$197,111	$172,986	$370,097	$9,230
Northeast	90	11,302	36,259	10,012	20,479	29,878	52,717	45,666	98,383	1,772
Massachusetts	15	2,413	7,869	2,115	4,385	6,353	10,987	8,260	19,247	303
New Jersey	15	1,194	4,021	1,060	2,191	3,257	6,137	5,518	11,655	76
Pennsylvania	32	5,297	16,455	4,743	9,518	13,824	23,979	21,488	45,467	1,112
North Central	114	23,412	85,912	20,622	42,280	70,958	135,497	118,177	253,674	6,816
Ohio	36	5,441	18,844	4,904	9,679	15,853	29,471	22,699	52,170	1,256
Illinois	30	6,701	26,858	5,730	12,175	21,765	44,324	33,258	77,582	1,810
Michigan	29	5,270	18,676	4,732	9,542	15,742	29,232	34,279	63,511	1,699
Wisconsin	9	3,834	14,068	3,258	6,895	11,308	22,174	14,855	37,029	1,331
South	14	960	2,608	878	1,883	2,236	3,510	3,288	6,798	108
Texas	4	175	469	152	328	397	845	775	1,620	18
West	32	1,050	3,419	872	1,827	2,704	5,387	5,855	11,242	534
California	23	781	2,561	637	1,374	2,029	4,322	4,375	8,697	445
Wire drawing, total [1]	134	55,079	175,682	45,644	94,987	136,797	314,788	597,307	912,095	43,893
New England	30	11,958	35,415	9,998	19,984	27,829	61,658	84,822	146,480	4,452
Massachusetts	16	4,926	15,505	4,164	8,272	12,566	22,499	33,098	55,597	2,223
Middle Atlantic	47	18,169	59,377	15,057	32,839	46,162	95,476	197,958	293,434	15,971
New York	16	6,977	22,072	5,736	12,467	16,335	29,837	97,636	127,473	9,203
New Jersey	19	5,154	18,908	4,057	8,969	14,080	34,907	48,407	83,314	4,668
Pennsylvania	12	6,038	18,397	5,264	11,403	15,747	30,732	51,915	82,647	2,100
Other Divisions	57	24,952	80,890	20,589	42,164	62,806	157,654	314,527	472,181	23,470
Ohio	8	3,967	12,689	3,342	6,660	9,919	25,698	37,403	63,101	971
Indiana	14	6,012	18,555	5,222	11,309	15,319	35,545	79,377	114,922	3,889
Illinois	22	7,013	23,408	5,816	11,799	18,428	48,644	108,406	157,050	9,104
Michigan	5	3,401	9,965	2,886	5,859	8,070	15,586	35,420	51,006	1,474
Welded and heavy-riveted pipe, total [1]	50	13,144	43,115	11,306	22,454	34,348	89,614	129,261	218,875	5,760
Northeast	13	5,155	15,178	4,604	8,934	12,559	30,392	52,437	82,829	1,881
Other Divisions	37	7,989	27,937	6,702	13,520	21,789	59,222	76,824	136,046	3,879
Ohio	9	2,356	7,669	1,990	4,008	5,923	16,915	17,437	34,352	525
Illinois	3	836	2,797	631	1,277	1,823	6,035	3,744	9,779	272
Michigan	5	2,365	8,626	1,985	3,792	6,824	16,430	12,085	28,515	1,795
California	12	1,138	3,864	979	1,980	3,123	7,426	10,714	18,140	560
Primary metal industries, n.e.c., total [1]	377	22,135	72,250	18,078	38,120	52,785	138,642	201,021	339,663	11,808
New England	43	2,001	6,521	1,630	3,627	4,972	14,609	21,474	36,083	1,157
Connecticut	19	1,035	3,572	855	1,921	2,737	7,858	14,924	22,782	569
Middle Atlantic	103	8,187	25,623	6,749	14,071	18,848	47,272	64,386	111,658	3,533
New York	30	1,005	3,230	853	1,757	2,432	6,651	9,688	16,339	200
New Jersey	33	2,591	8,505	2,015	4,425	6,039	14,582	16,595	31,177	1,310
Pennsylvania	40	4,591	13,888	3,881	7,889	10,377	26,039	38,103	64,142	2,023
North Central	181	10,909	36,871	8,875	18,752	26,609	70,441	109,218	179,659	6,075
Ohio	48	4,983	16,420	4,007	8,243	11,999	29,358	45,971	75,329	2,780
Indiana	15	963	3,698	780	1,835	2,643	8,762	20,653	29,415	742
Illinois	35	2,594	8,379	2,088	4,308	6,162	16,814	24,546	41,360	1,276
Michigan	59	2,022	7,123	1,725	3,748	4,957	13,341	17,155	30,496	1,142
South and West	50	1,038	3,235	824	1,670	2,356	6,320	5,943	12,263	1,043

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Iron and steel forgings: *Northeast*, Connecticut, 8 (623); New York, 20 (1,775); *North Central*, Indiana, 8; Iowa, 1; Missouri, 1; *South*, Maryland, 3 (486); Virginia, 3 (117); West Virginia, 1; Kentucky, 2; Tennessee, 1; *West*, Colorado, 2; Washington, 3; Oregon, 4 (127).

Wire drawing: *New England*, Rhode Island, 2; Connecticut, 12; *Other Divisions*, Wisconsin, 1; Missouri, 1; Maryland, 2; Tennessee, 1; California, 3 (490).

Welded and heavy-riveted pipe: *Northeast*, Massachusetts, 1; New York, 1; New Jersey, 1; Pennsylvania, 10 (4,330); *Other Divisions*, Indiana, 1; Wisconsin, 2; Iowa, 1; Texas, 2; Arizona, 1; Utah, 1.

Primary metal industries, n.e.c.: *New England*, Massachusetts, 19 (659); Rhode Island, 5 (307); *North Central*, Wisconsin, 17 (248); Minnesota, 3 (31); Iowa, 1; Missouri, 2; Kansas, 1; *South and West*, Maryland, 3 (72); Kentucky, 2; Tennessee, 1; Oklahoma, 1; Texas, 5 (102); Montana, 1; Colorado, 1; California, 36 (652).

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry: Iron and steel forgings	Wire drawing	Welded and heavy-riveted pipe	Primary metal industries, n.e.c.
Number of establishments	250	134	50	377
All employees:				
Number (average for the year)	36,724	55,079	13,144	22,135
Salaries and wages, total	$128,198	$175,682	$43,115	$72,250
Production and related workers:				
Number (average for the year)	32,384	45,644	11,306	18,078
Man-hours, total ... thousands	66,469	94,987	22,454	38,120
Wages, total	$105,776	$136,797	$34,348	$52,785
Value added by manufacture	$197,111	$314,788	$89,614	$138,642
Number of employees for pay period ended nearest *Oct. 15:*				
All employees	37,423	55,852	13,337	21,152
Male	35,764	45,370	12,392	19,303
Female	1,659	10,482	945	1,849
Production and related workers	32,947	46,209	11,466	17,124
Male	32,566	38,626	10,987	16,493
Female	381	7,583	479	631
Force-account construction workers	41	91	--------	31
Administrative, supervisory, sales, and all other	4,435	9,552	1,871	3,997
Male	3,157	6,653	1,405	2,779
Female	1,278	2,899	466	1,218
All employees, number by month:				
January	35,757	54,604	13,118	22,890
February	36,126	55,558	13,353	22,918
March	36,231	56,154	13,112	22,836
April	36,262	53,017	13,401	22,678
May	36,538	51,614	13,473	22,787
June	37,062	55,857	12,881	22,478
July	36,208	54,393	12,496	21,651
August	36,879	55,163	12,795	21,874
September	37,156	55,452	12,951	21,691
October	37,423	55,852	13,337	21,152
November	37,244	56,232	13,407	21,244
December	37,729	57,107	13,420	21,242
Cost of materials, fuel, electricity, and contract work	$172,986	$597,307	$129,261	$201,021
Materials, parts, containers, and supplies	152,036	579,140	124,481	191,120
Fuels, total	15,861	6,495	1,974	4,847
Bituminous coal	3,266	2,619	705	1,151
Anthracite	171	307	16	158
Coke	55	11	12	48
Fuel oils	9,810	1,860	343	941
Gas	2,432	1,614	759	2,318
Other fuels	127	84	139	231

ITEM	Industry: Iron and steel forgings	Wire drawing	Welded and heavy-riveted pipe	Primary metal industries, n.e.c.
Cost of materials, fuel, electricity, and contract work—Continued				
Purchased electric energy	$3,553	$6,627	$1,487	$3,937
Contract and commission work	1,536	5,045	1,319	1,117
Value of inventories:				
Beginning of year, total	$50,908	$107,886	$19,352	$37,958
Finished products	5,572	18,935	5,725	6,543
Materials, supplies, and work in process	45,336	88,951	13,627	31,415
End of year, total	56,304	148,864	21,156	38,120
Finished products	6,291	35,855	6,282	7,795
Materials, supplies, and work in process	50,013	113,009	14,874	30,325
Expenditures for plant and equipment:				
New plant and equipment	$9,230	$43,893	$5,760	$11,808
Construction and major alteration of fixed plants	1,982	10,377	2,491	4,522
Buildings	1,880	9,666	2,424	3,958
Other construction	102	711	67	564
Machinery and equipment	7,248	33,516	3,269	7,286
Production machinery and equipment	6,645	30,618	3,076	6,704
Other machinery and equipment	603	2,898	193	582
Used plant and equipment, and land	4,083	9,032	217	1,805
Number of highway-type motor vehicles owned or leased:				
Trucks	168	141	87	275
By manufacturer's rated capacity:				
Under 1½ tons	46	30	23	123
1½ tons	68	55	31	106
Over 1½ tons and less than 3½ tons	35	23	12	31
3½ tons and less than 5 tons	8	9	10	6
5 tons and over	11	24	11	9
By body type:				
Van	2	19	5	2
Stake or platform	82	68	41	117
Panel or light delivery	41	31	8	108
All other trucks	43	23	33	48
Truck tractors	20	32	9	13
Trailers and semitrailers	25	52	16	16

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of— 1–4 employees	5–9 employees	10–19 employees	20–49 employees	50–99 employees	100–249 employees	250–499 employees	500–999 employees	1,000–2,499 employees	2,500 employees and over
Iron and steel forgings:											
Number of establishments	250	24	24	23	63	30	46	24	11	5	----------
Number of employees (average for the year)	36,724	59	161	316	2,049	2,119	7,737	8,444	7,485	8,354	----------
Value added by manufacture	$197,111	$264	$650	$1,386	$11,615	$11,623	$43,804	$40,173	$38,769	$48,827	----------
Wire drawing:											
Number of establishments	134	10	9	10	7	8	29	20	25	15	1
Number of employees (average for the year)	55,079	29	66	136	254	538	4,634	7,451	17,774	*24,197*	(d)
Value added by manufacture	$314,788	$156	$353	$770	$1,509	$3,397	$27,706	$45,696	$92,215	*$142,986*	(d)
Welded and heavy-riveted pipe:											
Number of establishments	50	----------	6	6	3	8	7	13	4	3	----------
Number of employees (average for the year)	13,144	----------	38	81	111	738	1,244	4,443	2,585	3,904	----------
Value added by manufacture	$89,614	----------	$362	$518	$1,058	$5,184	$8,123	$30,809	$21,343	$22,217	----------
Primary metal industries, n.e.c.:											
Number of establishments	377	84	69	67	72	26	32	22	5	----------	----------
Number of employees (average for the year)	22,135	210	457	887	2,290	1,857	5,285	7,854	3,295	----------	----------
Value added by manufacture	$138,642	$1,484	$2,882	$5,111	$13,353	$11,642	$36,989	$50,170	$17,011	----------	----------

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

IRON AND STEEL FORGINGS INDUSTRY	Shipped by— Iron and steel forgings industry	Other industries	All industries
Total shipments by the industry	$370,097		
A. Iron and steel forgings	337,281	$102,279	$439,560
Closed die steel forgings	258,309	38,066	296,375
Open die or smith steel forgings	72,766	55,218	127,984
Steel forgings, not reported by type	6,206	8,995	12,950
Wrought iron forgings			2,251
B. Secondary products	19,107		
Small cutting tools	1,311		
All other secondary products (mechanics' hand service tools, agricultural equipment stampings, automobile stampings, etc.)	17,796		
C. Miscellaneous receipts	13,709		
Contract and commission work	1,353		
Repair work	1,054		
Scrap and salable refuse	11,275		
Nonmanufacturing activities	27		

WELDED AND HEAVY-RIVETED PIPE INDUSTRY	Shipped by— Welded and heavy-riveted pipe industry	Other industries	All industries
Total shipments by the industry	$218,875		
A. Steel pipe and tubes	202,513	[1] $621,011	[1] $823,524
B. Secondary products	11,545		
C. Miscellaneous receipts	4,817		
Scrap and salable refuse	3,659		
Other receipts	1,158		

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WIRE DRAWING INDUSTRY	Shipped by— Wire drawing industry	Other industries	All industries
Total shipments by the industry	$912,095		
A. Primary products of the industry	865,104	$1,446,908	$2,312,012
Steel wire	100,524	213,269	313,793
Copper and copper-base alloy wire	69,124	207,090	276,214
Other nonferrous wire	3,082	(2)	[2] 3,082
Receipts for drawing wire on toll basis	2,053	(2)	[2] 2,053
Insulated wire and cable	562,041	333,087	895,128
Wire rope and cable	69,292	59,956	129,248
Wire cloth and woven wire products	25,427	65,365	90,792
Nails, spikes, and brads	7,684	114,008	121,692
Wire fencing, wire springs and other wire products	25,877	454,133	480,010
B. Secondary products	33,878		
C. Miscellaneous receipts	13,113		
Scrap and salable refuse	8,114		
Other receipts	4,999		

PRIMARY METAL INDUSTRIES, N.E.C., INDUSTRY	Shipped by— Primary metal industries, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$339,663		
A. Primary products of the industry	279,640	$811,408	$1,091,048
Steel cold rolled sheet and strip	96,587	707,535	804,122
Steel cold finished bars and bar shapes	118,896	81,382	200,278
Other cold rolled and cold finished products	16,946	(2)	[2] 16,946
Nonferrous forgings	13,115	16,259	29,374
Metal powders	13,056	6,232	19,288
Other primary products of the industry	21,040	(2)	[2] 21,040
B. Secondary products (including bolts, nuts, washers, small cutting tools, etc.)	19,429		
C. Miscellaneous receipts	40,594		
Contract and commission work (largely receipts for heat treating operations)	35,784		
Scrap and salable refuse	4,608		
Other receipts	202		

[1] Includes seamless pipe and tubing, as well as welded and heavy-riveted pipe.
[2] Data on shipments of these product classes by establishments classified in other industries are not available.

TABLE 6-A.—SHIPMENTS OF IRON AND STEEL FORGINGS: 1947 [1]

[Money figures in thousands of dollars; quantity figures in short tons]

PRODUCT	Shipments and interplant transfers: Total — Quantity	Total — Value f.o.b. plant	Interplant transfers — Quantity	Interplant transfers — Value f.o.b. plant	All other shipments — Quantity	All other shipments — Value f.o.b. plant
Closed die steel forgings:						
Carbon steel	772,606	$185,738	102,094	$19,205	670,512	$166,533
Alloy steel, except stainless	361,478	105,317	76,298	18,023	289,054	91,714
Stainless steel	3,874	5,320				
Open die or smith steel forgings:						
Carbon steel	326,720	70,985	49,300	9,899	277,420	61,086
Alloy steel, except stainless	156,815	53,387	4,686	2,788	154,776	54,211
Stainless steel	2,647	3,612				
Wrought iron forgings	5,379	2,251	(d)	(d)	(d)	(d)
Steel forgings, not specified by type	n.a.	12,950	n.a.	n.a.	n.a.	n.a.

[d] Withheld to avoid disclosing figures for individual companies.
n.a.—Not available.
[1] Comparable 1939 data are not available.

TABLE 6-B.—PRODUCTION, SHIPMENTS, RECEIPTS, AND CONSUMPTION OF WIRE, COLD ROLLED STEEL SHAPES, AND STEEL PIPE AND TUBES: 1947

[Money figures in thousands of dollars; quantity figures in short tons]

PRODUCT	Receipts (quantity)	Production (quantity)	Products consumed in this plant— In the manufacture of other steel basic shapes and forms (quantity)	In the manufacture of fabricated products (quantity)	For maintenance repair and operating supplies (quantity)	Total shipments and interplant transfers: Shipments to other companies: Quantity	Value f.o.b. plant	Transfers to other plants of same company [1] (quantity)
Steel wire, total	**85,880**	**4,527,828**	**113,478**	**2,089,982**	**8,577**	**2,201,408**	**$283,588**	***271,571***
Carbon steel:								
Plain wire	81,259	3,271,927	102,073	1,327,308	6,492	1,732,083	197,930	*206,932*
Galvanized wire	2,452	1,054,033	9,528	723,645	1,783	327,266	44,143	*51,149*
Other coated wire	136	117,757	----------	25,468	291	84,634	15,994	*5,324*
Alloy steel wire	1,024	72,534	1,426	12,707	----------	46,407	14,573	*7,694*
Stainless steel wire	1,009	11,577	451	854	11	11,018	10,948	*472*
Copper and copper-base alloy wire and cable, bare and tinned, total	**17,207**	n.a.	----------	**385,566**	n.a.	**295,941**	**182,674**	**175,938**
Unalloyed copper:								
For electrical transmission	12,638	n.a.	----------	379,131	n.a.	228,493	135,282	164,529
Other copper wire and cable	304	n.a.	----------	456	n.a.	11,278	5,897	*1,078*
Copper-base alloys:								
For electrical transmission	325	n.a.	----------	974	n.a.	11,362	7,842	*1,814*
Other copper-base alloy wire and cable	3,940	n.a.	----------	5,005	n.a.	44,808	33,653	8,517
Cold rolled steel sheets, total	**646,396**	**6,211,613**	**624,668**	**8,610**	**10,095**	**5,158,125**	**458,580**	**999,885**
Carbon steel	625,057	5,913,391	605,467	8,610	9,824	4,878,723	376,838	982,744
Alloy steel	16,418	226,443	15,033	----------	231	208,661	23,395	16,494
Stainless steel	4,921	71,779	4,168	----------	40	70,741	58,347	647
Cold rolled steel strip, total	**148,050**	**1,792,280**	**143,681**	**45,315**	**1,209**	**1,593,585**	**266,631**	**116,951**
Carbon steel	140,562	1,578,800	136,346	45,127	700	1,400,248	175,890	103,441
Alloy steel	5,644	103,252	5,549	----------	----------	89,593	19,427	10,482
Stainless steel	1,844	110,228	1,786	188	509	103,744	71,314	3,028
Cold finished steel bars, total	**9,036**	**1,616,623**	**4,422**	**4,620**	**792**	**1,568,046**	**196,704**	**52,294**
Carbon steel	7,668	1,354,148	3,787	4,355	549	1,327,919	140,813	33,448
Alloy steel	1,343	239,111	635	265	230	217,644	38,958	18,266
Stainless steel	25	23,364	----------	----------	13	22,483	16,933	580
Steel pipe and tubes, total	**130,391**	**6,799,318**	**39,823**	**3,213**	**11,991**	**6,646,139**	**774,263**	**217,821**
Carbon steel:								
Standard pipe	17,504	2,361,126	1,419	30	10,938	2,242,945	202,385	119,604
Line pipe	4,367	1,502,882	----------	----------	121	1,491,299	129,104	21,669
Oil country goods	9,565	1,169,982	----------	598	111	1,190,310	122,789	(2)
Pressure tubing	651	344,361	552	----------	168	338,311	62,031	(2)
Mechanical tubing	16,143	555,996	15,359	1,300	490	541,159	94,045	5,203
Miscellaneous	61,470	211,892	8,216	1,285	74	195,016	27,955	59,638
Steel pipe and tubes, not reported by kind:[3]								
Welded steel pipe	n.a.	158,666	----------	n.a.	n.a.	158,666	32,380	----------
Heavy-riveted steel pipe	n.a.	1,357	----------	n.a.	n.a.	1,357	408	----------
Welded steel tubing	n.a.	22,668	----------	n.a.	n.a.	22,668	8,244	----------
Alloy steel:								
Oil country goods	223	229,364	----------	----------	29	232,232	29,398	(2)
Pressure tubing	----------	26,906	----------	----------	3	27,260	9,290	(2)
Mechanical tubing	20,115	175,080	13,932	----------	50	181,002	27,321	(2)
Miscellaneous (including standard and line)	5	23,090	----------	----------	----------	8,400	2,450	11,707
Stainless steel:								
Pressure tubing	----------	7,082	----------	----------	2	6,701	10,114	(2)
Mechanical tubing	348	8,866	345	----------	5	8,813	16,349	----------

NOTE: Comparable statistics for 1939 in the detail shown in this table are not available. Total shipments to other companies and interplant transfers of steel wire in 1939 amounted to 1,183,052 and 192,210 short tons, respectively, valued at $96,706,000 for shipments and $14,081,000 for interplant transfers. Shipments and interplant transfers of copper and copper-base alloy wire in 1939 are not comparable with 1947. However, comparable figures can be obtained by combining shipments to other companies, interplant transfers, and produced and consumed in the same establishment in the manufacture of fabricated products. The 1939 totals of these for unalloyed copper and copper-base alloys amounted to 336,603 and 45,063 short tons, respectively, compared to 835,927 short tons for unalloyed copper and 75,280 short tons for copper-base alloys in 1947. Total shipments of steel pipe and tubes in 1939 amounted to 3,886,513 short tons valued at $318,089,000, and additional shipments of $3,725,000 for which the quantity was not reported. The 1939 shipments of cold rolled sheets, cold rolled strip, and cold finished bars amounted to 2,767,526 tons at $137,285,000, 757,288 tons at $72,357,000, and 692,847 tons at $62,436,000, respectively.

n.a.—Not available.

[1] Figures in italics include a small quantity of steel, copper, and copper-base alloy wire drawn on a toll basis. Not included are 50,962 tons of unalloyed copper wire for electrical transmissions and 2,800 tons of copper-base alloy wire, other than for electrical transmissions.

[2] Included in quantity of "Shipments to other companies," but not in value of "Shipments to other companies."

[3] Includes a small quantity of alloy and stainless steel pipe and tubes.

TABLE 6-C.—INSULATED WIRE AND CABLE AND OTHER FABRICATED WIRE PRODUCTS—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers: Quantity	1947 Total shipments and interplant transfers: Value f.o.b. plant	1939 Total production for sale and interplant transfer: Quantity	1939 Total production for sale and interplant transfer: Value f.o.b. plant
Nails, spikes, and brads, total			$121,692		$53,647
Steel wire nails, spikes, and brads	M lb	1,615,400	94,196	1,378,886	42,565
Bright	do	1,198,680	63,253	1,117,253	31,626
Galvanized	do	202,017	16,671	120,507	6,191
Lead headed	do	16,036	2,054	(1)	(1)
Cement coated	do	176,974	10,091	141,126	4,748
Other coated	do	21,693	2,127	(1)	(1)
Steel wire tacks:					
Quantity reported	do	1,446	400	4,753	523
Quantity not reported			223		
Steel wire staples:					
Quantity reported	M lb	68,806	5,610	57,469	1,851
Quantity not reported			3,819		123
Steel cut nails, spikes, and brads (includes horseshoe nails)	M lb	56,726	5,915	41,259	2,521
Steel cut tacks, except thumb tacks	do	33,032	5,733	33,594	4,085
Steel cut thumb tacks:					
Quantity reported	do	1,454	1,155	975	411
Quantity not reported			269		257
Nonferrous nails, brads, tacks, and staples:					
Quantity reported	M lb	4,185	2,585	2,638	711
Quantity not reported			456		
Upholstery nails and nails, spikes, brads, tacks, and staples, not specified by kind			1,331		[2] 600
Wire rope and cable, total	Ton	308,923	129,248	n.a.	n.a.
Iron and steel wire rope and cable	do	174,678	75,213	98,486	35,762
Composite strand, rope, and cable, except insulated (includes wire or strands of different metals)	do	66,372	35,800	(3)	(3)
Guard rail cable	do	3,479	603	40,934	6,037
Iron and steel strand, except guard rail cable	do	63,059	16,722		
Copper strand and cable, except insulated, made from purchased wire	do	1,335	910	(4)	(4)
Fencing and fence gates, total	do	488,064	63,297	318,963	25,356
Chain link fencing (includes posts, gates, and fittings when sold with fencing)	do	107,927	23,103	n.a.	n.a.
Fence gates, wire (except chain link)	do	10,455	1,738		
Field fence	do	342,535	34,693		
Ornamental lawn fence	do	27,147	3,763		
Wire cloth and woven wire products, total			90,792		34,224
Woven wire netting (poultry, fur farm, stucco, etc.)	Ton	86,108	17,552	54,252	6,956
Insect wire screening:					
Steel	M sq. ft	336,188	10,238	n.a.	7,486
Copper and copper-base alloy	do	195,180	14,709	n.a.	4,884
Nonferrous metal, except copper and copper-base	do	61,903	4,479	n.a.	291
Fourdrinier wire cloth	do	10,434	9,257	n.a.	5,376
Cylinder wire cloth	do	1,358	1,371		
Hardware cloth	Ton	15,937	5,223		
Industrial wire cloth:					
Steel		n.a.	16,137	n.a.	[5] 9,231
Nonferrous metal		n.a.	8,890		
Other wire cloth (includes diamond cloth, spiral cloth, drying belts, etc.)			2,936		
Wire springs (made of flat, round, or shaped wire), total			191,254		62,966
Upholstery and furniture springs:					
Seat and back springs for motor vehicles			69,689		23,331
Other upholstery and furniture springs			45,098		15,614
Other springs [6]			76,467		24,021
Other wire products, total			212,772		n.a.
Welded steel wire fabric:					
Concrete reinforcing mesh	Ton	209,491	22,439	167,838	10,872
Other welded steel wire fabric	do	33,812	4,817	n.a.	n.a.
Barbed and twisted wire	do	257,781	27,316	230,765	13,825
Wire bale ties	do	159,202	18,227	84,783	5,915
Wire chain:					
Tire	do	48,729	16,512	20,670	4,139
Other	do	66,540	19,694	28,030	5,170
Wire garment hangers:					
Quantity reported	M lb	103,091	11,009	19,633	1,001
Quantity not reported					772
Other wire products (including cages, guards, lampshade frames, florists' designs, kitchenware goods, paper clips, etc.)			92,758		50,025
Wirework, not specified by kind			12,687		
Communication wire and cable [7]			186,878		
Drop and bridle wire			21,564		
Inside and duct telephone wire			6,183		
Distribution and jumper wire			1,006		
Flexible coaxial cable			1,294		
Switchboard cable			32,735		[8] 20,424
Paper-insulated, lead-covered cable (except coaxial)			65,031		
Lead sheathed coaxial cable			25,702		
Other communication wire and cable			33,363		
Signal wire and cable			7,534		
Magnet wire [7]			134,881		25,431
Enameled [9]			112,063		
Enameled only			90,094		n.a.
Enameled and covered			21,969		
Not enameled (cloth and fibrous covered)			22,818		
Weatherproof and slowburning			76,256		20,856

See footnotes at end of table.

TABLE 6-C.—INSULATED WIRE AND CABLE AND OTHER FABRICATED WIRE PRODUCTS—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers		1939 Total production for sale and interplant transfer	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Building wire and cable, excluding varnished cambric insulated [7] [10]			$174,003		n.a.
Metallic armored cable or conductor			23,914		$12,985
Synthetic (no braid)			17,631		
Fibrous covered and/or jacketed, including lead covered			66,354		
Service cable			25,507		
Nonmetallic sheathed cable or conductor			39,119		
Other building wire and cable, excluding varnished cambric insulated			1,478		
Power wire and cable			124,351		
Insulated for voltages not exceeding 600 volts			60,014		
Portable power cables			14,494		
Varnished cambric insulated, including varnished cambric building wire			11,770		
Synthetic			5,710		[8] 62,063
Rubber insulated			18,666		
Asbestos and asbestos-varnished cambric			5,980		
Other, including paper insulated			3,394		
Insulated for voltages exceeding 600 volts			64,337		
Portable power cables			3,768		
Varnished cambric insulated			14,328		
Paper insulated			32,480		
Rubber insulated			12,239		
Other			1,522		
Appliance wire and cord			48,752		n.a.
Flexible cord, including heater cord			35,959		16,003
Fixture wire, including heat resistant			8,010		
Other appliance wire and cord			4,783		
Automotive and aircraft wire and cable, all types, including ignition harness sets and cable sets			83,724		[8] 40,826
Marine wire and cable (U. S. Navy and Merchant Marine)			4,276		
Other insulated wire and cable			24,897		
Flexible cord sets			29,576		5,840

n.a.—Not available.
[1] Separate data not available.
[2] The 1939 figure includes upholstery nails only.
[3] Separate data on composite strand, rope, and cable were not collected in 1939. The 1939 statistics for most types of composite strand, rope, and cable were included with the data for bare wire, i.e., the copper wire content of composite cable was included with copper wire, the aluminum content with aluminum wire, etc.
[4] Comparable data for 1939 not available. The figures for this item originally published in 1939 represent the total production of copper strand and cable, including that made by manufacturers who draw their own wire, whereas the 1947 data represent only shipments by producers who purchase copper wire.
[5] Includes steel wire cloth valued at $6,684,000 and nonferrous wire cloth valued at $2,547,000.
[6] Probably includes a small quantity of flat springs made of sheet or strip stock.
[7] Includes a small amount of duplication due to the fact that some insulated wire and cable is shipped to manufacturers of insulated wire and cable for further processing. This duplication can be eliminated by subtracting insulated wire and cable manufacturers' receipts of these products from the total shipments. For 1947, this results in the following:

	(*M dollars*)
Gross shipments of insulated wire and cable	$895,128
Less shipments within the industry for further fabrication	15,618
Magnet wire, enameled only	878
Building wire, fibrous covered and/or jacketed	1,402
Building wire, nonmetallic sheathed cable	1,779
Flexible cord, including heater cord	$7,826
Fixture wire, including heat resistant	808
Automotive and aircraft type wire (including ignition harness sets and cable sets)	2,925
Net shipments of insulated wire and cable	879,510

[8] Coaxial cable, signal wire and cable, synthetic insulated wire of all types, portable power cables, and "other power wire and cable," were not reported separately in 1939. The values of these products are included in the $40,826,000 shown for other insulated wire and cable, including fixture wire, automotive and aircraft wire and cable, marine wire and cable, etc.
[9] Includes synthetic resin enamels and combinations of enameled with other coverings.
[10] Having underwriters' labels.

TABLE 6-D.—SHIPMENTS OF NONFERROUS FORGINGS AND METAL POWDERS, TOTALS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars; quantity figures in short tons]

PRODUCT	Total shipments and interplant transfers	
	Quantity	Value f.o.b. plant
Nonferrous forgings		$29,374
Copper and copper-base alloy forgings	17,823	18,536
Aluminum and aluminum-base alloy forgings	8,485	10,598
Other nonferrous forgings, and nonferrous forgings, not specified by kind		240
Metal powders		19,288
Aluminum	9,714	8,376
Copper, unalloyed	8,518	5,004
Copper-base alloys	4,814	3,213
Lead	839	372
Tin	436	738
Other metal powders (including iron powder)		1,585

TABLE 7-A.—SELECTED MATERIALS CONSUMED IN THE IRON AND STEEL FORGINGS INDUSTRY, BY KIND: 1947

[**Money figures in thousands of dollars; quantity figures in short tons.** The table below summarizes, in quantity and cost, the consumption of selected materials by manufacturers during 1947. It includes only the consumption by establishments classified in the industry]

MATERIAL	Quantity	Cost
Carbon steel:		
Ingots	71, 523	$3, 874
Blooms, billets, slabs	440, 239	24, 204
Bars	611, 301	42, 535
Alloy steel, except stainless:		
Ingots	31, 123	2, 667
Blooms, billets, slabs	142, 281	13, 111
Bars	328, 651	31, 857
Stainless steel:		
Ingots	19	12
Blooms, billets, slabs	3, 574	1, 827
Bars	1, 497	849

TABLE 7-B.—SELECTED MATERIALS CONSUMED IN THE WIRE DRAWING INDUSTRY, BY KIND: 1947

[**Money figures in thousands of dollars; quantity figures in short tons.** The table below summarizes, in quantity and cost, the consumption of selected materials by manufacturers during 1947. It includes only the consumption by establishments classified in the industry]

MATERIAL	Materials purchased or received as an inter-plant transfer		Materials processed on a toll basis (quantity)
	Quantity	Cost	
Steel for drawing wire:			
Rods:			
Carbon steel	400, 258	$30, 236	19, 412
Stainless steel	1, 114	803	
Bars:			816
Carbon steel	1, 746	144	
Alloy steel, except stainless	1, 357	214	
Nonferrous rods and bars for drawing wire:			
Aluminum and aluminum-base alloy	7, 161	2, 865	----------
Copper, unalloyed	433, 897	197, 029	6, 263
Copper-base alloy	6, 365	3, 685	1, 800
Wire for redrawing:			
Steel wire:			
Carbon steel	52, 151	6, 945	6, 512
Alloy steel, except stainless	1, 196	562	----------
Stainless steel			
Nonferrous wire:			
Copper, unalloyed	12, 792	6, 499	(d)
Copper-base alloy	3, 769	1, 718	----------

[d] Withheld to avoid disclosing figures for individual companies.

TABLE 7-C.—SELECTED MATERIALS CONSUMED IN THE WELDED AND HEAVY-RIVETED PIPE INDUSTRY, BY KIND: 1947

[**Money figures in thousands of dollars; quantity figures in short tons.** The table below summarizes, in quantity,[1] the consumption of selected materials by manufacturers during 1947. It includes only the consumption by establishments classified in the industry]

MATERIAL	Quantity
Carbon steel mill shapes and forms:	
Bars and bar shapes	3, 511
Sheet and strip	379, 360
Structural shapes	840
Plates	8, 067
Wire	44
All other mill shapes and forms (including skelp)	1, 005, 081
Alloy steel, except stainless, mill shapes and forms:	
Bars and bar shapes	287
All other mill shapes and forms	146
Stainless steel, millshapes and forms	3, 963

[1] Cost of the materials consumed is not available.

TABLE 7-D.—SELECTED MATERIALS CONSUMED IN THE PRIMARY METALS INDUSTRIES, NOT ELSEWHERE CLASSIFIED, BY KIND: 1947

[**Money figures in thousands of dollars; quantity figures in short tons.** The table below summarizes, in quantity and cost, the consumption of selected materials by manufacturers during 1947. It includes only the consumption by establishments classified in the industry]

MATERIAL	Quantity	Cost
Carbon steel:		
Sheets:		
Hot rolled	91, 204	$5, 734
Cold rolled	5, 692	500
Strip:		
Hot rolled	477, 242	33, 525
Cold rolled	5, 201	508
Bars	1, 080, 888	74, 587
Rods	25, 269	2, 185
Tubes	13, 862	1, 888
Alloy steel, except stainless:		
Strip	6, 056	778
Bars	99, 401	10, 888
Tubes	1, 666	408
Stainless steel:		
Sheets	7, 805	3, 201
Strip	949	330
Bars	2, 793	996
Rods		
Tubes	251	422

TABLE 8.—NUMBER OF ESTABLISHMENTS PERFORMING SELECTED METALWORKING OPERATIONS: 1947

[The figures in the table represent the number of establishments maintaining the metalworking operation specified, according to the usual number of production workers employed in the operation during 1947]

METALWORKING OPERATION	WIRE DRAWING INDUSTRY						WELDED AND HEAVY-RIVETED PIPE INDUSTRY					
	Number of establishments performing selected metalworking operations											
	Total	Distribution by number of production workers in the operation					Total	Distribution by number of production workers in the operation				
		1-4	5-19	20-49	50-99	100 and over		1-4	5-19	20-49	50-99	100 and over
Foundry	1	--------	--------	--------	1	--------	1	--------	1	--------	--------	--------
Die casting	2	--------	2	--------	--------	--------	--------	--------	--------	--------	--------	--------
Forging-presses, hammers, or upsetters	--------	--------	--------	--------	--------	--------	4	1	2	1	--------	--------
Electroplating	17	7	6	3	1	--------	7	4	3	--------	--------	--------
Galvanizing and other hot-dip coating	46	17	12	13	4	--------	6	--------	3	2	1	--------
Heat treating or annealing of metals	67	27	25	9	2	4	9	4	5	--------	--------	--------
Automatic screw-machine department	1	--------	1	--------	--------	--------	1	1	--------	--------	--------	--------
Machine shop	61	18	21	14	6	2	20	1	7	8	4	--------
Tool and die room	33	15	14	4	--------	--------	2	--------	2	--------	--------	--------
Pattern shop	1	1	--------	--------	--------	--------	1	1	--------	--------	--------	--------
Plate or structural fabrication	5	--------	3	1	--------	1	5	--------	--------	--------	4	1
Stamping, blanking, forming, or drawing	33	3	11	8	7	4	5	--------	1	1	2	1

NOTE: 126 establishments in the Steel Forgings Industry maintained machine shops during 1947. In terms of the distribution by number of production and related workers in the operation, there were 39 establishments with 1-4 production workers, 42 with 5-19, 24 with 20-49, 10 with 50-99, and 11 with 100 and over production workers.

Major Group 34.—FABRICATED METAL PRODUCTS

This major group includes establishments engaged in fabricating ferrous and nonferrous metal products such as tin cans and other tinware, hand tools, cutlery, general hardware, nonelectric heating apparatus, fabricated structural metal products, metal stampings, lighting fixtures, fabricated wire products, and a variety of metal products, not elsewhere classified. Establishments primarily engaged in manufacturing small machine parts by powder metallurgy (Standard Industrial Classification Industry 3464) are classified according to principal products made rather than by process of manufacture. Certain important segments of the metal fabricating industries are classified in other major groups such as machinery in Major Groups 35 and 36, transportation equipment in Major Group 37, professional, scientific, and controlling instruments, watches and clocks in Major Group 38, and jewelry and silverware in Major Group 39. The production of ferrous and nonferrous metals and their alloys, and basic products made of metal, are classified in Major Group 33. Heating, plumbing, air-conditioning, refrigeration, and roofing contractors incidentally manufacturing boiler shop or sheet-metal products are classified in nonmanufacturing industries.

GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

CENSUS YEAR	Number of establishments	All employees [1]		Production workers		Value added by manufacture [2]
		Number (average for the year)	Wages and salaries, total	Number (average for the year)	Wages, total	
1947	16,734	971,461	$2,832,835	822,514	$2,188,581	$4,921,476
1939 [3]	9,532	n.a.	n.a.	451,087	546,654	1,400,883
1937 [4]	8,588	n.a.	n.a.	493,091	604,863	1,388,835

n.a.—Not available.

[1] The figures for 1947 and 1939 include data for employees of manufacturing establishments who were engaged in distribution and construction work. The extent to which data for such employees are included in the figures for 1937 is not known. See GENERAL EXPLANATIONS—Manufacturing employees—Classifications used.

[2] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[3] The figures for 1947 and 1939 are not entirely comparable with those for 1937 because the 1937 figures exclude data for establishments primarily engaged in producing lawn sprinklers, spun ware, nonferrous metal novelties, tackle blocks, aluminum ornamental work, and aluminum stampings, and include data for establishments primarily engaged in making blow torches, caulking guns, toilet seats, brooders, metal partitions, cast aluminum cooking ware, and hair clippers. Value added for 1939 on a basis strictly comparable with 1937 was $1,340.4 million.

[4] The figures for 1935 and earlier years are not sufficiently comparable with those for 1937–47 to be shown in this table principally because of the inclusion in earlier years of data for establishments primarily engaged in manufacture of valves and fittings, except plumbers', and the exclusion of data for establishments primarily engaged in manufacture of stamped, pressed, and spun aluminum ware.

TIN CANS, CUTLERY, HAND TOOLS, AND HARDWARE

This report shows the 1947 Census of Manufactures statistics for establishments primarily engaged in the production of tin cans and other tinware, cutlery, edge tools, hand tools, files, hand saws and saw blades, and hardware. These establishments have been classified in seven industries described separately below.

Tin Cans and Other Tinware *(Standard Industrial Classification No. 3411.)*—This industry comprises establishments primarily engaged in manufacturing packers' cans, beer cans, general-line cans, oil containers, milk and ice-cream cans, and other tinware (except household and hospital utensils, Industry 3463) from purchased tinplate, terneplate, blackplate, or enameled sheet metal.

Figures on the shipments of metal cans are collected on a monthly basis by the Bureau of the Census on Form M75D. Included in both the monthly survey and in this Census of Manufactures industry is "captive" production, that is, the production of cans for use by the same company. Most of these "captive" establishments are part of food, petroleum, and paint companies. Separate data are shown in tables 6-A and 6-B on the shipments of "captive" establishments.

Table 6-A shows totals for the data collected in the monthly survey for 1947 and in the Census of Manufactures for the same period. The differences are due to minor revisions in the reports from some establishments, inclusion of a few small companies in the census which do not report in the monthly survey, and the inclusion of establishments in Hawaii in the current survey which are not included in the 1947 Census of Manufactures. The detailed figures by type of can shown in tables 6-A and 6-B are taken from the monthly survey for 1947.

The monthly survey data were reported in terms of base boxes of steel consumed in the manufacture of the cans. These base boxes have been converted to short tons on the basis of the following conversion factors:

Type of can	*Base boxes per short ton of steel*
Food cans:	
Fruit and vegetable	21.4
Evaporated milk	25.0
Condensed milk	23.0
Other dairy products	20.4
Fish and sea food	23.0
Coffee	21.3
Lard and shortening	21.7
Meat (including poultry)	21.7
All other food cans	23.0
Nonfood cans:	
Beer	20.6
Oil, open top—1 quart and 5 quart	23.3
Pet food	24.0
All other nonfood cans	21.2

Cutlery *(Standard Industrial Classification No. 3421.)*—This industry comprises establishments primarily engaged in manufacturing cutlery, such as table cutlery (except sterling-silver and silver-plated cutlery—Industry 3914); scissors, clippers and razors, safety-razor blades, manicure implements, pocket knives, butcher knives, and cleavers. Also included in this industry are hedge and other trimmers, and tinners and other snips.

Although the Standard Industrial Classification includes in this industry establishments primarily engaged in making hair clippers and electric shavers, for the 1947 census they have been transferred to the following industries: Animal hair clippers—Industry 3522, Farm Machinery; other hair clippers—Industry 3991, Beauty Shop and Barber Shop Equipment; and electric shavers—Industry 3621, Electrical Appliances. These departures from the Standard Industrial Classification were made because the products are produced primarily by establishments classified in the industries mentioned or because the products are closely related to the other products of those industries.

In 1939, cutlery was included with edge tools in the "Cutlery (Except Aluminum, Silver, and Plated Cutlery) and Edge Tools" industry. The 1939 reports have been retabulated to provide data comparable to the 1947 industries. Data for 1937 and earlier years have not been retabulated.

In deriving both the 1947 and 1939 figures, table cutlery has been included in the "Cutlery" industry and flatware in the "Silverware and Plated Ware" industry, 3914. However, the classification of some items as table cutlery or flatware has varied between the two censuses. In 1947, table cutlery has been defined as knives, forks, spoons, etc., for the serving and eating of food, which are made with handles of materials other than metal, and carving sets which are made with handles of materials other than metal. Flatware has been defined as knives, forks, spoons, etc., for the serving and eating of food, made with metal handles, and carving sets made with metal handles. In 1939, cutlery and flatware were not defined by type of handle but steel (unplated) knives, forks, spoons, etc., were classified as cutlery while all other (plated, sterling silver, etc.) knives, forks, spoons, etc., were classified as flatware. Therefore, some knives, etc., with metal handles are included in cutlery and some knives, etc., with handles other than metal are included as flatware in the 1939 census figures.

Edge Tools *(Standard Industrial Classification No. 3422.)*—This industry comprises establishments primarily engaged in manufacturing all kinds of edge tools, such as scythes, axes, planes, chisels, drawknives; machine knives; and cutting dies for use in cutting cloth, paper, and leather. Establishments primarily engaged in manufacturing metal-cutting dies are classified in Industry 3543.

In 1939, edge tools were included with cutlery in the "Cutlery (Except Aluminum, Silver, and Plated Cutlery) and Edge Tools" industry. The 1939 reports have been retabulated to provide data comparable to the two 1947 industries. Data for 1937 and earlier years have not been retabulated.

Of the total value of $64 million of edge tools, 23 percent was shipped by establishments classified in other industries. Establishments classified in the Edge Tools Industry shipped $49 million of edge tools and $13 million of other products such as hand tools, machine tools, metalworking machinery, etc.

Hand Tools, Not Elsewhere Classified *(Full Standard Industrial Classification title and number: Hand Tools, Except Edge Tools, Machine Tools, Files, and Saws, 3423.)*—This industry comprises establishments primarily engaged in manufacturing hand tools, such as hammers, wrenches, pliers, screw drivers, shovels, rakes, and a variety of special tools used by repairmen, jewelers, stone-cutters, and ironworkers. Establishments primarily engaged in manufacturing edge tools are classified in Industry 3422, files in Industry 3424, saws in Industry 3425, and power-driven hand tools in Major Group 35.

Of the total value of $258 million of hand tools, 15 percent was shipped by establishments classified in other industries. Establishments classified in the Hand Tools Industry shipped $219 million of hand tools and $50 million of other products such as closed die forgings, edge tools, stampings, etc.

Files *(Standard Industrial Classification No. 3424.)*—This industry comprises establishments primarily engaged in manufacturing and recutting files and rasps.

Hand Saws and Saw Blades *(Standard Industrial Classification No. 3425.)*—This industry comprises establishments primarily engaged in manufacturing hand saws and saw blades for hand and power-driven saws. Establishments primarily engaged in manufacturing power-driven sawing machines are classified in Major Group 35.

Hardware, Not Elsewhere Classified *(Standard Industrial Classification No. 3429.)*—This industry comprises establishments primarily engaged in manufacturing miscellaneous metal products usually termed "hardware" and not elsewhere classified. Important products of this industry include door locks, lock sets, and other builders' hardware; motor-vehicle and other transportation equipment hardware; hardware for caskets, furniture, cabinets, saddlery, harness, trunks and suitcases; locks and padlocks; vacuum bottles and jugs. Establishments primarily engaged in manufacturing bolts and nuts are classified in Industry 3494, nails and spikes in Industry 3481, cutlery in Industry 3421, and hand tools in Industry 3423.

In the 1939 Census of Manufactures, the reports for motor vehicle hardware plants owned by motor vehicle manufacturers were classified in the Motor Vehicles, Motor Vehicle Bodies, Parts, and Accessories Industry. In the 1947 census, these are included in the Hardware Industry. The 1939 reports were retabulated into the Hardware Industry as far as the individual establishment reports permitted. However, in some instances in 1939, the facilities were reported in combination with other operations (vehicle body and parts building and assembly) of a motor vehicle company at the same location. In such cases, it was not possible to retabulate the data on employment, wages, etc., into the Hardware Industry. Therefore, the general statistics (table 1) for 1939 and 1947 are not strictly comparable. However, the commodity data for motor vehicle hardware shown in table 6-A for 1939 are comparable with the 1947 data.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Tin cans and other tinware:								
1947	217	46,890	$127,338	40,890	$105,689	$231,953	$447,907	$679,860
1939 [4]	195	n.a.	n.a.	29,277	33,722	116,152	242,669	358,821
1937	224	38,330	48,426	33,145	37,194	113,686	245,110	358,796
1935 [5]	204	31,674	37,067	27,484	27,826	86,270	206,118	292,388
1933	194	25,883	27,604	23,343	22,693	70,900	137,046	207,946
1931	199	n.a.	n.a.	25,271	27,978	74,513	149,121	223,634
1929 [6]	232	35,254	46,461	31,497	38,173	101,914	194,987	296,901
1927	236	33,056	42,400	29,721	35,001	84,058	169,421	253,479
1925	221	33,234	41,063	29,901	34,392	84,581	175,779	260,360
1923	241	35,036	41,933	30,511	32,816	79,991	135,930	215,971
1921	244	25,168	29,943	22,711	24,595	59,557	108,748	168,305
1919	301	38,781	42,703	34,386	34,493	68,793	165,171	233,964
1914	294	25,130	15,660	22,584	12,217	28,090	53,841	81,931
1909	318	n.a.	n.a.	19,754	8,675	19,541	39,273	58,814
1904 [7]	377	18,135	8,872	16,919	6,842	15,645	26,248	41,893
Cutlery:								
1947	195	20,248	54,142	17,579	42,530	104,833	37,738	142,571
1939 [4]	124	n.a.	n.a.	10,252	10,768	28,381	14,400	42,781
Edge tools:								
1947	238	8,828	24,681	7,632	19,486	40,472	21,966	62,438
1939 [4]	163	n.a.	n.a.	4,889	5,831	13,183	5,591	18,774
Total for Cutlery and Edge tools: [8]								
1947 [9]	433	29,076	78,823	25,211	62,016	145,305	59,704	205,009
1939 [9]	287	n.a.	n.a.	15,141	16,599	41,564	19,991	61,555
1937	251	18,749	23,239	16,830	18,633	49,457	18,737	68,194
1935	264	15,473	17,836	13,715	13,532	38,499	12,672	51,171
1933	200	11,988	11,077	10,807	8,848	30,071	8,647	38,718
1931	221	n.a.	n.a.	12,485	12,194	43,354	8,983	52,337
1929	239	16,894	23,066	14,991	17,651	63,872	14,789	78,661
1927	230	17,743	23,602	15,832	18,892	58,508	18,180	76,688
1925	211	18,386	24,591	16,407	20,226	59,701	20,562	80,263
1923	211	18,582	24,033	16,671	19,751	55,317	17,160	72,477
1921	210	16,037	18,756	14,345	14,750	34,367	14,974	49,341
1919	304	22,356	24,789	19,859	20,048	47,153	19,477	66,630
1914	252	18,176	11,249	16,561	9,076	17,355	8,186	25,541
1909	281	n.a.	n.a.	16,997	8,556	15,654	7,231	22,885
1904	254	15,451	8,144	14,545	7,076	12,587	6,028	18,615
1899	275	12,827	6,579	12,028	5,652	9,696	5,091	14,787

See footnotes at end of table.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS—Continued

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Hand tools, n.e.c.:								
1947	579	35,668	$103,191	30,138	$79,061	$174,540	$98,003	$272,543
1939 [4]	354	n.a.	n.a.	14,722	17,204	46,110	26,002	72,112
1937	369	20,579	28,086	17,612	21,132	49,087	30,959	80,046
1935	343	15,066	18,381	12,636	13,298	33,476	19,068	52,544
1933	294	11,304	10,674	9,598	8,158	23,678	10,521	34,199
1931	355	n.a.	n.a.	10,833	11,209	28,692	13,725	42,417
1929	534	22,823	35,553	19,305	25,808	67,351	32,111	99,462
1927 [10]	405	19,277	27,784	16,447	20,941	48,549	28,058	76,607
Files:								
1947	37	4,446	11,213	4,084	9,714	19,149	5,344	24,493
1939	22	3,728	4,909	3,205	3,839	8,841	2,453	11,294
1937	21	4,027	5,648	3,715	4,815	10,309	3,344	13,653
1935	22	3,219	3,809	2,913	3,049	6,942	2,237	9,179
1933	23	2,838	2,896	2,634	2,431	5,824	1,567	7,391
1931	26	n.a.	n.a.	3,016	2,719	6,095	1,221	7,316
1929	33	4,293	6,221	3,974	5,240	11,061	3,053	14,114
1927	36	4,248	5,994	3,948	5,145	9,838	3,136	12,974
1925	38	4,485	6,170	4,209	5,393	10,023	3,518	13,541
1923	37	4,925	6,771	4,590	5,805	9,725	3,840	13,565
1921	39	3,900	4,063	3,595	3,175	5,338	2,309	7,647
1919	50	6,319	7,146	5,767	6,192	13,389	4,228	17,617
1914	48	4,716	2,600	4,349	2,135	4,013	1,595	5,608
1909	57	4,474	2,316	4,158	1,978	4,095	1,596	5,691
1904	62	3,385	1,684	3,276	1,514	3,081	1,311	4,392
1899	86	3,287	1,431	3,160	1,277	2,238	1,166	3,404
Hand saws and saw blades:								
1947	89	8,441	25,600	7,380	20,872	42,975	27,455	70,430
1939	87	4,902	7,097	4,072	5,198	11,086	6,785	18,471
1937	80	4,953	7,043	4,384	5,576	12,438	7,415	19,853
1935	82	4,156	5,239	3,425	3,731	8,426	5,223	13,649
1933	71	3,129	3,213	2,528	2,347	6,923	3,003	9,926
1931	78	n.a.	n.a.	3,005	3,084	7,537	4,035	11,572
1929	81	5,077	8,002	4,137	5,727	15,731	6,884	22,615
1927	77	5,134	7,873	4,182	5,754	14,954	7,674	22,628
1925	71	5,534	7,626	4,710	5,873	16,485	8,224	24,709
1923	80	6,373	8,959	5,420	6,730	21,047	9,740	30,787
1921	79	4,570	6,099	3,788	4,087	11,705	6,480	18,185
1919	112	6,621	8,672	5,510	6,281	19,669	11,792	31,461
1914	100	5,411	4,174	4,560	3,019	7,803	4,714	12,517
1909	96	5,673	3,823	4,832	2,856	6,624	4,912	11,536
1904	83	5,226	3,331	4,650	2,707	5,784	4,036	9,820
1899	96	3,527	2,022	3,215	1,693	3,844	2,600	6,444
Hardware, n.e.c.:								
1947	728	76,537	213,899	64,791	167,500	346,457	231,812	578,269
1939 [4]	462	n.a.	n.a.	38,035	43,373	100,767	66,615	167,382

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] Figures for years prior to 1935 do not include the cost of contract work.

[3] For 1947 and 1929, value of products shipped; for all other years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[4] The returns for 1939, but not for earlier years, have been retabulated to provide figures comparable with those for 1947. Value added for 1939, before retabulation and therefore on a basis comparable with earlier years, was $123.6 million for "Tin cans and other tinware" and $47.9 million for "Hand tools, n.e.c."

[5] Data for stamped tinware other than tin cans are excluded from the figures for 1929–1935 but not for earlier years.

[6] Figures for 1929 and earlier years do not include data for dairymen's tinware.

[7] "Tin cans and other tinware" was formerly a part of the discontinued industry "Tinsmithing, coppersmithing, and sheet iron working." Separate figures for 1899 are, therefore, not available.

[8] "Cutlery" and "Edge tools" formerly constituted a single classification. The separate figures shown for 1947 and 1939 have been combined in order that figures can be shown for the entire period 1899–1947.

[9] The figures for 1947 and 1939 include data for machine knives (except metal cutting) and exclude data for hair clippers and electric shavers, and are, therefore, not entirely comparable with the figures for earlier years. Value added for 1939 on a basis comparable with earlier years was $41.2 million.

[10] The figures for "Hand tools, n.e.c.," for prior years are not sufficiently comparable with those for later years to be shown in this table because they include data for machine-tool accessories.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Tin cans and other tinware, total [1]	217	46,890	$127,338	40,890	84,954	$105,689	$231,953	$447,907	$679,860	$20,183
New England	11	1,070	2,598	919	1,871	2,045	4,780	8,975	13,755	148
Middle Atlantic	57	11,972	31,269	10,685	21,584	26,453	54,118	95,661	149,779	3,259
New York	34	4,450	11,750	3,973	8,000	9,714	20,076	26,151	46,227	953
New Jersey	10	3,775	11,058	3,389	6,907	9,560	20,016	39,799	59,815	1,554
Pennsylvania	13	3,747	8,461	3,323	6,677	7,179	14,026	29,711	43,737	752
East North Central	57	15,525	43,488	13,555	28,253	36,388	75,544	140,001	215,545	6,576
Ohio	12	2,108	5,007	1,798	3,701	4,077	7,450	13,056	20,506	805
Illinois	32	12,082	34,995	10,609	22,157	29,438	60,883	104,867	165,750	4,656
West North Central	16	2,253	5,801	1,804	3,816	4,192	10,880	19,173	30,053	(d)
Missouri	9	1,539	4,024	1,220	2,484	2,883	6,194	13,045	19,239	(d)
South Atlantic	23	6,731	16,420	5,943	12,595	13,891	32,686	66,540	99,226	1,884
Maryland	12	4,948	12,121	4,442	9,509	10,520	24,187	40,688	64,875	966
Florida	3	665	1,492	545	1,096	1,125	4,015	15,889	19,904	550
East South Central	7	352	893	310	698	768	1,662	5,584	7,246	(d)
West South Central	10	2,485	6,389	2,084	4,359	5,034	12,499	22,184	34,683	1,240
West	36	6,502	20,480	5,590	11,778	16,918	39,784	89,789	129,573	3,084
Cutlery, total [1]	195	20,248	54,142	17,579	37,219	42,530	104,833	37,738	142,571	5,774
New England	39	8,444	21,919	7,260	14,898	17,287	46,795	15,718	62,513	2,018
Massachusetts	13	5,087	13,386	4,186	8,460	9,970	33,714	10,010	43,724	1,138
Connecticut	18	2,146	5,593	1,935	4,046	4,750	7,498	4,211	11,709	529
Middle Atlantic	98	10,034	27,908	8,721	19,072	21,669	49,993	19,212	69,205	2,327
New York	39	5,856	15,456	5,004	10,948	11,732	28,438	11,658	40,096	1,668
New Jersey	51	3,516	10,767	3,119	6,924	8,628	18,992	6,910	25,902	531
Pennsylvania	8	662	1,685	598	1,200	1,309	2,563	644	3,207	128
East North Central	30	1,233	3,045	1,110	2,269	2,477	5,765	2,000	7,765	(d)
Ohio	18	1,052	2,622	950	1,951	2,120	5,028	1,663	6,691	(d)
West North Central	6	119	319	103	221	253	735	248	983	22
South and West	22	418	951	385	759	844	1,545	560	2,105	(d)
Edge tools, total [1]	238	8,828	24,681	7,632	15,610	19,486	40,472	21,966	62,438	2,567
Maine	8	200	452	177	381	378	605	307	912	20
Massachusetts	42	1,280	3,675	1,070	2,056	2,765	6,447	2,306	8,753	395
Connecticut	19	1,266	3,753	1,126	2,471	3,003	6,680	3,251	9,931	365
New York	39	478	1,414	417	887	1,105	2,252	1,020	3,272	69
Ohio	17	1,187	3,631	962	2,060	2,842	5,517	2,746	8,263	238
Illinois	17	460	1,423	381	799	982	2,434	1,933	4,367	111
Michigan	13	153	509	134	270	368	860	589	1,449	16
Missouri	18	939	2,608	809	1,657	2,080	4,372	2,516	6,888	341
California	11	129	384	113	244	284	695	369	1,064	32
Hand tools, n.e.c., total [1]	579	35,668	103,191	30,138	62,991	79,061	174,540	98,003	272,543	8,653
New England	90	7,851	20,794	6,626	14,418	16,757	31,971	18,148	50,119	1,959
Massachusetts	38	3,539	8,963	2,984	6,498	7,383	14,314	8,108	22,422	883
Rhode Island	17	143	371	132	277	335	530	167	697	16
Connecticut	29	3,888	10,848	3,263	7,123	8,530	16,110	8,963	25,073	968
Middle Atlantic	134	9,602	27,721	8,301	17,152	21,630	46,712	21,752	68,464	2,122
New York	61	5,116	15,071	4,385	9,129	11,815	25,108	10,736	35,844	1,224
New Jersey	24	1,016	2,823	903	1,855	2,295	5,066	2,794	7,860	(d)
Pennsylvania	49	3,470	9,827	3,013	6,168	7,520	16,538	8,222	24,760	(d)
East North Central	193	13,077	40,962	10,783	22,661	30,385	69,849	44,050	113,899	3,555
Ohio	55	3,819	11,745	3,239	6,772	8,810	21,583	15,737	37,320	988
Indiana	18	529	1,267	453	871	981	2,020	1,615	3,635	257
Illinois	65	5,414	17,796	4,340	9,289	13,123	29,781	16,753	46,534	1,400
Michigan	40	2,186	6,502	1,831	3,758	4,846	9,471	6,709	16,180	656
Wisconsin	15	1,129	3,652	920	1,971	2,625	6,994	3,236	10,230	254
West North Central	52	1,982	5,518	1,709	3,504	4,125	10,159	4,975	15,134	477
Minnesota	17	1,069	2,820	927	1,819	2,243	4,929	1,666	6,595	207
Iowa	9	284	658	251	503	526	1,187	885	2,072	135
Missouri	13	420	1,515	344	753	996	3,120	2,054	5,174	72
South Atlantic	11	1,156	2,450	1,097	2,111	2,298	4,177	2,652	6,829	291
East South Central	7	288	568	242	480	395	1,656	900	2,556	32
West South Central	10	190	329	163	352	270	704	701	1,405	36
West	82	1,522	4,849	1,217	2,313	3,201	9,312	4,825	14,137	181
California	67	1,399	4,478	1,112	2,113	2,922	8,333	4,442	12,775	179
Files, total [1]	37	4,446	11,213	4,084	7,882	9,714	19,149	5,344	24,493	1,113
Pennsylvania	5	953	2,349	891	1,675	2,060	4,170	1,082	5,252	103
Hand saws and saw blades, total [1]	89	8,441	25,600	7,380	15,543	20,872	42,975	27,455	70,430	4,033
New England	15	2,787	9,235	2,439	5,312	7,675	18,129	8,644	26,773	1,104
Massachusetts	7	2,159	7,242	1,909	4,258	6,266	14,989	6,521	21,510	1,008
Middle Atlantic	26	2,910	8,072	2,636	5,536	6,846	12,499	10,416	22,915	1,290
North Central	32	2,453	7,379	2,075	4,166	5,675	10,815	7,415	18,230	1,577
Illinois	8	276	791	217	460	609	1,197	799	1,996	73
Michigan	9	128	436	96	202	271	865	527	1,392	37
South	5	116	377	98	245	301	630	489	1,119	27
Pacific	11	175	537	132	284	375	902	491	1,393	35
Oregon	4	110	349	82	189	242	511	365	876	18

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947—Continued

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Hardware, n.e.c., total [1]	728	76,537	$213,899	64,791	133,018	$167,500	$346,457	$231,812	$578,269	$17,148
New England	86	21,794	59,531	17,878	37,721	47,193	87,197	53,998	141,195	4,534
Massachusetts	31	2,080	5,863	1,804	3,751	4,977	10,016	6,475	16,491	403
Connecticut	46	19,183	52,350	15,631	33,107	41,203	75,075	46,174	121,249	3,997
Middle Atlantic	222	14,064	37,304	12,033	24,228	28,744	67,355	43,899	111,254	2,365
New York	135	4,407	11,583	3,692	7,599	8,708	21,185	16,744	37,929	1,010
New Jersey	35	5,251	14,670	4,607	8,875	11,641	28,135	17,655	45,790	447
Pennsylvania	52	4,406	11,051	3,734	7,754	8,395	18,035	9,500	27,535	908
East North Central	231	35,271	102,746	30,221	61,585	80,643	166,382	118,986	285,368	8,528
Ohio	44	4,771	13,562	4,102	8,114	10,795	20,822	20,187	41,009	2,232
Indiana	23	1,347	3,443	1,129	2,286	2,432	7,360	4,277	11,637	460
Illinois	82	10,677	30,397	9,074	20,006	24,058	53,193	34,085	87,278	2,461
Michigan	65	16,759	50,736	14,442	27,969	39,838	77,014	54,345	131,359	3,202
Wisconsin	17	1,717	4,608	1,474	3,210	3,520	7,993	6,092	14,085	173
West North Central	36	1,396	3,171	1,276	2,606	2,557	5,165	2,828	7,993	479
Minnesota	13	139	259	120	247	204	477	412	889	26
Iowa	8	318	765	284	636	643	1,470	898	2,368	125
Missouri	10	884	2,025	824	1,618	1,612	2,994	1,363	4,357	312
South	37	801	1,649	652	1,374	1,197	2,897	2,055	4,952	71
Mountain	9	427	1,115	376	756	855	1,604	1,016	2,620	119
Pacific	107	2,784	8,383	2,355	4,748	6,311	15,857	9,030	24,887	1,052
California	91	2,503	7,470	2,115	4,262	5,633	14,465	8,157	22,622	961

[d] Withheld to avoid disclosing figures for individual companies.

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Tin cans and other tinware: *New England*, Maine, 2; Massachusetts, 8; Connecticut, 1; *East North Central*, Indiana, 7 (937); Wisconsin, 6 (398); *West North Central*, Minnesota, 5; Iowa, 1; Nebraska, 1; *South Atlantic*, Delaware, 1; Virginia, 2; West Virginia, 4 (845); Georgia, 1; *East South Central*, Kentucky, 1; Tennessee, 6; *West South Central*, Arkansas, 1; Louisiana, 2; Oklahoma, 1; Texas, 6 (1,672); *West*, Colorado, 1; Utah, 2; Washington, 5 (667); Oregon, 1; California, 27 (5,238).

Cutlery: *New England*, New Hampshire, 3 (251); Rhode Island, 5 (960); *East North Central*, Indiana, 1; Illinois, 6 (91); Michigan, 4; Wisconsin, 1; *West North Central*, Minnesota, 2; Iowa, 3 (39); Missouri, 1; *South and West*, Delaware, 1; Maryland, 2; Virginia, 1; North Carolina, 1; Florida, 2; Kentucky, 1; Arkansas, 2; Texas, 1; Montana, 1; Colorado, 1; Oregon, 2; California, 7 (64).

Edge tools: New Hampshire, 3 (48); Vermont, 3 (93); New Jersey, 3 (58); Pennsylvania, 20 (542); Indiana, 5 (435); Wisconsin, 5 (126); Minnesota, 2; Iowa, 1; Delaware, 1; Maryland. 1; District of Columbia, 1; Virginia, 1; West Virginia, 1; North Carolina, 1; Florida, 1; Mississippi, 1; Oklahoma, 1; Colorado, 1; Washington, 1; Oregon, 1.

Hand tools, n.e.c.: *New England*, Maine, 3 (45); New Hampshire, 1; Vermont, 2; *West North Central*, North Dakota, 2; Nebraska, 7 (168); Kansas, 4; *South Atlantic*, Delaware, 1; Maryland, 3 (39); Virginia, 1; West Virginia, 3 (1,044); North Carolina, 1; Georgia, 1; Florida, 1; *East South Central*, Kentucky, 1; Tennessee, 4 (173); Mississippi, 2; *West South Central*, Arkansas, 1; Louisiana, 2; Oklahoma, 1; Texas, 6 (116); *West*, Colorado, 2; Arizona, 1; Utah, 2; Washington, 4 (18); Oregon, 6 (89).

Files: Rhode Island, 2; Connecticut, 2; New York, 7 (44); New Jersey, 6 (184); Ohio, 3 (1,131); Indiana, 2; Illinois, 3 (23); Michigan, 1; Wisconsin, 2; Minnesota, 1; Iowa, 1; Oregon, 1; California, 1.

Hand saws and saw blades: *New England*, Maine, 1; New Hampshire, 1; Rhode Island, 2; Connecticut, 4 (438); *Middle Atlantic*, New York, 16 (701); Pennsylvania, 10 (2,209); *North Central*, Ohio, 9 (324); Indiana, 3 (1,642); Wisconsin, 1; Missouri, 2; *South*, Maryland, 1; Georgia, 2; Alabama, 1; Mississippi, 1; *Pacific*, Washington, 1; California, 6.

Hardware, n.e.c.: *New England*, Maine, 2; New Hampshire, 2; Vermont, 1; Rhode Island, 4 (60); *West North Central*, Nebraska, 2; Kansas, 3; *South*, Delaware, 1; Maryland, 3 (19); Virginia, 3 (129); North Carolina, 3 (191); Georgia, 2; Florida, 2; Kentucky, 8 (213); Tennessee, 2; Alabama, 3 (17); Oklahoma, 2; Texas, 8 (54); *Mountain*, Colorado, 8; Arizona, 1; *Pacific*, Washington, 10 (166); Oregon, 6 (115).

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry						
	Tin cans and other tinware	Cutlery	Edge tools	Hand tools, n.e.c.	Files	Hand saws and saw blades	Hardware, n.e.c.
ALL ESTABLISHMENTS							
Number of establishments	217	195	238	579	37	89	728
All employees:							
Number (average for the year)	46,890	20,248	8,828	35,668	4,446	8,441	76,537
Salaries and wages, total	$127,338	$54,142	$24,681	$103,191	$11,213	$25,600	$213,899
Production and related workers:							
Number (average for the year)	40,890	17,579	7,632	30,138	4,084	7,380	64,791
Man-hours, total ... thousands	84,954	37,219	15,610	62,991	7,882	15,543	133,018
Wages, total	$105,689	$42,530	$19,486	$79,061	$9,714	$20,872	$167,500
Value added by manufacture	$231,953	$104,833	$40,472	$174,540	$19,149	$42,975	$346,457
ESTABLISHMENTS REPORTING DETAILED STATISTICS							
Number of establishments	217	150	165	434	37	89	639
All employees:							
Number (average for the year)	46,890	19,929	8,554	35,084	4,446	8,441	75,614
Salaries and wages, total	$127,338	$53,388	$24,003	$101,940	$11,213	$25,600	$211,445
Production and related workers:							
Number (average for the year)	40,890	17,279	7,367	29,572	4,084	7,380	63,908
Man-hours, total ... thousands	84,954	36,622	15,081	61,857	7,882	15,543	131,263
Wages, total	$105,689	$41,860	$18,868	$77,878	$9,714	$20,872	$165,564
Value added by manufacture	$231,953	$103,930	$39,357	$172,402	$19,149	$42,975	$341,659
Number of employees for pay period ended nearest Oct. 15:							
All employees	48,673	19,361	8,403	34,230	4,214	8,497	76,242
Male	34,311	12,257	7,419	27,963	3,663	7,292	52,248
Female	14,362	7,104	984	6,267	551	1,205	23,994
Production and related workers	42,458	16,736	7,167	28,723	3,854	7,304	64,435
Male	29,870	10,695	6,638	24,601	3,393	6,495	44,606
Female	12,588	6,041	529	4,122	461	809	19,829
Force-account construction workers	323	1	5	18	1	----------	24
Administrative, supervisory, sales, and all other	5,892	2,624	1,231	5,489	359	1,193	11,783
Male	4,118	1,561	776	3,344	269	797	7,618
Female	1,774	1,063	455	2,145	90	396	4,165
All employees, number by month:							
January	44,374	21,507	8,858	37,186	4,700	8,379	75,316
February	44,307	21,746	8,904	37,287	4,669	8,360	76,881
March	43,997	21,774	8,805	37,157	4,635	8,405	77,525
April	44,843	21,023	8,665	36,351	4,601	8,595	76,670
May	45,216	20,062	8,619	34,155	4,537	8,634	76,182
June	45,813	18,520	8,567	34,247	4,506	8,544	74,738
July	47,029	18,005	8,133	32,768	4,347	8,319	73,585
August	49,991	18,559	8,293	33,551	4,330	8,319	72,863
September	50,870	18,969	8,378	33,790	4,284	8,294	74,575
October	48,673	19,361	8,403	34,230	4,214	8,497	76,242
November	48,401	19,792	8,429	34,872	4,175	8,511	75,201
December	49,095	19,820	8,531	35,323	4,277	8,426	77,339
Cost of materials, fuel, electricity, and contract work	$447,907	$37,114	$21,323	$96,714	$5,344	$27,455	$227,171
Materials, parts, containers, and supplies	441,748	35,048	19,390	88,630	4,686	25,547	213,590
Fuels, total	3,066	651	646	2,717	397	832	3,764
Bituminous coal	485	187	202	504	122	335	1,853
Anthracite	24	11	14	48	5	2	88
Coke	75	12	12	112	1	4	177
Fuel oils	661	333	228	1,363	192	156	1,007
Gas	1,641	102	179	642	74	290	537
Other fuels	180	6	11	48	3	45	102
Purchased electric energy	2,583	830	442	2,176	257	546	3,428
Contract and commission work	510	585	845	3,191	4	530	6,389
Value of inventories:							
Beginning of year, total	$100,216	$24,640	$8,967	$55,612	$6,338	$13,942	$91,067
Finished products	21,665	5,700	1,096	14,542	1,900	3,054	15,209
Materials, supplies, and work in process	78,551	18,940	7,871	41,070	4,438	10,888	75,858
End of year, total	123,668	25,703	10,745	61,630	6,976	15,859	110,837
Finished products	28,124	6,106	1,645	19,208	2,146	4,033	21,194
Materials, supplies, and work in process	95,544	19,597	9,100	42,422	4,830	11,826	89,643
Expenditures for plant and equipment:							
New plant and equipment	$20,183	$5,774	$2,567	$8,653	$1,113	$4,033	$17,148
Construction and major alteration of fixed plants	3,650	1,334	729	2,022	622	1,735	3,455
Buildings	3,474	1,303	690	1,938	621	1,699	3,253
Other construction	182	31	39	84	1	36	202
Machinery and equipment	16,527	4,440	1,838	6,631	491	2,298	13,693
Production machinery and equipment	15,068	4,239	1,693	5,775	465	2,024	11,910
Other machinery and equipment	1,459	201	145	856	26	274	1,783
Used plant and equipment, and land	662	139	137	1,575	81	460	1,481
Number of highway-type motor vehicles owned or leased:							
Trucks	190	66	59	190	13	58	358
By manufacturer's rated capacity:							
Under 1½ tons	21	38	22	80	4	44	141
1½ tons	59	19	23	72	3	3	112
Over 1½ tons and less than 3½ tons	54	7	13	21	4	8	54
3½ tons and less than 5 tons	13	----------	1	6	1	2	19
5 tons and over	43	2	----------	11	1	1	32
By body type:							
Van	96	3	1	7	1	1	36
Stake or platform	55	16	27	81	3	8	156
Panel or light delivery	30	36	17	65	2	34	109
All other trucks	9	11	14	37	7	15	57
Truck tractors	181	----------	----------	2	1	----------	32
Trailers and semitrailers	365	----------	----------	2	2	----------	33

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Tin cans and other tinware:											
Number of establishments	217	18	9	18	35	29	49	35	17	7	----------
Number of employees (average for the year)	46,890	45	67	265	1,212	2,120	8,039	11,954	12,083	11,105	----------
Value added by manufacture	$231,953	$319	$306	$1,279	$6,241	$9,177	$41,749	$64,409	$54,543	$53,930	----------
Cutlery:											
Number of establishments	195	39	32	26	31	22	27	7	8	2	1
Number of employees (average for the year)	20,248	84	236	361	924	1,531	4,204	2,597	*10,511*	(d)	(d)
Value added by manufacture	$104,833	$337	$853	$1,351	$4,646	$6,801	$18,104	$13,113	*$59,628*	(d)	(d)
Edge tools:											
Number of establishments	238	73	32	36	48	32	10	5	2	----------	----------
Number of employees (average for the year)	8,828	150	206	507	1,510	2,171	1,422	*2,862*	(d)	----------	----------
Value added by manufacture	$40,472	$872	$710	$1,820	$6,627	$10,000	$6,204	*$14,239*	(d)	----------	----------
Hand tools, n.e.c.:											
Number of establishments	579	185	91	82	88	55	44	20	10	4	----------
Number of employees (average for the year)	35,668	375	618	1,132	2,781	3,715	7,147	7,155	7,111	5,634	----------
Value added by manufacture	$174,540	$1,722	$2,563	$4,727	$12,358	$17,557	$37,795	$36,849	$32,799	$28,170	----------
Files:											
Number of establishments	37	16	5	6	2	2	1	3	----------	2	----------
Number of employees (average for the year)	4,446	40	32	86	(d)	(d)	*376*	*3,912*	----------	(d)	----------
Value added by manufacture	$19,149	$101	$141	$399	(d)	(d)	*$1,246*	*$17,362*	----------	(d)	----------
Hand saws and saw blades:											
Number of establishments	89	9	20	17	21	8	10	1	----------	3	----------
Number of employees (average for the year)	8,441	20	139	230	637	571	*1,751*	(d)	----------	5,093	----------
Value added by manufacture	$42,975	$99	$810	$1,370	$3,306	$3,052	*$7,598*	(d)	----------	$26,740	----------
Hardware, n.e.c.:											
Number of establishments	728	200	114	108	122	56	69	31	13	10	5
Number of employees (average for the year)	76,537	439	762	1,451	3,931	4,111	10,694	11,037	9,083	13,677	21,352
Value added by manufacture	$346,457	$2,009	$3,345	$6,208	$19,020	$18,876	$51,337	$55,678	$41,423	$59,102	$89,459

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

TIN CANS AND OTHER TINWARE INDUSTRY 3411	Shipped by— Tin cans and other tinware industry	Other industries	All industries
Total shipments by the industry	$679,860		
A. Tin cans and other tinware	643,845	$8,588	$652,433
Metal cans	615,527	3,879	619,406
Tin-coated containers and tinware, except metal cans and household and hospital utensils	28,318	4,709	33,027
B. Secondary products	23,450		
Stamped and spun household and hospital utensils	5,649		
Steel shipping packages, kegs, and parts	8,782		
Other secondary products	9,019		
C. Miscellaneous receipts	12,565		
Scrap and salable refuse	5,538		
Nonmanufacturing activities	6,423		
Other receipts	604		

CUTLERY INDUSTRY 3421	Shipped by— Cutlery industry	Other industries	All industries
Total shipments by the industry	$142,571		
A. Cutlery	132,424	$8,661	$141,085
Cutlery, scissors, shears, and trimmers	72,443	8,661	81,104
Safety razors and razor blades	59,981		59,981
B. Secondary products	9,592		
Silverware and plated ware	1,948		
Other secondary products	7,644		
C. Miscellaneous receipts	555		

EDGE TOOLS INDUSTRY 3422	Shipped by— Edge tools industry	Other industries	All industries
Total shipments by the industry	$62,438		
A. Edge tools	49,158	$14,591	$63,749
B. Secondary products (includes hand tools, machine tools, metalworking machinery, etc.)	12,639		
C. Miscellaneous receipts	641		

FILES INDUSTRY 3424	Shipped by— Files industry	Other industries	All industries
Total shipments by the industry	$24,493		
A. Files and rasps	22,769	$1,828	$24,597
B. Secondary products	1,567		
C. Miscellaneous receipts	157		

HAND TOOLS, NOT ELSEWHERE CLASSIFIED, INDUSTRY 3423	Shipped by— Hand tools, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$272,543		
A. Hand tools, n.e.c	219,058	$38,590	$257,648
Mechanics' hand service tools	114,917	15,533	130,450
Hand tools, n.e.c	95,027	21,830	116,857
Mechanics' and other hand tools (except edge tools, files, and saws), not specified by type	9,114	1,227	10,341
B. Secondary products	50,357		
Closed die forgings	6,735		
Edge tools	5,386		
Job stampings, except automobile	1,231		
Other secondary products	37,005		
C. Miscellaneous receipts	3,128		

HAND SAWS AND SAW BLADES INDUSTRY 3425	Shipped by— Hand saws and saw blades industry	Other industries	All industries
Total shipments by the industry	$70,430		
A. Hand saws and saw blades	53,805	$8,284	$62,089
B. Secondary products	15,413		
Edge tools	3,506		
Other secondary products	11,907		
C. Miscellaneous receipts	1,212		

HARDWARE, NOT ELSEWHERE CLASSIFIED, INDUSTRY 3429	Shipped by— Hardware, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$578,269		
A. Hardware, n.e.c	514,957	$51,527	$566,484
Transportation equipment hardware	187,840	7,850	195,690
Furniture and cabinet hardware	36,340	2,794	39,134
Vacuum bottles and jugs	12,750	5,029	17,779
Other hardware	268,959	34,185	303,144
Hardware, not specified by type	9,068	1,669	10,737
B. Secondary products	55,669		
Job stampings, except automobile	6,310		
Bolts, nuts, washers, rivets, and screws, standard types	9,409		
Other secondary products (hand tools, stamped and pressed metal end products, hand trucks and trailers, electric switches, phonographs, metal buckles for wearing apparel, etc.)	39,950		
C. Miscellaneous receipts	7,643		
Contract and commission work	1,258		
Repair work	689		
Scrap and salable refuse	4,504		
Nonmanufacturing activities	1,192		

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947						1939	
		Shipments and interplant transfers						Total production for sale and interplant transfer	
		Total		Interplant transfers (for own use)		All other shipments (for sale)			
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Metal cans [1]									
Reported in 1947 Census of Manufactures [2]	M Base boxes	65,018	$619,406	10,665	$79,405	54,353	$540,001	n.a.	$339,413
Reported on monthly Form M75D for 1947 [2]	*M Base boxes*	*65,125*	*n.a.*	*10,223*	*n.a.*	*54,902*	*n.a.*		
Detailed data, by type of can, from monthly survey for 1947: Total	*M Short tons* [3]	[3] *2,956*	*n.a.*	*456*	*n.a.*	*2,500*	*n.a.*		
Food cans	*do*	*2,147*		*394*		*1,753*			
Fruit and vegetable (including juice)	*do*	*1,066*							
Evaporated milk	*do*	*267*							
Condensed milk	*do*	*26*							
Other dairy products	*do*	*38*							
Fish and sea food	*do*	*109*							
Lard and shortening	*do*	*57*		*n.a.*		*n.a.*		*n.a.*	*n.a.*
Meat (including poultry)	*do*	*110*							
Coffee	*do*	*142*	*n.a.*		*n.a.*		*n.a.*		
All other food cans	*do*	*332*							
Nonfood cans	*do*	*809*		*62*		*747*			
Oil, open top—1 quart and 5 quart	*do*	*195*							
Beer cans	*do*	*207*							
Pet food	*do*	*50*		*n.a.*		*n.a.*			
All other nonfood cans	*do*	*357*							

PRODUCT	Unit of measure	1947		1939	
		Total shipments and interplant transfers		Total production for sale and interplant transfer	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Tin-coated containers and tinware (except cans; household and hospital utensils)			$33,027		n.a.
Metal fluid milk shipping and delivery containers	M	1,635	8,011	1,195	$3,847
Tinware end products, except cans; household and hospital utensils			25,016		n.a.
Safety razors and razor blades			59,981		19,220
Safety razors	M	20,092	9,644	10,457	1,635
Razor blades	do	2,759,183	50,337	1,958,659	17,585
Cutlery, scissors, shears, and trimmers			81,104		n.a.
Table cutlery [4]			14,610		
Kitchen cutlery [4]			8,462		(4)
Butchers' and meatpacking cutlery			2,607		1,834
Pocket knives	M	31,340	17,465	n.a.	5,180
Scissors (except manicure), shears, hedge and other trimmers, tinners and other snips	do	26,255	16,886		
Manicure scissors and implements			8,975		[5] 6,680
Other cutlery (including knife blades)			10,347		
Cutlery, not reported by type			1,752		3,183
Edge tools			63,749		[7] 14,996
Agricultural edged hand tools [6]			7,937		[7] 1,823
Axes, adzes, and hatchets			9,863		3,482
Cutting dies [8]			9,303		4,929
Other edge tools			34,638		[7] 4,762
Edge tools, not specified by type			2,008		
Mechanics' hand service tools			130,450		40,055
Pliers	M	20,722	14,528		
Ball peen hammers	do	3,372	2,111		
Wrenches	do	91,878	58,520		40,055
Screw drivers	do	50,138	11,328		
Other mechanics' hand service tools			43,963		
Hand tools (except mechanics' hand service tools, edge tools, files, and saws)			116,857		37,176
Shovels, spades, scoops, telegraph spoons, and scrapers			13,431		
Light forged hammers (except ball peen hammers)			6,493		
Heavy forged tools (sledges, picks, pick mattocks, mauls)			3,535		n.a.
Steel goods (forks, hoes, rakes, weeders, etc.)			13,935		
Hand tools, not elsewhere classified			79,463		
Mechanics' and other hand tools (except edge tools, files, and saws), not specified by type			10,341		
Files and rasps			24,597		11,631
Metalworking:					
Precision files (Swiss pattern)	M	6,845	1,890		
Rotary files and burs	do	598	722	81,393	10,702
Other metalworking files and rasps	do	105,040	20,154		
Other files and rasps (including woodworking and reconditioned and rebuilt) and accessories for files (including file cleaners, handles, etc.)			1,831		929

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers		1939 Total production for sale and interplant transfer	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Hand saws and saw blades			$62,089		[7] $16,498
Power saw blades:					
Woodworking:					
Circular:					
Solid tooth	M	2,438	9,823	n.a.	2,731
Inserted tooth	do	28	3,340		
Band:					
Under 2 inches	M ft	8,792	1,435	n.a.	1,407
2 inch and over	do	967	2,775		
Metalworking:					
Circular	M	148	2,440	n.a.	[7] 387
Band	M ft	63,182	5,675	n.a.	1,006
Hack (power only)	M	4,503	3,331	n.a.	4,767
Hand operated saws:					
Hack saw blades (hand only)	do	97,572	9,312		
Crosscut, buck, and other heavy hand saws	do	1,096	4,240	n.a.	1,279
Other hand saws—carpenter, miter, coping, pruning, compass, etc. [9]			13,558		3,288
Parts and accessories (teeth, handles, frames, holders, guides, clamps, etc.)			5,117		1,540
Hand saws and saw blades, not specified by type			1,043		93

PRODUCT	1947 Total shipments and interplant transfers (value f.o.b. plant)	1939 Total production for sale and interplant transfer (value f.o.b. plant)
Hardware, not elsewhere classified, total	$566,484	$192,011
Transportation equipment hardware	195,690	n.a.
Motor vehicle hardware (including lock units)	173,923	69,233
Marine fittings hardware [10]	15,272	(11)
Marine joiners hardware	1,040	
Railroad car hardware (including railroad car seals)	5,455	
Furniture and cabinet hardware	39,134	
Furniture hardware, except casters (including office and household)	27,644	(12)
Furniture casters and other floor protective devices [13]	11,490	
Vacuum bottles and jugs (excluding replacement parts)	17,779	4,485
Other hardware	303,144	n.a.
Builders' hardware:		
Padlocks	13,618	4,757
Door locks, lock sets, and lock trim [14]	56,539	16,521
Cabinet hardware (including cabinet hinges and locks)	19,804	(12)
Miscellaneous sash, screen, and shelf hardware [15]	26,866	
Door closers and checking devices (including floor types)	9,825	
Hinges and butts, except cabinet hinges (including spring hinges)	25,449	38,261
Hangers, tracks, and related items (including overhead door hardware)	16,062	
Sash balances and sash pulleys	9,487	
Other builders' hardware	16,272	
Casket and casket shell hardware	8,141	4,402
Trunk and luggage hardware (including locks)	10,426	2,926
Saddlery and harness hardware	3,631	2,566
Fireplace fixtures and equipment (including dampers, irons, and fire screens)	7,325	
Casters and wheels for dollies and industrial hand trucks	15,105	
All other hardware, not elsewhere classified [16]	64,594	[11] 31,471
Hardware, not specified by type	10,737	

n.a.—Not available.

[1] Metal cans are defined as single walled containers constructed wholly of tin plate, terneplate, black plate, or waste plate which are designed for the packing of products. Included are all pails and drums manufactured from steel sheets of 29 gauge or lighter. Excluded are steel shipping containers such as barrels, drums, kegs, pails, and packages which are manufactured from steel sheets of heavier than 29 gauge; ice cream cans; and fluid milk shipping containers.

[2] See text for explanation of differences.

[3] See text for method of converting base boxes to short tons.

[4] Comparable data for kitchen and table cutlery for 1939 are not available. In 1947, table cutlery includes knives, forks, spoons, etc. for the serving and eating of food, made with handles of materials other than metal and carving sets made with handles other than metal; flatware is defined as knives, forks, spoons, etc. for the serving and eating of food, made wholly of metal and carving sets made with metal handles. No distinction was made in 1939 on the basis of the type of handle on the knife, fork, spoon, etc. Therefore, the unplated steel knives, forks, spoons, etc. which were placed in the Cutlery industry in 1939, included some with metal handles, and the plated knives, forks, spoons, etc. and the unplated knives, forks, spoons, etc. made of other than steel, which were placed in the Silverware and Plated Ware industry in 1939, included some with handles of materials other than metal. The total for table and kitchen cutlery and flatware, amounted to $172.9 million in 1947 as compared to $45.6 million in 1939.

[5] Includes manicure scissors and other scissors, shears, and snips, but does not include manicure implements.

[6] Includes scythes, sickles, grass hooks, machetes, hay knives, and similar tools.

[7] Revised.

[8] Includes dies for use in cutting cloth, paper, leather, etc., but excludes metal cutting dies.

[9] Includes hand saw frames and hand saw blades sold together and hand saw blades sold separately.

[10] Includes shackles, rope sockets, tackle blocks, and wire rope clips and clamps.

[11] In 1939, separate data were not requested on marine fittings hardware, marine joiners' hardware, or railroad car hardware. The major portion of these commodities, which were reported separately, were included in "Other hardware, not elsewhere classified."

[12] Furniture and cabinet hardware included builders' cabinet hardware and refrigerator hardware in 1939. Data were retabulated to exclude refrigerator hardware, which is now classified as "Other hardware, not elsewhere classified." The revised total value of furniture and cabinet hardware, including builders' cabinet hardware amounted to $17.4 million in 1939 compared to $58.9 million in 1947.

[13] Includes slides, glides, furniture rests, and leg cups.

[14] Includes night latches, deadlocks, and panic devices.

[15] Includes window hardware, transom hardware, door pulls and bolts, screen door hardware, etc.

[16] Includes such products as hose fittings, refrigerator hardware, stove hardware, animal traps, and locks, not elsewhere classified.

TABLE 6-B.—SHIPMENTS OF METAL CANS, FOR SALE AND FOR OWN USE, BY GEOGRAPHIC DIVISIONS: 1947 [1]

[Expressed in terms of steel consumed in their manufacture; all quantities in thousands of short tons]

DIVISION	Total shipments			Interplant transfers (for own use)			All other shipments (for sale)		
	Total	Food	Nonfood	Total	Food	Nonfood	Total	Food	Nonfood
United States and Hawaii	2,956	2,147	809	456	394	62	2,500	1,753	747
New England	58	(d)	(d)	(d)		(d)	(d)	(d)	(d)
Middle Atlantic	558	313	245	148	137	11	410	176	234
East North Central	940	640	300	177	150	27	763	490	273
West North Central	120	77	43	(d)	(d)		(d)	(d)	43
South Atlantic	434	337	97	34	(d)	(d)	400	(d)	(d)
East South Central	37	(d)	(d)	(d)	(d)		(d)	(d)	(d)
West South Central	157	102	55	(d)		(d)	(d)	102	(d)
Mountain	24	(d)	(d)	(d)	(d)		(d)	(d)	(d)
Pacific and Hawaii	628	568	60	(d)	31	(d)	(d)	537	(d)

[d] Withheld to avoid disclosing figures for individual companies.
[1] Data are from monthly survey. See text for explanation.

TABLE 7.—SELECTED MATERIALS CONSUMED, BY KIND: 1947

[The table below summarizes the consumption of selected metal shapes by manufacturers during 1947. For each shape, manufacturing establishments were required to report consumption, in quantity and cost, provided that such usage during 1947 exceeded the following amounts: For iron castings, steel castings, each of six carbon steel shapes—50 short tons; for alloy steel bars and all other alloy steel—25 short tons; for stainless steel, brass and copper wire mill shapes, copper and brass castings, aluminum mill shapes and aluminum castings—10 short tons]

[Money figures in thousands of dollars]

METAL SHAPE	TIN CANS AND OTHER TINWARE INDUSTRY			CUTLERY INDUSTRY			EDGE TOOLS INDUSTRY			HAND TOOLS, N.E.C., INDUSTRY		
	Establishments consuming more than specified quantities											
	Number	Short tons	Cost	Number	Short tons	Cost	Number	Short tons	Cost	Number	Short tons	Cost
Iron castings, rough and semifinished				(1)	268	$93	14	3,627	$1,137	39	20,328	$6,077
Steel castings, rough and semifinished							(1)	439	182	10	1,663	478
Steel mill shapes and forms	n.a.	3,106,461	$354,994	n.a.	23,773	8,708	n.a.	41,775	5,016	n.a.	244,840	23,854
Carbon steel:												
Bars and bar shapes	(1)	2,259	191	14	3,555	520	35	24,404	2,370	100	108,397	8,334
Sheet and strip	17	35,207	2,911	39	14,257	5,515	23	14,655	1,825	59	60,347	6,234
Structural shapes										(1)	(d)	(d)
Plates	(1)	(d)	(d)							5	749	71
Wire	21	5,812	580	(1)	499	134	(1)	354	36	17	9,194	1,346
Tin plate, terne plate, and black plate	178	3,062,455	351,013									
All other mill shapes and forms	(1)	216	48				(1)	369	48	12	13,220	1,458
Alloy steel, except stainless:												
Bars and bar shapes				(1)	1,078	127	12	1,815	650	68	50,694	5,690
All other mill shapes and forms	(1)	512	251	(1)	1,118	460				(1)	1,707	248
Stainless steel				21	3,266	1,952	(1)	178	87	9	532	473
Copper and copper-base alloy:												
Brass and wire mill shapes and forms	(1)	593	389	14	3,541	2,018	5	125	117	15	1,330	928
Castings, rough and semifinished	(1)	(d)	(d)							(1)	73	56
Aluminum:												
Aluminum mill shapes	(1)	57	49	(1)	315	178				10	1,030	758
Castings, rough and semifinished				(1)	(d)	(d)	(1)	(d)	(d)	15	1,703	1,285

METAL SHAPE	FILES INDUSTRY			HAND SAWS AND SAW BLADES INDUSTRY			HARDWARE, N.E.C., INDUSTRY		
	Establishments consuming more than specified quantities								
	Number	Short tons	Cost	Number	Short tons	Cost	Number	Short tons	Cost
Iron castings, rough and semifinished				(1)	(d)	(d)	60	28,161	$6,888
Steel castings, rough and semifinished							8	1,531	552
Steel mill shapes and forms	n.a.	22,488	$2,471	n.a.	26,113	$10,265	n.a.	490,074	52,367
Carbon steel:									
Bars and bar shapes	10	[2] 22,488	[2] 2,471	5	1,554	491	68	51,163	5,019
Sheet and strip				21	12,756	4,311	104	376,741	37,370
Structural shapes							9	5,996	419
Plates							11	4,290	310
Wire				(1)	699	61	46	37,524	3,950
All other mill shapes and forms							13	4,085	623
Alloy steel, except stainless:									
Bars and bar shapes	(1)	(3)	(3)	7	1,319	997	9	2,697	452
All other mill shapes and forms				18	9,785	4,405	5	1,159	185
Stainless steel							19	6,419	4,039
Copper and copper-base alloy:									
Brass and wire mill shapes and forms				(1)	152	157	104	21,517	13,798
Castings, rough and semifinished							43	3,007	2,198
Aluminum:									
Aluminum mill shapes							26	1,627	1,023
Castings, rough and semifinished				(1)	(d)	(d)	15	733	592

[d] Withheld to avoid disclosing figures for individual companies.
[1] Less than 5 establishments.
[2] Includes a small amount of alloy steel bars and bar shapes which are not shown separately to avoid disclosing figures for individual companies.
[3] Included with carbon steel bars and bar shapes.

TABLE 8.—NUMBER OF ESTABLISHMENTS PERFORMING SELECTED METALWORKING OPERATIONS: 1947

[The figures in the table represent the number of establishments maintaining the metalworking operation specified, according to the usual number of production workers employed in the operation during 1947]

METALWORKING OPERATION	TIN CANS AND OTHER TINWARE INDUSTRY						HARDWARE, N.E.C., INDUSTRY					
	Number of establishments performing selected metalworking operations											
	Total	Distribution by number of production workers in the operation					Total	Distribution by number of production workers in the operation				
		1–4	5–19	20–49	50–99	100 and over		1–4	5–19	20–49	50–99	100 and over
Foundry							74	22	31	13	6	2
Die casting							46	25	14	3	2	2
Forging-presses, hammers, or upsetters	2	1	1				55	26	19	8	1	1
Electroplating	2	2					158	66	62	18	5	7
Galvanizing and other hot dip coating	6		1	2	2	1	19	13	5		1	
Heat treating or annealing of metals	15	11	4				69	60	7	2		
Automatic screw-machine department	2	1	1				77	46	20	9	2	
Machine shop	126	26	51	38	10	1	337	145	117	49	18	8
Tool and die room	5	2	2	1			187	96	61	17	6	7
Pattern shop	1	1					63	53	8	1	1	
Plate or structural fabrication							24	16	4	1	2	1
Stamping, blanking, forming, or drawing	190	22	34	39	32	63	339	150	101	38	24	26

NOTE: In the "Tin cans and other tinware" industry 16 establishments did not answer this inquiry. Of these 12 had fewer than 20 employees and 4 had between 20 and 99 employees. In the "Hardware, n.e.c.," industry, 109 establishments did not answer the inquiry. Of these 101 had fewer than 20 employees; 5 had between 20 and 99; and 3 had 100 and more employees.

HEATING, COOKING, AND PLUMBING EQUIPMENT

This report shows 1947 Census of Manufactures statistics for establishments primarily engaged in the production of metal plumbing fixtures and fittings, oil burners, and heating and cooking equipment, not elsewhere classified. These establishments have been classified in three industries, described separately below.

Metal Plumbing Fixtures and Fittings *(Full Standard Industrial Classification title and number: Enameled-Iron and Metal Sanitary Ware and Other Plumbers' Supplies, 3431.)*—This industry comprises establishments primarily engaged in manufacturing enameled-iron, cast-iron, or pressed-metal sanitary ware such as bathtubs, sinks, lavatories, and laundry tubs; and plumbers' brass goods and fittings such as faucets, spigots, and steam and water traps. These establishments may also manufacture small plumbers' valves, stopcocks, and nozzles, but establishments specializing in the manufacture of steam or waterline valves are classified in Industry 3591. Establishments primarily engaged in manufacturing vitreous and semi-vitreous-pottery sanitary ware are classified in Industry 3261, and vitreous-enameled kitchen, household, and hospital ware in Industry 3461.

In the 1939 Census of Manufactures this industry included range boilers and tanks for water heaters, sold separately. For the 1947 census, the industry was redefined, excluding these products and including them in the Heating and Cooking Apparatus, N.E.C. Industry. The 1939 reports have been retabulated to provide data comparable with 1947, but data for earlier years are not available.

Data on the shipments of metal plumbing fixtures were collected during 1947 by the Bureau of the Census on a quarterly basis on Form M51H. The detailed statistics shown in table 6–A are taken from the quarterly survey for 1947 but include revisions obtained as a result of the 1947 Census of Manufactures. These revisions are largely in the value of products shipped. Some companies indicated that the figures on value in their quarterly reports were estimates. The data shown in table 6–A include values for each product item, which are not shown in the current survey.

Although vitreous china plumbing fixtures are classified in another industry (3261), commodity data on these fixtures are shown in table 6–B. The data on vitreous china fixtures also include revisions of the quarterly survey data for 1947. The employment, wage, and other statistics for plants primarily manufacturing vitreous china plumbing fixtures are not included in any of the tables for the metal plumbing fixtures and fittings industry.

Of the total value of $280 million of metal plumbing fixtures and fittings, 10 percent was shipped by establishments classified in other industries. Establishments classified in the Metal Plumbing Fixtures and Fittings Industry shipped $253 million of metal plumbing fixtures and fittings and $32 million of other products, such as valves and fittings, gray-iron castings, vitreous-enameled products, etc.

Oil Burners *(Full Standard Industrial Classification title and number: Oil Burners, Domestic and Industrial, 3432.)*—This industry comprises establishments primarily engaged in manufacturing distillate or fuel oil burners used for installation in heating and cooking equipment, for industrial-process equipment, and for generating steam for power. Establishments primarily engaged in manufacturing complete boiler-burner units and furnace-burner units are classified in Industry 3439.

Data on the shipments of oil burners for central heating, steam generation plants, and industrial-process equipment were collected during 1947 by the Bureau of the Census on a monthly basis on Form M51A. The detailed statistics on number of residential type burners were obtained from the data collected for 1947 on the monthly survey, with the addition of data for establishments not canvassed in the monthly survey. Value statistics, which were not collected monthly, are from the Census of Manufactures. Data on oil burners produced and used in the same establishment, in the assembly of furnace-burner units and boiler-burner units, are not available from the 1947 Census of Manufactures. However, data on these "captive" oil burners as compiled from the monthly survey are shown as a footnote to table 6–A.

On commercial and industrial oil burners the 1947 Census of Manufactures totals, shown in table 6–A, exceed the data collected for 1947 in the monthly survey due to the inclusion of establishments not canvassed in the monthly survey.

Of the total value of $132 million of oil burners, 35 percent was shipped by establishments classified in other industries (largely in the Heating and Cooking Apparatus, N.E.C. Industry). Establishments classified in the Oil Burner Industry shipped $85 million of oil burners and $21 million of other products, such as furnaces, boilers, etc.

Heating and Cooking Apparatus, N.E.C. *(Full Standard Industrial Classification title and number: Heating and Cooking Apparatus (Except Electric), Not Elsewhere Classified, 3439.)*—This industry comprises establishments primarily engaged in manufacturing heating and cooking equipment, not elsewhere classified. Important products of this industry include stoves, ranges, water heaters, warm-air furnaces, domestic steam and hot-water heating apparatus, cast-iron and nonferrous radiators, complete gas and oil boiler-burner units, furnace-burner units, boiler-stoker units, incinerators, unit heaters, gas burners, portable ovens, steam tables, and cafeteria food warming equipment. Establishments primarily engaged in manufacturing electric stoves and ranges are classified in Industry 3621, incubators and brooders in Industry 3522, and industrial furnaces and ovens in Industry 3567. Boiler shops primarily engaged in the production of industrial, power, and marine boilers, smoke stacks, heavy tanks, and other plate work are classified in Industry 3443.

In the 1939 Census of Manufactures there were three industries (Steam and Hot Water Heating Apparatus; Stoves, Ranges, and Hot Air Furnaces; and Heating and Cooking Apparatus (Except Electric), N.E.C.) which were combined into one industry for the 1947 Census of Manufactures. In addition, range boilers and tanks for water heaters sold separately, which were classified with plumbing fixtures and fittings in 1939, have been reclassified into the Heating and Cooking Apparatus Industry. Incubators and brooders were classified as heating and cooking apparatus in the 1939 census but were reclassified into the Farm Machinery Industry for the 1947 census. The 1939 reports have been retabulated to provide data comparable with 1947.

Much of the data shown for this industry in table 6–A was covered in monthly surveys conducted by the Bureau of the Census in 1947 (warm air furnaces, domestic heating stoves, domestic cooking equipment, cast iron boilers, cast iron radiation, water heaters, range boilers, tanks for water heaters, floor and wall furnaces, and direct-fired unit heaters). For some of these products the totals differ from the monthly totals for 1947 due to the inclusion of reports for companies not canvassed in the monthly survey during 1947 and, in a few cases, include changes of 1947 data for companies where the 1947 census reports showed significant revisions of the sum of their 1947 monthly reports.

Of the total value of $1,086 million of heating and cooking apparatus, 13 percent was shipped by establishments classified in other industries. Establishments classified in the Heating and Cooking Apparatus Industry shipped $947 million of heating and cooking apparatus and $175 million of other products, such as oil burners, metal tanks, electric water heaters, electric ranges, etc.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work	Value of products shipped [2]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Metal plumbing fixtures and fittings:								
1947	277	34,089	$96,371	30,107	$80,144	$155,944	$135,963	$291,907
1939 [3]	247	n.a.	n.a.	22,889	28,086	66,743	45,648	112,391
Oil burners:								
1947	151	6,318	19,889	4,646	12,760	44,388	62,393	106,781
1939 [4]	133	n.a.	n.a.	1,552	1,964	8,391	10,413	18,804
1937 [5]	113	n.a.	n.a.	1,865	2,314	9,679	9,355	19,034
Heating and cooking apparatus, n.e.c.:								
1947	848	110,475	322,842	91,972	246,125	589,192	544,893	1,134,085
1939 [6]	656	n.a.	n.a.	53,889	63,113	169,717	128,071	297,788
1937 [5]	563	n.a.	n.a.	61,611	74,187	163,794	132,329	296,123

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] For 1947, value of products shipped; for prior years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[3] The returns for 1939 have been retabulated to provide figures comparable with those for 1947. No comparable figures are available for prior years.

[4] Revised.

[5] "Oil burners" and "Heating and cooking apparatus, n.e.c.," were formerly part of the discontinued industry "Heating and cooking apparatus, except electric." Separate figures for earlier years are therefore not available.

[6] The returns for 1939 but not for 1937 have been retabulated to provide figures comparable with those for 1947. Value added for 1939, before retabulation and on a basis comparable with 1937, was $165.7 million.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Metal plumbing fixtures and fittings, total [1]	277	34,089	$96,371	30,107	61,083	$80,144	$155,944	$135,963	$291,907	$9,839
New England	24	4,708	12,556	3,941	7,941	9,850	19,585	17,058	36,643	1,161
Connecticut	12	4,234	11,455	3,530	7,095	8,936	18,038	16,093	34,131	1,127
Middle Atlantic	76	4,967	13,610	4,377	8,427	11,475	19,537	18,656	38,193	1,192
New York	40	838	2,371	712	1,506	1,797	4,241	5,566	9,807	192
New Jersey	12	637	2,035	538	1,105	1,634	3,043	2,606	5,649	126
Pennsylvania	24	3,492	9,204	3,127	5,816	8,044	12,253	10,484	22,737	874
East North Central	96	11,439	34,980	10,065	21,276	28,580	62,021	57,348	119,369	3,782
Ohio	39	4,339	11,989	3,826	7,635	9,862	23,294	22,703	45,997	2,035
Illinois	32	1,516	4,711	1,281	2,777	3,603	8,410	7,256	15,675	384
Michigan	12	1,628	5,430	1,340	2,841	3,860	10,277	10,190	20,467	419
West North Central	11	614	1,801	540	1,062	1,375	3,889	2,171	6,060	194
South and West	70	12,361	33,424	11,184	22,377	28,864	50,912	40,730	91,642	3,510
Oil burners, total [1]	151	6,318	19,889	4,646	9,965	12,760	44,388	62,393	106,781	1,987
New England	33	1,292	4,041	841	1,893	2,441	8,528	12,082	20,610	413
Connecticut	10	685	2,170	452	1,063	1,297	4,878	8,332	13,210	205
Middle Atlantic	58	1,253	4,134	955	2,135	2,573	9,425	18,349	27,774	488
New York	28	663	2,237	517	1,123	1,516	5,616	7,010	12,626	114
New Jersey	21	357	1,182	266	611	642	2,610	9,541	12,151	224
Pennsylvania	9	233	715	172	401	415	1,199	1,798	2,997	150
East North Central	30	2,136	6,678	1,648	3,398	4,411	16,795	18,248	35,043	622
Ohio	7	182	585	131	273	324	1,744	2,550	4,294	33
Illinois	13	622	2,026	487	1,075	1,277	5,184	7,156	12,340	380
West North Central	13	633	1,746	505	1,072	1,265	3,385	7,804	11,189	186
South and West	17	1,004	3,290	697	1,467	2,070	6,255	5,910	12,165	278
Heating and cooking apparatus, n.e.c., total [1]	848	110,475	322,842	91,972	188,649	246,125	589,192	544,893	1,134,085	45,998
New England	43	4,014	12,702	3,430	7,619	9,849	22,885	16,783	39,668	1,186
Massachusetts	24	2,702	8,543	2,330	5,134	6,807	14,438	10,614	25,052	532
Connecticut	13	892	2,711	762	1,748	2,124	5,310	3,408	8,718	510
Middle Atlantic	185	22,176	64,538	18,543	37,758	50,515	107,422	95,884	203,306	8,271
New York	80	7,717	22,976	6,754	13,547	18,937	39,155	31,773	70,928	2,404
New Jersey	23	3,753	11,013	2,928	5,992	8,135	16,629	15,758	32,387	1,643
Pennsylvania	82	10,706	30,549	8,861	18,219	23,443	51,638	48,353	99,991	4,224
East North Central	290	53,108	157,597	44,216	90,194	120,661	301,402	268,482	569,884	21,885
Ohio	86	17,106	50,275	14,013	28,223	36,714	92,073	83,232	175,305	9,207
Indiana	41	4,656	13,076	3,924	8,154	9,918	23,506	22,779	46,285	1,801
Illinois	79	13,658	39,614	11,482	23,228	30,724	70,065	69,093	139,158	5,033
Michigan	62	9,257	28,381	7,755	15,639	22,654	64,456	46,864	111,320	2,865
Wisconsin	22	8,431	26,251	7,042	14,950	20,651	51,302	46,514	97,816	2,979
West North Central	68	7,708	22,489	6,062	12,644	15,640	43,326	50,490	93,816	4,717
Iowa	11	1,124	3,244	827	1,793	2,023	6,898	10,399	17,297	541
Missouri	29	3,424	9,806	2,758	5,531	6,934	15,790	14,405	30,195	2,352
South	110	13,934	33,834	11,943	24,926	25,883	56,992	58,274	115,266	5,313
Alabama	11	1,835	4,290	1,629	3,466	3,469	7,091	6,240	13,331	518
West	152	9,535	31,682	7,778	15,508	23,577	57,165	54,980	112,145	4,626
Washington	23	1,013	3,292	787	1,531	2,398	6,202	4,008	10,210	202
California	113	8,116	27,197	6,636	13,278	20,165	49,528	49,519	99,047	4,308

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Metal plumbing fixtures: *New England*, New Hampshire, 2; Massachusetts, 9 (269); Rhode Island, 1; *East North Central*, Indiana, 7 (732); Wisconsin, 6 (3,224); *West North Central*, Minnesota, 2; Iowa, 1; Missouri, 7 (199); Nebraska, 1; *South and West*, Delaware, 2; Maryland, 2; Virginia, 2; West Virginia, 1; Georgia, 1; Florida, 1; Kentucky, 3; Tennessee, 1; Texas, 3 (82); Colorado, 1; Arizona, 1; Washington, 2; Oregon, 1; California, 49 (2,827).

Oil burners: *New England*, Maine, 1; Massachusetts, 17 (545); Rhode Island, 5; *East North Central*, Indiana, 6 (327); Wisconsin, 4 (1,005); *West North Central*, Minnesota4, (23); Iowa, 5 (350); Missouri, 2; South Dakota, 1; Nebraska, 1; *South and West*, Maryland, 2; North Carolina, 2; New Mexico, 1; Washington, 4 (35); Oregon, 2; California, 6 (347).

Heating and cooking apparatus, n.e.c.: *New England*, Maine, 1; Vermont, 1; Rhode Island, 4; *West North Central*, Minnesota, 15; Nebraska, 2; Kansas, 11 (1,971); *South*, Delaware, 1; Maryland, 8 (1,592); Virginia, 4 (326); West Virginia, 3 (366); North Carolina, 3; Georgia, 8 (590); Florida, 8 (42); Kentucky, 6 (1,318); Tennessee, 24 (5,798); Arkansas, 2; Louisiana, 1; Oklahoma, 7 (191); Texas, 24 (1,650); *West*, Montana, 1; Colorado, 6; Oregon, 9 (318).

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry: Metal plumbing fixtures and fittings	Industry: Oil burners	Industry: Heating and cooking apparatus, n.e.c.
ALL ESTABLISHMENTS			
Number of establishments	277	151	848
All employees:			
Number (average for the year)	34,089	6,318	110,475
Salaries and wages, total	$96,371	$19,889	$322,842
Production and related workers:			
Number (average for the year)	30,107	4,646	91,972
Man-hours, total ... thousands	61,083	9,965	188,649
Wages, total	$80,144	$12,760	$246,125
Value added by manufacture	$155,944	$44,388	$589,192
ESTABLISHMENTS REPORTING DETAILED STATISTICS			
Number of establishments	203	151	698
All employees:			
Number (average for the year)	33,643	6,318	108,940
Salaries and wages, total	$95,265	$19,889	$319,191
Production and related workers:			
Number (average for the year)	29,684	4,646	90,533
Man-hours, total ... thousands	60,249	9,965	185,776
Wages, total	$79,151	$12,760	$243,060
Value added by manufacture	$154,208	$44,388	$582,215
Number of employees for pay period ended nearest Oct. 15:			
All employees	32,897	6,464	113,807
Male	28,538	5,378	101,578
Female	4,359	1,086	12,229
Production and related workers	28,890	4,752	94,802
Male	25,661	4,316	88,598
Female	3,229	436	6,204
Force-account construction workers	23	4	100
Administrative, supervisory, sales, and all other	3,984	1,708	18,905
Male	2,854	1,058	12,880
Female	1,130	650	6,025
All employees, number by month:			
January	34,852	6,332	107,881
February	34,998	6,384	109,406
March	34,508	6,305	108,795
April	34,523	6,312	106,160
May	33,937	6,222	103,378
June	33,015	6,248	104,675
July	32,335	6,220	104,579
August	32,518	6,453	108,703
September	32,311	6,411	111,483
October	32,897	6,464	113,807
November	33,649	6,375	114,547
December	34,058	6,028	113,655

ITEM	Industry: Metal plumbing fixtures and fittings	Industry: Oil burners	Industry: Heating and cooking apparatus, n.e.c.
ESTABLISHMENTS REPORTING DETAILED STATISTICS—Continued			
Cost of materials, fuel, electricity, and contract work	$133,731	$62,393	$537,819
Materials, parts, containers, and supplies	123,758	61,101	514,710
Fuels, total	5,277	170	8,534
Bituminous coal	465	22	1,718
Anthracite	22	----------	168
Coke	1,812	8	3,007
Fuel oils	1,499	112	1,561
Gas	1,393	26	1,884
Other fuels	86	2	196
Purchased electric energy	2,032	320	5,446
Contract and commission work	2,664	802	9,129
Value of inventories:			
Beginning of year, total	$37,603	$15,164	$162,289
Finished products	5,674	4,892	27,744
Materials, supplies, and work in process	31,929	10,272	134,545
End of year, total	43,185	21,387	203,890
Finished products	8,417	7,826	47,102
Materials, supplies, and work in process	34,768	13,561	156,797
Expenditures for plant and equipment:			
New plant and equipment	$9,839	$1,987	$45,998
Construction and major alteration of fixed plants	2,757	599	17,851
Buildings	2,504	429	14,436
Other construction	253	170	3,415
Machinery and equipment	7,082	1,388	28,147
Production machinery and equipment	6,623	1,085	24,656
Other machinery and equipment	459	303	3,491
Used plant and equipment, and land	358	148	2,888
Number of highway-type motor vehicles owned or leased:			
Trucks	139	137	1,470
By manufacturer's rated capacity:			
Under 1½ tons	41	85	516
1½ tons	54	29	608
Over 1½ tons and less than 3½ tons	27	19	179
3½ tons and less than 5 tons	6	3	31
5 tons and over	11	1	46
By body type:			
Van	1	4	69
Stake or platform	58	37	771
Panel or light delivery	36	58	442
All other trucks	44	38	188
Truck tractors	16	2	68
Trailers and semitrailers	17	3	82

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of— 1–4 employees	5–9 employees	10–19 employees	20–49 employees	50–99 employees	100–249 employees	250–499 employees	500–999 employees	1,000–2,499 employees	2,500 employees and over
Metal plumbing fixtures and fittings:											
Number of establishments	277	56	37	50	45	29	31	13	9	6	1
Number of employees (average for the year)	34,089	127	257	687	1,384	2,078	5,356	4,704	5,758	*13,738*	(d)
Value added by manufacture	$155,944	$574	$1,190	$3,132	$6,694	$10,173	$27,072	$24,946	$26,159	*$56,004*	(d)
Oil burners:											
Number of establishments	151	35	26	34	25	14	14	2	1	----------	----------
Number of employees (average for the year)	6,318	88	187	457	754	994	2,415	*1,423*	(d)	----------	----------
Value added by manufacture	$44,388	$453	$1,074	$3,256	$5,868	$6,334	$19,661	*$7,742*	(d)	----------	----------
Heating and cooking apparatus, n.e.c.:											
Number of establishments	848	133	107	106	149	107	123	58	49	15	1
Number of employees (average for the year)	110,475	302	745	1,508	4,778	7,593	19,805	19,818	32,717	*23,209*	(d)
Value added by manufacture	$589,192	$1,353	$3,546	$6,863	$24,101	$42,127	$106,523	$107,048	$186,523	*$110,708*	(d)

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

METAL PLUMBING FIXTURES AND FITTINGS INDUSTRY	Shipped by— Metal plumbing fixtures and fittings industry	Other industries	All industries
Total shipments by the industry	$291,907		
A. Metal plumbing fixtures and fittings	253,382	$26,880	$280,262
Metal plumbing fixtures	109,237	17,675	126,912
Plumbing fixture fittings and trim	144,145	9,205	153,350
B. Secondary products	31,983		
Valves and fittings (except plumbing and heating valves)	3,766		
Valves for plumbing and heating systems	1,065		
Other products (gray-iron castings, vitreous-enameled products, etc)	27,152		
C. Miscellaneous receipts	6,542		
Contract and commission work	1,927		
Scrap and salable refuse	3,534		
Other receipts	1,081		

OIL BURNERS INDUSTRY	Shipped by— Oil burners industry	Other industries	All industries
Total shipments by the industry	$106,781		
A. Oil burners	84,581	$47,147	$131,728
B. Secondary products	20,672		
Warm air furnaces	3,535		
Steel heating boilers	1,959		
Other products (specialty transformers, domestic heating stoves, etc.)	15,178		
C. Miscellaneous receipts	1,528		

HEATING AND COOKING APPARATUS, N.E.C., INDUSTRY	Shipped by— Heating and cooking apparatus, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$1,134,085		
A. Heating and cooking apparatus, except electric	946,832	$139,412	$1,086,244
Steam and hot water heating equipment	113,958	20,840	134,798
Warm air furnaces and parts	149,321	26,255	175,576
Domestic heating stoves	121,939	24,382	146,321
Domestic cooking stoves, ranges, and appliances (except electric)	258,208	8,930	267,138
Water heaters, except electric	91,167	20,946	112,113
Commercial cooking and food warming equipment	30,270	2,401	32,671
All other cooking and heating equipment (except electric)	181,969	35,658	217,627
B. Secondary products	174,565		
Oil burners	14,211		
Metal tanks	10,851		
Blowers; exhaust and ventilating fans	5,010		
Electric water heaters	12,353		
Electric domestic ranges	18,192		
Other products (castings, power boilers, refrigeration equipment, etc.)	113,948		
C. Miscellaneous receipts	12,688		
Contract and commission work	3,268		
Repair work	2,364		
Scrap and salable refuse	3,443		
Nonmanufacturing activities	3,613		

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	1947 Total shipments and interplant transfers: Number	Thousands of pounds	Value f.o.b. plant	1939 Total production for sale and interplant transfer: Number	Value f.o.b. plant
Steam and hot water heating equipment			$134,798		n.a.
Cast iron heating boilers:					
Oil	100,999	139,639	18,548	n.a.	$15,056
Gas	36,560	32,105	8,756		
Solid fuels	96,346	139,517	18,137		
Cast iron boilers, not specified by fuel	n.a.	14,868	2,833		
Parts and accessories for cast iron boilers, shipped separately			3,534		n.a.

PRODUCT	1947 Total shipments and interplant transfers: Quantity	Value f.o.b. plant	1939 Total production for sale and interplant transfer: Quantity	Value f.o.b. plant
Cast iron radiation:				
Radiators (quantity in M square ft. of radiation)	53,390	$22,742	n.a.	$15,480
Convectors (quantity in M square ft. of equivalent direct radiation)	3,330	1,613		
Convector radiation, except cast iron:				
Nonferrous (quantity in M square ft. of equivalent direct radiation)	29,585	11,858	n.a.	2,248
Steel (quantity in M square ft. of equivalent direct radiation)	8,847	3,243	n.a.	n.a.
Steel heating boilers (15 p.s.i. steam working pressure and under):				
Residential type (177 square ft. of heating surface and less):				
Oil-burning [1]	(units) 93,876	24,784	(units) 28,855	8,084
Gas-burning [1]	6,184	2,033		
Stoker-fired [1]	4,584	1,119		
Hand-fired [1]	823	177		
Nonresidential type (over 177 square ft. of heating surface):				
Horizontal firebox [1]	7,256	8,365		
Scotch-type [1]	670	1,297		
Other [1]	586	1,777		
Steel heating boilers, not specified by type		1,266		
Parts and attachments for steel heating boilers, sold separately		2,716	n.a.	n.a.

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	1947 Total shipments and interplant transfers		1939 Total production for sale and interplant transfer	
	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
	(*units*)		(*units*)	
Warm air furnaces and parts and attachments		$175,576		$43,627
Warm air furnaces, by type, as reported in the monthly survey for 1947, with revisions obtained in the Census of Manufactures	885,149	148,597		35,295
Forced air:				
Solid fuel (coal, coke, wood):				
Cast iron:				
250,000 BTU bonnet output and under	1,962	400		
Over 250,000 BTU bonnet output	271	176		
Steel:				
250,000 BTU bonnet output and under	28,778	5,403		
Over 250,000 BTU bonnet output	723	386		
Oil:				
Cast iron [2]	1,429	547		
Steel:				
250,000 BTU bonnet output and under	308,753	67,980		
Over 250,000 BTU bonnet output	7,118	3,893		
Gas:				
Cast iron	37,901	7,801		
Steel:				
250,000 BTU bonnet output and under	105,710	18,733	n.a.	n.a.
Over 250,000 BTU bonnet output	2,412	1,499		
Gravity air flow:				
Solid fuel (coal, coke, wood):				
Cast iron:				
20 in. and under	31,035	2,604		
Over 20 in.	107,132	13,294		
Steel:				
20 in. and under	31,981	2,520		
Over 20 in.	147,225	16,323		
Oil (steel only)	27,193	2,586		
Gas:				
Cast iron	3,338	385		
Steel	42,188	4,067		
Parts and attachments for warm air furnaces, including registers, sold separately		26,979		8,332
Domestic heating stoves, by type, as reported in the monthly survey for 1947, with revisions obtained in the Census of Manufactures	6,478,329	146,321	n.a.	27,371
Gas:				
Vented circulators	400,938	17,446		
Unvented circulators	1,158,805	11,721	n.a.	5,597
Radiants	1,147,435	10,943		
All other	45,287	779		
Wood (sheet metal air tight type):				
With cast iron grates, linings, or bases	43,858	751	474,450	1,361
All other	592,351	1,359		
Coal and wood (other than sheet metal air tight type):				
Laundry stoves (without cored firepots)	172,418	1,216		
Standard circulators	49,195	2,368		
Magazine type circulators	70,266	3,511		
Magazine radiants	120,618	3,292	398,319	7,880
Oaks, and hot blasts	85,467	1,298		
Kitchen heaters	43,281	1,379		
All other (including caboose, schoolroom, wood box, etc.)	128,194	2,317		
Kerosene, gasoline, fuel oil:				
Flue-connected heaters, equipped with vaporizing pot-type burner	1,884,311	79,104		
Flue-connected heaters, equipped with sleeve burner	50,442	2,564	719,463	12,533
Trailer heaters, equipped with vaporizing pot-type burner	69,496	2,201		
Unvented portable kerosene heaters	415,967	4,072		
Domestic cooking stoves, ranges, and appliances (except electric), by type, as reported in the monthly survey for 1947, with revisions obtained in the Census of Manufactures		267,138	n.a.	n.a.
Nonelectric cooking stoves and ranges	3,519,157	257,534	n.a.	n.a.
Gas:				
Standard ranges for use with natural and manufactured gas	1,408,985	122,188		
Standard ranges for use with liquefied petroleum gas	477,840	40,377	1,502,301	63,764
Apartment ranges for use with natural and manufactured gas	295,680	12,758		
Apartment ranges for use with liquefied petroleum gas	86,021	3,913		
Bungalow ranges:				
Natural and manufactured gas and coal	30,593	3,291	(4)	(4)
All other [3]	39,586	4,538		
Coal and wood:				
Ranges	409,591	23,177	636,151	20,070
Cook stoves	39,765	704		
Combination ranges (except bungalow ranges):				
Natural and manufactured gas and oil	71,485	11,120		
Liquefied petroleum gas and oil	25,985	4,045		
Natural and manufactured gas and coal	26,775	3,793	102,260	9,715
Ranges equipped with conversion burners	2,745	277		
All other [5]	44,527	6,725		
Kerosene, gasoline, and fuel oil:				
Low oven kerosene ranges	224,989	11,678		
High oven kerosene ranges	116,983	4,415	1,158,952	14,438
Cook stoves	217,607	4,535		
Miscellaneous cooking appliances	1,742,445	9,604	n.a.	n.a.
Gas hot plates	167,318	844	137,848	519
Needle valve stoves	757,164	3,696		
Miscellaneous kerosene, gasoline, and fuel oil stoves [6]	262,231	4,029	n.a.	n.a.
Portable and drum ovens	555,732	1,035		

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	1947 Total shipments and interplant transfers		1939 Total production for sale and interplant transfer	
	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
	(units)		(units)	
Water heaters, except electric	2,721,926	$112,113	n.a.	n.a.
Direct fired:				
Gas:				
Underfired storage	1,809,159	84,796	498,905	$14,958
Side arm, less tank	258,560	2,532	407,455	2,531
Oil:				
Underfired storage	221,903	12,693	67,213	1,450
Side arm, less tank	60,520	1,114		
Coal or wood:				
Cast iron tank heaters	76,824	1,089	297,004	2,523
Steel tank heaters	14,523	275		
Indirect:				
Storage (cast or coil type) less tanks:				
20 G.P.H. and less	25,247	192		
21 G.P.H. and over	78,863	1,084		
Generator tanks with integral coils (sold together):			n.a.	n.a.
525 gallons and less	6,300	678		
526 gallons and over	1,804	1,284		
Generator tanks (sold without coils)	4,094	107		
Instantaneous	164,129	6,269		
Commercial cooking and food warming equipment, except electric[7]		32,671		9,261
Commercial cooking stoves, ranges, ovens, and broilers, except electric		15,063		
Other commercial cooking equipment (griddles, deep fat fryers, coffee urns, etc.), except electric		8,420		n.a.
Commercial food warming equipment, except electric (including steam tables)		9,188		
Other heating and cooking equipment		217,627		n.a.
Gas burners for residential heating equipment, for sale separately	54,616	3,447	n.a.	1,858
Gas floor furnaces	430,057	21,725		
Oil floor furnaces	141,100	11,524	n.a.	n.a.
Wall furnaces, gas and oil	104,578	4,587		
Direct fired unit heaters, gas	115,297	13,273		
Direct fired unit heaters, oil and electric	3,902	287		
			n.a.	8,741
Steam and hot water unit heaters, centrifugal fan type (blower)	18,323	5,161		
Steam and hot water unit heaters, propeller fan type	267,089	20,501		
Range boilers	691,252	7,437	999,329	6,676
Tanks for water heaters, sold separately	1,041,022	12,893	265,637	2,517
Firebox generators or coils	161,588	199		
Generator coils with tank collars (sold without tank)	15,483	440		
Converters and preheaters	1,282	118		
All other heating and cooking equipment (including pressure cookers, hot water storage tanks, blast coils, expansion tanks, etc.) and cooking and heating equipment not specified by type, except electric		87,681		n.a.
Parts, attachments and accessories for heating and cooking equipment, not requested separately		28,354		
Oil burners, domestic and industrial		131,728		20,585
Residential oil burners for central heating units, shipped separately:[8]				
Atomizing, low pressure	79,558			
Atomizing, high pressure	745,027	88,345	216,336	17,862
Vaporizing, pot mechanical draft	32,526			
Other (rotary and pot natural draft)	67,903			
Commercial and industrial oil burners, shipped separately[9]	48,930	14,857		
Range-type oil burners, shipped separately (sleeve and pot type burners for use in water heaters, stoves, and ranges)[10]	682,219	4,737	160,453	1,179
Parts and attachments for oil burners, sold separately		22,861		1,544
Oil burners, not specified by type		928		
	(thousands)			
Plumbing fixture fittings and trim		153,350		n.a.
Bath and shower fittings:				
Tub fillers:				
Number reported	881	5,931		
Number not reported		686		
Tub and shower fittings:				
Number reported	992	8,937		
Number not reported		538		
Shower fittings:				
Number reported	728	3,973		
Number not reported		392		
Bath tub faucets—for leg tubs:				
Number reported	349	899		
Number not reported		163		
Bath drains and overflows:				
Number reported	1,613	6,224		
Number not reported		305		
Lavatory fittings:				
Combination 4" center-set fittings (with or without pop-up drains):				
Number reported	932	5,349		
Number not reported		1,081		
Other combination center-set fittings (with or without pop-up drains)	628	4,873		
Pop-up drains, sold separately:			n.a.	n.a.
Number reported	555	1,380		
Number not reported		134		
Single lavatory faucet-compression	3,509	5,413		
Sink fittings:				
Deck type sink faucets	2,610	15,910		
Other combination sink faucet:				
Number reported	1,868	9,527		
Number not reported		198		
Single sink faucets	3,182	3,068		
Miscellaneous items:				
Compression stops	4,374	3,219		
Compression stops and drains	3,461	2,159		
Sediment faucets	3,879	1,626		
Double laundry tray faucets	527	1,317		
P traps	3,870	6,238		
S traps	1,705	3,721		
Other plumbing fixture fittings and trim, including lavatory legs, strainers, bibbs, shower curtain rods, towel rods, soap dishes, etc		49,218		
Plumbing fixture fittings and trim, not specified by type		10,871		

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
	(thousands)		(thousands)	
Metal plumbing fixtures [11]		$126,912		n.a.
Drinking fountains	23	243	n.a.	$161
Lavatories, cast iron	1,222	10,267	1,149	6,908
Lavatories, steel	231	1,519		
Kitchen sinks, cast iron	1,220	17,804		
Kitchen sinks, steel	1,295	19,636		
Wash sinks	5	308	1,272	11,807
Service sinks, cast iron	17	310		
Sink and laundry tray combinations, cast iron	143	3,604	n.a.	n.a.
Bath tubs, cast iron	1,234	45,592	887	20,115
Bath tubs, steel	421	13,646		
Shower stalls, steel	133	4,705	n.a.	n.a.
Other metal plumbing fixtures (including those not covered in the quarterly survey on plumbing fixtures and those for which data cannot be shown separately without disclosing figures for individual companies) and metal plumbing fixtures and fittings and trim not specified by type		9,278	n.a.	n.a.

n.a.—Not available.

[1] Data on the square feet of heating surface for steel heating boilers were reported by most but not all producers of these boilers. The data on units and square feet for those establishments reporting are as follows: *Residential*, oil, 87,161 units—3,280,790 square feet; gas, 5,203 units—232,432 square feet; stoker-fired, 4,564 units—884,956 square feet; hand, 550 units—36,836 square feet; *nonresidential*, horizontal firebox, 7,190 units—3,347,970 square feet; scotch type, 345 units—201,884 square feet; other, 500 units—183,692 square feet.

[2] Includes a small amount of cast iron oil gravity air flow furnaces which are not shown separately to avoid disclosing figures for individual companies.

[3] Includes data for liquefied petroleum gas and coal, and all other types of bungalow ranges.

[4] Included with gas ranges.

[5] Includes data for liquefied petroleum gas and coal, coal and electric, and all other types.

[6] Includes trailer, gasoline pressure, camp stove, etc.

[7] Excludes industrial-type ovens.

[8] See text for explanation of source of these data for 1947. Residential burners are those with oil consumption rates of less than 6 gallons per hour. Data on the production and use in the same plant of oil burners in furnace-burner units and boiler-burner units are not available from the Census of Manufactures. However, the following shipment data for 1947 were compiled in the monthly survey: Furnace-burner units with residential atomizing high pressure burners—61,884; furnace-burner units with residential pot mechanical draft burners—65,617; furnace-burner units with other types of residential burners—32,416; boiler-burner units with residential atomizing high pressure burners—26,070; boiler-burner units with other residential type oil burners—19,108; and commercial and industrial boiler-burner units—4,859. These data do not represent the total shipments of furnaces and boilers, but only the shipments of those incorporating oil burners made in the same plant.

[9] Commercial and industrial burners are those with oil consumption rates of 6 gallons per hour or more.

[10] Does not include burners produced and used in the same establishment for assembly into stoves, ranges, and water heaters. The "captive" production of these burners exceeds those shipped as such.

[11] The data on plumbing fixtures shown in tables 6-A and 6-B do not include concrete and composition which are included in the Census quarterly survey on plumbing fixtures. Separate data on concrete and composition were not collected in the Census of Manufactures.

TABLE 6-B.—VITREOUS AND SEMIVITREOUS PLUMBING FIXTURES—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Production	
	Quantity (thousands)	Value f.o.b. plant	Quantity (thousands)	Value f.o.b. plant
Vitreous and semivitreous plumbing fixtures and accessories, total		$67,165		$22,105
Vitreous china and glazed earthenware plumbing fixtures		62,641		19,130
Drinking fountains (vitreous china)	58	646	n.a.	(1)
Lavatories (vitreous china)	1,392	12,688	279	3,004
Water closet bowls (vitreous china):				
Syphon jet	294	4,438	194	1,558
Washdown	1,429	10,449	905	3,365
Reverse trap	962	8,258	486	3,035
Flush tanks (vitreous china)	2,367	20,723	1,245	6,162
Urinals (vitreous china and glazed earthenware)	96	1,534	n.a.	(1)
Kitchen sinks (vitreous china and glazed earthenware)	171	1,254	n.a.	(1)
All other vitreous china and glazed earthenware plumbing fixtures		2,651		[1] 2,006
Vitreous china and glazed earthenware plumbing fixture accessories and fittings (including towel racks, soap cups, etc.)		4,524		[2] 2,975

n.a.—Not available.

[1] "Drinking fountains," "Urinals," and "Kitchen sinks" are included with "All other vitreous china and glazed earthenware plumbing fixtures."

[2] Represents "Other bathroom and toilet fixtures (recessed and attachable)."

TABLE 7.—SELECTED MATERIALS CONSUMED, BY KIND: 1947

[The table below summarizes the consumption of selected metal shapes by manufacturers during 1947. For each shape, manufacturing establishments were required to report consumption, in quantity and cost, provided that such usage during 1947 exceeded the following amounts: for iron castings, steel castings, each of six carbon steel shapes—50 short tons; for alloy steel bars and all other alloy steel—25 short tons; for stainless steel, brass and copper wire mill shapes, copper and brass castings, aluminum mill shapes and aluminum castings—10 short tons]

[Money figures in thousands of dollars]

METAL SHAPE	METAL PLUMBING FIXTURES AND FITTINGS INDUSTRY			OIL BURNERS INDUSTRY			HEATING AND COOKING APPARATUS, N.E.C., INDUSTRY		
	Establishments consuming more than specified quantities								
	Number	Short tons	Cost	Number	Short tons	Cost	Number	Short tons	Cost
Iron castings, rough and semifinished [1]	13	4,151	$773	27	6,830	$1,890	179	122,337	$28,074
Steel castings, rough and semifinished [1]	(2)	(d)	(d)	(2)	(d)	(d)	8	3,645	1,150
Steel mill shapes and forms	n.a.	23,878	3,281	n.a.	8,752	1,523	n.a.	1,118,650	112,913
Carbon steel:									
Bars and bar shapes	(2)	640	62	6	2,741	279	80	42,889	4,065
Sheet and strip	24	20,127	2,153	13	4,074	545	347	907,109	93,768
Structural shapes							20	3,143	245
Plates							61	72,127	6,085
Wire	(2)	2,136	253	(2)	1,063	147	21	3,373	415
All other mill shapes and forms	(2)	313	212				35	22,493	3,307
Alloy steel, except stainless:									
Bars and bar shapes							(2)	1,154	111
All other mill shapes and forms	11	662	601				(2)	314	54
Stainless steel				11	874	552	68	6,048	4,863
Copper and copper-base alloy:									
Brass and wire mill shapes and forms	7	33,810	20,511	11	362	287	77	11,636	8,815
Castings, rough and semifinished [1]	50	7,884	6,142	5	222	176	34	2,221	1,856
Aluminum:									
Aluminum mill shapes	6	906	479	(2)	(d)	(d)	95	16,627	9,377
Castings, rough and semifinished [1]	(2)	37	47	21	1,439	1,704	21	1,744	1,645

[d] Withheld to avoid disclosing figures for individual companies.
[1] Includes only castings purchased or obtained from other plants of the same company. Does not include castings made and consumed in the same establishment.
[2] Less than 5 establishments.

TABLE 8.—NUMBER OF ESTABLISHMENTS PERFORMING SELECTED METALWORKING OPERATIONS: 1947

[The figures in the table represent the number of establishments maintaining the metalworking operation specified, according to the usual number of production workers employed in the operation during 1947]

METALWORKING OPERATION	METAL PLUMBING FIXTURES AND FITTINGS INDUSTRY						HEATING AND COOKING APPARATUS, N.E.C., INDUSTRY					
	Number of establishments performing selected metalworking operations											
	Total	Distribution by number of production workers in the operation					Total	Distribution by number of production workers in the operation				
		1–4	5–19	20–49	50–99	100 and over		1–4	5–19	20–49	50–99	100 and over
Foundry	73	3	18	21	15	16	140	9	20	39	36	36
Die casting	5	2	1		2		1	1				
Forging—presses, hammers, or upsetters	5	2	2	1			12	8	2	2		
Electroplating	65	24	27	10	3	1	48	24	19	4	1	
Galvanizing and other hot dip coating	4	2		2			27	6	15	3	3	
Heat treating or annealing of metals	16	12	3	1			38	31	5	2		
Automatic screw-machine department	31	18	7	5	1		35	18	14	2		1
Machine shop	129	33	49	34	10	3	255	86	105	44	12	8
Tool and die room	53	31	17	2	2	1	111	43	40	22	6	
Pattern shop	43	27	11	3		2	112	83	23	3	2	1
Plate or structural fabrication	6	3	3				88	22	34	17	7	8
Stamping, blanking, forming, or drawing	58	26	16	10	2	4	327	59	91	90	47	40

NOTE: In the Metal Plumbing Fixtures and Fittings Industry, 100 establishments did not answer this inquiry. Of these, 92 had fewer than 20 employees; 7 had between 20 and 99 employees, and 1 had 100 or more employees.
In the Heating and Cooking Apparatus, N.E.C., Industry, 150 small establishments did not report any detailed statistics, including this inquiry. In addition, a number of other establishments, mainly small ones, did not answer the inquiry on metalworking operations.

FABRICATED STRUCTURAL METAL PRODUCTS

This report shows the 1947 Census of Manufactures statistics for establishments primarily engaged in the production of fabricated structural steel; ornamental metal work; metal doors, sash, frames, molding and trim; boiler shop products; and sheet-metal products. These establishments have been classified in four industries described separately below.

Structural and Ornamental Products *(Full Standard Industrial Classification title and number: Fabricated Structural Steel and Ornamental Metal Work, 3441.)*—This industry comprises establishments primarily engaged in manufacturing fabricated iron and steel or other metal for structural purposes, and architectural ornamental work of ferrous and nonferrous metals. Important products of this industry include structural steel shapes, stairs and staircases, fire escapes, grilles, railings, fences and posts, and portable metal buildings. Establishments primarily engaged in manufacturing metal doors, sash, frames, molding, and trim are classified in Industry 3442, and fabrication work done by construction contractors at the site of construction is classified in construction industries.

Structural steel is sometimes fabricated in conjunction with a metal warehousing business. Such establishments were excluded from the Census of Manufactures if their fabricating activities were minor. Reports, however, were secured from metal warehouses with large fabricating departments. Where the warehousing operations of these establishments were considerable, data were collected on the fabricating departments only. Where the warehousing operations were of little consequence, warehouse employees and costs were not excluded from the reports and the warehouse sales were tabulated as "Receipts for nonmanufacturing activities."

Structural steel fabricated and erected by the same company is shown in table 6–A separately from structural steel fabricated for sale to outside erectors. Where the erection activities were closely integrated with the fabricating activities, establishments were permitted to include their receipts for erection in their value of shipments, provided they also reported their erection crews and costs. Structural steel fabricated and erected by the same company, therefore, includes both steel valued at f.o.b. plant and steel valued as erected on construction site. Erection crews are included among "Administrative, supervisory, sales, and all other employees" and not as "Production workers."

In the 1939 and prior censuses, establishments primarily engaged in manufacturing portable steel buildings were included in the Sheet-Metal Work Industry instead of the Structural and Ornamental Products Industry. The 1939 reports have been retabulated to reflect this change and the figures presented for 1939 are comparable with those for 1947. The reports for earlier years have not been retabulated, but the reclassification of portable steel buildings does not significantly affect the comparability of data for earlier years.

Of the total value of $809 million of Structural and Ornamental Products, 12 percent was shipped by establishments classified in other industries. Establishments classified in the Structural and Ornamental Products Industry shipped $713 million of structural and ornamental products and $119 million of other products such as partitions, shelving, and lockers; doors and door frames; window sash and frames; metal tanks; sheet-metal products; etc.

Metal Doors, Sash, and Trim *(Full Standard Industrial Classification title and number: Metal Doors, Sash, Frames, Molding, and Trim, 3442.)*—This industry comprises establishments primarily engaged in manufacturing ferrous and nonferrous and metal-covered doors and sash, window and door frames, store fronts, molding, and trim.

In the 1939 and prior censuses, establishments primarily engaged in manufacturing metal partitions were also included in this industry. They are now included in Industry 2541, Partitions and Fixtures. The reports for 1939 have been retabulated to reflect this change and the figures presented for 1939 are comparable with those for 1947. The reports for earlier years have not been retabulated, but the reclassification of metal partitions does not significantly affect the comparability of data for earlier years.

Of the total value of $197 million of Metal Doors, Sash, and Trim, 14 percent was shipped by establishments classified in other industries. Establishments classified in the Metal Doors, Sash, and Trim Industry shipped $169 million of metal doors, sash, and trim and $34 million of other products such as metal screen doors and window screens, fabricated structural steel, ornamental metal work, prefabricated and portable metal buildings, etc.

Boiler Shop Products *(Standard Industrial Classification No. 3443.)*—This industry comprises establishments primarily engaged in manufacturing industrial, power, and marine boilers, smoke stacks, heavy tanks, and other boiler shop products; and fabricated plate work, which involves the cutting, punching, bending, and shaping of steel plates for other industries, or for assembly on the job. Establishments primarily engaged in manufacturing domestic heating and cooking apparatus are classified in Industry 3439, Heating and Cooking Apparatus, N.E.C. Expansion tanks, range boilers, hot water storage tanks, tanks for water heaters, and steel heating boilers are included in such heating apparatus. Establishments primarily engaged in manufacturing light tanks from sheet metal are classified in Industry 3444, Sheet-Metal Work.

Establishments primarily engaged in making metal tanks are classified in the Boiler Shop Products Industry if their principal material consumed is plate and in the Sheet-Metal Work Industry if their principal material is sheet. The total in table 5 for metal tanks "Shipped by the Boiler Shop Products Industry" consists, therefore, principally of heavy gauge tanks. Conversely, the total for metal tanks "Shipped by the Sheet-Metal Work Industry" consists principally of light metal tanks. The segregation is not precise because some types of tanks can be made of either plate or sheet and several manufacturers used both types of material. The total in table 5 for metal tanks "Shipped by all industries" and the detail by type of tank in table 6–A include both heavy (plate) and light (sheet metal) tanks.

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The term "pressure tanks," as used in table 6–A, applies only to the types of pressure tanks which were not called for elsewhere in the census by individual designation. The figures for pressure tanks in table 6–A, therefore, include all tanks made to hold fluids under pressure, except expansion tanks, range boilers, hot water storage tanks, tanks for water heaters, and gas cylinders. Pressure tanks vary in size, complexity, pressure rating, and price from mass-produced hydro-pneumatic tanks costing a few dollars to individually designed units costing thousands of dollars.

Of the total value of $678 million of boiler shop products, 19 percent was shipped by establishments classified in other industries. However, of the 19 percent, or $130 million, shipped by such establishments, $54 million consisted partly of sheet-metal tanks which, while they are metal tanks, represent a different type of tank than that produced by boiler shop products manufacturers. The establishments classified in the Boiler Shop Products Industry shipped $548 million of boiler shop products and $133 million of other products such as steel heating boilers, water heaters, fabricated structural steel, sheet-metal products, etc.

Sheet-Metal Work *(Standard Industrial Classification No. 3444.)*—This industry comprises establishments primarily engaged in manufacturing cornices, ventilators, skylights, gutters, and other types of sheet-metal work for buildings (not including fabrication work done by construction contractors at the place of construction), and manufacturing sheet-metal stovepipes, light tanks, bins, furnace casings, etc. Establishments primarily engaged in manufacturing heavy tanks from plate are classified in Industry 3443, Boiler Shop Products, and those primarily engaged in manufacturing domestic heating apparatus such as expansion tanks, range boilers, hot-water storage tanks, and tanks for water heaters are classified in Industry 3439, Heating and Cooking Apparatus, N.E.C.

In the 1939 and prior censuses, establishments primarily engaged in manufacturing portable metal buildings were also included in this industry. They are now included in Industry 3441, Structural and Ornamental Products. The reports for 1939 have been retabulated to reflect this change. Although the reports for earlier years have not been retabulated, the reclassification of portable metal buildings does not significantly affect the comparability of data for earlier years.

Establishments primarily engaged in making metal tanks are classified in the Sheet-Metal Work Industry if their principal material consumed is sheet and in the Boiler Shop Products Industry if their principal material is plate. The total in table 5 for metal tanks "Shipped by the Sheet-Metal Work Industry" consists, therefore, principally of light metal tanks. Conversely, the total for metal tanks "Shipped by the Boiler Shop Products Industry" consists principally of heavy tanks. The segregation is not precise because some types of tanks can be made of either plate or sheet and several manufacturers used both types of material. The total in table 5 for metal tanks "Shipped by all industries" and the detail by type of tank in table 6–A include both heavy (plate) and light (sheet metal) tanks.

Due to the close relationship existing among manufacturing, reselling, and installation activities in the sheet-metal field, considerable difficulty was experienced in distinguishing between a sheet-metal manufacturing establishment and a sheet-metal business (wholesale, service, construction, etc.) establishment. Because of this overlap, many establishments performing minor manufacturing operations incidental to their installation or contracting business are not covered in the census. Conversely, many of the establishments included in the Sheet-Metal Work Industry figures are engaged to some extent in installing or wholesaling sheet-metal items. Whenever possible, these nonmanufacturing activities were excluded from the census reports but the manufacturers' records, particularly those for the smaller plants, often did not permit such a separation.

Of the total value of $679 million of Sheet-Metal Work, 48 percent was shipped by establishments classified in other industries. However, of the 48 percent, or $326 million, shipped by such establishments, $254 million consisted mainly of heavy (plate) steel tanks which, while they are metal tanks, represent a different type of tank than that produced by sheet-metal work manufacturers. The establishments classified in the Sheet-Metal Work Industry shipped $352 million of sheet-metal products and $59 million of other products such as doors and door frames; prefabricated and portable metal buildings, and parts; job stampings; stamped and spun household and hospital utensils; etc.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Structural and ornamental products:								
1947	1,667	79,678	$249,034	64,278	$180,105	$440,701	$423,734	$864,435
1939 [4]	1,171	n.a.	n.a.	36,776	49,294	116,925	175,785	292,710
1937	1,132	47,467	74,160	38,814	53,898	123,083	169,673	292,756
1935	1,111	34,818	42,690	27,243	28,225	66,674	94,088	160,762
1933	962	26,547	26,284	21,377	18,624	44,443	63,169	107,612
1931	1,302	n.a.	n.a.	37,510	47,875	106,384	131,649	238,033
1929	1,482	68,605	126,867	54,947	87,786	232,341	244,696	477,037
1927	1,284	65,124	120,238	52,392	84,578	196,930	243,446	440,376
1925	1,136	59,983	107,862	48,341	77,411	183,345	237,653	420,998
1923	1,056	63,030	109,912	51,591	80,833	180,630	225,487	406,117
1921	1,021	42,068	70,008	32,897	47,455	99,074	151,011	250,085
1919	1,146	55,484	83,030	43,962	59,920	126,161	168,801	294,962
1914	1,235	56,134	45,639	47,167	33,429	71,756	87,622	159,378
1909	1,089	n.a.	n.a.	40,234	26,422	56,582	76,659	133,241
1904	775	39,442	25,560	34,276	19,760	43,493	47,452	90,945
1899	697	27,069	15,995	24,903	13,589	28,874	38,053	66,927
Metal doors, sash, and trim:								
1947	320	21,079	66,038	17,359	49,238	117,642	88,446	206,088
1939 [4]	188	n.a.	n.a.	7,387	10,054	27,425	17,663	45,088
1937	154	10,273	15,762	8,408	11,879	29,862	20,053	49,915
1935	134	5,985	7,769	4,533	5,093	12,456	10,284	22,740
1933	125	4,544	4,642	3,572	3,123	7,424	5,953	13,377
1931	139	n.a.	n.a.	6,816	8,898	21,036	14,572	35,608
1929	148	11,916	24,265	9,557	17,065	41,982	30,178	72,160
1927	117	10,080	21,618	8,050	15,564	39,678	25,602	65,280
1925	92	8,357	17,350	6,791	12,899	28,450	21,628	50,078
1923	37	2,972	5,786	2,429	4,333	9,763	5,604	15,367
1921	45	2,252	4,140	1,782	2,881	8,178	4,289	12,467
1919	57	2,638	3,988	2,077	2,730	6,299	4,578	10,877
1914	43	2,373	2,085	1,985	1,538	3,188	1,996	5,184
1909	29	1,798	1,098	1,601	874	1,723	1,283	3,006
1904	24	792	525	699	407	875	602	1,477
1899	13	137	105	117	86	204	116	320
Boiler shop products:								
1947	812	68,979	213,364	55,937	157,464	358,764	345,783	704,547
1939 [5]	478	n.a.	n.a.	20,517	27,552	77,891	75,380	153,271
1937	453	29,911	45,910	24,485	33,842	82,301	82,979	165,280
1935	413	16,779	21,930	13,290	14,770	36,572	36,598	73,170
1933 [6]	292	12,138	12,772	9,805	9,094	22,385	23,481	45,866
Sheet-metal work:								
1947	1,708	42,643	132,663	35,116	99,930	226,446	197,859	424,305
1939	1,262	24,740	36,727	18,749	23,079	66,360	70,981	137,341
1937	1,392	27,606	40,116	22,973	29,263	73,161	85,935	159,096
1935	1,400	21,844	28,702	17,369	19,551	51,210	58,123	109,333
1933	1,229	16,095	16,938	13,050	12,658	33,344	35,463	68,807
1931	1,762	n.a.	n.a.	19,365	25,158	60,101	56,342	116,443
1929 [7]	2,161	35,547	61,668	28,593	43,255	109,837	112,648	222,485
1927	1,981	30,442	53,253	24,527	38,668	92,743	98,386	191,129
1925	2,107	30,655	50,968	24,996	37,825	90,963	84,080	175,043
1923	2,524	34,730	55,945	28,852	42,446	95,401	93,507	188,908
1921	3,105	30,625	48,213	25,172	36,562	72,880	75,896	148,776
1919	4,796	33,503	44,876	27,640	33,867	79,415	80,899	160,314
1914	4,527	33,715	26,568	28,714	20,518	44,717	50,174	94,891
1909	3,671	n.a.	n.a.	28,448	19,368	42,455	46,933	89,388
1904 [8]	1,989	n.a.	n.a.	22,556	13,766	28,934	27,148	56,082

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] Figures for years prior to 1935 do not include cost of contract work.

[3] For 1947 and 1929, value of products shipped; for all other years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[4] The returns for 1939, but not for earlier years, have been retabulated to provide figures comparable with those for 1947. Value added for 1939, before retabulation and therefore, on a basis comparable with earlier years, was $112.2 million for "Structural and ornamental products," and $29.2 million for "Metal doors, sash, and trim."

[5] Revised.

[6] "Boiler shop products" was formerly a part of the discontinued industry "Foundry and machine-shop products, n.e.c." Separate figures for earlier years are, therefore, not available.

[7] Figures for 1929 and earlier years do not include data for sheet-metal dairymen's supplies, classified for these years in the discontinued industry "Dairymen's supplies, etc."

[8] "Sheet-metal work" was formerly a part of the discontinued industry "Tinsmithing, coppersmithing, and sheet iron working." Separate figures for 1899 are, therefore, not available.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Structural and ornamental products, total [1]	**1,667**	**79,678**	**$249,034**	**64,278**	**135,948**	**$180,105**	**$440,701**	**$423,734**	**$864,435**	**$21,850**
New England	112	2,318	7,711	1,696	3,680	4,525	12,569	12,092	24,661	567
Massachusetts	69	1,340	4,417	1,048	2,192	2,705	7,003	7,148	14,151	252
Rhode Island	16	318	934	232	538	598	1,793	2,124	3,917	65
Connecticut	20	434	1,667	244	580	773	2,467	1,827	4,294	140
Middle Atlantic	508	23,883	75,760	19,839	41,378	57,690	130,438	131,366	261,804	5,186
New York	253	7,471	25,204	6,010	12,610	18,432	43,186	39,220	82,406	3,332
New Jersey	88	2,644	9,125	2,154	4,409	6,676	15,612	16,346	31,958	617
Pennsylvania	167	13,768	41,431	11,675	24,359	32,582	71,640	75,800	147,440	1,237
East North Central	377	21,748	71,869	17,183	36,607	50,726	132,929	117,248	250,177	7,658
Ohio	107	5,866	18,437	4,604	9,264	12,422	34,141	29,158	63,299	1,645
Indiana	29	4,754	15,046	3,921	8,474	11,788	24,117	21,435	45,552	1,446
Illinois	129	5,505	19,114	4,460	9,861	14,020	37,590	33,952	71,542	1,348
Michigan	73	3,653	12,767	2,624	5,465	7,869	26,317	25,148	51,465	2,718
Wisconsin	39	1,970	6,505	1,574	3,543	4,627	10,764	7,555	18,319	501
West North Central	114	6,122	19,452	4,846	10,698	13,649	35,585	31,745	67,330	1,610
Minnesota	29	2,036	6,053	1,627	3,513	4,364	9,914	8,517	18,431	785
Missouri	47	1,350	4,571	1,064	2,294	2,951	9,836	9,167	19,003	251
Nebraska	6	350	1,220	258	631	686	2,079	3,685	5,764	126
Kansas	12	1,025	2,819	798	1,618	1,915	6,278	4,307	10,585	107
South Atlantic	134	6,235	18,087	4,951	10,492	12,405	31,695	34,915	66,610	1,384
Maryland	20	584	2,102	417	899	1,166	3,487	3,221	6,708	208
Virginia	23	2,006	5,699	1,532	3,325	3,745	9,473	10,204	19,677	368
North Carolina	18	916	2,497	685	1,499	1,620	4,109	5,213	9,322	215
Georgia	11	665	1,820	569	1,157	1,482	3,086	3,002	6,088	219
Florida	31	454	1,217	384	852	931	2,401	2,120	4,521	(d)
East South Central	68	4,686	11,873	3,853	8,216	8,467	23,634	20,725	44,359	613
Kentucky	11	761	2,025	618	1,350	1,477	5,042	4,959	10,001	113
Tennessee	24	1,065	2,880	936	1,980	2,179	5,597	4,341	9,938	138
Alabama	28	2,730	6,633	2,182	4,629	4,577	12,513	10,631	23,144	327
Mississippi	5	130	335	117	257	234	482	794	1,276	35
West South Central	121	6,453	17,794	5,158	10,984	12,448	29,909	35,346	65,255	2,131
Arkansas	4	261	725	212	460	519	1,266	764	2,030	28
Louisiana	20	592	1,542	503	1,030	1,180	2,362	2,906	5,268	72
Oklahoma	16	1,314	3,859	988	1,996	2,286	7,228	8,895	16,123	388
Texas	81	4,286	11,668	3,455	7,498	8,463	19,053	22,781	41,834	1,643
Mountain	37	1,336	3,899	1,087	2,447	3,072	7,903	6,907	14,810	808
Colorado	13	485	1,361	413	850	1,058	2,984	2,713	5,697	77
Utah	11	322	881	258	558	646	1,610	2,171	3,781	(d)
Pacific	196	6,897	22,589	5,665	11,446	17,123	36,039	33,390	69,429	1,803
Washington	23	375	1,092	330	642	950	1,766	1,501	3,267	55
Oregon	12	780	2,682	672	1,334	2,191	3,591	3,180	6,771	80
California	161	5,742	18,815	4,663	9,470	13,982	30,682	28,709	59,391	1,758
Metal doors, sash, and trim, total [1]	**320**	**21,079**	**66,038**	**17,359**	**36,630**	**49,238**	**117,642**	**88,446**	**206,088**	**6,668**
New England	18	356	1,047	307	638	786	1,802	1,294	3,096	49
Massachusetts	11	144	364	127	256	314	693	507	1,200	10
Middle Atlantic	102	5,792	18,749	4,797	10,410	13,991	31,248	21,391	52,639	1,240
New York	76	3,412	11,380	2,787	5,988	8,463	19,589	11,596	31,185	526
New Jersey	8	438	1,434	307	686	869	2,286	1,310	3,596	129
Pennsylvania	18	1,942	5,935	1,703	3,736	4,659	9,373	8,485	17,858	585
East North Central	90	10,969	35,111	8,992	18,779	26,546	65,441	49,924	115,365	3,740
Ohio	17	3,364	10,492	2,798	5,911	8,084	22,973	16,339	39,312	424
Illinois	32	1,995	6,104	1,552	3,267	4,221	11,313	9,422	20,735	656
Michigan	22	2,866	10,139	2,384	4,749	7,544	18,219	12,876	31,095	1,188
West North Central	18	1,219	3,190	1,034	2,235	2,186	4,962	3,615	8,577	209
South Atlantic	18	711	1,842	578	1,232	1,361	3,002	2,647	5,649	342
Florida	6	211	521	181	419	413	901	785	1,686	(d)
East South Central	8	376	912	323	688	637	1,625	1,916	3,541	181
West South Central	5	253	644	204	425	443	751	1,181	1,932	123
West	61	1,403	4,543	1,124	2,223	3,288	8,811	6,478	15,289	775
California	48	1,043	3,422	834	1,644	2,462	6,621	4,538	11,159	547
Boiler shop products, total [1]	**812**	**68,979**	**213,364**	**55,937**	**114,795**	**157,464**	**358,764**	**345,783**	**704,547**	**21,908**
New England	57	2,531	7,648	2,107	4,360	5,653	12,857	9,760	22,617	307
Massachusetts	37	1,706	5,306	1,416	2,883	3,906	8,805	7,339	16,144	157
Middle Atlantic	169	16,744	51,340	13,853	28,262	38,744	87,407	94,836	182,243	4,647
New York	62	3,578	11,192	2,876	6,207	8,293	18,288	17,533	35,821	726
New Jersey	30	1,499	5,269	1,227	2,610	3,887	9,394	7,501	16,895	603
Pennsylvania	77	11,667	34,879	9,750	19,445	26,564	59,725	69,802	129,527	3,318
East North Central	231	19,849	64,942	15,343	31,820	45,879	115,077	94,513	209,590	5,779
Ohio	64	9,321	30,088	6,866	14,669	20,171	51,445	37,386	88,831	2,307
Indiana	19	2,147	6,205	1,855	3,731	5,196	9,857	9,235	19,092	725
Illinois	61	2,989	10,437	2,411	4,929	7,634	19,555	17,947	37,502	787
Michigan	55	2,121	7,276	1,593	3,192	4,761	12,403	10,945	23,348	786
Wisconsin	32	3,271	10,936	2,618	5,299	8,117	21,817	19,000	40,817	1,114

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947—Continued

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Boiler shop products—Continued										
West North Central	59	6,597	$19,478	5,382	10,913	$14,548	$32,898	$28,068	$60,966	$2,130
Minnesota	11	1,568	4,863	1,247	2,503	3,516	9,565	5,803	15,368	403
Iowa	10	314	840	273	545	684	1,689	1,272	2,961	119
Missouri	26	3,846	11,253	3,113	6,262	8,353	19,091	17,583	36,674	1,184
South Atlantic	43	3,788	10,580	2,987	6,323	7,177	18,171	17,314	35,485	895
Virginia	6	748	1,727	606	1,180	1,203	2,921	3,206	6,127	72
North Carolina	5	299	786	252	573	569	1,137	1,487	2,624	50
Georgia	7	524	1,335	439	954	1,012	2,417	2,223	4,640	58
Florida	10	226	610	192	421	455	1,188	1,579	2,767	81
East South Central	33	5,043	14,093	4,125	8,413	10,613	19,316	28,548	47,864	885
Tennessee	11	3,669	9,687	2,943	5,884	7,367	11,296	15,400	26,696	579
West South Central	83	5,247	13,878	4,300	9,046	10,520	28,732	32,137	60,869	2,415
Oklahoma	19	1,518	4,120	1,154	2,506	2,770	8,548	8,483	17,031	368
Texas	48	2,394	6,432	2,092	4,339	5,286	15,857	15,971	31,828	1,479
Mountain	19	833	2,535	685	1,399	1,975	3,742	3,679	7,421	294
Montana	5	140	410	109	225	304	835	566	1,401	16
Pacific	118	8,347	28,870	7,155	14,259	22,355	40,564	36,928	77,492	4,556
Washington	23	722	2,538	623	1,237	2,140	4,481	2,840	7,321	128
Oregon	13	1,023	3,286	893	1,747	2,717	5,793	4,319	10,112	158
California	82	6,602	23,046	5,639	11,275	17,498	30,290	29,769	60,059	4,270
Sheet-metal work, total[1]	**1,708**	**42,643**	**132,663**	**35,116**	**73,349**	**99,930**	**226,446**	**197,859**	**424,305**	**13,157**
New England	138	2,172	6,471	1,846	3,839	4,973	10,303	6,547	16,850	408
Massachusetts	89	1,425	4,234	1,202	2,487	3,201	6,775	4,253	11,028	283
Connecticut	21	283	931	240	511	739	1,614	990	2,604	40
Middle Atlantic	405	11,434	37,773	9,288	19,748	27,935	60,033	40,244	100,277	3,256
New York	216	5,385	18,374	4,487	9,693	13,956	30,772	16,996	47,768	1,004
New Jersey	83	1,586	5,525	1,343	2,812	4,336	8,472	5,269	13,741	589
Pennsylvania	106	4,463	13,874	3,458	7,243	9,643	20,789	17,979	38,768	1,663
East North Central	429	12,354	39,562	10,134	21,513	29,691	70,468	55,197	125,665	3,536
Ohio	119	4,772	15,456	3,797	8,057	11,114	27,035	25,529	52,564	1,380
Illinois	114	2,333	8,097	1,981	4,342	6,406	12,982	7,751	20,733	703
Michigan	102	1,905	6,251	1,596	3,383	4,917	9,606	6,916	16,522	348
West North Central	126	2,951	8,520	2,424	5,068	6,368	14,265	19,440	33,705	1,411
Iowa	22	641	1,988	509	1,071	1,383	2,594	8,087	10,681	351
South Atlantic	128	4,472	12,111	3,774	7,519	9,200	21,845	18,717	40,562	1,261
Maryland	27	841	2,595	659	1,374	1,605	4,155	2,384	6,539	138
North Carolina	18	725	1,466	582	1,190	1,089	3,612	3,043	6,655	359
South Carolina	13	186	426	166	323	344	751	507	1,258	40
Georgia	20	468	1,152	388	803	850	2,326	2,520	4,846	115
Florida	28	385	1,104	318	670	815	2,014	2,160	4,174	194
East South Central	43	2,482	6,704	1,921	3,883	4,705	13,587	28,596	42,183	1,001
Kentucky	13	1,824	5,117	1,407	2,788	3,599	7,592	11,714	19,306	822
West South Central	110	1,349	3,570	1,143	2,285	2,791	5,289	4,807	10,096	308
Oklahoma	23	158	362	123	240	257	472	304	776	16
West	329	5,429	17,952	4,586	9,494	14,267	30,656	24,311	54,967	1,976
Colorado	15	483	1,443	355	851	926	2,289	3,185	5,474	93
Oregon	25	459	1,569	387	788	1,211	2,846	2,380	5,226	182
California	223	3,729	12,609	3,170	6,487	10,099	22,084	15,498	37,582	1,593

[d] Withheld to avoid disclosing figures for individual companies.

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Structural and ornamental products: *New England*, Maine, 3 (50); New Hampshire, 2; Vermont, 2; *West North Central*, Iowa, 17 (1,210); North Dakota, 1; South Dakota, 2; *South Atlantic*, Delaware, 3 (29); District of Columbia, 11 (210); West Virginia, 12 (1,214); South Carolina, 5 (157); *Mountain*, Montana, 2; Idaho, 2; New Mexico, 2; Arizona, 6 (405); Nevada, 1.

Metal doors, sash, and trim: *New England*, Maine, 1; Connecticut, 6; *East North Central*, Indiana, 16 (2,577); Wisconsin, 3 (167); *West North Central*, Minnesota, 1; Iowa, 1; Missouri, 12 (979); Nebraska, 2; Kansas, 2; *South Atlantic*, Maryland, 1; District of Columbia, 1; Virginia, 3 (232); South Carolina, 1; Georgia, 6 (74); *East South Central*, Kentucky, 2; Tennessee, 2; Alabama, 4 (108); *West South Central*, Arkansas, 1; Texas, 4; *West*, Colorado, 2; Arizona, 3 (46); Washington, 5 (211); Oregon, 3.

Boiler shop products: *New England*, Maine, 3; Rhode Island, 2; Connecticut, 15 (388); *West North Central*, South Dakota, 2; Nebraska, 5 (480); Kansas, 5; *South Atlantic*, Delaware, 3 (339); Maryland, 9 (1,570); District of Columbia, 1; West Virginia, 2; *East South Central*, Kentucky, 9 (414); Alabama, 7 (877); Mississippi, 6 (83); *West South Central*, Arkansas, 1; Louisiana, 15; *Mountain*, Idaho, 1; Wyoming, 1; Colorado, 6 (348); New Mexico, 3 (33); Utah, 2; Nevada, 1.

Sheet-metal work: *New England*, Maine, 3 (24); New Hampshire, 7 (109); Vermont, 4 (72); Rhode Island, 14 (259); *East North Central*, Indiana, 40 (1,046); Wisconsin, 54 (2,298); *West North Central*, Minnesota, 40 (1,010); Missouri, 38 (912); North Dakota, 2; South Dakota, 1; Nebraska, 8 (99); Kansas, 15 (239); *South Atlantic*, Delaware, 6 (234); District of Columbia, 2; Virginia, 10 (229); West Virginia, 4; *East South Central*, Tennessee, 13 (136); Alabama, 14 (486); Mississippi, 3 (36); *West South Central*, Arkansas, 7 (42); Louisiana, 19 (416); Texas, 61 (733); *West*, Montana, 4 (42); Idaho, 6 (41); Wyoming, 1; New Mexico, 1; Arizona, 6; Utah, 10 (155); Washington, 38 (471).

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry: Structural and ornamental products	Metal doors, sash, and trim	Boiler shop products	Sheet-metal work
ALL ESTABLISHMENTS				
Number of establishments	1,667	320	812	1,708
All employees:				
Number (average for the year)	79,678	21,079	68,979	42,643
Salaries and wages, total	$249,034	$66,038	$213,364	$132,663
Production and related workers:				
Number (average for the year)	64,278	17,359	55,937	35,116
Man-hours, total ... thousands	135,948	36,630	114,795	73,349
Wages, total	$180,105	$49,238	$157,464	$99,930
Value added by manufacture	$440,701	$117,642	$358,764	$226,446
ESTABLISHMENTS REPORTING DETAILED STATISTICS				
Number of establishments	1,279	241	671	1,132
All employees:				
Number (average for the year)	77,682	20,410	68,038	40,107
Salaries and wages, total	$243,985	$64,377	$210,832	$126,696
Production and related workers:				
Number (average for the year)	62,391	16,731	55,046	32,637
Man-hours, total ... thousands	132,167	35,377	113,026	68,423
Wages, total	$175,615	$47,847	$155,183	$94,237
Value added by manufacture	$432,073	$114,776	$354,675	$216,059
Number of employees for pay period ended nearest Oct. 15:				
All employees	79,488	21,304	69,642	41,372
Male	75,709	18,995	65,886	37,885
Female	3,779	2,309	3,756	3,487
Production and related workers	63,789	17,452	56,158	33,772
Male	63,399	16,268	55,845	32,307
Female	390	1,184	313	1,465
Force-account construction workers	362	47	70	78
Administrative, supervisory, sales, and all other	15,337	3,805	13,414	7,522
Male	11,948	2,680	9,971	5,500
Female	3,389	1,125	3,443	2,022
All employees, number by month:				
January	75,081	19,952	65,616	39,156
February	75,129	19,923	66,375	38,825
March	75,593	20,080	66,688	39,343
April	76,327	20,023	67,727	39,038
May	76,589	19,618	67,645	39,144
June	77,095	19,756	67,940	39,707
July	77,850	19,272	67,280	39,830
August	79,050	20,418	68,800	40,690
September	79,055	20,814	69,206	40,904
October	79,488	21,304	69,642	41,372
November	80,214	21,762	69,746	41,272
December	80,248	21,854	69,457	41,676
ESTABLISHMENTS REPORTING DETAILED STATISTICS—Continued				
Cost of materials, fuel, electricity, and contract work	$413,621	$86,090	$341,627	$189,603
Materials, parts, containers, and supplies	399,033	82,062	327,212	183,056
Fuels, total	2,690	665	3,892	1,273
Bituminous coal	675	304	898	428
Anthracite	68	15	115	43
Coke	412	6	316	26
Fuel oils	811	174	1,177	370
Gas	553	162	916	364
Other fuels	171	4	470	42
Purchased electric energy	4,195	917	4,665	1,599
Contract and commission work	7,103	1,546	5,858	3,675
Value of inventories:				
Beginning of year, total	$115,659	$29,162	$124,128	$48,552
Finished products	17,517	4,551	12,665	9,968
Materials, supplies, and work in process	98,142	24,611	111,463	38,584
End of year, total	140,135	33,759	158,816	56,693
Finished products	19,727	5,242	14,677	14,323
Materials, supplies, and work in process	120,408	28,517	144,139	42,370
Expenditures for plant and equipment:				
New plant and equipment	$21,850	$6,668	$21,908	$13,157
Construction and major alteration of fixed plants	11,205	2,363	6,761	4,162
Buildings	10,256	2,082	6,088	3,612
Other construction	949	281	673	550
Machinery and equipment	10,645	4,305	15,147	8,995
Production machinery and equipment	8,039	3,773	13,217	7,591
Other machinery and equipment	2,606	532	1,930	1,404
Used plant and equipment, and land	2,211	261	3,341	1,351
Number of highway-type motor vehicles owned or leased:				
Trucks	2,150	332	1,163	1,713
By manufacturer's rated capacity:				
Under 1½ tons	709	101	382	972
1½ tons	808	162	485	526
Over 1½ tons and less than 3½ tons	367	44	182	165
3½ tons and less than 5 tons	94	8	33	31
5 tons and over	172	17	81	19
By body type:				
Van	18	3	9	69
Stake or platform	1,327	170	723	741
Panel or light delivery	499	93	278	636
All other trucks	306	66	153	267
Truck tractors	245	26	164	118
Trailers and semitrailers	303	52	189	146

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of— 1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Structural and ornamental products:											
Number of establishments	1,667	396	281	282	361	182	110	31	20	2	2
Number of employees (average for the year)	79,678	900	1,848	3,870	11,323	12,633	16,469	10,419	12,846	(d)	*9,370*
Value added by manufacture	$440,701	$4,157	$9,153	$21,114	$63,645	$72,547	$95,940	$59,985	$71,652	(d)	*$42,508*
Metal doors, sash, and trim:											
Number of establishments	320	63	55	58	61	32	34	10	6	1	----------
Number of employees (average for the year)	21,079	148	376	812	1,802	2,311	5,339	3,724	*6,567*	(d)	----------
Value added by manufacture	$117,642	$757	$2,015	$4,273	$10,926	$12,111	$26,770	$20,609	*$40,181*	(d)	----------
Boiler shop products:											
Number of establishments	812	108	132	135	198	90	88	37	16	6	2
Number of employees (average for the year)	68,979	277	903	1,835	6,468	6,292	13,680	12,922	10,494	*16,108*	(d)
Value added by manufacture	$358,764	$1,960	$4,350	$9,830	$35,091	$35,934	$74,275	$68,911	$54,464	*$73,949*	(d)
Sheet-metal work:											
Number of establishments	1,708	502	372	339	328	104	47	10	3	3	----------
Number of employees (average for the year)	42,643	1,159	2,507	4,677	10,149	7,237	7,542	3,287	2,188	3,897	----------
Value added by manufacture	$226,446	6,028	12,114	24,548	53,822	37,362	40,731	16,865	17,472	17,504	----------

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

3441 STRUCTURAL AND ORNAMENTAL PRODUCTS INDUSTRY	Shipped by— Structural and ornamental products industry	Other industries	All industries
Total shipments by the industry	$864,435		
A. Structural and ornamental products	713,088	$95,834	$808,922
Structural steel fabricated for sale	382,368	35,010	417,378
Structural steel fabricated and erected by the same company	98,090	13,659	111,749
Ornamental metal work	66,932	9,231	76,163
Prefabricated and portable metal buildings, and parts	60,589	9,266	69,855
Miscellaneous metal building materials	71,604	23,010	94,614
Structural and ornamental products, not reported by type	33,505	5,658	39,163
B. Secondary products	118,969		
Partitions, shelving, and lockers	3,236		
Gray-iron castings	6,929		
Doors and door frames	5,163		
Window sash and frames	5,328		
Metal tanks	11,050		
Fabricated steel plate	6,383		
✓Sheet-metal products	12,269	3444	
Other secondary products (construction and mining machinery, oil-field machinery, industrial furnaces and ovens, ships, etc.)	68,611		
C. Miscellaneous receipts	32,378		
Contract and commission work	9,759		
Repair work	5,996		
Scrap and salable refuse	3,273		
Nonmanufacturing activities	13,350		

3442 METAL DOORS, SASH, AND TRIM INDUSTRY	Shipped by— Metal doors, sash, and trim industry	Other industries	All industries
Total shipments by the industry	$206,088		
A. Metal doors, sash, and trim	168,576	$28,066	$196,642
Molding, trim, and store fronts	41,775	4,503	46,278
Doors and frames	39,595	12,479	52,074
Window sash and frames	80,406	10,374	90,780
Metal doors, sash, frames, molding, and trim, not specified by type	6,800	710	7,510
B. Secondary products	34,271		
Metal screen doors and window screens	1,717		
Structural steel fabricated for sale	5,252		
Structural steel fabricated and erected by the same company	1,707		
Ornamental metal work	2,026		
Prefabricated and portable metal buildings, and parts	3,115		
✓Sheet metal work	2,738	3444	
Other secondary products (fabricated steel plate; automobile stampings; lighting fixtures; standard bolts, nuts, washers, and rivets; etc.)	17,716		
C. Miscellaneous receipts	3,241		
Contract and commission work	1,887		
Other receipts	1,354		

3443 BOILER SHOP PRODUCTS INDUSTRY	Shipped by— Boiler shop products industry	Other industries	All industries
Total shipments by the industry	$704,547		
A. Boiler shop products	547,793	$129,821	$677,614
Metal tanks	[1] 207,670	54,202	[3] 261,872
Fabricated steel plate	99,426	24,101	123,527
Power boilers and parts and attachments	116,836	14,327	131,163
Gas cylinders, stacks, and other boiler shop products	103,409	30,109	133,518
Boiler shop products, not specified by type	20,452	7,082	27,534
B. Secondary products	133,442		
Steel heating boilers	4,668		
Water heaters (except electric)	3,172		
Structural steel fabricated for sale	11,954		
Structural steel fabricated and erected by the same company	7,103		
✓Sheet-metal products	10,010	3444	
Oil-field machinery and tools	2,584		
Truck trailers	3,247		
Other secondary products (blowers, exhaust fans, and ventilating fans; domestic water systems; petroleum refinery machinery and equipment; etc.)	90,704		
C. Miscellaneous receipts	23,312		
Contract and commission work	6,034		
Repair work	11,600		
Scrap and salable refuse	3,711		
Nonmanufacturing activities	1,967		

3444 SHEET-METAL WORK INDUSTRY	Shipped by— Sheet-metal work industry	Other industries	All industries
Total shipments by the industry	$424,305		
A. Sheet-metal work	352,413	$326,483	$678,896
Sheet-metal products, except metal tanks	344,410	72,614	417,024
Metal tanks	[2] 8,003	253,869	[3] 261,872
B. Secondary products	59,338		
Doors and door frames	2,974		
Prefabricated and portable metal buildings, and parts	1,630		
Job stampings, except automobile	7,199		
Stamped and spun household and hospital utensils	1,357		
Other secondary products (fabricated steel plate; domestic heating stoves; commercial cooking and food warming equipment, except electric; warm air furnaces; window sash and frames; automobile stampings; etc.)	46,178		
C. Miscellaneous receipts	12,554		
Contract and commission work	2,657		
Repair work	1,921		
Scrap and salable refuse	1,876		
Nonmanufacturing activities	6,100		

[1] Consists principally of heavy tanks made from plate.
[2] Consists principally of light tanks made from sheet metal.
[3] Includes both heavy and light tanks.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers		1939 Total production for sale and interplant transfer	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Fabricated structural iron and steel:					
Fabricated for sale, total			$417,378		**$181,779**
Fabricated and erected by the same company, total			111,749		
For bridges:					
Fabricated for sale:					
Quantity reported	Ton	213,313	32,095	n.a.	[1] 36,913
Quantity not reported			1,028		
Fabricated and erected by the same company	Ton	55,634	9,108		
For buildings:					
Fabricated for sale:					
Quantity reported	Ton	1,697,447	284,932	n.a.	[2] 102,415
Quantity not reported			8,700		
Fabricated and erected by the same company:					
Quantity reported	Ton	408,994	79,842		
Quantity not reported			5,643		
For ships, boats, and barges:					
Fabricated for sale:					
Quantity reported	Ton	18,549	4,220	n.a.	[4] 31,516
Quantity not reported			244		
Fabricated and installed by the same company			[3] 650		
For other structures:					
Fabricated for sale:					
Quantity reported	Ton	367,626	61,894		
Quantity not reported			17,237		
Fabricated and erected by the same company:					
Quantity reported	Ton	63,968	14,008		
Quantity not reported			1,796		
Not reported by end use:					
Fabricated for sale:					
Quantity reported	Ton	13,751	3,000	n.a.	[5] 10,935
Quantity not reported			4,028		
Fabricated and erected by the same company:					
Quantity reported	Ton	1,670	443		
Quantity not reported			259		
Ornamental metal work			76,163		**33,788**
Iron and steel:					
Grille work:					
Quantity reported	Ton	3,885	1,832	n.a.	[6] 10,824
Quantity not reported			2,522		
Stairs, staircases, fire escapes, and railings:					
Quantity reported	Ton	66,186	21,764		
Quantity not reported			12,045		
Fences and gates, other than wire:					
Quantity reported	Ton	4,156	1,696	11,422	1,332
Quantity not reported			1,461		503
Steel grating and flooring, and other ornamental work:					
Quantity reported	Ton	43,930	12,642	55,980	9,900
Quantity not reported			7,650		4,182
Nonferrous metal:					
Quantity reported	Ton	1,588	6,698	1,329	2,366
Quantity not reported			4,062		3,173
Ornamental metal work, not reported by kind of material or type:					
Quantity reported	Ton	5,222	1,901		1,508
Quantity not reported			1,890		
Prefabricated and portable metal buildings, and parts			69,855		n.a.
Prefabricated and portable metal buildings, complete units (in sections or panels):					
Farm buildings (livestock shelters, etc.)			2,661		n.a.
Other prefabricated and portable metal buildings (dwellings, garages, utility buildings, etc.)			31,574		
Panels or sections for prefabricated buildings, not sold as a complete unit			35,620		
Miscellaneous metal building materials			94,614		
Metal plaster bases:					
Expanded metal lath	M sq. yds	85,960	19,651	n.a.	11,116
Metal plaster base accessories (corner beads, screeds, grounds, etc.)			9,974		n.a.
Fabricated concrete reinforcing bars	Ton	560,314	54,097	n.a.	[7] 19,146
All other structural and ornamental metal products			10,892		
Structural and ornamental products, not reported by type			39,163		6,430
Molding and trim, and store fronts			46,278		**10,517**
Molding and trim			40,370		n.a.
Store fronts, sold complete at factory			5,908		

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers: Quantity	1947 Total shipments and interplant transfers: Value f.o.b. plant	1939 Total production for sale and interplant transfer: Quantity	1939 Total production for sale and interplant transfer: Value f.o.b. plant
Doors and frames			$52,074		$15,815
Doors:					
Iron and steel:					
Industrial	Number	153,197	18,208		
Residential, commercial and institutional	do	273,495	11,528		[9] 9,895
Other (garage doors, hangar doors, etc.)					
Quantity reported	Number	104,086	6,079		
Quantity not reported			1,240		
Nonferrous metal (all types)	Number	19,150	2,916	n.a.	1,317
Door frames			10,818		4,603
Doors and door frames, not reported by type			1,285		
Window sash and frames	Number	8,649,058	99,780		[9] 21,960
Iron and steel	do	7,555,684	69,622		n.a.
Nonferrous metal	do	1,093,375	21,158		
Metal doors, sash, frames, molding, and trim, not reported by type			7,510		[9] 5,576
Metal tanks (complete at factory) [10]			261,872		n.a.
Pressure tanks:					
For liquefied petroleum gas:					
Quantity reported	Number	203,295	36,331		
Quantity not reported			979	(11)	(11)
Other pressure tanks:					
Quantity reported	Number	570,478	38,080		
Quantity not reported			4,341		
Septic tanks	Number	151,235	4,443	81,323	1,082
Basement oil tanks	do	489,269	17,036		
Bulk storage tanks (other than tanks listed above):					
Carbon and alloy steel:					
6,000 gallons and less capacity:					
Quantity reported	Number	479,377	37,766		
Quantity not reported			1,930		26,168
Over 6,000 gallons capacity:					
Quantity reported	Number	22,672	25,009		
Quantity not reported			357		
Stainless steel, aluminum, nickel, etc.:					
Quantity reported	Number	13,312	12,414		
Quantity not reported			2,340		
All other tanks (truck tanks, etc.)			[12] 73,044		
Metal tanks, not specified by type			7,802		
Fabricated steel plate (cut, punched, or shaped for assembly on job)			123,527		41,135
For oil storage tanks:					
Quantity reported	Ton	295,834	38,099	149,183	11,530
Quantity not reported			9,827		1,388
For water storage tanks:					
Quantity reported	Ton	51,484	8,737	43,356	6,011
Quantity not reported			914		308
For large diameter pipe (pipe lines, pen stocks, etc.):					
Quantity reported	Ton	181,453	28,490		
Quantity not reported			1,840		[13] 21,898
For other purposes:					
Quantity reported	Ton	141,951	27,042		
Quantity not reported			5,228		
Not specified by type:					
Quantity reported	Ton	14,842	2,927		
Quantity not reported			423		
Power boilers, and parts and attachments			131,163		n.a.
Power boilers (over 15 psi steam working pressure):					
Water tube boilers:					
Number of boilers		5,349	[14] 66,762		
Sq. ft. of boiler and water wall heating surface		10,507,580			
Fire tube boilers:				(14)	23,382
Quantity reported:					
Number of boilers		15,444	34,079		
Sq. ft. of boiler heating surface		5,849,707			
Quantity not reported			702		
Parts and attachments for steel power boilers			29,620		n.a.
Gas cylinders, stacks, and other boiler shop products			133,518		n.a.
Gas cylinders:					
For liquefied petroleum gas	Number	1,582,988	21,002		
Other gas cylinders:				(11)	(11)
Quantity reported	Number	1,213,782	13,828		
Quantity not reported			4,446		
Smoke stacks and other stacks, iron and steel (complete or including all necessary parts for assembly on the site):					
Quantity reported	Ton	16,653	5,112	8,107	1,123
Quantity not reported			1,155		505
All other plate steel products:					
Quantity reported	Ton	378,594	66,219	103,160	14,804
Quantity not reported			21,756		10,229
Boiler shop products, not specified by type			27,534		

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947		1939	
		Total shipments and interplant transfers		Total production for sale and interplant transfer	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Sheet-metal products, except metal tanks			$417,024		[16] $126,379
Roofing:					
Steel, all types			25,289		
Aluminum, all types			39,956		
Other metals, all types			3,239		
Metal siding			1,815		
Roof drainage equipment			19,943		
Cornices and skylights			3,164		
Roof ventilators			9,064		
Furnace smoke pipe, elbows, ducts, and fittings			36,034		n.a.
Stove pipe and elbows			9,209		
Culverts, flumes, irrigation pipe, and similar products			48,113		
Bins			2,767		
Vats			672		
Restaurant, hotel, and kitchen sheet-metal equipment (table tops, drainboard tops, etc.)			20,853		
Other sheet-metal work (air conditioning ducts, dust collector system ducts, metal awnings, etc.)			148,575		
Sheet-metal work, not reported by type			48,331		

n.a.—Not available.

[1] Includes 388,110 tons valued at $35,069,000 and $1,844,000 worth of fabricated structural steel for bridges for which quantity was not reported.

[2] Includes 1,058,248 tons valued at $92,336,000 and $10,079,000 worth of fabricated structural steel for buildings for which quantity was not reported.

[3] Does not include structural steel fabricated for own use by establishments building ships.

[4] Includes 270,383 tons valued at $25,767,000 and $5,749,000 worth of fabricated structural steel for ships, boats, and barges and other structures for which quantity was not reported.

[5] Includes 67,741 tons valued at $6,461,000 and $4,474,000 worth of fabricated structural steel for which neither quantity nor end use was reported.

[6] Includes 37,451 tons valued at $6,308,000 and $4,516,000 worth of grille work, stairs, staircases, fire escapes, and railings for which quantity was not reported.

[7] Includes 329,533 tons valued at $17,427,000 and $1,719,000 worth of fabricated concrete reinforcing bars for which quantity was not reported.

[8] Includes 216,073 doors valued at $6,242,000 and $3,653,000 worth of iron and steel doors for which quantity was not reported.

[9] The $21,960,000 worth of window sash and frames includes 1,159,176 solid iron and steel window sash and frames valued at $10,187,000; $7,694,000 of solid iron and steel window sash and frames for which quantity was not reported; $936,000 of solid nonferrous window sash and frames for which quantity was not reported; and $3,143,000 of hollow metal (iron, steel, and nonferrous) window sash and frames for which quantity was not reported. Data for all the metal covered (iron, steel, and nonferrous) window sash and frames are included among the $5,576,000 of metal doors, sash, frames, molding, and trim, not reported by type.

[10] Data on metal tanks for 1939 do not include sheet-metal tanks. In 1939, $11,972,000 of bins and sheet-metal tanks were reported. Since separate data on these two commodities are not available, the total has been included among the sheet-metal products.

[11] In 1939, data on pressure tanks and gas cylinders were collected together. The revised 1939 totals are 540,014 units valued at $12,778,000 and $1,644,000 worth of pressure tanks and cylinders for which quantity was not reported.

[12] Includes $4,602,000 of truck tanks for delivery of butane and propane, $23,544,000 of truck tanks for delivery of liquid fuels other than butane and propane, $3,045,000 of truck tanks for delivery of other fluids, and $41,853,000 of all other tanks.

[13] Includes 113,898 tons valued at $13,362,000 and $8,536,000 worth of fabricated plate work for large diameter pipe and for other purposes for which quantities were not reported.

[14] Includes value of water walls, superheaters, economizers, etc.

[15] A total of 11,280 power boilers, valued at $23,382,000, was produced in 1939.

[16] Includes value of sheet-metal tanks. See footnote 10.

TABLE 6-B.—QUANTITY AND VALUE OF FABRICATED STRUCTURAL STEEL SHIPPED, FOR DIVISIONS AND STATES: 1947

[Money figures in thousands of dollars; quantities in short tons]

DIVISION AND STATE	Total fabricated structural steel				Fabricated for sale				Fabricated and erected by same company			
	Total	Quantity reported		Quantity not reported	Total	Quantity reported		Quantity not reported	Total	Quantity reported		Quantity not reported
	Value	Quantity	Value	Value	Value	Quantity	Value	Value	Value	Quantity	Value	Value
United States	**$529,127**	**2,840,952**	**$489,542**	**$39,585**	**$417,378**	**2,310,686**	**$386,141**	**$31,237**	**$111,749**	**530,266**	**$103,401**	**$8,348**
New England	13,267	61,867	11,627	1,640	9,840	48,804	8,666	1,174	3,427	13,063	2,961	466
Massachusetts	6,846	29,835	5,654	1,192	5,339	24,295	4,477	862	1,507	5,540	1,177	330
Connecticut	3,682	15,287	3,272	410	1,871	8,288	1,587	284	1,811	6,999	1,685	126
All other States	2,739	16,745	2,701	38	2,630	16,221	2,602	28	109	524	99	10
Middle Atlantic	191,085	1,159,288	179,183	11,902	153,475	949,795	144,523	8,952	37,610	209,493	34,660	2,950
New York	44,337	209,135	38,838	5,499	30,720	147,887	26,556	4,164	13,617	61,248	12,282	1,335
New Jersey	18,701	105,738	17,366	1,335	9,976	52,386	9,406	570	8,725	53,352	7,960	765
Pennsylvania	128,047	844,415	122,979	5,068	112,779	749,522	108,561	4,218	15,268	94,893	14,418	850
East North Central	126,676	641,573	113,253	13,423	95,669	490,823	83,560	12,109	31,007	150,750	29,693	1,314
Ohio	37,151	158,281	30,199	6,952	24,985	105,363	18,342	6,643	12,166	52,918	11,857	309
Indiana	24,583	154,726	23,225	1,358	20,396	127,108	19,287	1,109	4,187	27,618	3,938	249
Illinois	34,400	189,833	31,566	2,834	31,131	171,137	28,317	2,814	3,269	18,696	3,249	20
Michigan	17,086	82,580	15,882	1,204	8,206	40,163	7,507	699	8,880	42,417	8,375	505
Wisconsin	13,456	56,153	12,381	1,075	10,951	47,052	10,107	844	2,505	9,101	2,274	231
West North Central	43,141	249,568	42,490	651	38,997	229,164	38,400	597	4,144	20,404	4,090	54
Missouri	16,408	85,453	16,372	36	15,905	82,960	15,905	----------	503	2,493	467	36
Kansas	6,190	32,584	6,190	----------	5,281	28,034	5,281	----------	909	4,550	909	----------
All other States	20,543	131,531	19,928	615	17,811	118,170	17,214	597	2,732	13,361	2,714	18
South Atlantic	34,708	180,964	32,912	1,796	28,470	149,002	26,732	1,738	6,238	31,962	6,180	58
Maryland	5,151	28,031	5,047	104	3,780	20,781	3,687	93	1,371	7,250	1,360	11
Virginia	12,748	70,271	12,313	435	10,354	59,070	9,919	435	2,394	11,201	2,394	----------
South Carolina	1,424	6,030	934	490	1,424	6,030	934	490	----------	----------	----------	----------
Georgia	3,630	18,854	3,532	98	2,961	13,621	2,863	98	669	5,233	669	----------
Florida	2,556	10,747	2,312	244	1,688	7,045	1,486	202	868	3,702	826	42
All other States	9,199	47,031	8,774	425	8,263	42,455	7,843	420	936	4,576	931	5
East South Central	25,516	133,547	24,409	1,107	23,426	125,210	22,581	845	2,090	8,337	1,828	262
Tennessee	8,011	41,944	7,447	564	7,149	38,860	6,804	345	862	3,084	643	219
All other States	17,505	91,603	16,962	543	16,277	86,350	15,777	500	1,228	5,253	1,185	43
West South Central	33,692	168,632	30,854	2,838	31,243	160,769	29,017	2,226	2,449	7,863	1,837	612
Louisiana	3,745	15,155	2,943	802	3,056	13,817	2,667	389	689	1,338	276	413
Texas	18,999	99,993	18,515	484	17,778	95,675	17,403	375	1,221	4,318	1,112	109
All other States	10,948	53,484	9,396	1,552	10,409	51,277	8,947	1,462	539	2,207	449	90
Mountain	6,944	26,635	6,557	387	3,643	15,814	3,454	189	3,301	10,821	3,103	198
Colorado	2,797	10,930	2,612	185	2,207	9,292	2,207	----------	590	1,638	405	185
Utah	721	3,326	721	----------	721	3,326	721	----------	----------	----------	----------	----------
All other States	3,426	12,379	3,224	202	715	3,196	526	189	2,711	9,183	2,698	13
Pacific	54,098	218,878	48,257	5,841	32,615	141,305	29,208	3,407	21,483	77,573	19,049	2,434
California	46,351	189,708	41,849	4,502	25,559	114,773	23,293	2,266	20,792	74,935	18,556	2,236
All other States	7,747	29,170	6,408	1,339	7,056	26,532	5,915	1,141	691	2,638	493	198

NOTE: "Other States" includes data for States in the following geographic divisions—*New England*—Maine, New Hampshire, Vermont, and Rhode Island; *West North Central*—Minnesota, Iowa, North Dakota, South Dakota, and Nebraska; *South Atlantic*—Delaware, District of Columbia, West Virginia, and North Carolina; *East South Central*—Kentucky, Alabama, and Mississippi; *West South Central*—Arkansas and Oklahoma; *Mountain*—Montana, Idaho, New Mexico, Arizona, and Nevada; *Pacific*—Washington and Oregon. Data for most of these States have been combined to avoid disclosing figures for individual companies within the State. Within one geographic division, figures for a disclosure-free State have been withheld to protect a State containing a disclosure.

TABLE 7.—SELECTED MATERIALS CONSUMED, BY KIND: 1947

[The table below summarizes the consumption of selected metal shapes by manufacturers during 1947. For each shape, manufacturing establishments were required to report consumption, in quantity and cost, provided that such usage during 1947 exceeded the following amounts: for iron castings, steel castings, each of six carbon steel shapes—50 short tons; for alloy steel bars and all other alloy steel—25 short tons; for stainless steel, brass and copper wire mill shapes, copper and brass castings, aluminum mill shapes and aluminum castings—10 short tons]

[Money figures in thousands of dollars]

METAL SHAPE	STRUCTURAL AND ORNAMENTAL PRODUCTS INDUSTRY			METAL DOORS, SASH, AND TRIM INDUSTRY			BOILER SHOP PRODUCTS INDUSTRY			SHEET-METAL WORK INDUSTRY		
	Establishments consuming more than specified quantities											
	Number	Short tons	Cost	Number	Short tons	Cost	Number	Short tons	Cost	Number	Short tons	Cost
Iron castings, rough and semifinished	21	10,196	$1,691	10	2,142	$710	40	12,779	$2,809	10	2,614	$582
Steel castings, rough and semifinished	14	3,041	863				21	7,827	2,451	(1)	(d)	(d)
Steel mill shapes and forms	n.a.	3,874,821	284,341	n.a.	355,893	36,834	n.a.	2,289,266	196,035	n.a.	862,881	80,530
Carbon steel:												
Bars and bar shapes	582	633,376	46,126	44	151,539	12,034	196	66,229	5,776	85	74,509	6,769
Sheet and strip	315	472,526	40,201	92	137,970	13,347	300	416,687	34,812	472	705,777	63,181
Structural shapes	668	2,087,515	145,635	18	24,515	1,748	201	181,933	13,052	35	5,151	501
Plates	498	560,197	40,259	9	15,140	1,175	408	1,401,627	116,899	54	28,795	2,309
Wire	40	21,760	2,090	10	6,020	521	15	6,181	777	11	3,810	374
All other mill shapes and forms	94	65,808	5,958	6	6,882	603	61	95,399	12,666	43	40,117	3,997
Alloy steel, except stainless:												
Bars and bar shapes	18	3,309	334	(1)	1,595	238	14	1,084	247	(1)	104	35
All other mill shapes and forms	22	29,467	2,856	(1)	1,084	166	18	20,869	3,060	7	898	103
Stainless steel	26	863	882	21	11,148	7,002	93	9,257	8,746	85	3,720	3,261
Copper and copper-base alloy:												
Brass and wire mill shapes and forms	17	843	728	13	504	304	16	1,678	1,005	57	2,946	2,137
Castings, rough and semifinished	11	416	366	(1)	32	22	8	192	164	9	189	151
Aluminum:												
Aluminum mill shapes	38	7,011	3,991	69	15,643	10,695	17	1,025	607	165	105,253	42,194
Castings, rough and semifinished	7	198	163	(1)	(d)	(d)	(1)	82	33	6	148	133

d Withheld to avoid disclosing figures for individual companies.
n.a.—Not available.
1 Less than 5 establishments.

TABLE 8.—NUMBER OF ESTABLISHMENTS PERFORMING SELECTED METALWORKING OPERATIONS: 1947

[The figures in the table represent the number of establishments maintaining the metalworking operation specified, according to the usual number of production workers employed in the operation during 1947]

METALWORKING OPERATION	STRUCTURAL AND ORNAMENTAL PRODUCTS INDUSTRY						METAL DOORS, SASH, AND TRIM INDUSTRY					
	Number of establishments performing selected metalworking operations											
	Total	Distribution by number of production workers in the operation					Total	Distribution by number of production workers in the operation				
		1-4	5-19	20-49	50-99	100 and over		1-4	5-19	20-49	50-99	100 and over
Foundry	47	6	19	14	5	3	7	1	3	3		
Die casting	2	2					2			2		
Forging—presses, hammers, or upsetters	98	70	24	4			12	5	7			
Electroplating	10	6	4				12	7	4	1		
Galvanizing and other hot dip coating	10		4	4	2		4	4				
Heat treating or annealing of metals	38	32	6				13	11	2			
Automatic screw-machine department	3	3					5	4	1			
Machine shop	248	123	89	29	4	3	92	40	30	12	7	3
Tool and die room	25	17	7	1			33	17	11	4	1	
Pattern shop	41	32	9				9	8		1		
Plate or structural fabrication	938	151	332	241	121	93	55	9	25	15	2	4
Stamping, blanking, forming, or drawing	141	49	52	17	11	12	105	27	44	19	7	8

METALWORKING OPERATION	BOILER SHOP PRODUCTS INDUSTRY						SHEET-METAL WORK INDUSTRY					
	Number of establishments performing selected metalworking operations											
	Total	Distribution by number of production workers in the operation					Total	Distribution by number of production workers in the operation				
		1-4	5-19	20-49	50-99	100 and over		1-4	5-19	20-49	50-99	100 and over
Foundry	16	2	3	5	3	3	2	1		1		
Die casting	1	1										
Forging—presses, hammers, or upsetters	48	25	15	5	1	2	15	9	5		1	
Electroplating	2	2					9	6	2	1		
Galvanizing and other hot dip coating	16	7	5	4			18	11	6	1		
Heat treating or annealing of metals	56	41	7	3	4	1	12	10	1	1		
Automatic screw-machine department	5	3	1	1			2		2			
Machine shop	217	87	73	34	12	11	141	88	37	15	1	
Tool and die room	31	19	5	2	3	2	45	34	8	2	1	
Pattern shop	19	10	6	2	1		20	14	5	1		
Plate or structural fabrication	497	49	155	134	76	83	212	52	94	46	12	8
Stamping, blanking, forming, or drawing	132	47	38	24	12	11	460	124	209	90	17	20

NOTE:

In the Structural and Ornamental Products Industry 495 establishments did not answer this inquiry. Of these, 451 had fewer than 20 employees; 43 had between 20 and 99 employees; and 1 had 100 or more employees.

In the Metal Doors, Sash, and Trim Industry 100 establishments did not answer this inquiry. Of these, 92 had fewer than 20 employees; 7 had between 20 and 99 employees; and 1 had 100 or more employees.

In the Boiler Shop Products Industry 199 establishments did not answer this inquiry. Of these, 177 had fewer than 20 employees; 21 had between 20 and 99 employees; and 1 had 100 or more employees.

In the Sheet-Metal Work Industry 756 establishments did not answer this inquiry. Of these, 709 had fewer than 20 employees; 44 had between 20 and 99 employees; and 3 had 100 or more employees.

METAL STAMPING, COATING AND ENGRAVING; LIGHTING FIXTURES

This report shows the 1947 Census of Manufactures statistics for establishments primarily engaged in the production of vitreous-enameled products, stamped and pressed metal products, and lighting fixtures and in stamping, enameling, japanning, lacquering, galvanizing, engraving, and plating materials for the trade. These establishments have been classified in seven industries described separately below.

The Standard Industrial Classification lists an eighth industry in the Metal Stamping, Coating, and Engraving group—namely, Powder Metallurgy, number 3464. However, it was not possible from the returns for the 1947 census to identify such establishments with reasonable accuracy. Products made by the powder metallurgy process, therefore, are classified by the type of product made, with many such establishments appearing in Industry 3566, Mechanical Power-Transmission Equipment (Except Ball and Roller Bearings).

Vitreous-Enameled Products *(Standard Industrial Classification No. 3461.)*—This industry comprises establishments primarily engaged in manufacturing vitreous-enameled kitchen, household, and hospital utensils; table tops; refrigerator, stove, and washing-machine parts; etc. Establishments primarily engaged in manufacturing enameled-iron plumbing fixtures are classified in Industry 3431.

Establishments classified in the Vitreous-Enameled Products Industry differ from those classified in Industry 3465, Enameling and Lacquering by the nature of the operations performed in the establishment. Vitreous-Enameled Products Industry establishments are primarily engaged in producing vitreous-enameled products from their own materials, although many of them do vitreous-enamel some materials owned by others, while those in the Enameling and Lacquering Industry are primarily engaged in vitreous-enameling materials owned by others. Industry 3461 covers only vitreous (or porcelain) enameling while Industry 3465 covers both vitreous and other types of enameling (such as baked enameling).

Data on porcelain enameled products were collected monthly during 1947 on Bureau of the Census Form M75B. The current survey and 1947 census totals for porcelain enameled products differ because some products, such as signs and reflectors, which were included in the current survey on Porcelain Enameled Products, have been included in other industries for the Census of Manufactures. Furthermore, some of the porcelain-enameled stove parts reported separately on the current survey were reported in combination with nonenameled stove parts in the census and the totals appear in the census statistics for the Heating and Cooking Apparatus Industry. The 1947 census and current survey data also differ for other products due to revisions of data previously submitted by some companies and the addition of a few companies which were not reporting currently.

Of the total value of $76 million for Vitreous-Enameled Products, establishments classified in the Vitreous-Enameled Products Industry accounted for 71 percent and establishments classified in other industries for the remaining 29 percent. Establishments classified in the Vitreous-Enameled Products Industry shipped vitreous-enameled products valued at $54 million, and received $19 million as payments for enameling materials owned by others or for shipments of other products such as nonelectric signs and advertising displays, fluorescent lighting equipment, warm air furnaces, stamped and spun household and hospital utensils, etc.

Metal Stampings *(Includes Standard Industrial Classification Industries: Automobile Stampings, 3462; and Stamped and Pressed Metal Products, Except Automobile Stampings, 3463.)*—This industry comprises establishments primarily engaged in manufacturing metal stampings of ferrous or nonferrous metal such as bottle caps and tops; stamped kitchen, household, and hospital utensils; perforated metal; stamped and pressed machine parts; and automobile stampings such as fenders, tops, hub caps, body parts, and trim. Establishments primarily engaged in stamping and spinning metal for the trade are also included in this industry; but establishments primarily engaged in manufacturing stamped vitreous-enameled products are classified in Industry 3461, Vitreous-Enameled Products, and establishments primarily engaged in assembling complete automobile bodies are classified in Group 371, Motor Vehicles and Equipment.

According to the Standard Industrial Classification, establishments primarily engaged in manufacturing automobile stampings constitute a separate industry from those manufacturing stampings, other than automobile. However, many establishments producing automobile stampings also produce other types of stampings. In addition, since a number of large stamping departments of automobile manufacturers are integrated with their body and assembly plants, it has not been possible to obtain adequate coverage of automobile stampings. For these reasons, the Automobile Stampings Industry is not shown as a separate industry but has been combined with the Stamped and Pressed Metal Products, Except Automobile Stampings, Industry.

This combined 1947 census industry includes the two 1939 census industries "Automobile Stampings" and "Stamped and Pressed Metal Products (Except Automobile Stampings)" as well as household and hospital utensils made of tinplate, classified in "Tin Cans and Other Tinware" in 1939, and household and hospital utensils made of aluminum, classified in "Aluminum Ware, Kitchen, Hospital and Household" in 1939. The reports for 1939 were retabulated in order to provide statistics

comparable with 1947. Data for earlier years, however, are not available.

The products of the Metal Stampings Industry fall into two broad categories—job stampings and finished products. The job stampings are mainly parts which are sold to other manufacturers for incorporation into products such as automobiles, refrigerators, stoves, washing machines, etc. These parts may be made from materials owned by the stamping establishment or from materials owned by the customer. Separate data are shown in table 6 for stamping, drawing, or spinning work done on materials owned by others. The finished products produced by establishments in the industry include cooking, kitchen, and hospital utensils (except pressure cookers and porcelain enameled utensils), pails, ash cans, garbage cans, perforated metal products, metal commercial and home canning closures, as well as a large variety of miscellaneous items.

Data on the metal commercial and home-canning closures classified in this industry are collected monthly by the Bureau of the Census on Form M75C. The 1947 census data on metal closures differ slightly from those published in the current survey due to minor revisions submitted by some companies and the addition of a few small companies which were not covered in the current survey. The data shown in table 6 include values, for each product item, which are not shown in the current survey. The current survey also covers other types of closures in addition to metal, but in accordance with the Standard Industrial Classification, the 1947 census includes them in their appropriate industry—plastic, glass, or rubber.

Of the total value of $1,199 million of metal stampings, 18 percent was shipped by establishments classified in other industries. Establishments classified in the Metal Stampings Industry shipped $977 million of metal stampings and $161 million of other products such as enameled-iron and metal plumbing fixtures; sheet-metal products; vitreous-enameled cooking and kitchen utensils; jigs, fixtures, etc.; cork products; etc.

Enameling and Lacquering *(Full Standard Industrial Classification title and number: Enameling, Japanning, and Lacquering, 3465.)*—This industry comprises establishments primarily engaged in enameling, japanning, and lacquering metal products for the trade.

In enameling materials owned by others, establishments in this industry differ from those classified in Industry 3461, Vitreous-Enameled Products, which are primarily engaged in manufacturing vitreous-enameled products from their own materials. In addition, Industry 3465 covers both vitreous and other types of enameling (such as baked enameling) while Industry 3461 covers only vitreous-enameling.

Galvanizing *(Full Standard Industrial Classification title and number: Galvanizing and Other Hot-Dip Coating, 3466.)*—This industry comprises establishments primarily engaged in galvanizing iron and steel sheets or formed products; in coating iron sheets or formed products with aluminum, lead, or zinc; and in retinning cans and utensils. Most of the work done in this industry is done on materials owned by others. Rolling mills engaged in galvanizing, tinning, and other coating are classified in Industry 3312.

Engraving on Metal *(Standard Industrial Classification No. 3467.)*—This industry comprises establishments primarily engaged in engraving, chasing, and etching jewelry, silverware, notarial seals, and other metal products for the trade, for purposes other than printing. Establishments primarily engaged in preparing metal lithographic plates and in printing from such media are classified in Industry 2761, Lithographing; establishments primarily engaged in engraving and etching steel and copper plates and in using these plates to print stationery, visiting cards, etc., are included in Industry 2792, Engraving and Plate Printing; and establishments primarily engaged in preparing photoengraved plates (halftones and line-cuts) are classified in Industry 2793, Photoengraving.

Plating and Polishing *(Full Standard Industrial Classification title and number: Electroplating, Plating, and Polishing, 3468.)*—This industry comprises establishments primarily engaged in all types of electroplating, plating, and metal-polishing work. Most of the work done in this industry is done on materials owned by others.

Lighting Fixtures *(Standard Industrial Classification No. 3471.)*—This industry comprises establishments primarily engaged in manufacturing lighting fixtures and equipment of any type, including electric and gas lighting fixtures, carbide, kerosene, and gasoline lamps, and metal reflectors and fittings. Establishments primarily engaged in producing glassware for lighting fixtures are classified in Major Group 32, and electric light bulbs, tubes, and related light sources in Industry 3651.

Of the total value of $471 million of lighting fixtures, 10 percent was shipped by establishments classified in other industries. Establishments classified in the Lighting Fixture Industry shipped $423 million of lighting fixtures and $45 million of other products such as gray-iron castings, wiring devices, vitreous-enameled products, etc.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Vitreous-enameled products:								
1947	49	12,240	$28,070	11,061	$22,917	$45,116	$29,266	$74,382
1939	55	12,480	15,283	10,809	11,442	23,891	20,348	44,239
1937 [4]	48	n.a.	n.a.	11,326	11,362	21,822	19,293	41,115
Metal stampings:								
1947	1,981	132,011	388,038	113,976	304,120	642,483	521,816	1,164,299
1939 [5]	965	n.a.	n.a.	57,182	69,978	168,209	158,082	326,291
Enameling and lacquering:								
1947	261	4,025	10,188	3,653	8,653	16,638	7,230	23,868
1939	80	2,123	2,808	1,821	2,062	4,480	2,456	6,936
1937 [4]	74	n.a.	n.a.	2,868	3,287	6,484	3,656	10,140
Galvanizing:								
1947	125	3,056	8,636	2,711	6,548	15,296	11,815	27,111
1939	83	1,459	2,180	1,212	1,343	3,683	2,513	6,196
1937	64	1,290	2,112	1,119	1,376	3,467	2,527	5,994
1935	65	1,404	1,887	1,201	1,269	3,061	2,133	5,194
1933	54	861	797	761	661	1,527	1,164	2,691
1931	60	n.a.	n.a.	1,011	1,170	2,391	1,669	4,060
1929	65	1,338	2,237	1,125	1,564	3,728	3,939	7,667
1927	59	1,144	2,033	953	1,449	3,229	3,722	6,951
1925	54	998	1,691	804	1,128	3,041	2,892	5,933
1923	51	1,036	1,655	877	1,183	2,964	3,363	6,327
1921	51	825	1,267	685	844	1,857	2,161	4,018
1919	52	1,932	2,850	1,665	2,248	3,944	10,532	14,476
1914	48	1,863	1,293	1,580	922	2,187	6,293	8,480
1909	46	1,663	1,044	1,447	787	1,619	5,719	7,338
1904	36	1,423	812	1,256	620	1,675	4,744	6,419
1899	28	587	276	535	229	793	1,678	-2,471
Engraving on metal:								
1947	219	3,428	10,054	2,929	8,176	16,252	4,291	20,543
1939	94	1,683	2,690	1,419	1,866	4,186	1,678	5,864
1937	77	2,584	3,762	2,152	2,771	6,016	2,865	8,881
1935	101	2,667	3,499	2,190	2,449	4,909	2,752	7,661
1933	77	1,252	1,320	1,089	1,094	2,504	921	3,425
1931	133	n.a.	n.a.	1,467	2,048	4,167	1,440	5,607
1929	189	2,651	4,540	2,240	3,212	8,351	2,583	10,934
1927	173	2,131	3,562	1,805	2,612	5,853	2,078	7,931
1925	188	2,131	3,539	1,827	2,691	6,446	2,177	8,623
1923	210	2,167	3,528	1,887	2,853	6,301	2,820	9,121
1921	193	1,450	2,152	1,276	1,760	3,453	1,397	4,850
1919	478	2,123	2,883	1,878	2,302	5,424	1,927	7,351
1914	486	1,752	1,302	1,536	1,076	2,538	596	3,134
1909	253	1,482	989	1,308	821	1,899	351	2,250
1904	305	1,748	1,192	1,573	1,032	2,046	376	2,422
1899	277	1,039	606	964	543	1,265	203	1,468
Plating and polishing:								
1947	1,802	28,223	76,345	25,596	64,460	125,388	51,104	176,492
1939	643	9,653	12,548	8,206	9,383	20,868	7,300	28,168
1937	547	9,330	12,300	8,256	9,828	19,871	6,815	26,686
1935	553	7,206	8,974	6,238	6,941	13,679	4,649	18,328
1933	423	4,435	4,295	3,956	3,715	7,680	2,352	10,032
1931	464	n.a.	n.a.	4,107	5,642	10,282	2,802	13,084
1929	534	6,843	12,094	5,928	9,537	18,929	4,799	23,728
1927	419	4,126	6,905	3,556	5,629	10,595	3,335	13,930
1925	449	3,843	6,340	3,337	5,254	9,900	2,541	12,441
1923	446	4,017	6,350	3,374	5,195	9,684	2,613	12,297
1921	392	2,844	4,325	2,460	3,563	6,081	1,960	8,041
1919	515	3,442	4,537	3,024	3,794	7,751	2,639	10,390
1914	479	2,918	2,094	2,584	1,713	3,437	1,336	4,773
1909	461	3,004	1,895	2,717	1,652	3,305	1,205	4,510
1904	312	2,087	1,225	1,943	1,093	2,218	747	2,965
1899	302	2,201	1,042	2,086	949	1,936	784	2,720
Lighting fixtures:								
1947	1,206	47,596	132,858	39,883	97,351	247,619	227,140	474,759
1939	568	25,686	35,758	20,477	23,238	64,731	59,851	124,582
1937	466	25,599	33,888	21,743	24,918	59,503	55,593	115,096
1935	501	20,113	24,342	16,677	17,232	45,586	40,114	85,700
1933	357	12,459	12,625	10,538	9,506	26,932	19,241	46,173
1931	523	n.a.	n.a.	14,790	18,150	44,738	30,312	75,050
1929	614	28,339	46,979	23,580	33,269	87,048	57,918	144,966
1927	481	25,821	41,898	21,030	29,207	72,193	55,609	127,802
1925	517	26,835	42,301	22,334	31,072	71,927	57,771	129,698
1923	535	27,359	39,567	22,919	29,097	66,339	52,640	118,979
1921	465	19,056	25,409	15,866	18,523	39,252	32,802	72,054
1919	512	21,776	26,228	18,155	19,095	41,679	38,688	80,367
1914	611	21,389	15,371	18,047	10,677	23,276	22,102	45,378
1909	619	22,475	14,734	18,861	10,393	24,590	20,467	45,057
1904	405	14,319	8,606	12,570	6,408	15,482	11,078	26,560
1899	370	12,532	6,680	11,238	5,188	11,859	7,962	19,821

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] Figures for years prior to 1935 do not include cost of contract work.

[3] For 1947 and 1929, value of products shipped; for all other years, value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[4] "Vitreous-enameled products" and "Enameling and lacquering" were formerly part of the discontinued industry "Stamped and pressed metal products; enameling, japanning, and lacquering." Separate figures for each industry are, therefore, not available for years prior to 1937.

[5] The returns for 1939 have been retabulated to provide figures comparable with those for 1947. No comparable figures are available for prior years.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Vitreous-enameled products, total [1]	49	12,240	$28,070	11,061	21,119	$22,917	$45,116	$29,266	$74,382	$2,977
New England	6	190	463	164	382	346	637	374	1,011	85
Massachusetts	6	190	463	164	382	346	637	374	1,011	85
Middle Atlantic	14	2,996	6,226	2,778	5,231	5,196	11,998	5,762	17,760	1,258
New York	7	514	1,316	457	983	1,052	2,161	1,124	3,285	65
Pennsylvania	7	2,482	4,910	2,321	4,248	4,144	9,837	4,638	14,475	1,193
East North Central	19	6,204	15,191	5,538	10,474	12,262	22,160	14,844	37,004	1,075
Ohio	11	4,609	10,705	4,132	7,661	8,648	14,842	10,421	25,263	456
Illinois	4	732	1,868	645	1,263	1,650	2,790	2,080	4,870	330
South Atlantic	3	1,752	3,902	1,550	2,815	3,179	6,491	4,333	10,824	263
East South Central	3	978	1,915	922	1,991	1,620	3,306	3,673	6,979	226
Pacific	4	120	373	109	226	314	524	280	804	70
Metal stampings, total [1]	1,981	132,011	388,038	113,976	231,309	304,120	642,483	521,816	1,164,299	44,846
New England	168	10,578	30,347	9,091	18,848	22,575	45,290	28,933	74,223	3,072
Massachusetts	85	3,107	8,399	2,700	5,526	6,227	13,900	7,704	21,604	635
Rhode Island	15	360	768	316	599	598	1,360	952	2,312	80
Connecticut	61	7,041	21,011	6,014	12,598	15,618	29,654	20,202	49,856	2,347
Middle Atlantic	549	38,139	113,606	32,532	65,107	88,406	179,820	141,436	321,256	9,620
New York	341	12,481	37,672	10,788	22,923	29,049	63,644	46,257	109,901	3,308
New Jersey	95	3,204	9,167	2,682	5,337	6,981	15,162	10,321	25,483	1,189
Pennsylvania	113	22,454	66,767	19,062	36,847	52,376	101,014	84,858	185,872	5,123
East North Central	901	66,029	201,806	58,112	118,618	159,130	343,620	278,394	622,014	24,101
Ohio	217	18,253	54,950	15,789	32,116	43,455	96,608	83,680	180,288	5,694
Indiana	73	4,827	13,284	4,174	8,473	10,274	23,540	19,373	42,913	1,421
Illinois	295	15,734	46,562	13,503	28,242	35,617	78,084	55,460	133,544	5,188
Michigan	237	19,808	64,675	17,470	34,127	52,148	101,501	91,686	193,187	9,911
Wisconsin	79	8,307	22,335	7,176	15,660	17,636	43,887	28,195	72,082	1,887
West North Central	96	3,852	9,885	3,359	6,816	7,805	17,601	11,736	29,337	2,041
Minnesota	42	1,727	4,878	1,447	2,986	3,578	8,768	5,238	14,006	1,325
Iowa	6	223	570	190	371	428	1,222	858	2,080	117
Missouri	33	1,810	4,206	1,637	3,274	3,609	7,324	5,406	12,730	577
South Atlantic	44	7,287	17,564	6,502	12,996	15,390	31,197	39,441	70,638	3,184
Georgia	7	574	1,194	529	1,055	1,034	2,720	2,629	5,349	114
East South Central	26	621	1,281	548	1,066	941	3,050	2,083	5,133	206
Kentucky	15	337	772	297	577	568	1,535	1,055	2,590	135
West South Central	26	673	1,547	563	1,155	1,198	2,540	2,520	5,060	178
Texas	15	357	856	280	565	631	1,316	1,288	2,604	143
West	171	3,932	12,002	3,269	6,703	8,675	19,365	17,273	36,638	2,444
California	151	3,809	11,724	3,156	6,496	8,426	18,884	17,047	35,931	2,426
Enameling and lacquering, total [1]	261	4,025	10,188	3,653	7,395	8,653	16,638	7,230	23,868	965
Northeast	120	1,165	2,599	1,064	2,157	2,188	4,100	1,837	5,937	143
New York	52	424	988	397	800	859	1,595	590	2,185	29
New Jersey	17	191	536	167	373	421	797	308	1,105	59
East North Central	102	2,373	6,337	2,136	4,301	5,340	10,299	4,384	14,683	656
Illinois	45	1,141	2,988	1,005	2,101	2,400	4,841	2,396	7,237	502
Michigan	25	660	1,930	622	1,203	1,755	3,017	1,111	4,128	72
Wisconsin	8	82	232	67	132	164	381	202	583	11
West North Central	12	148	333	140	278	310	564	241	805	28
Minnesota	6	105	259	98	194	237	395	190	585	19
South and West	27	339	919	313	659	815	1,675	768	2,443	138
Galvanizing, total [1]	125	3,056	8,636	2,711	5,695	6,548	15,296	11,815	27,111	681
Northeast	38	1,246	3,360	1,109	2,334	2,447	5,472	6,592	12,064	160
New York	11	168	436	143	295	344	560	487	1,047	61
Pennsylvania	12	588	1,823	521	1,089	1,247	3,285	5,304	8,589	40
East North Central	39	1,091	3,224	965	2,037	2,496	6,067	2,740	8,807	280
Ohio	10	279	888	248	559	667	1,898	684	2,582	68
Illinois	17	390	1,187	347	742	975	2,438	1,055	3,493	96
Wisconsin	3	254	638	223	468	472	933	491	1,424	55
West North Central	10	74	146	71	138	138	260	149	409	48
South	11	315	792	276	570	604	1,374	833	2,207	129
West	27	330	1,114	290	616	863	2,123	1,501	3,624	64
California	21	305	1,048	268	566	809	1,982	1,407	3,389	64
Engraving on metal, total [1]	219	3,428	10,054	2,929	6,144	8,176	16,252	4,291	20,543	680
New England	52	483	1,283	433	899	1,052	2,298	593	2,891	17
Massachusetts	32	419	1,141	371	775	911	2,018	562	2,580	15
Middle Atlantic	74	1,266	4,235	1,047	2,377	3,554	6,250	1,684	7,934	281
New York	51	1,166	3,882	957	2,197	3,273	5,578	1,542	7,120	276
East North Central	52	1,345	3,650	1,172	2,301	2,902	6,265	1,632	7,897	336
Illinois	25	769	2,321	657	1,394	1,819	3,906	1,287	5,193	312
Michigan	9	103	242	93	178	189	486	118	604	11
West North Central	10	42	91	36	76	76	161	41	202	1
South and West	31	292	795	241	491	592	1,278	341	1,619	45
California	16	227	672	185	374	487	1,019	231	1,250	38

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947—Continued

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Plating and polishing, total [1]	1,802	28,223	$76,345	25,596	52,156	$64,460	$125,388	$51,104	$176,492	$6,137
New England	231	3,447	8,910	3,125	6,487	7,550	14,488	4,008	18,496	708
Massachusetts	89	1,356	3,341	1,233	2,455	2,930	5,413	1,523	6,936	263
Rhode Island	54	461	1,076	430	887	905	1,774	518	2,292	38
Connecticut	84	1,569	4,341	1,406	3,014	3,574	7,035	1,895	8,930	405
Middle Atlantic	498	6,269	16,442	5,699	11,816	13,616	27,455	10,711	38,166	1,323
New York	329	3,747	10,061	3,415	6,995	8,273	16,492	5,160	21,652	696
New Jersey	88	1,178	3,193	1,071	2,312	2,660	5,550	1,540	7,090	378
Pennsylvania	81	1,344	3,188	1,213	2,509	2,683	5,413	4,011	9,424	249
East North Central	670	14,543	40,743	13,145	26,455	34,463	66,945	31,276	98,221	3,476
Ohio	182	3,610	9,818	3,261	6,531	8,221	15,785	8,766	24,551	908
Indiana	53	878	2,392	792	1,594	1,979	4,207	1,337	5,544	382
Illinois	204	4,177	12,329	3,743	7,892	10,392	20,078	6,547	26,625	716
Michigan	186	5,285	14,690	4,811	9,416	12,634	24,566	13,991	38,557	1,375
Wisconsin	45	593	1,514	538	1,022	1,237	2,309	635	2,944	95
West North Central	78	925	2,423	822	1,715	1,982	3,686	1,184	4,870	179
Minnesota	31	304	826	271	571	652	1,356	511	1,867	35
Iowa	8	126	253	104	235	219	380	122	502	40
Missouri	34	446	1,219	404	802	1,004	1,716	485	2,201	99
South	86	800	1,681	731	1,481	1,491	2,664	820	3,484	93
Maryland	8	102	258	84	182	217	388	119	507	9
Tennessee	5	102	209	91	184	180	228	108	336	10
Texas	19	133	271	123	248	237	528	156	684	39
West	239	2,239	6,146	2,074	4,202	5,358	10,150	3,105	13,255	358
California	211	2,087	5,707	1,935	3,933	4,983	9,462	2,915	12,377	334
Lighting fixtures, total [1]	1,206	47,596	132,858	39,883	80,259	97,351	247,619	227,140	474,759	9,797
New England	69	5,015	13,305	4,016	8,293	9,784	26,797	27,178	53,975	1,786
Massachusetts	44	3,489	9,482	2,799	5,705	6,840	19,463	18,665	38,128	1,075
Middle Atlantic	613	12,916	36,742	10,757	22,095	25,092	70,328	66,645	136,973	1,947
New York	435	7,318	22,198	5,974	12,390	14,495	43,799	41,446	85,245	888
New Jersey	74	2,265	6,144	1,898	3,946	4,439	9,396	10,151	19,547	379
Pennsylvania	104	3,333	8,400	2,885	5,759	6,158	17,133	15,048	32,181	680
East North Central	309	25,346	70,627	21,573	42,536	54,111	127,135	108,807	235,942	4,979
Ohio	63	7,655	22,036	6,561	12,636	17,341	35,072	30,302	65,374	2,133
Illinois	190	9,037	24,798	7,442	15,152	17,364	47,027	44,073	91,100	1,603
Michigan	26	1,252	4,069	1,125	2,256	3,471	12,635	8,112	20,747	195
West North Central	43	1,514	4,080	1,246	2,647	2,615	8,449	10,671	19,120	398
Missouri	32	1,328	3,654	1,092	2,320	2,303	7,585	9,616	17,201	341
South	25	267	503	229	404	364	831	1,664	2,495	78
West	147	2,538	7,601	2,062	4,284	5,385	14,079	12,175	26,254	609

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Vitreous-enameled products: *East North Central*, Indiana, 3; Michigan, 1; *South Atlantic*, Maryland, 1; West Virginia, 2; *East South Central*, Kentucky, 1; Tennessee, 2; *Pacific*, Washington, 1; California, 3.

Metal stampings: *New England*, Maine, 2; New Hampshire, 5; *West North Central*, North Dakota, 1; Nebraska, 2; Kansas, 12 (79); *South Atlantic*, Delaware, 3 (854); Maryland, 16 (3,769); Virginia, 2; West Virginia 10 (2,030); North Carolina, 2; Florida, 4 (17); *East South Central*, Tennessee, 9; Alabama, 2; *West South Central*, Arkansas, 1; Louisiana, 3 (228); Oklahoma, 7; *West*, Colorado, 3; Utah, 1; Washington, 10 (73); Oregon, 6 (35).

Enameling and lacquering: *Northeast*, Massachusetts, 12 (112); Rhode Island, 21 (166); Connecticut, 7 (93); Pennsylvania, 11 (179); *East North Central*, Ohio, 19 (440); Indiana, 5 (50); *West North Central*, Missouri, 6 (43); *South and West*, Alabama, 1; Oklahoma, 1; Oregon, 1; California, 24 (317).

Galvanizing: *Northeast*, Massachusetts, 6 (101); New Jersey, 9 (389); *East North Central*, Indiana, 4 (92); Michigan, 5 (76); *West North Central*, Minnesota, 2; Missouri, 6 (52); Nebraska, 1; Kansas, 1; *South*, Maryland, 2; Georgia, 1; Florida, 1; Alabama, 1; Louisiana, 1; Oklahoma, 2; Texas, 3 (58); *West*, Idaho, 1; Washington, 2; Oregon, 3 (17).

Engraving on metal: *New England*, New Hampshire, 1; Rhode Island, 13 (38); Connecticut, 6; *Middle Atlantic*, New Jersey, 16 (81); Pennsylvania, 7 (19); *East North Central*, Ohio, 13 (74); Indiana, 2; Wisconsin, 3; *West North Central*, Minnesota, 3 (13); Missouri, 4 (11); Nebraska, 3 (18); *South and West*, Maryland, 4 (29); District of Columbia, 1; Georgia, 1; Florida, 1; Louisiana, 1; Texas, 4 (17); Colorado, 1; Washington, 1; Oregon, 1.

Plating and polishing: *New England*, Maine, 1; New Hampshire, 2; Vermont, 1; *West North Central*, Nebraska, 2; Kansas, 3; *South*, Delaware, 2; District of Columbia, 6 (50); Virginia, 5 (31); West Virginia, 1; North Carolina, 1; South Carolina, 2; Georgia, 7 (91); Florida, 6 (30); Kentucky, 8 (60); Alabama, 4 (29); Mississippi, 1; Arkansas, 1; Louisiana, 7 (35); Oklahoma, 3 (24); *West*, Colorado, 3; Arizona, 1; Utah, 1; Washington, 13 (61); Oregon, 10 (48).

Lighting fixtures: *New England*, New Hampshire, 1; Vermont, 1; Rhode Island, 5; Connecticut, 18 (1,292); *East North Central*, Indiana, 11 (6,329); Wisconsin, 19 (1,073); *West North Central*, Minnesota, 2; Iowa, 4 (58); Nebraska, 1; Kansas, 4 (101); *South*, Maryland, 3 (16); Virginia, 2; West Virginia, 2; North Carolina, 1; Georgia, 2; Florida, 3 (33); Kentucky, 1; Tennessee, 2; Alabama, 1; Arkansas, 1; Oklahoma, 1; Texas, 6 (30); *West*, Colorado, 5 (87); Utah, 2; Washington, 4 (149); Oregon, 2; California, 134 (2,254).

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TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry						
	Vitreous-enameled products	Metal stampings	Enameling and lacquering	Galvanizing	Engraving on metal	Plating and polishing	Lighting fixtures
ALL ESTABLISHMENTS							
Number of establishments	49	1,981	261	125	219	1,802	1,206
All employees:							
Number (average for the year)	12,240	132,011	4,025	3,056	3,428	28,223	47,596
Salaries and wages, total	$28,070	$388,038	$10,188	$8,636	$10,054	$76,345	$132,858
Production and related workers:							
Number (average for the year)	11,061	113,976	3,653	2,711	2,929	25,596	39,883
Man-hours, total ... thousands	21,119	231,309	7,395	5,695	6,144	52,156	80,259
Wages, total	$22,917	$304,120	$8,653	$6,548	$8,176	$64,460	$97,351
Value added by manufacture	$45,116	$642,483	$16,638	$15,296	$16,252	$125,388	$247,619
ESTABLISHMENTS REPORTING DETAILED STATISTICS							
Number of establishments	49	1,450	155	76	104	986	865
All employees:							
Number (average for the year)	12,240	128,869	3,406	2,686	3,063	23,766	46,089
Salaries and wages, total	$28,070	$380,485	$9,000	$7,760	$9,070	$66,401	$120,508
Production and related workers:							
Number (average for the year)	11,061	110,951	3,051	2,366	2,570	21,270	38,425
Man-hours, total ... thousands	21,119	225,291	6,194	4,998	5,434	43,535	77,384
Wages, total	$22,917	$297,196	$7,520	$5,769	$7,233	$55,229	$94,224
Value added by manufacture	$45,116	$629,692	$14,580	$13,870	$14,369	$108,364	$241,262
Number of employees for pay period ended nearest Oct. 15:							
All employees	12,266	129,627	3,422	2,763	2,909	23,858	47,495
Male	7,503	100,185	2,613	2,504	1,967	19,957	32,225
Female	4,763	29,442	809	259	942	3,901	15,270
Production and related workers	11,087	111,757	3,073	2,441	2,433	21,345	39,663
Male	6,737	87,670	2,377	2,283	1,699	18,332	27,369
Female	4,350	24,087	696	158	734	3,013	12,294
Force-account construction workers	----	58	----	----	----	13	12
Administrative, supervisory, sales, and all other	1,179	17,812	349	322	476	2,500	7,820
Male	766	12,457	236	221	268	1,612	4,844
Female	413	5,355	113	101	208	888	2,976
All employees, number by month:							
January	12,231	130,355	3,599	2,574	3,345	24,397	47,666
February	12,199	130,665	3,611	2,601	3,355	24,239	48,114
March	12,489	130,510	3,571	2,703	3,333	24,025	47,818
April	12,412	129,032	3,509	2,555	3,243	24,018	45,815
May	12,239	127,235	3,435	2,701	2,992	23,948	44,567
June	12,259	126,249	3,263	2,689	3,015	23,362	43,786
July	11,544	124,343	2,980	2,669	2,860	22,894	43,053
August	11,996	127,288	3,020	2,683	2,861	22,611	44,416
September	12,223	129,339	3,287	2,801	2,866	22,812	45,917
October	12,266	129,627	3,422	2,763	2,909	23,858	47,495
November	12,519	130,687	3,527	2,703	2,964	24,198	47,410
December	12,478	132,051	3,520	2,688	3,038	24,364	46,873
Cost of materials, fuel, electricity, and contract work	$29,266	$511,231	$6,244	$10,852	$3,975	$44,389	$219,123
Materials, parts, containers, and supplies	26,642	489,615	5,392	10,063	3,520	37,261	211,163
Fuels, total	1,950	5,602	468	548	102	2,016	2,324
Bituminous coal	290	2,346	67	140	5	513	604
Anthracite	----	124	11	13	1	39	18
Coke	4	25	----	38	1	30	86
Fuel oils	802	1,465	120	155	46	936	974
Gas	842	1,447	243	193	46	443	611
Other fuels	12	195	27	9	3	55	31
Purchased electric energy	616	7,353	361	200	118	3,187	2,153
Contract and commission work	58	8,661	23	41	235	1,925	3,483
Value of inventories:							
Beginning of year, total	$7,289	$137,872	$875	$1,294	$2,176	$6,235	$58,808
Finished products	1,988	22,755	128	221	97	636	12,418
Materials, supplies, and work in process	5,301	115,117	747	1,073	2,079	5,599	46,480
End of year, total	9,038	158,791	856	1,291	2,359	7,474	68,129
Finished products	2,609	31,844	155	177	116	982	15,554
Materials, supplies, and work in process	6,429	126,947	701	1,114	2,243	6,492	52,575
Expenditures for plant and equipment:							
New plant and equipment	$2,977	$44,846	$965	$681	$680	$6,137	$9,797
Construction and major alteration of fixed plants	1,150	11,314	460	257	102	1,640	2,467
Buildings	740	10,429	445	212	102	1,550	2,309
Other construction	410	885	15	45	----	90	158
Machinery and equipment	1,827	33,532	505	424	578	4,497	7,330
Production machinery and equipment	1,700	30,553	443	271	501	4,082	6,566
Other machinery and equipment	127	2,979	62	153	77	415	770
Used plant and equipment, and land	67	3,880	55	61	29	536	1,506
Number of highway-type motor vehicles owned or leased:							
Trucks	55	791	55	71	8	481	247
By manufacturer's rated capacity:							
Under 1½ tons	11	255	20	8	4	239	99
1½ tons	31	322	23	20	4	182	101
Over 1½ tons and less than 3½ tons	4	160	11	23	----	44	32
3½ tons and less than 5 tons	5	24	1	8	----	15	6
5 tons and over	4	30	----	12	----	1	9
By body type:							
Van	7	68	7	9	----	44	28
Stake or platform	27	390	29	39	1	143	98
Panel or light delivery	12	236	15	11	7	242	89
All other trucks	9	97	4	12	----	52	32
Truck tractors	11	104	13	5	----	1	8
Trailers and semitrailers	12	156	29	5	----	1	15

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1–4 employees	5–9 employees	10–19 employees	20–49 employees	50–99 employees	100–249 employees	250–499 employees	500–999 employees	1,000–2,499 employees	2,500 employees and over
Vitreous-enameled products:											
Number of establishments	49	3	4	5	4	5	11	11	5	1	
Number of employees (average for the year)	12,240	(d)	*36*	78	146	346	1,831	3,970	*5,833*	(d)	
Value added by manufacture	$45,116	(d)	*$241*	$208	$527	$1,417	$7,949	$14,823	*$19,951*	(d)	
Metal stampings:											
Number of establishments	1,981	521	328	326	403	165	139	48	35	11	5
Number of employees (average for the year)	132,011	1,253	2,222	4,521	12,365	11,398	21,298	16,462	23,089	15,846	23,557
Value added by manufacture	$642,483	$5,975	$9,797	$20,874	$60,430	$59,511	$112,569	$84,204	$107,511	$78,443	$103,169
Enameling and lacquering:											
Number of establishments	261	90	77	48	33	7	5	1			
Number of employees (average for the year)	4,025	223	541	682	1,039	485	*1,055*	(d)			
Value added by manufacture	$16,638	$1,124	$1,961	$3,058	$4,007	$1,852	*$4,636*	(d)			
Galvanizing:											
Number of establishments	125	30	26	22	31	10	6				
Number of employees (average for the year)	3,056	70	176	300	876	713	921				
Value added by manufacture	$15,296	$416	$984	$1,601	$4,088	$3,903	$4,304				
Engraving on metal:											
Number of establishments	219	140	38	18	11	1	8	2	1		
Number of employees (average for the year)	3,428	269	251	236	*353*	(d)	*2,319*	(d)	(d)		
Value added by manufacture	$16,252	$1,462	$1,391	$1,524	*$1,558*	(d)	*$10,317*	(d)	(d)		
Plating and polishing:											
Number of establishments	1,802	703	464	289	236	77	26	5	1	1	
Number of employees (average for the year)	28,223	1,539	3,128	3,984	7,058	5,470	3,498	*3,546*	(d)	(d)	
Value added by manufacture	$125,388	$7,756	$14,062	$17,174	$30,675	$23,575	$16,656	*$15,490*	(d)	(d)	
Lighting fixtures:											
Number of establishments	1,206	427	235	185	189	91	46	15	15	2	1
Number of employees (average for the year)	47,596	952	1,601	2,650	5,809	6,223	6,947	5,300	9,510	*8,604*	(d)
Value added by manufacture	$247,619	$5,897	$8,503	$14,164	$30,557	$31,818	$37,041	$29,303	$49,616	*$40,720*	(d)

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[**Money figures in thousands of dollars**]

VITREOUS-ENAMELED PRODUCTS INDUSTRY	Shipped by—		
	Vitreous-enameled products industry	Other industries	All industries
Total shipments by the industry	$74,382		
A. Vitreous-enameled products	54,408	$21,951	$76,359
Vitreous-enameled cooking and kitchen utensils made from the establishment's own materials	32,092	4,860	36,952
Other vitreous-enameled products made from the establishment's own materials	22,146	17,063	39,209
Vitreous-enameled products, not reported by type, made from the establishment's own materials	170	28	198
B. Secondary products	19,007		
Receipts for vitreous-enameling utensils and other products owned by others	7,024		
Nonelectric signs and advertising displays	1,290		
Other secondary products (fluorescent lighting equipment; warm air furnaces; etc.)	10,693		
C. Miscellaneous receipts	[1] 967		

ENAMELING AND LACQUERING INDUSTRY	Shipped by—		
	Enameling and lacquering industry	Other industries	All industries
Total shipments by the industry	$23,868		
A. Enameling, japanning, and lacquering	23,361	(3)	(3)
B. Secondary products	407		
C. Miscellaneous receipts	[4] 100		

METAL STAMPINGS INDUSTRY	Shipped by—		
	Metal stampings industry	Other industries	All industries
Total shipments by the industry	$1,164,299		
A. Metal stampings	977,245	$221,340	$1,198,585
Job stampings, automotive	336,963	66,800	403,763
Job stampings, except automotive	279,299	80,495	359,794
Pails, ash cans, and garbage cans (except shipping containers)	24,335	9,553	33,888
Metal home canning closures, except one-piece zinc (porcelain lined) screw caps	11,942		11,942
Metal commercial closures, except crowns	44,424	1,494	45,918
Crowns	53,504	6,925	60,429
Stamped and spun household and hospital utensils (except porcelain enameled)	133,140	21,987	155,127
Perforated metal end products, and other stamped and pressed metal end products	65,964	27,050	93,014
Metal stampings, not reported by type	27,674	7,036	34,710
B. Secondary products	160,841		
Enameled-iron and metal plumbing fixtures	2,541		
Sheet-metal products	12,301		
Vitreous-enameled cooking and kitchen utensils	4,443		
Jigs, fixtures, etc	33,307		
Needles, pins, hooks and eyes, and similar notions	5,572		
Cork products	6,052		
Other secondary products (metal cans; doors and door frames; kitchen furniture; metal shipping barrels and drums; steel shipping packages, kegs, and pails; etc.)	96,625		
C. Miscellaneous receipts	26,213		
Contract and commission work	[2] 3,913		
Repair work	552		
Scrap and salable refuse	18,823		
Nonmanufacturing activities	2,925		

See footnotes at end of table.

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947—Continued

GALVANIZING INDUSTRY	Shipped by— Galvanizing industry	Other industries	All industries
Total shipments by the industry	$27,111		
A. Galvanizing and other hot-dip coating	20,199	(5)	(5)
B. Secondary products	1,268		
C. Miscellaneous receipts	[6] 5,644		
Nonmanufacturing activities	4,230		
Other receipts	[6] 1,414		

ENGRAVING ON METAL INDUSTRY	Shipped by— Engraving on metal industry	Other industries	All industries
Total shipments by the industry	$20,543		
A. Engraving on metal	17,268	(7)	(7)
B. Secondary products	2,918		
C. Miscellaneous receipts	[8] 357		

PLATING AND POLISHING INDUSTRY	Shipped by— Plating and polishing industry	Other industries	All industries
Total shipments by the industry	$176,492		
A. Electroplating, plating, and polishing	172,475	(9)	(9)
B. Secondary products	2,288		
C. Miscellaneous receipts	[10] 1,729		

LIGHTING FIXTURES INDUSTRY	Shipped by— Lighting fixtures industry	Other industries	All industries
Total shipments by the industry	$474,759		
A. Lighting fixtures	422,530	$48,618	$471,148
Incandescent lighting equipment, except searchlights, vehicular, hand portable, street, etc.	127,368	9,999	137,367
Searchlights, floodlights, and spotlights	7,418	3,138	10,556
Vehicular lighting equipment, incandescent and fluorescent	109,796	5,257	115,053
Hand portable equipment, electric, incandescent	15,120	11,140	26,260
Fluorescent lighting equipment, except vehicular	116,670	6,320	122,990
Nonelectric lighting equipment	5,846	4,464	10,310
Electric lighting equipment, n.e.c., including street and highway lighting equipment	20,747	5,449	26,196
Lighting fixtures, not specified by type	19,565	2,851	22,416
B. Secondary products (gray-iron castings; wiring devices; vitreous-enameled products; etc.)	45,022		
C. Miscellaneous receipts	7,207		
Contract and commission work	3,053		
Repair work	2,016		
Scrap and salable refuse	2,138		

[1] Does not include receipts for vitreous-enameling of materials owned by others. These receipts are included in Section B, secondary products.
[2] Excludes receipts for job stamping done on materials owned by others. These receipts are included in Section A.
[3] Data on receipts for enameling, japanning, and lacquering not available for establishments classified outside the Enameling and Lacquering Industry.
[4] Does not include receipts for enameling, japanning, and lacquering of materials owned by others. These receipts are included in Section A.
[5] Data on receipts for galvanizing and other hot-dip coating not available for establishments classified outside the Galvanizing Industry.
[6] Does not include receipts for galvanizing and other hot-dip coating of materials owned by others. These receipts are included in Section A.
[7] Data on receipts for engraving not available for establishments classified outside the Engraving on Metal Industry.
[8] Does not include receipts for engraving materials owned by others. These receipts are included in Section A.
[9] Data on receipts for electroplating, plating, and polishing not available for establishments classified outside the Plating and Polishing Industry.
[10] Does not include receipts for electroplating, plating, and polishing of materials owned by others. These receipts are included in Section A.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	1947: Total shipments and interplant transfers of products made from the establishment's own materials (value f.o.b. plant)	1947: Receipts for work done on materials owned by others (value f.o.b. plant)	1939: Total production for sale and interplant transfer (value f.o.b. plant)
Vitreous-enameled products	$76,359	[1] $7,024	[2] $34,386
Cooking and kitchen utensils (including household, hospital, and commercial)	36,952	(d)	15,807
Other vitreous-enameled products	39,209	(d)	18,579
Table tops (kitchen cabinets, dinette, and breakfast sets)	5,190	(d)	3,004
Stove parts (sold separately)	5,449	[1] 3,286	3,373
Refrigerator parts (household and commercial, sold separately)	6,210	[1] 1,774	2,403
Store fronts	1,385	(d)	1,237
Other architectural porcelain parts (exterior and interior)	1,476	[1] 32	
Hospital utensils, except cooking and kitchen	1,665		758
Washing machine parts (sold separately)	12,868	[1] 321	3,671
Other porcelain enameled products	4,966	[1] 1,296	4,133
Vitreous-enameled products, not reported by type	198		
Job stampings, automotive (truck, bus, and passenger car) [3]	392,624	11,139	[2] 46,440
Job stampings, except automotive [3]	340,616	19,178	[2] 82,537
Agricultural equipment stampings, including tractor	25,591	497	n.a.
Aviation stampings	8,503	690	
Electrical appliance stampings	29,577	2,574	
Furniture stampings	6,060	652	
Office machine stampings	2,947	632	
Radio and television stampings	27,686	1,226	
Refrigerator stampings	43,123	1,994	
Stove, heater, and air conditioner stampings	21,316	1,600	
Washing machine stampings	22,307	730	
Other job stampings	137,111	8,267	
Job stampings (except automotive), not reported by type	16,395	316	

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers		1939 Total production for sale and interplant transfer	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Pails, ash cans, and garbage cans (except shipping containers)			$33,888		$13,606
Galvanized steel			29,064		12,331
Other steel			4,824		1,275
Metal home canning closures, except one-piece zinc (porcelain lined) screw caps [4]			11,942		
Metal screw bands for use with self-sealing metal lids	M gross	3,498	3,051		
Self-sealing (flowed-on-rubber) metal lids	do	10,143	8,891		25,758
Metal commercial closures, except crowns	M units	8,924,579	45,918		
Metal caps: screw thread and lug types	do	6,029,492	27,073		
Metal caps: vacuum, friction, and other types	do	2,895,087	18,845		
Crowns	M gross	320,330	60,429	n.a.	22,114
Stamped and spun household and hospital utensils (except porcelain enameled)			155,127		n.a.
Cooking and kitchen utensils (including household, hospital, and commercial):					
Tinned			19,127		(5)
Stainless steel			30,944		
Aluminum			87,715		
Other metal			11,661		
Cooking and hospital utensils, not reported by type of material			4,433		
Hospital utensils, except cooking and kitchen			1,247		[6] 67,920
Perforated metal end products, and other stamped and pressed metal end products			93,014		
Perforated metal end products			7,394		
Other stamped and pressed metal end products [4]			85,620		
Metal stampings, not reported by type			34,710		

PRODUCT	1947 Total shipments and interplant transfers (value f.o.b. plant)	1939 Total production for sale and interplant transfer (value f.o.b. plant)
Enameling, galvanizing, engraving, and plating (Consists principally of receipts for work done on materials owned by others. For each item, the value represents only work done by establishments classified in the industry to which the product (service) is primary)	$233,303	$45,386
Enameling, japanning, and lacquering	23,361	[7] 5,158
Galvanizing and other hot-dip coating	20,199	6,196
Engraving on metal	17,268	5,864
Electroplating, plating, and polishing	172,475	28,168
Incandescent lighting equipment, except searchlights, vehicular, hand portable, street, etc.	137,367	[8] 59,889
Fixtures (excluding portable lamps):		
Residential type:		
Interior ceiling or pendant (including bath and kitchen)	20,804	[8] 15,415
Interior wall or bracket (including bath and kitchen)	8,111	
Other residential type fixtures (outdoor, porch, etc.)	4,847	[8] 2,072
Commercial and institutional type:		
Ornamental type (primarily for auditorium, church, and theater)	4,730	[8] 2,321
Utilitarian type (primarily for public building, bank, store, office building, school, etc.), other than interior display	5,615	[8] 8,469
Specialized commercial and institutional lighting fixtures, such as interior display, etc.	2,691	[8] 757
Industrial type:		
General lighting	5,754	
Localized lighting	2,860	[8] 3,765
Other industrial type fixtures (including explosion-proof, vapor-proof, and dust-tight)	3,753	

PRODUCT	1947 Total shipments and interplant transfers (value f.o.b. plant)	1939 Total production for sale and interplant transfer (value f.o.b. plant)
Incandescent lighting equipment, except searchlights, vehicular, hand portable, street, etc.—Continued		
Portable lamps:		
Residential type:		
Complete with shade:		
Floor, bridge, and torch lamps	$25,191	
Table lamps	24,264	
Pin-up lamps	2,313	
Other (including boudoir)	7,532	
Lamps sold without shades:		[8] $27,090
Floor, bridge, and torch lamps	5,156	
Table lamps	3,464	
Pin-up lamps	954	
Other (including boudoir)	3,037	
Other portable lamps (including commercial and institutional, and industrial types)	1,430	
Incandescent lighting equipment, except searchlights, vehicular, hand portable, street, etc., not specified by type	4,861	
Searchlights, floodlights, and spotlights	10,556	5,663
Incandescent type:		
Floodlights (general type)	6,650	
Searchlights	1,316	5,663
Spotlights (including such items as indoor and stage, but excluding vehicular type)	1,474	
Searchlights, floodlights, and spotlights, not specified by type	1,116	
Vehicular lighting equipment, incandescent and fluorescent	115,053	n.a.
Incandescent type:		
Motor vehicle lighting:		
Headlights, sealed beam units (except glass sealed beam)	32,388	
Spot, fog, and auxiliary lighting equipment	32,326	[8] 26,557
Other (park, dome, tail lights, etc.)	42,076	
Other vehicular type lighting equipment, such as aircraft, watercraft, railway locomotive and car, streetcar, etc.	6,001	(9)
Fluorescent type	2,262	(9)

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	1947 Total shipments and interplant transfers (value f.o.b. plant)	1939 Total production for sale and interplant transfer (value f.o.b. plant)
Hand portable equipment, electric, incandescent	$26,260	n.a.
Flashlights and flashlight lanterns (one to five cells)	24,191	$4,916
Other, such as miners' lights, emergency warning lights, generator flashlights, etc.	1,803	(9)
Electric hand portable equipment, not specified by kind	266	----------
Fluorescent lighting equipment, except vehicular	122,990	(8)
Combinations of incandescent and fluorescent lighting equipment, complete units	982	----------
Fluorescent lighting equipment:		
Fixtures (excluding portable lamps):		
Residential type	15,606	(8)
Commercial or institutional type:		
Pendant or surface	44,459	(8)
Recessed	9,518	(8)
Industrial type:		
General lighting	34,911	(8)
Other industrial fixtures, including localized lighting, explosion-proof, vapor-proof, and dust-tight	3,745	(8)
Portable lamps (desk, etc.)	3,508	(8)
Other fluorescent lighting equipment, complete units	962	(8)
Parts and accessories for fluorescent lighting equipment, excluding tubes, ballasts, starting switches, and lampholders, but including reflectors, etc.	4,385	(8)
Fluorescent lighting equipment, not specified by type	4,914	(8)
Nonelectric lighting equipment	$10,310	n.a.
Kerosene and gasoline lamps	1,317	$3,150
Kerosene and gasoline lanterns	5,460	
Other nonelectric lighting fixtures and equipment, and parts and accessories for nonelectric lighting equipment, including reflectors and fittings, incandescent mantles, etc.	3,533	(9)
Electric lighting equipment, n.e.c., including street and highway lighting equipment	26,196	n.a.
Incandescent type:		
Street and highway lighting equipment (including luminaries, standards, newels, brackets, and accessories, but excluding traffic signals)	12,353	3,320
Marine channel, shiplane, and marker lights (including beacons)	1,578	1,372
Aviation ground type lighting fixtures (airport, airway, seadrome, and flight deck)	1,618	(9)
Railway and other vehicular route and operational area lighting equipment	1,303	(9)
Other incandescent electric lighting equipment, including parts and accessories such as reflectors, etc.	5,222	(9)
Other electric lighting equipment, including electrical discharge such as mercury vapor, sodium vapor, etc. (except signs)	4,036	(9)
Electric lighting equipment, n.e.c., not specified by type	86	----------
Lighting fixtures, not specified by type	22,416	728

[d] Data withheld to avoid disclosing figures for individual companies.
n.a.—Not available.
[1] Includes only payments received by establishments classified in the vitreous-enameled products industry.
[2] Data for 1939 include some receipts for work done on materials owned by others.
[3] "Job stampings" are mainly parts which are sold to other manufacturers for incorporation into their own products. Job stampings may be made from materials owned by the stamping establishment or from materials owned by the customer. These stampings are classified on the basis of the final or end product into which they are incorporated.
[4] "One-piece zinc (porcelain lined) screw caps" included in "Other stamped and pressed metal end products" to avoid disclosing figures for individul companies.
[5] A total of $20,469,000 was reported in 1939 for "Finished tinware, other than cans" which included the two 1947 census commodities: "Tinned cooking and kitchen utensils" and "Other tinware, except cooking and kitchen utensils." A distribution of this combined value is not available. For 1947, in addition to $19,127,000 worth of "Tinned cooking and kitchen utensils," $25,016,000 worth of "Other tinware, except cooking and kitchen utensils" was reported. The latter is included in Industry 3411, Tin Cans and Other Tinware.
[6] Includes $22,669,000 worth of stamped aluminum cooking utensils, $1,143,000 of spun aluminum ware other than cooking utensils, $4,110,000 of other aluminum ware, $3,557,000 of nonferrous (except aluminum) spunware, $5,382,000 of perforated metal end products, and $31,059,000 of other finished articles made of nonferrous metal (except aluminum) and steel.
[7] In 1939, in addition to the $5,158,000 of receipts reported by establishments classified in the Enameling and Lacquering Industry, $1,878,000 of receipts were reported by establishments classified in other industries.
[8] Separate data were not collected on fluorescent lighting fixtures in 1939. The 1939 data for incandescent lighting fixtures, therefore, include a very small amount of fluorescent lighting fixtures.
[9] Separate data, for 1939, are not available for "Other vehicular type lighting equipment," "Other electric hand portable equipment such as miners' lights, etc.," "Other nonelectric lighting fixtures and equipment, and parts and accessories," "Aviation ground type lighting fixtures," "Railway and other vehicular route and operational area lighting equipment," "Other incandescent electric lighting equipment, including parts and accessories such as reflectors, etc.," and "Other electric lighting equipment, including electrical discharge." The combined 1939 figure for these seven groups of commodities was $18,412,000.

TABLE 7.—SELECTED MATERIALS CONSUMED, BY KIND: 1947

[The table below summarizes the consumption of selected metal shapes by manufacturers during 1947. For each shape, manufacturing establishments were required to report consumption, in quantity and cost, provided that such usage during 1947 exceeded the following amounts: For iron castings, steel castings, each of six carbon steel shapes—50 short tons; for alloy steel bars and all other alloy steel—25 short tons; for stainless steel, brass and copper wire mill shapes, copper and brass castings, aluminum mill shapes and aluminum castings—10 short tons]

[Money figures in thousands of dollars]

METAL SHAPE	VITREOUS-ENAMELED PRODUCTS INDUSTRY			METAL STAMPINGS INDUSTRY			LIGHTING FIXTURES INDUSTRY		
	Establishments consuming more than specified quantities								
	Number	Short tons	Cost	Number	Short tons	Cost	Number	Short tons	Cost
Iron castings, rough and semifinished				20	7,710	$1,849	21	3,656	$1,074
Steel castings, rough and semifinished				5	905	209	(1)	1,179	296
Steel mill shapes and forms	n.a.	91,684	$8,419	n.a.	2,412,785	239,346	n.a.	127,009	15,905
Carbon steel:									
Bars and bar shapes				66	25,340	2,564	13	2,709	270
Sheet and strip	28	[2] 91,239	[2] 8,068	640	1,906,426	166,421	157	116,176	13,770
Structural shapes				10	1,699	159	(1)	(2)	(3)
Plates				48	53,135	4,287	(1)	[3] 343	[3] 31
Wire	(1)	(2)	(2)	58	20,071	1,851	12	1,480	171
All other mill shapes and forms				116	[4] 360,344	[4] 38,726	6	4,235	505
Alloy steel, except stainless:									
Bars and bar shapes				15	6,827	856	(1)	168	29
All other mill shapes and forms				10	5,912	946	(1)	165	30
Stainless steel	(1)	445	351	124	33,031	23,536	9	1,733	1,099
Copper and copper-base alloy:									
Brass and wire mill shapes and forms	(1)	168	102	170	43,520	26,906	62	10,787	7,321
Castings, rough and semifinished				8	298	275	14	461	387
Aluminum:									
Aluminum mill shapes	(1)	391	213	220	63,613	34,558	56	3,564	2,259
Castings, rough and semifinished				10	951	801	29	1,395	1,428

[1] Less than 5 establishments.
[2] A small amount of carbon steel wire was combined with carbon steel sheet and strip to avoid disclosing figures for individual companies.
[3] A small amount of carbon steel structural shapes was combined with carbon steel plate to avoid disclosing figures for individual companies.
[4] Includes 341,634 tons of tin plate, terneplate, and black plate valued at $36,708,000.

TABLE 8.—NUMBER OF ESTABLISHMENTS PERFORMING SELECTED METALWORKING OPERATIONS: 1947

[The figures in the table represent the number of establishments maintaining the metalworking operation specified, according to the usual number of production workers employed in the operation during 1947]

METALWORKING OPERATION	METAL STAMPINGS INDUSTRY						LIGHTING FIXTURES INDUSTRY					
	Number of establishments performing selected metalworking operations											
	Total	Distribution by number of production workers in the operation					Total	Distribution by number of production workers in the operation				
		1–4	5–19	20–49	50–99	100 and over		1–4	5–19	20–49	50–99	100 and over
Foundry	10	3	5	1	1		23	11	9	2		1
Die casting	19	16	1	2			24	15	6	1	1	1
Forging—presses, hammers, or upsetters	13	6	4	1	1	1	21	15	6			
Electroplating	85	37	26	16	4	2	117	59	44	10	2	2
Galvanizing and other hot dip coating	35	16	8	9	1	1	9	6	3			
Heat treating or annealing of metals	113	91	19	2	1		35	34		1		
Automatic screw-machine department	30	24	4	1	1		26	20	6			
Machine shop	422	197	148	51	16	10	193	109	64	15	2	3
Tool and die room	502	232	201	51	15	3	99	57	34	5	2	1
Pattern shop	26	21	3		1	1	23	21	2			
Plate or structural fabrication	45	22	13	4	6		21	14	7			
Stamping, blanking, forming, or drawing	1,332	297	517	277	114	127	308	136	105	41	18	8

NOTE: In the Metal Stampings Industry, 649 establishments did not answer this inquiry. Of these 617 had fewer than 20 employees; 31 had between 20 and 99 employees; and 1 had 100 or more employees. In the Lighting Fixtures Industry, 341 small establishments did not report any detailed statistics including this inquiry. In addition, a number of other establishments in the Lighting Fixtures Industry, mainly small ones, also did not answer this inquiry on Metalworking Operations.

METAL BARRELS, DRUMS, AND PAILS; WIRE PRODUCTS; AND OTHER METAL PRODUCTS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of nails, brads, spikes, staples, fencing, woven wire products, bare wire rope and cable, barbed wire, springs, tire chains, and other wire products; metal shipping barrels, drums, kegs, and pails; safes and vaults; and leaf and hot wound springs. These establishments have been classified in five industries described separately below.

Nails and Spikes *(Standard Industrial Classification No. 3481.)*—This industry comprises establishments primarily engaged in manufacturing wire and cut nails, brads, spikes, staples, and tacks from purchased rods, wire, and plate. Establishments primarily engaged in drawing wire from purchased rods and in manufacturing nails, brads, spikes, and staples are classified in Industry 3392, and rolling mills manufacturing similar products in Industry 3312.

Although establishments primarily engaged in manufacturing nails and spikes, from wire drawn at the same location from purchased rods, are classified in Industry 3392, the nails, and spikes made in such establishments, as well as those produced in steel mills and in all other industries are included in table 6–A. The value of nails and spikes made in establishments classified in other industries was about four times the value made by establishments classified in the nails and spikes industry.

There is a small amount of duplication in the quantity and value of nails shown as shipped, in table 6–A. This is due to the fact that some establishments producing lead-headed nails and, to a small extent, other special headed or coated nails do not manufacture the nails at that location but either purchase them or transfer them from other plants of their company where they are produced. Such nails are thus counted twice, once as bright and once as headed or coated. The effect of this duplication on total shipments is minor. The total quantity of lead-headed and coated nails only amounted to 13 percent of the total production of iron and steel nails and by no means all of the lead-headed and coated nails are duplicated.

Wirework, Not Elsewhere Classified *(Standard Industrial Classification No. 3489.)*—This industry comprises establishments primarily engaged in manufacturing from purchased wire, ferrous and nonferrous wire products, not elsewhere classified. Important products of this industry include fencing, fly screening, cloth and netting, bare wire rope and cable, barbed wire, tire chains, bale ties, concrete reinforcing wire and mesh, springs, coated welding wire, wire guards and partitions, wire grilles, trays and baskets, and kitchen wire goods. Establishments primarily engaged in manufacturihg insulated wire from purchased wire are classified in Industry 3631, and establishments engaged in drawing wire from purchased rods and in manufacturing wire products are classified in Industry 3392.

Although establishments primarily engaged in manufacturing wire products, from wire drawn at the same location from purchased rods, are classified in Industry 3392, the fabricated wire products made in such establishments as well as those produced in steel mills and in all other industries, are included in table 6-A. Of the total value of wirework shown in table 6-A, 59 percent was made in the wirework, not elsewhere classified, industry, and the remaining 41 percent was made in all other industries. The major portion of wire products made in other industries was produced by establishments classified in the steel works and rolling mill and in the wire drawing industries.

Metal Barrels, Drums, and Pails *(Full Standard Industrial Classification title and number: Metal Shipping Barrels, Drums, Kegs, and Pails, 3491.)*—This industry comprises establishments primarily engaged in manufacturing ferrous and nonferrous shipping barrels, drums, kegs, and pails. The industry includes both establishments primarily engaged in making these products for sale and "captive" establishments primarily engaged in making them for other establishments of the same company. However, establishments which manufacture and fill the containers at the same location are not included in this industry, unless the container-making facilities were a separate plant of the producing company for which a separate 1947 census report was submitted.

Figures on production and shipments of steel shipping barrels, drums, kegs, and pails are collected on a monthly basis by the Bureau of the Census on Form M75A. These monthly figures include all the "captive" production of establishments which produce and fill the containers at the same location. Most of these captive establishments belong to petroleum refineries or chemical companies. This captive production is the main reason for differences between total shipments as reported in the Census of Manufactures and those reported on the monthly reports during 1947. Other differences are due to minor revisions reported by a number of companies. These revisions were quite small, amounting to less than 1 percent of the total. The shipments of steel shipping barrels, drums, kegs, and pails as reported on the monthly survey are shown in table 6–A, as well as the shipments reported in the census. These monthly survey figures involve minor revisions of previously published data.

Of the total value of metal barrels, drums, and pails shown in table 6–A, 83 percent was made in the metal barrels, drums, and pails industry, and the remaining 17 percent was made in all other industries. In addition to shipping over 142 million dollars worth of metal barrels, drums, and pails, establishments classified in the metal barrels, drums, and pails industry also shipped substantial quantities of other items, 16 percent of the total shipments of the industry consisting of products such as automobile and other job stampings, metal cans, ash and garbage cans and pails, rims for automobile wheels, etc.

Safes and Vaults *(Standard Industrial Classification No. 3492.)*—This industry comprises establishments primarily engaged in manufacturing safes and vaults (except concrete grave vaults—Industry 3271), vault doors and linings, safe deposit boxes and chests, and safe locks.

Steel Springs *(Standard Industrial Classification No. 3493.)*—This industry comprises establishments primarily engaged in manufacturing leaf springs, hot wound springs, and coiled flat springs. Establishments primarily engaged in manufacturing wire springs are classified in Industry 3489, and rolling mills manufacturing steel springs in Industry 3312.

Of the total value of steel springs, except wire, shown in table 6–A, 68 percent was made in the steel springs industry, and the remaining 32 percent was made in all other industries. Establishments classified in the motor vehicles and parts industry and the wirework, not elsewhere classified, industry produced most of this 32 percent.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Nails and spikes:								
1947	68	3,805	$9,876	3,278	$7,738	$15,721	$14,317	$30,038
1939	36	2,996	3,851	2,515	2,730	7,072	5,836	12,908
1937	42	2,819	3,666	2,432	2,746	6,293	5,636	11,929
1935	43	2,507	3,049	2,178	2,320	5,322	4,334	9,656
1933	39	1,900	1,952	1,695	1,590	4,269	2,704	6,973
1931	46	n.a.	n.a.	1,570	1,670	3,846	2,982	6,828
1929	55	2,403	3,598	2,027	2,553	6,899	5,956	12,855
1927	56	2,458	3,659	2,100	2,670	6,596	5,157	11,753
1925	58	2,626	3,594	2,227	2,610	6,672	5,646	12,318
1923	61	3,271	4,174	2,849	3,235	6,295	7,005	13,300
1921	56	2,869	3,485	2,412	2,576	5,306	5,670	10,976
1919	65	3,909	4,575	3,355	3,398	8,708	8,875	17,583
1914	64	3,139	2,198	2,644	1,508	3,605	3,594	7,199
1909	57	3,197	1,914	2,765	1,353	4,220	3,972	8,192
1904	76	4,087	2,138	3,681	1,684	4,237	4,686	8,923
1899	102	4,908	2,487	4,477	2,042	6,215	8,562	14,777
Wirework, n.e.c.:								
1947	909	56,842	161,418	49,265	128,457	206,426	198,199	464,625
1939	669	35,916	49,067	30,386	35,539	83,865	74,952	158,817
1937	563	37,880	50,569	33,471	39,207	86,214	78,296	164,510
1935	536	28,797	33,811	25,165	25,426	61,585	55,984	117,569
1933	429	20,270	18,433	17,633	14,155	39,300	35,220	74,520
1931	494	n.a.	n.a.	17,226	17,386	46,386	40,308	86,694
1929	547	25,609	37,501	22,388	27,912	78,661	68,144	146,805
1927	512	25,174	35,875	21,697	26,439	65,443	63,093	128,536
1925	462	22,406	31,835	19,268	23,835	55,825	59,604	115,429
1923	443	19,307	25,574	16,783	19,341	47,968	52,280	100,248
1921	413	13,695	18,462	11,485	13,314	29,346	37,039	66,385
1919	558	17,883	21,585	15,224	15,506	39,795	50,754	90,549
1914	552	14,196	9,593	12,126	6,719	17,675	24,114	41,789
1909	611	14,510	9,005	12,348	6,331	17,544	24,394	41,938
1904	649	15,315	8,217	13,379	6,100	15,182	17,856	33,038
1899	596	10,137	4,834	9,142	3,894	9,027	10,813	19,840
Metal barrels, drums, and pails:								
1947	70	10,915	31,331	9,329	24,918	64,119	108,941	173,060
1939	64	6,964	9,545	6,072	7,360	16,838	32,328	49,166
1937	58	7,051	9,159	6,231	7,357	17,879	30,296	48,175
1935	64	6,481	7,624	5,761	5,839	13,560	21,090	34,650
1933	58	7,015	6,959	6,517	6,026	12,364	18,035	30,399
1931	52	n.a.	n.a.	3,253	3,513	8,654	12,990	21,644
1929	53	4,666	7,665	4,110	5,769	15,878	21,947	37,825
1927	39	3,344	5,390	2,853	3,986	9,369	14,736	24,105
1925	33	2,286	3,866	2,021	2,914	7,185	12,743	19,928
1923	39	3,145	4,912	2,668	3,363	8,431	14,818	23,249
1921	31	2,445	3,525	2,013	2,323	5,258	9,267	14,525
1919 [4]	33	3,956	5,899	3,322	4,435	9,792	15,151	24,943
Safes and vaults:								
1947	26	3,754	10,117	3,004	7,437	19,434	9,782	29,216
1939	16	1,558	2,286	1,236	1,589	3,671	2,413	6,084
1937	14	1,359	1,951	1,132	1,445	3,151	1,998	5,149
1935	14	1,060	1,280	809	800	2,047	1,266	3,313
1933	21	1,208	1,058	933	643	1,980	938	2,918
1931	25	n.a.	n.a.	2,044	2,176	7,534	4,073	11,607
1929	27	3,782	6,442	3,033	4,439	12,970	6,392	19,362
1927 [5]	25	3,936	5,796	3,386	4,494	11,214	7,226	18,440
Steel springs:								
1947	81	7,760	24,938	6,747	20,233	45,876	46,770	92,646
1939	53	3,591	5,739	2,940	4,277	10,249	12,795	23,044
1937	57	4,412	7,151	3,902	5,804	11,080	16,153	27,233
1935	49	3,595	4,609	3,146	3,566	7,184	11,049	18,233
1933	60	2,508	2,581	2,112	1,972	4,870	5,543	10,413
1931 [6]	77	n.a.	n.a.	2,561	3,101	6,247	6,367	12,614

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] Figures for years prior to 1935 do not include cost of contract work.

[3] For 1947 and 1929, the figures represent value of products shipped except in the case of "Metal barrels, drums, and pails" and "Safes and vaults" for 1929 where they represent value of products made; for all other years, the figures represent value of products shipped. See GENERAL EXPLANATIONS—Value of products shipped. Separate figures are therefore not available for earlier years.

[4] Prior to 1919, "Metal barrels, drums, and pails" was a part of the "Foundry and machine shop products, n.e.c." industry.

[5] The figures for "Safes and vaults" prior to 1927 are not sufficiently comparable with those for later years to be shown in this table because they include data for steel burial vaults.

[6] The figures for "Steel springs" prior to 1931 are not sufficiently comparable with those for later years to be shown in this table because they include data for the repair and replacing of motor vehicle springs.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Nails and spikes, total [1]	68	3,805	$9,876	3,278	6,617	$7,738	$15,721	$14,317	$30,038	$886
New England	17	2,188	5,376	1,903	3,732	4,392	7,774	6,991	14,765	487
Connecticut	4	884	2,193	744	1,442	1,697	2,804	1,881	4,685	135
Middle Atlantic	13	510	1,252	442	893	942	1,839	1,182	3,021	148
New York	10	275	676	245	500	551	1,005	734	1,739	123
North Central	20	708	2,131	570	1,251	1,430	3,592	3,122	6,714	192
Ohio	3	230	829	180	381	507	1,510	1,313	2,823	87
Illinois	13	389	1,150	310	702	796	1,836	1,535	3,371	101
South	7	356	1,009	323	660	884	2,280	2,764	5,044	25
Pacific	11	43	108	40	81	90	236	258	494	34
Wirework, n. e. c., total [1]	909	56,842	161,418	49,265	100,197	128,457	266,426	198,199	464,625	15,540
New England	95	5,810	17,282	4,984	10,521	13,533	27,277	18,688	45,965	1,317
Connecticut	45	3,459	11,060	2,991	6,483	8,582	18,069	10,102	28,171	857
Middle Atlantic	292	14,430	39,489	12,441	25,902	31,284	66,378	51,588	117,966	4,163
New York	165	4,585	13,362	3,855	8,119	10,090	19,409	12,342	31,751	1,012
North Central	365	30,118	87,287	26,458	53,123	70,801	141,582	100,546	242,128	8,110
Ohio	59	2,909	9,081	2,472	5,230	6,900	14,440	9,718	24,158	988
Illinois	125	8,697	24,595	7,585	14,994	19,652	40,411	33,065	73,476	2,500
Minnesota	12	357	1,069	326	738	862	2,184	1,469	3,653	73
Iowa	6	180	335	154	316	258	620	801	1,421	12
South	57	2,875	6,659	2,282	4,673	4,435	14,243	12,596	26,839	709
North Carolina	5	271	449	252	529	342	740	757	1,497	116
Tennessee	7	504	870	469	951	784	1,537	1,302	2,839	107
Mountain	7	63	137	58	117	117	294	388	682	12
Pacific	93	3,546	10,564	3,042	5,861	8,287	16,652	14,393	31,045	1,229
California	80	3,313	9,910	2,843	5,466	7,785	15,048	12,990	28,038	1,113
Metal barrels, drums, and pails, total [1]	70	10,915	31,331	9,329	18,449	24,918	64,119	108,941	173,060	3,607
Middle Atlantic	16	1,961	5,424	1,655	3,316	4,199	13,310	20,809	34,119	480
New York	5	185	494	153	326	361	1,033	1,660	2,693	28
New Jersey	5	504	1,528	417	862	1,172	4,322	7,692	12,014	54
Pennsylvania	6	1,272	3,402	1,085	2,128	2,666	7,955	11,457	19,412	398
East North Central	24	5,679	16,807	4,902	9,253	13,449	31,542	48,911	80,453	1,686
Ohio	13	4,130	11,926	3,643	6,742	9,907	21,535	35,529	57,064	1,021
Illinois	7	1,369	4,158	1,101	2,171	2,956	8,683	11,470	20,153	579
West North Central	8	761	2,181	672	1,471	1,791	4,539	6,875	11,414	151
South and West	22	2,514	6,919	2,100	4,409	5,479	14,728	32,346	47,074	1,290
Louisiana	5	356	1,000	306	650	793	3,570	6,407	9,977	293
Texas	5	682	1,781	581	1,204	1,397	4,707	9,844	14,551	330
Safes and vaults, total [1]	26	3,754	10,117	3,004	6,035	7,437	19,434	9,782	29,216	580
Northeast and North Central	18	3,573	9,587	2,849	5,679	7,013	18,501	9,355	27,856	565
Ohio	9	3,203	8,609	2,555	5,073	6,412	17,151	7,867	25,018	513
South and West	8	181	530	155	356	424	933	427	1,360	15
Steel springs, total [1]	81	7,760	24,938	6,747	14,135	20,233	45,876	46,770	92,646	2,285
Northeast	26	3,435	10,785	3,034	6,295	8,852	18,895	17,246	36,141	931
New York	3	341	1,259	313	637	1,068	2,187	2,406	4,593	21
Pennsylvania	17	2,569	8,023	2,258	4,697	6,531	14,498	12,367	26,865	883
East North Central	25	3,477	11,796	3,038	6,366	9,690	22,913	26,654	49,567	1,163
Indiana	4	533	1,645	457	938	1,326	4,611	5,657	10,268	35
Illinois	8	1,288	4,331	1,090	2,357	3,308	8,220	7,819	16,039	585
West North Central	4	225	633	205	489	517	1,855	1,297	3,152	73
Missouri	4	225	633	205	489	517	1,855	1,297	3,152	73
South	8	87	250	73	157	204	349	347	696	18
West	18	536	1,474	397	828	970	1,864	1,226	3,090	100
California	11	406	1,108	304	637	742	1,370	972	2,342	88

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Nails and spikes: *New England*, New Hampshire, 1; Massachusetts, 12; *Middle Atlantic*, New Jersey, 1; Pennsylvania, 2; *North Central*, Indiana, 1; Michigan, 1; Wisconsin, 1; Missouri, 1; *South*, Maryland, 2; West Virginia, 1; Kentucky, 1; Alabama, 1; Texas, 2; *Pacific*, California, 11 (43).

Wirework, n. e. c.: *New England*, Vermont, 2; Massachusetts, 39 (2,264); Rhode Island, 9; *Middle Atlantic*, New Jersey, 49 (3,732); Pennsylvania, 78 (6,113); *North Central*, Indiana, 30 (1,711); Michigan, 72 (13,178); Wisconsin, 21 (495); Missouri, 33 (2,503); Nebraska, 3 (31); Kansas, 4 (57); *South*, Maryland, 15 (1,174); Virginia, 3 (211); West Virginia, 1; South Carolina, 1; Georgia, 3 (100); Kentucky, 3 (70); Alabama, 4 (93); Arkansas, 1; Louisiana, 2; Oklahoma, 2; Texas, 10 (288); *Mountain*, Colorado, 7 (63); *Pacific*, Washington, 10 (201); Oregon, 3 (32).

Metal barrels, drums, and pails: *East North Central*, Michigan, 3; Wisconsin, 1; *West North Central*, Iowa, 2; Missouri, 5 (622); Nebraska, 1; *South and West*, Georgia, 2; Florida, 1; Alabama, 2; Mississippi, 1; Washington, 1; Oregon, 1; California, 4 (1,091).

Safes and vaults: *Northeast and North Central*, Massachusetts, 2; New York, 3 (148); Indiana, 1; Illinois, 1; Wisconsin, 1; Minnesota, 1; *South and West*, Kentucky, 1; California, 7.

Steel springs: *Northeast*, Massachusetts, 3 (101); New Jersey, 3 (424); *East North Central*, Ohio, 6 (421); Michigan, 7 (1,235); *South*, Alabama, 1; Arkansas, 1; Texas, 6; *West*, Utah, 1; Washington, 4 (46); Oregon, 2.

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry				
	Nails and spikes	Wire-work, n. e. c.	Metal barrels, drums, and pails	Safes and vaults	Steel springs
ALL ESTABLISHMENTS					
Number of establishments	68	909	70	26	81
All employees:					
Number (average for the year)	3,805	56,842	10,915	3,754	7,760
Salaries and wages, total	$9,876	$161,418	$31,331	$10,117	$24,938
Production and related workers:					
Number (average for the year)	3,278	49,265	9,329	3,004	6,747
Man-hours, total ... thousands	6,617	100,197	18,449	6,035	14,135
Wages, total	$7,738	$128,457	$24,918	$7,437	$20,233
Value added by manufacture	$15,721	$266,426	$64,119	$19,434	$45,876
ESTABLISHMENTS REPORTING DETAILED STATISTICS					
Number of establishments	68	662	70	26	81
All employees:					
Number (average for the year)	3,805	55,629	10,915	3,754	7,760
Salaries and wages, total	$9,876	$158,779	$31,331	$10,117	$24,938
Production and related workers:					
Number (average for the year)	3,278	48,088	9,329	3,004	6,747
Man-hours, total ... thousands	6,617	97,868	18,449	6,035	14,135
Wages, total	$7,738	$125,982	$24,918	$7,437	$20,233
Value added by manufacture	$15,721	$262,077	$64,119	$19,434	$45,876
Number of employees for pay period ended nearest Oct. 15:					
All employees	3,832	56,031	10,329	3,547	7,943
Male	2,756	41,708	8,844	3,210	7,494
Female	1,076	14,323	1,485	337	449
Production and related workers	3,275	48,331	8,810	2,812	6,874
Male	2,441	36,528	7,790	2,715	6,760
Female	834	11,803	1,020	97	114
Force-account construction workers	-------	120	3	-------	-------
Administrative, supervisory, sales, and all other	557	7,580	1,516	735	1,069
Male	315	5,061	1,051	495	734
Female	242	2,519	465	240	335
All employees, number by month:					
January	3,830	57,173	11,009	3,710	7,711
February	3,821	55,102	10,970	3,763	7,728
March	3,888	57,548	11,097	3,823	7,766
April	3,893	56,560	11,144	3,830	7,770
May	3,719	53,335	11,229	3,960	7,876
June	3,755	54,147	11,395	3,919	7,573
July	3,704	54,217	11,093	3,897	6,989
August	3,719	53,749	10,925	3,827	7,718
September	3,824	55,676	10,725	3,751	7,826
October	3,832	56,031	10,329	3,547	7,943
November	3,790	56,372	10,513	3,515	8,039
December	3,827	57,443	10,505	3,496	8,152

ITEM	Industry				
	Nails and spikes	Wire-work, n. e. c.	Metal barrels, drums, and pails	Safes and vaults	Steel springs
ESTABLISHMENTS REPORTING DETAILED STATISTICS—Continued					
Cost of materials, fuel, electricity, and contract work	$14,317	$195,177	$108,941	$9,782	$46,770
Materials, parts, containers, and supplies	13,668	186,984	104,715	9,404	44,286
Fuels, total	224	2,108	476	122	1,796
Bituminous coal	103	727	74	64	90
Anthracite	11	125	1	7	-------
Coke	1	21	1	9	9
Fuel oils	59	553	189	8	760
Gas	42	652	188	17	920
Other fuels	8	30	23	17	17
Purchased electric energy	259	2,585	957	137	537
Contract and commission work	166	3,500	2,793	119	151
Value of inventories:					
Beginning of year, total	$5,036	$61,830	$16,381	$6,906	$12,020
Finished products	1,585	18,021	1,053	771	1,111
Materials, supplies, and work in process	3,451	43,809	15,328	6,135	10,909
End of year, total	5,850	74,084	18,262	8,572	14,872
Finished products	1,865	23,780	2,025	915	1,831
Materials, supplies, and work in process	3,985	50,304	16,237	7,657	13,041
Expenditures for plant and equipment:					
New plant and equipment	$886	$15,540	$3,607	$580	$2,285
Construction and major alteration of fixed plants	166	4,543	970	102	1,020
Buildings	165	4,353	925	99	740
Other construction	1	190	45	3	280
Machinery and equipment	720	10,997	2,637	478	1,265
Production machinery and equipment	662	9,744	2,461	437	1,162
Other machinery and equipment	58	1,253	176	41	103
Used plant and equipment, and land	42	1,012	167	57	227
Number of highway-type motor vehicles owned or leased:					
Trucks	23	510	78	11	97
By manufacturer's rated capacity:					
Under 1½ tons	10	198	21	7	63
1½ tons	7	225	39	4	16
Over 1½ tons and less than 3½ tons	3	67	12	-------	11
3½ tons and less than 5 tons	2	12	2	-------	2
5 tons and over	1	8	4	-------	5
By body type:					
Van	1	47	9	-------	2
Stake or platform	14	267	29	4	24
Panel or light delivery	5	126	25	6	55
All other trucks	3	70	15	1	16
Truck tractors	1	72	30	-------	3
Trailers and semitrailers	1	110	45	-------	4

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Nails and spikes:											
Number of establishments	68	16	7	11	11	15	4	4	-------	-------	-------
Number of employees (average for the year)	3,805	43	44	163	383	1,125	465	1,582	-------	-------	-------
Value added by manufacture	$15,721	$227	$194	$738	$1,686	$5,545	$1,850	$5,481	-------	-------	-------
Wirework, n. e. c.:											
Number of establishments	909	240	162	133	176	77	68	29	17	7	-------
Number of employees (average for the year)	56,842	550	1,090	1,855	5,557	5,504	10,497	9,853	12,136	9,800	-------
Value added by manufacture	$266,426	$2,461	$5,097	$9,249	$26,383	$26,658	$54,958	$43,360	$55,253	$43,007	-------
Metal barrels, drums, and pails:											
Number of establishments	70	6	4	7	13	8	19	9	3	1	-------
Number of employees (average for the year)	10,915	13	29	100	390	593	2,798	3,382	*3,610*	(d)	-------
Value added by manufacture	$64,119	$80	$180	$544	$2,511	$5,640	$19,531	$17,329	*$18,304*	(d)	-------
Safes and vaults:											
Number of establishments	26	7	5	1	3	4	3	-------	2	1	-------
Number of employees (average for the year)	3,754	21	47	(d)	105	269	339	-------	*2,973*	(d)	-------
Value added by manufacture	$19,434	$100	*$367*	(d)	$514	$1,255	$1,171	-------	*$16,027*	(d)	-------
Steel springs:											
Number of establishments	81	7	10	18	14	12	10	9	1	-------	-------
Number of employees (average for the year)	7,760	14	71	273	454	899	1,841	*4,208*	(d)	-------	-------
Value added by manufacture	$45,876	$58	$357	$1,296	$2,692	$4,645	$10,802	*$26,026*	(d)	-------	-------

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

NAILS AND SPIKES INDUSTRY	Shipped by— Nails and spikes industry	Other industries	All industries
Total shipments by the industry	$30,038		
A. Nails, spikes, and brads	23,523	$98,169	$121,692
B. Secondary products	6,138		
C. Miscellaneous receipts	377		

SAFES AND VAULTS INDUSTRY	Shipped by— Safes and vaults industry	Other industries	All industries
Total shipments by the industry	$29,216		
A. Safes and vaults	28,113	$624	$28,737
B. Secondary products	598		
C. Miscellaneous receipts	505		

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STEEL SPRINGS INDUSTRY	Shipped by— Steel springs industry	Other industries	All industries
Total shipments by the industry	$92,646		
A. Steel springs, except wire	80,525	$37,985	$118,510
B. Secondary products	10,105		
Wire springs	3,360		
Other secondary products	6,745		
C. Miscellaneous receipts	2,016		

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WIREWORK, NOT ELSEWHERE CLASSIFIED, INDUSTRY	Shipped by— Wirework, n. e. c., industry	Other industries	All industries
Total shipments by the industry	$464,625		
A. Wirework, n. e. c.	416,520	$283,521	$700,050
Wire rope and cable	41,174	88,074	129,248
Fencing and fence gates	20,255	43,042	63,297
Wire cloth and woven wire products	48,339	42,453	90,792
Wire springs	177,223	14,031	191,254
Other wire products, n. e. c.	118,207	94,565	212,772
Wirework, not specified by kind	11,331	1,356	12,687
B. Secondary products	41,527		
Steel springs, except wire	11,544		
Job stampings, except automobile	1,536		
Automobile stampings	1,044		
All other secondary products	27,403		
C. Miscellaneous receipts	6,569		
Contract and commission work	2,188		
Nonmanufacturing activities	2,675		
All other receipts	1,706		

METAL BARRELS, DRUMS, AND PAILS INDUSTRY	Shipped by— Metal barrels, drums, and pails industry	Other industries	All industries
Total shipments by the industry	$173,060		
A. Metal shipping barrels, drums, and pails	142,355	$29,190	$171,545
Steel shipping packages, kegs, and pails	24,738	10,866	35,604
Metal shipping barrels and drums	117,617	18,324	135,941
B. Secondary products	28,284		
Metal tanks	2,369		
Job stampings	1,872		
All other secondary products (including automobile stampings, garbage and ash cans and pails, etc.)	24,043		
C. Miscellaneous receipts	2,421		

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers: Quantity	1947 Value f.o.b. plant	1939 Total production for sale and interplant transfer: Quantity	1939 Value f.o.b. plant
Nails, spikes, and brads, total			$121,692		$53,647
Steel wire nails, spikes, and brads	M lb.	1,615,400	94,196	1,378,886	42,565
Bright	do.	1,198,680	63,253	1,117,253	31,626
Galvanized	do.	202,017	16,671	120,507	6,191
Lead-headed	do.	16,036	2,054	(1)	(1)
Cement coated	do.	176,974	10,091	141,126	4,748
Other coated	do.	21,693	2,127	(1)	(1)
Steel wire tacks:					
Quantity reported	do.	1,446	400	4,753	523
Quantity not reported			223		
Steel wire staples:					
Quantity reported	do.	68,806	5,610	57,469	1,851
Quantity not reported			3,819		123
Steel cut nails, spikes, and brads (includes horseshoe nails)	do.	56,726	5,915	41,259	2,521
Steel cut tacks, except thumb tacks	do.	33,032	5,733	33,594	4,085
Steel cut thumb tacks:					
Quantity reported	do.	1,454	1,155	975	411
Quantity not reported			269		257
Nonferrous nails, brads, tacks, and staples:					
Quantity reported	do.	4,185	2,585	2,638	711
Quantity not reported			456		
Upholstery nails and nails, spikes, brads, tacks, and staples, not specified by kind			1,331		[2] 600

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers: Quantity	1947 Value f.o.b. plant	1939 Total production for sale and interplant transfer: Quantity	1939 Value f.o.b. plant
Wire rope and cable, total	Ton	308,923	$129,248	n.a.	n.a.
Iron and steel wire rope and cable	do.	174,678	75,213	98,486	$35,762
Composite strand, rope and cable, except insulated (includes wire or strands of different metals)	do.	66,372	35,800	(3)	(3)
Guard rail cable	do.	3,479	603	40,934	6,037
Iron and steel strand, except guard rail cable	do.	63,059	16,722		
Copper strand and cable, except insulated, made from purchased wire	do.	1,335	910	(4)	(4)
Fencing and fence gates, total	do.	488,064	63,297	318,963	25,356
Chain link fencing (includes posts, gates and fittings when sold with fencing)	do.	107,927	23,103	n.a.	n.a.
Fence gates, wire (except chain link)	do.	10,455	1,738		
Field fence	do.	342,535	34,693		
Ornamental lawn fence	do.	27,147	3,763		

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers		1939 Total production for sale and interplant transfer	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Wire cloth and woven wire products, total			$90,792		$34,224
Woven wire netting (poultry, fur farm, stucco, etc.)	Ton	86,108	17,552	54,252	6,956
Insect wire screening:					
Steel	M sq. ft.	336,188	10,238	n.a.	7,486
Copper and copper-base alloy	do	195,180	14,709	n.a.	4,884
Nonferrous metal, except copper and copper-base alloy	do	61,903	4,479	n.a.	291
Fourdrinier wire cloth	do	10,434	9,257	n.a.	5,376
Cylinder wire cloth	do	1,358	1,371		
Hardware cloth	Ton	15,937	5,223		
Industrial wire cloth:					
Steel		n.a.	16,137	n.a.	[5] 9,231
Nonferrous metal		n.a.	8,890		
Other wire cloth (includes diamond cloth, spiral cloth, drying belts, etc.)			2,936		
Wire springs (made of flat, round, or shaped wire), total			191,254		62,966
Upholstery and furniture springs:					
Seat and back springs for motor vehicles			69,689		23,331
Other upholstery and furniture springs			45,098		15,614
Other springs [6]			76,467		24,021
Other wire products, total			212,772		n.a.
Welded steel wire fabric:					
Concrete reinforcing mesh	Ton	209,491	22,439	167,838	10,872
Other welded steel wire fabric	do	33,812	4,817	n.a.	n.a.
Barbed and twisted wire	do	257,781	27,316	230,765	13,825
Wire bale ties	do	159,202	18,227	84,783	5,915
Wire chain:					
Tire	do	48,729	16,512	20,670	4,139
Other	do	66,540	19,694	28,030	5,170
Wire garment hangers:					
Quantity reported	M lb	103,091	11,009	19,633	1,001
Quantity not reported					772
Other wire products (including cages, guards, lampshade frames, florists' designs, kitchenware goods, paper clips, etc.)			92,758		50,025
Wirework, not specified by kind			$12,687		
Safes and vaults, total			28,737		$6,023
Safes and chests (safes and chests are shown as fire-resistive or burglary-resistive depending upon the primary purpose for which they are built):					
Fire-resistive safes (insulated)	Units	130,566	10,668		
Burglary-resistive safes and chests	do	12,917	1,718		
Safe deposit boxes	do	776,279	10,109		
All other bank and security vaults and equipment (including bank security lockers and night depositories, interior equipment for safes and chests, safe locks, etc.)			6,242		[7]
Steel springs, except wire, total			118,510		n.a.
Leaf springs:					
Locomotive and railroad car	Ton	31,315	5,957	[8]	28,824
Automotive (including tractor, farm equipment, and other heavy vehicle springs)	do	365,338	79,706		
Helical springs, hot wound:					
Automobile knee action coil springs	do	31,118	9,203	[8]	5,081
Other helical springs, hot wound	do	67,568	12,073		
All other springs (including torsion bar springs, flat springs made of sheet or strip stock and reconditioned springs) [9]			10,650	n.a.	n.a.
Steel springs, except wire, not specified by type			921		

PRODUCT	1947 Shipments and interplant transfers: Total		Interplant transfers		All other shipments		1939 Total production for sale and interplant transfer	
	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
	(Thousands)		(Thousands)		(Thousands)		(Thousands)	
Steel shipping packages, kegs, and pails (12-gallon capacity and under) [10]	60,420	$35,604	2,367	$1,212	58,053	$34,392	40,580	$10,966
Totals reported on monthly census Bureau reports M75A. (Includes containers made and filled in the same establishment. See text for explanation of differences from 1947 census figures shown above.)	61,344	n.a.	4,389	n.a.	56,955	n.a.		
1 to but not including 3-gallon capacity	3,358	n.a.	1,241	n.a.	2,823	n.a.		
3 to but not including 5-gallon capacity					4,294	n.a.		
5-gallon capacity, 24 gauge					34,069	n.a.		
5-gallon capacity, 28 gauge	52,986	n.a.	3,148	n.a.	3,331	n.a.		
5-gallon capacity, all other gauges					7,802	n.a.		
Over 5 to but not including 7-gallon capacity					2,209	n.a.		
7 to but not including 12-gallon capacity					2,160	n.a.		
12-gallon capacity					267	n.a.		

See footnotes at end of table.

TABLE 6-A.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	1947						1939	
	Shipments and interplant transfers						Total production for sale and interplant transfers	
	Total		Interplant transfers		All other shipments			
	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
	(Thousands)		(Thousands)		(Thousands)		(Thousands)	
Metal shipping barrels and drums		$135,941						$42,611
Steel shipping barrels and drums (over 12-gallon capacity) [11]								
Light types	7,004	11,440	1,056	$1,521	5,948	$9,919		
Totals reported on monthly census Bureau reports M75A. (Includes containers made and filled in the same establishment. See text for explanation of differences from 1947 census figures shown above.)	8,800	n.a.	2,768	n.a.	6,032	n.a.		
Welded side seam construction	8,800	n.a.	2,768	n.a.	1,597	n.a.		
Lock side seam construction					4,215	n.a.		
100-lb. grease drums					220	n.a.		
Heavy types	27,035	96,301			27,035	96,301	(12)	40,452
Totals reported on monthly Census Bureau reports M75A. (See text for explanation of differences from 1947 census figures shown above.)	27,062	n.a.			27,062	n.a.		
Heavier than 16 gauge, all capacities	420	n.a.			420	n.a.		
16 gauge, 55-gallon capacity	665	n.a.			665	n.a.		
18 gauge, 55-gallon capacity	20,405	n.a.			20,405	n.a.		
100-lb. grease drums	3,366	n.a.			3,366	n.a.		
20 gauge body with 18 gauge heads, 55-gallon capacity	2,306	n.a.			2,306	n.a.		
All other heavy types, all capacities								
Beer barrels, steel, all sizes	1,213	17,546						
Beer barrels, aluminum, all sizes	515	7,234						[13] 2,159
Parts for metal barrels, drums, and pails; etc.		3,420						

n.a.—Not available.
[1] Separate data not available.
[2] The 1939 figure includes upholstery nails only.
[3] Separate data on composite strand, rope and cable were not collected in 1939. The 1939 statistics for most types of composite strand, rope and cable were included with the data for bare wire, i.e., the copper wire content of composite cable was included with copper wire, the aluminum content with aluminum wire, etc.
[4] Comparable data for 1939 not available. The figures for this item originally published in 1939 represent the total production of copper strand and cable, including that made by manufacturers who draw their own wire, whereas the 1947 data represent only shipments by producers who purchase copper wire.
[5] Includes steel wire cloth valued at $6,684,000 and nonferrous wire cloth valued at $2,547,000.
[6] Probably includes a small quantity of flat springs made of sheet or strip stock. See footnote 9.
[7] No detailed commodity statistics were collected for the industry in 1939.
[8] The quantity of springs produced was not reported by all manufacturers in 1939. The quantities reported, and the values relating to these quantities, were as follows: Leaf springs, 196,658 short tons at $23,883,000; helical springs, hot wound, 35,480 short tons at $4,480,000.
[9] Probably does not include the total shipments of flat springs made of sheet or strip stock. In general, flat springs are made by wire spring manufacturers and it is likely that some wire spring manufacturers reported their total shipments of springs (both wire and flat) in a combined form.
[10] Steel packages, kegs, and pails are defined as single-walled, cylindrical shipping containers, with a range of capacity from 1 to 12 gallons inclusive, constructed of steel heavier than 29 gauge. This term does not include tin cans (packers' cans, general line cans, and beer cans), terneplate oil containers, high and low pressure gas steel cylinders, fluid milk shipping containers, ice cream cans, or containers not commercially usable in the transportation of commodities. In addition, 1939 data do not include stainless steel packages, kegs, and pails.
[11] Steel shipping barrels and drums are defined as single-walled, cylindrical, or bilged shipping containers, with a range of capacity from 12 to 132 gallons, constructed of steel. This term does not include tin cans (packers' cans, general line cans, beer cans), terneplate oil containers, high and low pressure gas steel cylinders, beer barrels, fluid milk shipping containers, ice cream cans, or containers not commercially usable in the transportation of commodities. In addition, 1939 data do not include stainless steel barrels and drums.
Light type steel barrels and drums include:
(a) Barrels and drums of lighter than 20 gauge steel.
(b) Barrels and drums wholly or partly of 20 gauge steel if of open-head construction.
(c) Grease drums of 100 pounds capacity if steel is lighter than 20 gauge steel.
Heavy type steel barrels and drums include:
(a) Barrels and drums of welded side seam construction of 19 gauge or heavier steel.
(b) Grease drums of 100 pounds capacity of 20 gauge or heavier steel.
(c) Barrels and drums wholly or partly of 20 gauge steel when of other than open-head construction.
[12] In the 1939 census, not all manufacturers used the same gauges as the dividing line between heavy and light types of steel shipping barrels and drums. As a result, the quantity data reported for each type were not homogeneous and not comparable with those reported for 1947.
[13] Includes stainless steel shipping barrels, drums, kegs, and pails and other metal casings.

TABLE 6-B.—PRODUCTION OF STEEL SHIPPING BARRELS, DRUMS, AND PAILS BY GEOGRAPHIC DIVISIONS: 1947

[Data in this table represent production, which differed only slightly from shipments during 1947. Production data have been taken from the monthly Census Bureau reports on Steel Shipping Barrels, Drums, and Pails, Series M75A. For definitions of light and heavy types of steel shipping barrels and drums, and steel shipping packages, kegs and pails, see footnotes 10 and 11 of table 6-A]

[All figures in thousands of units]

PRODUCT AND DIVISION	Total	For sale	For own use
Steel shipping packages, kegs, and pails, total	61,340	56,960	4,380
New England	15,798	15,665	133
Middle Atlantic			
East North Central	37,087	35,080	2,007
West North Central	803	364	439
All other divisions	7,652	5,851	1,801
Light-type steel shipping barrels and drums, total	8,798	6,032	2,766
New England	2,472	1,791	681
Middle Atlantic			
East North Central			
West North Central	2,362	941	1,421
Light-type steel shipping barrels and drums—Continued			
South Atlantic	1,276		
East South Central	1,364		
West South Central	842	3,300	664
Mountain			
Pacific	482		
Heavy-type steel shipping barrels and drums, total	27,065	27,065	----------
Middle Atlantic	5,879	5,879	----------
East North Central	9,590	9,590	----------
West North Central	1,544	1,544	----------
All other divisions	10,052	10,052	----------

TABLE 7.—SELECTED MATERIALS CONSUMED, BY KIND: 1947.

[The table below summarizes the consumption of selected metal shapes by manufacturers during 1947. For each shape, manufacturing establishments were required to report consumption, in quantity and cost, provided that such usage during 1947 exceeded the following amounts: for iron castings, steel castings, each of six carbon steel shapes—50 short tons; for alloy steel bars and all other alloy steel—25 short tons; for stainless steel, brass and copper wire mill shapes, copper and brass castings, aluminum mill shapes and aluminum castings—10 short tons]

[Money figures in thousands of dollars]

METAL SHAPE	NAILS AND SPIKES INDUSTRY			WIREWORK, NOT ELSEWHERE CLASSIFIED, INDUSTRY			METAL BARRELS, DRUMS, AND PAILS INDUSTRY			STEEL SPRINGS INDUSTRY		
	Establishments consuming more than specified quantities											
	Number	Short tons	Cost	Number	Short tons	Cost	Number	Short tons	Cost	Number	Short tons	Cost
Iron castings, rough and semifinished	(1)	157	$55	11	3,407	$1,006				(1)	547	$204
Steel castings, rough and semifinished				(1)	313	89				(1)	(d)	(d)
Steel mill shapes and forms	n.a.	68,329	7,119	n.a.	912,384	117,440	n.a.	873,408	$74,570	n.a.	418,663	36,223
Carbon steel:												
Bars and bar shapes	(1)	(2)	(2)	36	31,964	3,406	(1)	1,956	162	28	137,190	10,477
Sheet and strip	21	40,433	4,065	62	66,987	9,541	53	818,823	63,158	10	8,912	610
Structural shapes				7	1,214	100						
Plates	(1)	(2)	(2)	(1)	427	69	(1)	9,680	646			
Wire	29	19,872	2,447	372	787,592	98,060	10	2,679	243	(1)	6,325	1,422
All other mill shapes and forms	(1)	7,709	542	13	13,440	1,731	(1)	28,989	1,968	(1)		
Alloy steel, except stainless:												
Bars and bar shapes	(1)	315	65	10	2,657	531				52	265,797	23,643
All other mill shapes and forms				6	4,303	596				(1)	439	71
Stainless steel	(1)			43	3,800	3,406	6	11,281	8,393	(1)		
Copper and copper-base alloy:												
Brass and wire mill shapes and forms	7	1,928	1,250	70	15,627	11,604				(1)	(d)	(d)
Castings, rough and semifinished				(1)	110	101						
Aluminum:												
Aluminum mill shapes	(1)	(d)	(d)	17	1,018	1,185	6	7,290	5,087			
Castings, rough and semifinished				5	511	420	(1)	(d)	(d)			

n.a.—Not available.
d Withheld to avoid disclosing figures for individual companies.
1 Less than 5 establishments.
2 Included with all other carbon steel mill shapes and forms.

BOLTS, NUTS, AND RIVETS; SCREW-MACHINE PRODUCTS; AND OTHER METAL PRODUCTS

This report shows 1947 Census of Manufactures statistics for establishments engaged primarily in the production of nuts, bolts, rivets, washers, screws, screw-machine products, foil, leaf, collapsible tubes, railway track accessories such as frogs, switches and crossings, and miscellaneous fabricated metal products. These establishments have been classified in five industries described separately below.

Bolts, Nuts, Washers and Rivets *(Standard Industrial Classification No. 3494.)*—This industry comprises establishments primarily engaged in manufacturing bolts, nuts, washers, rivets, turnbuckles, screws, and toggle bolts. Rolling mills engaged in manufacturing similar products are classified in Industry 3312. Establishments primarily engaged in manufacturing screw-machine products are classified in Industry 3495.

In general, bolts, nuts, screws, etc., are made on heading, threading and nut forming machines, and all establishments primarily engaged in making these products, in standard types and sizes, on such equipment are classified in the Bolts, Nuts, Washers, and Rivets Industry. In addition, these machines are also used to make products other than standard type nuts, bolts, screws, etc. Establishments primarily engaged in making these nonstandard items, called "specials," are also included in the industry.

Bolts, nuts, screws, etc., are also made to a small extent on screw machines, and establishments primarily engaged in making standard type and size bolts, screws, etc., on screw machines are also included in this industry. The vast majority of the products made on screw machines, however, are miscellaneous small items used as parts for machinery, etc., and establishments primarily engaged in making these commodities, commonly called screw machine products, are classified in Industry 3495, Screw Machine Products. The production of nonstandard bolts, nuts, screws, etc., made on screw machines is classified in Industry 3495.

Bolts, nuts, screws, etc., are produced to a considerable extent in departments of steel works and rolling mills. Bolt, nut, etc., departments, which are considered by the rolling mills to be completely integrated with their steel-mill activities, are included in the Steel Works and Rolling Mills Industry. In the 1939 census, bolt and nut departments of steel works were generally considered to be parts of the steel works and rolling mills. In 1947, however, many steel works and rolling mills submitted separate reports for departments making these products and these departments were considered as separate establishments and classified in the Bolts, Nuts, Washers, and Rivets industry. For this reason the bolts, nuts, washers, rivets, etc., made in steel works and rolling mills are a smaller proportion of the total in 1947 than in 1939.

In 1939 and in prior Censuses, establishments whose primary products were cap and set screws, machine screws and stove bolts, sheet-metal and tapping screws, and wood and drive screws, were included in the Screw Machine Products and Wood Screws industry. Establishments producing cotter pins were in the Wirework, Not Elsewhere Classified, Industry in 1939. In 1947, plants producing these items have been considered part of the Bolts, Nuts, Washers, and Rivets Industry. The 1939 data have been retabulated to reflect these two changes, and the figures presented for 1939 are, therefore, comparable with those for 1947.

Although data on nuts, screws, washers, and rivets were requested in terms of number of pieces shipped, as well as dollar value of shipments, many manufacturers were unable to supply the quantitative information called for, and instead reported the tonnages of these products shipped. Table 6 shows separate 1947 figures on the quantities and values of each of these items, shipped by producers who reported quantities in number of units, and those reporting quantities in terms of tonnages.

Screw-Machine Products *(Standard Industrial Classification No. 3495.)*—This industry comprises establishments primarily engaged in manufacturing automatic or hand screw-machine products from rod, bar, or tube stock of metal, fiber, plastics, or other material. The products of this industry consist of a wide variety of unassembled parts and are usually manufactured on a job or order basis. This industry does not include establishments primarily engaged in making standard size and type nuts, bolts, rivets, and screws, on screw machines; these establishments, together with those making nuts, bolts, etc., on headers, threaders, and nut-forming machines, are included in Industry 3494, Bolts, Nuts, Washers, and Rivets.

In 1939 and prior censuses, establishments primarily engaged in manufacturing cap and set screws, machine screws and stove bolts, sheet-metal and tapping screws, and wood and drive screws, were included in this industry. These products are now considered part of the Bolts, Nuts, Washers, and Rivets Industry. The 1939 data have been retabulated to reflect these changes and the figures for 1939 are comparable to those presented for 1947. Comparable retabulations have not been made for 1937 and prior years. However, the figures for the "Bolts, nuts, washers, and rivets" and the "Screw-machine products" industries have been combined so that comparable figures can be shown for the period 1899–1947.

A comparison of the number of establishments in 1947 with those for 1939 shows a very large increase. The increase is essentially one of small establishments, since most of the larger ones are included in the 1939 figures. Although it is undoubtedly true that the industry has expanded greatly since 1939, it is probable that some of the increase shown in number of establishments is due to the fact that some small establishments, although active in 1939, were not included in the census for that year.

Collapsible Tubes *(Standard Industrial Classification No. 3496.)*—This industry comprises establishments primarily engaged in manufacturing collapsible tubes, made of aluminum, tin, plastics, and other materials, for use as containers for toilet preparations, adhesives, etc. The industry includes both establishments making collapsible tubes for sale and "captive" establishments making collapsible tubes for the use of other establishments of the same company. The statistics, in tables 5 and 6, on shipments of collapsible tubes cover only tubes shipped by establishments classified in the industry. No shipments of collapsible tubes, as secondary products, were reported by establishments classified in other industries and no data were collected on "captive" tubes produced and filled in the same establishment.

Metal Foil *(Full Standard Industrial Classification title and number: Gold, Silver, Tin, Aluminum, and Other Foil, 3497.)*—This industry comprises establishments primarily engaged in manufacturing gold, silver, tin, aluminum, and other foil and leaf.

The 1947 census industry is a combination of two 1939 census industries—the Gold and Silver Leaf and Foil Industry and the Tin and Other Foils (Except Gold and Silver Foil) Industry. The data for the two industries have been combined for 1939 and earlier years in order to provide a comparable series of data.

There is some duplication in the value of shipments and cost of materials figures for the industry because, included in the industry, are some establishments which laminate purchased foil to paper and other materials. Thus, the foil is reported twice, once as unlaminated and again in laminated form. The principal duplication occurs in the aluminum foil where approximately 11½ million pounds are reported twice. In terms of value of shipments and cost of materials the duplication is smaller, amounting to less than 10 percent for the industry as a whole.

Fabricated Metal Products, Not Elsewhere Classified *(Standard Industrial Classification No. 3499.)*—This industry comprises establishments primarily engaged in manufacturing metal products not elsewhere classified, including metal novelties and specialties. Other products included in the industry are frogs, switches, crossings, and similar railway track accessories; aluminum giftware; metal bookends; and aluminum ladders. These and other products included in the industry are generally end products which do not require extensive machining or assembling operations.

In the 1939 census there was no industry comparable to Industry 3499. Establishments producing the commodities classified in this industry were included in a number of separate industries in 1939. The 1939 data have been retabulated to reflect these changes. However, it is likely that some of the smaller establishments producing items such as giftware, trophies, etc., in 1939 were either not included in the census for that year or reported in such a manner that their products were not sufficiently identifiable that the establishments making them could be included in the retabulation.

TABLE 1.—GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[Money figures in thousands of dollars. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY AND CENSUS YEAR	Number of establishments	All employees		Production and related workers		Value added by manufacture [1]	Cost of materials, fuel, electricity, and contract work [2]	Value of products shipped [3]
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Wages, total			
Bolts, nuts, washers, and rivets:								
1947	364	49,235	$151,514	40,908	$115,790	$285,451	$178,301	$463,752
1939 [4]	219	n.a.	n.a.	20,722	26,216	63,999	50,634	114,633
Screw-machine products:								
1947	1,207	28,492	86,850	24,740	68,949	143,853	76,689	220,542
1939 [4]	288	n.a.	n.a.	10,571	14,287	31,654	20,910	52,564
Total for Bolts, nuts, washers, and rivets and Screw-machine products [4]								
1947	1,571	77,727	238,364	65,648	184,739	429,304	254,990	684,294
1939	507	n.a.	n.a.	31,293	40,503	95,653	71,544	167,197
1937	449	43,125	63,685	38,127	50,118	113,748	87,056	200,804
1935	439	31,854	40,274	27,524	30,200	63,921	56,528	120,449
1933	358	21,624	21,266	18,722	16,106	37,488	28,835	66,323
1931	391	n.a.	n.a.	22,565	23,655	50,167	33,014	83,181
1929	390	40,557	66,117	36,056	51,103	124,692	83,675	208,367
1927	333	31,038	45,840	27,304	35,379	71,684	64,212	135,896
1925	332	31,704	46,101	27,978	36,136	71,958	63,583	135,541
1923	316	32,829	46,332	29,196	37,150	73,938	63,439	137,377
1921	293	21,677	27,430	18,801	19,614	32,970	28,587	61,557
1919	298	36,956	47,137	33,118	37,943	80,407	64,812	145,219
1914	180	20,671	13,085	18,747	10,221	18,546	18,321	36,867
1909	162	17,945	10,164	16,476	8,217	17,425	16,273	33,698
1904	121	12,542	6,490	11,543	5,140	10,043	9,489	19,532
1899	105	11,854	5,282	11,187	4,416	8,845	9,791	18,636
Collapsible tubes:								
1947	19	3,866	9,415	3,475	7,205	16,942	10,055	26,997
1939	14	2,195	2,695	1,933	1,903	4,536	4,936	9,472
1937	15	2,164	2,437	1,983	1,872	3,913	5,272	9,185
1935	16	2,138	2,306	1,961	1,750	3,539	4,966	8,505
1933	17	1,881	1,735	1,750	1,482	3,090	3,834	6,924
1931	17	n.a.	n.a.	1,737	1,634	3,492	4,142	7,634
1929	17	1,968	2,429	1,821	1,782	3,527	5,386	8,913
1927	17	2,169	2,568	1,984	1,918	4,247	7,104	11,351
1925	16	n.a.	n.a.	1,948	1,877	3,755	5,694	9,449
1923 [5]	12	1,413	1,448	1,297	1,161	2,143	3,047	5,190
Metal foil:								
1947	43	4,261	11,732	3,673	9,252	21,439	33,199	54,638
1939 [6]	39	n.a.	n.a.	2,278	2,962	11,051	13,254	24,305
1937	35	2,641	3,620	2,294	2,869	7,671	12,388	20,059
1935	38	2,766	2,972	2,388	2,302	6,129	10,187	16,316
1933	38	2,185	2,017	1,945	1,537	4,368	8,364	12,732
1931	56	n.a.	n.a.	2,083	1,629	6,045	8,398	14,443
1929	82	3,256	4,430	2,887	2,990	9,452	15,481	24,933
1927	87	3,097	3,962	2,804	3,204	7,452	17,071	24,523
1925	94	n.a.	n.a.	2,818	3,237	6,870	17,487	24,357
1923 [5]	76	3,278	4,150	2,944	3,295	8,472	13,365	21,837
Fabricated metal products, n. e. c.:								
1947	438	7,633	21,190	6,377	15,759	39,967	33,238	73,205
1939 [7]	104	n.a.	n.a.	5,097	6,802	19,328	13,085	32,413

n.a.—Not available.

[1] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[2] Figures for years prior to 1935 do not include cost of contract work.

[3] For 1947 and 1929, value of products shipped; for all other years value of products made. See GENERAL EXPLANATIONS—Value of products shipped.

[4] The returns for 1939 have been retabulated to provide figures comparable with those for 1947. However, the figures for the "Bolts, nuts, washers, and rivets" and the "Screw-machine products" industries have been combined so that figures can be shown for the period 1899–1947. Comparable retabulations have not been made for 1937 and prior years.

[5] No comparable data are available for prior years because "Collapsible tubes" and "Metal foil" were combined in a single industry.

[6] Revised.

[7] The returns for 1939 have been retabulated to provide figures comparable with those for 1947. Comparable retabulations have not been made for 1937 and prior years.

TABLE 2.—GENERAL STATISTICS BY DIVISIONS AND STATES: 1947

[Money figures and man-hours in thousands. For explanation of column captions see GENERAL EXPLANATIONS]

INDUSTRY, DIVISION, AND STATE	Number of establishments	All employees		Production and related workers			Value added by manufacture	Cost of materials, fuel, electricity, and contract work	Value of products shipped	Expenditures for new plant and equipment
		Number (average for the year)	Salaries and wages, total	Number (average for the year)	Man-hours, total	Wages, total				
Bolts, nuts, washers, and rivets, total [1]	364	49,235	$151,514	40,908	85,895	$115,790	$285,451	$178,301	$463,752	$18,263
New England	63	11,157	32,512	9,308	20,006	25,618	52,583	27,520	80,112	3,811
Massachusetts	20	4,108	12,503	3,455	7,758	9,937	18,485	9,061	27,546	852
Connecticut	29	4,268	12,195	3,480	7,270	9,667	20,142	11,292	31,434	2,612
Middle Atlantic	66	11,105	33,435	8,865	17,960	23,939	60,738	41,283	102,021	2,635
New York	23	2,376	8,077	1,868	4,057	5,540	18,420	9,434	27,854	763
New Jersey	14	1,100	3,741	752	1,629	2,186	5,092	3,178	8,270	169
Pennsylvania	29	7,629	21,617	6,245	12,274	16,213	37,226	28,671	65,897	1,703
East North Central	182	24,368	78,500	20,560	43,591	60,864	159,169	99,866	259,035	10,937
Ohio	56	10,318	32,412	8,927	18,642	26,248	62,927	39,762	102,689	4,676
Indiana	7	1,477	3,951	1,257	2,360	3,109	7,984	6,427	14,411	353
Illinois	59	8,197	27,256	6,596	14,418	20,120	52,574	31,960	84,534	4,363
Michigan	53	3,633	12,781	3,184	7,003	9,879	31,589	17,912	49,501	1,340
Wisconsin	7	743	2,100	596	1,168	1,499	4,095	3,805	7,900	205
West North Central	9	526	1,363	437	889	1,044	2,317	1,364	3,681	54
South	12	1,236	3,041	1,070	2,126	2,451	5,637	4,757	10,394	515
Pacific	32	843	2,663	668	1,323	1,874	5,007	3,502	8,509	311
California	27	755	2,409	602	1,200	1,710	4,636	3,155	7,791	305
Screw-machine products, total [1]	1,207	28,492	86,850	24,740	52,226	68,949	143,853	76,689	220,542	10,800
New England	179	4,363	12,383	3,805	8,180	9,916	20,881	10,414	31,295	1,952
Massachusetts	58	1,888	5,277	1,633	3,590	4,111	8,074	3,934	12,008	698
Connecticut	94	2,146	6,118	1,896	3,987	5,027	11,105	5,447	16,552	1,167
Middle Atlantic	224	4,372	12,256	3,762	7,924	9,434	20,417	11,567	31,984	1,140
New York	113	2,152	6,226	1,864	4,025	4,851	10,156	5,865	16,021	471
New Jersey	62	1,007	2,912	833	1,720	2,116	5,093	2,959	8,052	311
Pennsylvania	49	1,213	3,118	1,065	2,179	2,467	5,168	2,743	7,911	358
East North Central	654	17,669	56,253	15,350	32,319	44,718	92,725	48,668	141,393	6,946
Ohio	146	5,888	17,562	5,178	10,708	14,237	26,004	15,952	41,956	1,841
Indiana	51	912	2,564	803	1,670	2,048	4,445	2,803	7,248	281
Illinois	190	5,738	19,061	4,943	10,768	15,157	33,332	13,073	46,405	2,962
Michigan	223	4,138	13,919	3,588	7,402	10,968	23,663	14,219	37,882	1,642
Wisconsin	44	993	3,147	838	1,771	2,308	5,281	2,621	7,902	220
West North Central	38	641	1,813	548	1,162	1,406	3,018	1,992	5,010	271
Missouri	19	343	920	294	614	723	1,511	1,215	2,726	125
South	17	238	572	212	443	476	1,068	709	1,777	70
Maryland	6	121	322	105	212	253	607	386	993	39
West	95	1,209	3,573	1,063	2,198	2,999	5,744	3,339	9,083	421
California	85	1,103	3,278	975	2,027	2,780	5,379	3,093	8,472	389
Collapsible tubes, total [1]	19	3,866	9,415	3,475	6,886	7,205	16,942	10,055	26,997	1,477
Northeast	15	3,059	7,516	2,730	5,380	5,781	13,404	8,075	21,479	1,157
New Jersey	9	1,500	4,038	1,295	2,549	2,947	7,161	4,065	11,226	864
Other divisions	4	807	1,899	745	1,506	1,424	3,538	1,980	5,518	320
Metal foil, total [1]	43	4,261	11,732	3,673	7,422	9,252	21,439	33,199	54,638	2,395
Northeast and North Central	35	3,035	8,263	2,508	4,830	6,092	12,417	20,030	32,447	1,866
New York	11	712	2,047	603	1,175	1,570	3,143	6,142	9,285	111
South and West	8	1,226	3,469	1,165	2,592	3,160	9,022	13,169	22,191	529
Fabricated metal products, n. e. c., total [1]	438	7,633	21,190	6,377	13,288	15,759	39,967	33,238	73,205	2,028
New England	37	629	1,701	529	1,086	1,147	3,022	2,120	5,142	130
Massachusetts	18	186	483	158	325	314	1,088	662	1,750	54
Middle Atlantic	181	2,600	7,161	2,142	4,548	5,148	12,793	9,947	22,740	783
New York	118	1,414	4,186	1,101	2,331	2,791	7,375	6,309	13,684	450
New Jersey	20	493	1,340	438	925	1,035	2,450	1,520	3,970	76
Pennsylvania	43	693	1,635	603	1,292	1,322	2,968	2,118	5,086	257
North Central	133	2,878	8,203	2,389	4,971	6,293	16,915	14,922	31,837	866
Illinois	47	1,199	3,627	971	2,042	2,704	8,203	7,490	15,693	452
Michigan	19	486	1,174	432	838	1,007	2,286	1,587	3,873	52
South	27	866	2,235	762	1,570	1,751	3,516	2,779	6,295	102
West	60	660	1,890	555	1,113	1,420	3 721	3,470	7,191	147

[1] For each producing State not shown separately in the table (see GENERAL EXPLANATIONS "Disclosure of Data for Individual Companies"), there are shown below the number of establishments and, in parentheses, the number of employees for States represented by three or more companies, when possible.

Bolts, nuts, washers, and rivets: *New England*, New Hampshire, 2; Rhode Island, 12; *West North Central*, Minnesota, 3 (242); Iowa, 2; Missouri, 3 (265); Kansas, 1; *South*, Maryland, 3 (351); North Carolina, 1; Georgia, 1; Alabama, 3 (749); Oklahoma, 1; Texas, 3 (58); *Pacific*, Washington, 3; Oregon, 2.

Screw-machine products: *New England*, Maine, 1; Vermont, 1; Rhode Island, 25; *West North Central*, Minnesota, 12 (210); Iowa, 4 (51); Kansas, 3 (37); *South*, Georgia, 1; Florida, 1; Kentucky, 1; Tennessee, 1; Oklahoma, 1; Texas, 6 (47); *West*, Colorado, 1; Washington, 6 (60); Oregon, 3.

Collapsible tubes: *Northeast*, Rhode Island, 1; Connecticut, 1; New York, 2; Pennsylvania, 2; *Other divisions*, Illinois, 1; Michigan, 1; West Virginia, 1; Arkansas, 1.

Metal foil: *Northeast and North Central*, Massachusetts, 3 (8); Rhode Island, 1; Connecticut, 4 (270); New Jersey, 10 (1,151); Pennsylvania, 2; Illinois, 3 (41); Missouri, 1; *South and West*, Maryland, 1; Virginia, 2; North Carolina, 1; Kentucky, 2; California, 2.

Fabricated metal products, n. e. c.: *New England*, Maine, 4 (74); Vermont, 2; Rhode Island, 3; Connecticut, 10 (324); *North Central*, Ohio 28 (753); Indiana, 8 (167); Wisconsin 12 (171); Minnesota, 1; Iowa, 3 (24); Missouri, 8 (56); Nebraska, 1; Kansas, 6; *South*, Delaware, 1; Maryland, 3 (109); Virginia, 3 (460); Georgia, 2; Florida, 4 (11); Kentucky, 3 (18); Tennessee, 2; Alabama, 1; Arkansas, 1; Oklahoma, 1; Texas, 6 (64); *West*, Colorado, 7 (120); Arizona, 1; Washington, 4; California, 48 (456).

TABLE 3.—DETAILED STATISTICS FOR THE UNITED STATES: 1947

[Money figures in thousands of dollars. For explanation of line captions see GENERAL EXPLANATIONS]

ITEM	Industry				
	Bolts, nuts, washers, and rivets	Screw-machine products	Collapsible tubes	Metal foil	Fabricated metal products, n. e. c.
ALL ESTABLISHMENTS					
Number of establishments	364	1,207	19	43	438
All employees:					
Number (average for the year)	49,235	28,492	3,866	4,261	7,633
Salaries and wages, total	$151,514	$86,850	$9,415	$11,732	$21,190
Production and related workers:					
Number (average for the year)	40,908	24,740	3,475	3,673	6,377
Man-hours, total thousands	85,895	52,226	6,886	7,422	13,288
Wages, total	$115,790	$68,949	$7,205	$9,252	$15,759
Value added by manufacture	$285,451	$143,853	$16,942	$21,439	$39,967
ESTABLISHMENTS REPORTING DETAILED STATISTICS					
Number of establishments	306	887	19	43	217
All employees:					
Number (average for the year)	48,933	27,211	3,866	4,261	6,691
Salaries and wages, total	$150,772	$83,597	$9,415	$11,732	$19,324
Production and related workers:					
Number (average for the year)	40,617	23,491	3,475	3,673	5,486
Man-hours, total thousands	85,321	49,804	6,886	7,422	11,514
Wages, total	$115,110	$65,857	$7,205	$9,252	$13,969
Value added by manufacture	$284,478	$138,234	$16,942	$21,439	$36,474
Number of employees for pay period ended nearest Oct. 15:					
All employees	48,470	25,384	3,748	4,178	6,738
Male	37,894	20,402	1,365	3,273	5,515
Female	10,576	4,982	2,383	905	1,223
Production and related workers	40,233	21,684	3,319	3,576	5,512
Male	32,966	17,986	1,099	2,870	4,683
Female	7,267	3,698	2,220	706	829
Force-account construction workers	21	2			
Administrative, supervisory, sales, and all other	8,216	3,698	429	602	1,226
Male	4,907	2,415	266	403	832
Female	3,309	1,283	163	199	394
All employees, number by month:					
January	49,038	29,833	4,136	4,568	6,761
February	49,108	29,708	4,296	4,545	6,731
March	49,451	29,854	4,301	4,471	6,844
April	49,551	29,256	4,223	4,405	6,666
May	49,240	28,094	4,258	4,116	6,527
June	49,173	26,905	3,799	3,974	6,461
July	48,097	26,241	3,268	4,058	6,615
August	48,685	25,574	3,250	4,177	6,689
September	48,734	25,212	3,619	4,211	6,519
October	48,474	25,384	3,748	4,178	6,738
November	48,665	24,889	3,763	4,175	6,769
December	49,043	25,134	3,705	4,235	6,817

ITEM	Industry				
	Bolts, nuts, washers, and rivets	Screw-machine products	Collapsible tubes	Metal foil	Fabricated metal products, n. e. c.
ESTABLISHMENTS REPORTING DETAILED STATISTICS—Continued					
Cost of materials, fuel, electricity, and contract work	$177,207	$73,359	$10,055	$33,199	$31,005
Materials, parts, containers, and supplies	166,583	66,221	9,769	32,438	29,223
Fuels, total	2,942	790	128	363	412
Bituminous coal	785	214	29	106	115
Anthracite	12	41		3	7
Coke	34	7	10	45	1
Fuel oils	973	309	38	96	144
Gas	1,072	179	50	113	102
Other fuels	66	40	1		43
Purchased electric energy	3,028	1,996	156	392	444
Contract and commission work	4,654	4,352	2	6	926
Value of inventories:					
Beginning of year, total	$58,723	$24,225	$2,092	$8,297	$10,644
Finished products	20,364	3,643	256	758	1,771
Materials, supplies, and work in process	38,359	20,582	1,836	7,539	8,873
End of year, total	70,607	24,480	2,561	7,805	11,997
Finished products	25,971	4,750	354	894	2,047
Materials, supplies, and work in process	44,636	19,730	2,207	6,911	9,950
Expenditures for plant and equipment:					
New plant and equipment	$18,263	$10,800	$1,477	$2,395	$2,028
Construction and major alteration of fixed plants	4,762	2,866	160	446	443
Buildings	4,535	2,559	120	422	407
Other construction	227	307	40	24	36
Machinery and equipment	13,501	7,934	1,317	1,949	1,585
Production machinery and equipment	12,515	7,256	1,285	1,855	1,392
Other machinery and equipment	986	678	32	94	193
Used plant and equipment, and land	2,054	2,288	149	61	249
Number of highway-type motor vehicles owned or leased:					
Trucks	233	277	8	14	78
By manufacturer's rated capacity:					
Under 1 ½ tons	71	172	2	4	42
1 ½ tons	75	76	2	4	17
Over 1 ½ tons and less than 3 ½ tons	48	21	2	3	17
3 ½ tons and less than 5 tons	13	7	1		
5 tons and over	26	1	1	3	2
By body type:					
Van	5	16	4		6
Stake or platform	115	93	2	3	25
Panel or light delivery	59	122	2	8	32
All other trucks	54	46		3	15
Truck tractors	9	2		2	
Trailers and semitrailers	9	4		2	

TABLE 4.—SELECTED GENERAL STATISTICS BY SIZE OF ESTABLISHMENT, FOR THE UNITED STATES: 1947

[**Money figures in thousands of dollars.** For explanation of line captions see GENERAL EXPLANATIONS. Data which cannot be shown without disclosing information for individual companies have been combined with figures for other groups. A [d] appears in the column where the figure has been omitted and the combined figure is printed in italics]

INDUSTRY AND ITEM	Total, all establishments	Establishments with an average of—									
		1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Bolts, nuts, washers, and rivets:											
Number of establishments	364	69	41	37	66	47	53	25	15	11	----------
Number of employees (average for the year)	49,235	144	283	515	2,161	3,250	8,391	9,300	10,720	14,462	----------
Value added by manufacture	$285,451	$817	$1,622	$2,239	$12,636	$19,458	$52,328	$60,622	$60,385	$75,344	----------
Screw-machine products:											
Number of establishments	1,207	412	251	243	176	78	36	8	1	2	----------
Number of employees (average for the year)	28,492	862	1,709	3,290	5,325	5,289	5,303	*6,714*	(d)	(d)	----------
Value added by manufacture	$143,853	$5,413	$9,197	$16,980	$26,538	$26,813	$26,893	*$32,019*	(d)	(d)	----------
Collapsible tubes:											
Number of establishments	19	1	----------	2	----------	7	3	4	2	----------	----------
Number of employees (average for the year)	3,866	(d)	----------	(d)	----------	*558*	513	*2,795*	(d)	----------	----------
Value added by manufacture	$16,942	(d)	----------	(d)	----------	*$2,555*	$2,234	*$12,153*	(d)	----------	----------
Metal foil:											
Number of establishments	43	13	2	7	7	2	8	2	2	----------	----------
Number of employees (average for the year)	4,261	*38*	(d)	88	*303*	(d)	*3,832*	(d)	(d)	----------	----------
Value added by manufacture	$21,439	*$163*	(d)	$520	*$1,560*	(d)	*$19,196*	(d)	(d)	----------	----------
Fabricated metal products, n. e. c.:											
Number of establishments	438	194	95	64	53	16	13	3	----------	----------	----------
Number of employees (average for the year)	7,633	402	612	862	1,711	1,069	1,930	1,047	----------	----------	----------
Value added by manufacture	$39,967	$1,908	$2,640	$3,988	$8,353	$5,970	$12,525	$4,583	----------	----------	----------

TABLE 5.—VALUE OF PRODUCTS SHIPPED, BY BROAD CLASSES OF PRODUCTS, FOR THE UNITED STATES: 1947

[The first column shows the total value of shipments of the specified industry, divided among: (A) products classified in (primary to) the industry, (B) products classified in other industries (secondary to the specified industry), and (C) miscellaneous receipts. The second column shows the value of shipments of the primary products of the specified industry reported by establishments in other industries. The third column shows the total value of shipments of the primary products of the specified industry by all reporting manufacturers]

[Money figures in thousands of dollars]

BOLTS, NUTS, WASHERS, AND RIVETS INDUSTRY	Shipped by—		
	Bolts, nuts, washers, and rivets industry	Other industries	All industries
Total shipments by the industry	$463,752	----------	----------
A. Primary products of this industry	415,019	$68,473	$483,492
Standard bolts, nuts, washers, rivets, and screws	390,837	55,864	446,701
Specials [1]	24,182	12,609	36,791
B. Secondary products	37,990	----------	----------
Screw-machine products	12,240	----------	----------
Job stampings, except automobile	1,781	----------	----------
Nails, spikes, and brads	1,642	----------	----------
Other	22,327	----------	----------
C. Miscellaneous receipts	10,743	----------	----------
Contract and commission work	1,598	----------	----------
Scrap and salable refuse	8,482	----------	----------
Other	663	----------	----------

SCREW-MACHINE PRODUCTS INDUSTRY	Shipped by—		
	Screw-products machine industry	Other industries	All industries
Total shipments by the industry	$220,542	----------	----------
A. Screw-machine products	193,666	$31,401	$225,067
B. Secondary products	13,482	----------	----------
Standard bolts, nuts, washers, rivets, and screws	2,853	----------	----------
Other	10,629	----------	----------
C. Miscellaneous receipts	13,394	----------	----------
Contract and commission work	6,147	----------	----------
Scrap and salable refuse	7,013	----------	----------
Other	234	----------	----------

COLLAPSIBLE TUBES INDUSTRY	Shipped by—		
	Collapsible tubes industry	Other industries	All industries
Total shipments by the industry	$26,997	----------	----------
A. Collapsible tubes, and caps, spouts, etc., for collapsible tubes	23,772	----------	$23,772
B. Secondary products	2,359	----------	----------
C. Miscellaneous receipts	866	----------	----------

METAL FOIL INDUSTRY	Shipped by—		
	Metal foil industry	Other industries	All industries
Total shipments by the industry	$54,638	----------	----------
A. Foil and leaf	50,433	$6,914	$57,347
B. Secondary products	1,434	----------	----------
C. Miscellaneous receipts	2,771	----------	----------

FABRICATED METAL PRODUCTS, NOT ELSEWHERE CLASSIFIED, INDUSTRY	Shipped by—		
	Fabricated metal products, n.e.c., industry	Other industries	All industries
Total shipments by the industry	$73,205	----------	----------
A. Primary products of this industry	64,438	$44,149	$108,587
B. Secondary products	6,950	----------	----------
C. Miscellaneous receipts	1,817	----------	----------
Contract and commission work	1,203	----------	----------
Other	614	----------	----------

[1] Specials are defined as products, other than standard bolts, nuts, washers, etc., made on the same machines (headers, threaders, and nut-forming machines) that are used in the production of standard bolts, nuts, washers, etc.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers		1939 Total production for sale and interplant transfer	
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
Standard bolts, nuts, washers, rivets, and screws, total			$446,701		[1] $131,929
Bolts, rods, lag screws, and studs (including nuts when nuts and bolts are sold as a unit):					
Ferrous metal	Thousand pounds	1,032,577	129,121	(2)	(2)
Nonferrous metal	do	6,909	4,468	(2)	(2)
Nuts:					
Locknuts and similar nut devices:					
Ferrous metal, quantity reported	Thousand pieces	2,479,369	19,118	(2)	(2)
Ferrous metal, quantity not reported			4,683		
Nonferrous metal	Thousand pieces	584,857	2,779	(2)	(2)
Other nuts (including stove, machine screw, and wing nuts):					
Ferrous metal, total			37,808		
Quantity reported in pieces	Thousand pieces	8,439,021	28,710	(2)	(2)
Quantity reported in tons	Ton	26,567	9,098		
Nonferrous metal	Thousand pieces	1,177,724	5,362	(2)	(2)
Screws:					
Cap and set screws:					
Ferrous metal, total			56,534		
Quantity reported in pieces	Thousand pieces	3,850,250	46,381		
Quantity reported in tons	Ton	24,704	10,153	(4)	10,629
Nonferrous metal, quantity reported	Thousand pieces	34,817	1,056		
Nonferrous metal, quantity not reported			237		
Machine screws and stove bolts:					
Ferrous metal, total			32,185		
Quantity reported in pieces	Thousand pieces	13,628,394	29,349	(4)	8,347
Quantity reported in tons	Ton	5,604	2,836		
Nonferrous metal, quantity reported	Thousand pieces	2,519,610	7,873	(4)	2,408
Nonferrous metal, quantity not reported			1,295		
Sheet metal and tapping screws (thread forming screws):					
Ferrous metal, total			16,812		
Quantity reported in pieces	Thousand pieces	6,775,345	15,729	(4)	3,534
Quantity reported in tons	Ton	1,266	1,083		
Nonferrous metal	Thousand pieces	153,143	438		
Wood and drive screws:					
Ferrous metal, total			20,202		
Reported in pieces	Gross	55,613,807	17,718	(4)	6,026
Reported in tons	Ton	4,394	2,484		
Nonferrous metal	Gross	7,258,540	4,794	(4)	1,140
Washers:					
Plate (flat):					
Ferrous metal	Thousand pounds	93,182	11,186	63,065	3,651
Nonferrous metal	do	5,849	2,640	(3)	(3)
Spring and lock:					
Ferrous metal, total			11,951		
Reported in pieces	Thousand pieces	10,339,541	10,698	n.a.	5,481
Reported in tons	Ton	3,653	1,253		
Nonferrous metal	Thousand pieces	271,245	670	(3)	(3)
Rivets:					
Ferrous metal:					
7/16" and under, total			18,832		
Reported in pieces	Thousand pieces	8,267,238	9,027		
Reported in tons	Ton	46,840	9,805		
½" and over, total			13,585	(5)	13,608
Reported in pieces	Thousand pieces	5,366,774	3,537		
Reported in tons	Ton	84,223	10,048		
Nonferrous metal, total			10,000		
Reported in pieces	Thousand pieces	5,433,272	8,176	(3)	(3)
Reported in tons	Ton	1,478	1,824		
Turnbuckles and toggle bolts			1,405		[6] 2,854
Cotter pins:					
Ferrous metal			2,614		n.a.
Nonferrous metal			780		n.a.
Standard bolts, nuts, washers, rivets, and screws (not specified by kind)[7]			28,273		
Specials—products other than the items listed above, made on the same machines (headers, threaders, nut-forming machines) that are used in the production of bolts, nuts, rivets, etc., total			36,791		n.a.
Ferrous metal			33,129		n.a.
Nonferrous metal			3,662		n.a.
Screw machine products			225,067		55,387
Collapsible tubes, and caps, spouts, etc., for collapsible tubes, total			23,772		n.a.
Collapsible tubes:					
Aluminum	Gross	905,518	4,430		
Lead	do	2,370,630	8,505		
Tin	do	558,203	1,765	3,994,339	8,398
Tin-coated	do	1,332,393	5,420		
All other types[8]	do	672,000	2,274		
Caps, spouts, applicators, and screw eyes for collapsible tubes			1,378		n.a.

See footnotes at end of table.

TABLE 6.—QUANTITY AND VALUE OF PRODUCTS, TOTALS FOR THE UNITED STATES: 1947 AND 1939—Continued

PRODUCT	Unit of measure	1947 Total shipments and interplant transfers: Quantity	1947 Total shipments and interplant transfers: Value f.o.b. plant	1939 Total production for sale and interplant transfer: Quantity	1939 Total production for sale and interplant transfer: Value f.o.b. plant
Foil and leaf, total			$57,347		$20,806
Foil:[9]					
Aluminum	Thousand pounds[10]	81,544	48,026	(11)	18,859
Tin	do[10]	184	181		
Other, including composition (combination of two or more metals)	do[10]	9,296	4,991		
Leaf:					
Gold leaf:					
In books	Books of 500 sheets	63,170	1,453	86,264	1,235
In rolls, sized and unsized[12]	Rolls of 100′ x 1″	490,592	1,550	76,616	253
Imitation gold leaf	do	3,302,184	665		
Aluminum leaf			213		459
All other leaf (including nonmetallic stamping and embossing materials made from pigments)			268		
Fabricated metal products, n.e.c. (includes miscellaneous fabricated metal products such as: frogs, switches, crossings and similar railway track accessories; aluminum giftware; metal bookends; aluminum ladders, etc.)			108,587		n.a.

n.a.—Not available.
[1] Does not include the value of cotter pins produced in 1939.
[2] The total value of ferrous bolts, rods, lag screws, studs, and nuts amounted to $65,397,000 in 1939. This included production of 839,280,000 pounds valued at $60,469,000, and production valued at $4,928,000, for which quantity was not reported.
[3] Total value of nonferrous bolts, nuts, washers, and rivets was $8,854,000 in 1939. Separate data by product are not available.
[4] The quantity of screws produced was not reported by all manufacturers in 1939. The quantities reported and the values relating to these quantities are as follows: cap and set screws, ferrous and nonferrous—927,852,000 pieces at $6,218,000; ferrous machine screws—4,701,163,000 pieces at $5,005,000; nonferrous machine screws—637,588,000 pieces at $1,826,000; sheet metal screws, ferrous and nonferrous—1,029,261,000 pieces at $1,881,000; ferrous wood and drive screws—32,719,119 gross at $4,959,000; nonferrous wood and drive screws—2,990,225 gross at $1,078,000.
[5] 131,253 short tons was reported with a value of $12,573,000 in 1939. Quantity was not reported for the remaining $1,035,000.
[6] Includes the value of nonferrous turnbuckles and toggle bolts as does the 1947 figure.
[7] More than 50 percent of the value, for which this type of product was not specified, consisted of ferrous cap and set screws, ferrous wood and drive screws, and ferrous rivets 7/16 inch and under.
[8] Consists mainly of special alloys of tin, lead, and other metals.
[9] Data include a quantity of foil reported twice: once as unlaminated foil and again as foil laminated to paper, or other materials. The duplication amounted to 11½ million pounds of aluminum foil and negligible quantities of other types of foil.
[10] Quantity figures are shown in terms of metal content.
[11] Quantity of foil produced was not reported by all establishments in 1939. 80,746,000 pounds were reported at a value of $17,486,000.
[12] A small quantity of unsized rolls of 67 feet by 1 inch have been converted to 100 feet by 1 inch.

TABLE 7.—SELECTED MATERIALS CONSUMED, BY KIND: 1947

[The table below summarizes the consumption of selected metal shapes by manufacturers during 1947. For each shape, manufacturing establishments were required to report consumption, in quantity and cost, provided that such usage during 1947 exceeded the following amounts: For iron castings, steel castings, each of six carbon steel shapes—50 short tons; for alloy steel bars and all other alloy steel—25 short tons; for stainless steel, brass, and copper wire mill shapes, copper and brass castings, aluminum mill shapes and aluminum castings—10 short tons]

[Money figures in thousands of dollars]

METAL SHAPES	Establishments consuming more than specified quantities: BOLTS, NUTS, WASHERS, AND RIVETS INDUSTRY: Number	Consumption: Short tons	Consumption: Cost	SCREW-MACHINE PRODUCTS INDUSTRY: Number	Consumption: Short tons	Consumption: Cost
Iron castings, rough and semifinished	11	2,565	$813	5	1,091	$344
Steel castings, rough and semifinished	(1)	(d)	(d)			
Steel mill shapes and forms	n.a.	1,243,783	104,101	n.a.	197,230	23,370
Carbon steel:						
Bars and bar shapes	101	478,741	34,369	265	157,239	17,321
Sheet and strip	52	102,588	8,480	11	3,380	349
Structural shapes	(1)	521	40			
Plates	(1)	5,116	315			
Wire	135	510,340	44,845	9	12,070	1,074
All other mill shapes and forms	16	98,097	7,332	8	998	151
Alloy steel, except stainless:						
Bars and bar shapes	38	20,250	2,873	91	17,368	2,831
All other mill shapes and forms	23	24,633	3,137	5	4,900	603
Stainless steel	38	3,497	2,710	43	1,281	1,047
Copper and copper-base alloy:						
Brass and wire mill shapes and forms	96	30,204	17,568	256	33,950	16,650
Castings, rough and semifinished	(1)	(d)	(d)	5	194	139
Aluminum:						
Aluminum mill shapes	18	1,829	1,069	49	1,775	1,339
Castings, rough and semifinished	(1)	(d)	(d)	(1)	(d)	(d)

n.a.—Not available.
[d] Withheld to avoid disclosing figures for individual companies.
[1] Less than 5 establishments.

TABLE 8.—NUMBER OF ESTABLISHMENTS PERFORMING SELECTED METALWORKING OPERATIONS: 1947

[The figures in the table represent the number of establishments maintaining the metalworking operation specified, according to the usual number of production workers employed in the operation during 1947]

METALWORKING OPERATION	Number of establishments performing selected metalworking operations											
	BOLTS, NUTS, WASHERS, AND RIVETS INDUSTRY						SCREW-MACHINE PRODUCTS INDUSTRY					
	Total	Distribution by number of production workers in the operation					Total	Distribution by number of production workers in the operation				
		1–4	5–19	20–49	50–99	100 and over		1–4	5–19	20–49	50–99	100 and over
Foundry	5	1		3	1		2	2				
Die casting	7	6		1			2	2				
Forging—presses, hammers, or upsetters	31	12	8	6	2	3	8	4	4			
Electroplating	54	29	15	6	2	2	14	11	2	1		
Galvanizing and other hot dip coating	16	4	11	1			5	5				
Heat treating or annealing of metals	115	72	29	11	2	1	41	29	9	2	1	
Automatic screw machine department	97	25	36	23	10	3	887	283	417	131	39	17
Machine shop	167	46	63	41	9	8	324	126	142	38	12	6
Tool and die room	95	31	33	11	16	4	127	76	41	7	1	2
Pattern shop	5	5					2	2				
Plate or structural fabrication	5	2	2	1			5	5				
Stamping, blanking, forming, or drawing	98	33	32	18	7	8	62	45	12	4	1	

NOTE—In the Bolts, Nuts, Washers, and Rivets Industry, 113 establishments did not answer this inquiry. Of these, 85 had fewer than 20 employees; 25 had between 20 and 99 employees; and 3 had 100 or more employees. In the Screw-Machine Products Industry, 320 establishments did not answer this inquiry. All of these had fewer than 20 employees.

Major Group 35.—MACHINERY (EXCEPT ELECTRICAL)

This major group includes establishments engaged in manufacturing machinery and prime movers other than electrical equipment (Major Group 36). Machines powered by built-in or detachable electric motors ordinarily are included in this major group with the exception of certain types of small electrical household appliances (Major Group 36). Portable tools, both electric and pneumatic powered, are included in this major group, but hand tools are classified in Major Group 34.

GENERAL STATISTICS FOR THE UNITED STATES: 1947 AND EARLIER CENSUS YEARS

[**Money figures in thousands of dollars.** For explanation of column captions see GENERAL EXPLANATIONS]

CENSUS YEAR	Number of establishments	All employees [1]		Production workers		Value added by manufacture [2]
		Number (average for the year)	Wages and salaries, total	Number (average for the year)	Wages, total	
1947	17,906	1,545,323	$4,804,563	1,244,135	$3,592,771	$7,812,455
1939 [3]	8,860	n.a.	n.a.	536,082	769,569	2,036,965
1937 [4]	7,327	n.a.	n.a.	653,461	909,679	2,365,788

n.a.—Not available.

[1] The figures for 1947 and 1939 include data for employees of manufacturing establishments who were engaged in distribution and construction work. The extent to which data for such employees are included in the figures for 1937 is not known. See GENERAL EXPLANATIONS—Manufacturing employees—Classifications used.

[2] Value of products less cost of materials, supplies, fuel, electricity, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

[3] The figures for 1947 and 1939 are not entirely comparable with those for 1937 because the 1937 figures (a) include data for establishments primarily engaged in manufacture of thermostats and gauges, heat treating of steel, machine knives, and tackle blocks, and (b) exclude data for establishments primarily engaged in manufacture of vacuum cleaners, turbo-generators and water-wheel generator sets, hair clippers for animal use, brooders, nonferrous bearings, certain industrial furnaces and ovens, time-stamps and time-recording machines, dictating machines, certain valves and fittings (except plumbers'), blow torches, and caulking guns. Value added by manufacture for 1939 on a basis strictly comparable with 1937 was $1,989.6 million.

[4] The figures prior to 1937 are not sufficiently comparable with those for later years to be shown in this table principally because they include data for establishments primarily engaged in manufacture of aircraft engines and in machine shop repairs.