

Chapter XVI—MACHINERY (EXCEPT ELECTRICAL)

ENGINES AND TURBINES; FARM MACHINERY; CONSTRUCTION, MINING, AND OIL-FIELD EQUIPMENT

TABLE A.—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			Total production for sale and interplant transfer		
	Quantity (number of units)	Total rated horsepower capacity	Value f.o.b. plant	Quantity (number of units)	Total rated horsepower capacity	Value f.o.b. plant
Steam engines and turbines and hydraulic turbines ¹			\$51,848			n.a.
Steam engines (reciprocating).....	260	110,874	2,183	308	117,365	\$1,155
Steam turbines:						
Marine (including Navy):						
Mechanical drive steam turbines.....	40	232,905	2,261	} 122	} 702,760	} 8,369
Steam turbine-gear units.....	48	265,745	4,167			
Other:						
Mechanical drive steam turbines.....	3,474	375,875	6,012	} 2,271	} 517,795	} 7,070
Steam turbine-gear units.....	799	135,662	3,282			
Hydraulic turbines.....	158	1,599,158	10,740	} 112	} 836,663	} 5,885
Parts for steam engines and turbines and hydraulic turbines (sold separately).....			23,203			n.a.
Steam and water (hydraulic) turbine generator-set units			67,179			(4)
Steam turbine generator-set units.....	789	n.a.	66,399			
Water (hydraulic) turbine generator-set units and other equipment, including parts, etc.....			780			

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Quantity (number of units)	Value f.o.b. plant	Quantity (number of units)	Value f.o.b. plant
Internal-combustion engines (except automotive and aircraft) ⁵		\$617,257		\$107,421
Gasoline and other carburetor engines, except outboard.....		165,663		31,216
Outboard motors.....		50,038		8,562
Diesel and semi-Diesel engines.....		182,326		45,527
Gas engines.....		18,092		4,751
Other internal-combustion engines.....		5,773		
Internal-combustion engines, not reported by type.....		1,148		761
Parts and accessories for internal-combustion engines.....		194,217		16,604
Wheel-type tractors ⁶		483,045		(7)
Total reported on annual Census Bureau report M37A.....		475,086		(7)
Complete tractors.....	428,665	349,355	185,558	110,856
All purpose.....	366,057	273,861	158,585	90,333
8 and under 15 belt hp.....	13,620	5,796		
15 and under 20 belt hp.....	98,603	64,808	} 149,195	} 83,076
20 and under 25 belt hp.....	163,590	119,464		
25 and under 30 belt hp.....	25,622	24,460		
30 and under 35 belt hp.....	58,711	55,673	} 9,390	} 7,257
35 and under 45 belt hp.....	5,911	8,660		
Other.....	62,608	70,474	} 26,973	} 20,523
8 and under 20 belt hp.....	3,819	2,445	} 11,248	} 6,713
20 and under 25 belt hp.....	12,627	9,765		
25 and under 35 belt hp.....	15,981	15,802		
35 and under 45 belt hp.....	24,985	34,595	} 15,725	} 13,810
45 belt hp. and over.....	5,196	7,867		
Attachments.....		32,388		
Parts.....		83,553		(7)

See footnotes at end of table.

TABLE 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 (number of units)	Value f.o.b. plant	Quantity (number of units)	Value f.o.b. plant
Track-laying type tractors		224,632		(?)
Total reported on annual Census Bureau report MS7A		225,256		(?)
Complete tractors	37,534	134,530	20,127	45,305
Under 25-34 drawbar hp	12,011	20,608		
35-49 drawbar hp	9,597	27,912	13,284	19,249
50-69 drawbar hp	7,214	29,924		
70-84 drawbar hp	5,373	29,458	6,843	26,056
85 and over drawbar hp	5,339	26,428		
Attachments		7,466		
Parts		83,461		(?)
Garden tractors (including motor tillers)		46,961		(?)
Total reported on annual Census Bureau report MS7A		43,931		(?)
Complete tractors	172,252	33,151	9,777	1,416
Garden tractors, except motor tillers	140,959	22,928		
Under 3 engine hp	110,103	14,902	9,777	1,416
3 and under 8 engine hp	30,856	7,666		
Motor tillers, under 10 engine hp	31,293	10,523		
Attachments		9,650		
Parts		1,130		(?)
Tractors, not specified by type; and parts and attachments shipped to other plants producing tractors		27,886		
		83,529		n.a.
Plows and listers^a				
Moldboard plows:				
Horse drawn:				
Walking:				
Steel bottom	114,201	1,013	166,538	1,298
Chilled bottom	83,231	939		
Sulky type and gang type, 2-bottom and larger	1,682	104	4,260	266
Tractor drawn, 1-way:				
1-bottom	38,356	833	24,445	1,423
2-bottom	67,259	6,578	68,437	5,241
3-bottom	22,247	2,683	8,859	974
4-bottom	4,555	907	1,836	312
5-bottom and larger	2,467	620	881	197
Tractor drawn, 2-way				
Mounted, 1-way:				
1-bottom	20,733	1,240	n.a.	n.a.
2-bottom and larger	70,302	6,342	n.a.	n.a.
Mounted, 2-way, 2 bottom	11,145	1,258	n.a.	n.a.
Disc plows, drawn:				
1-disc	968	48	940	52
2-disc	2,982	328	3,378	343
3-disc	2,104	424	1,730	258
4-disc	1,803	464	784	168
5-disc	1,272	380	491	136
6-disc and larger	1,120	486	474	148
Disc plows, mounted:				
1-disc and 2-disc	21,784	2,481	n.a.	n.a.
3-disc and larger	11,129	2,242	n.a.	n.a.
One-way disc plows or tillers:				
Width of cut, under 5 feet	8,067	1,259		
Width of cut, 5 feet and larger	17,548	6,037	10,320	1,727
Ditching plows	4,727	630	n.a.	(11)
Terracers	21,297	2,441	n.a.	(11)
Other plows	36,709	10,123	n.a.	547
Plowstocks	66,925	207	47,036	89
Listers, without planting attachments:				
Drawn	11,500	193	10,316	733
Mounted:				
1-row	2,444	88	n.a.	n.a.
2-row	12,508	985	n.a.	n.a.
3-row and larger	3,529	431	n.a.	n.a.
Plowshares (quantity in thousand pounds)	59,293	8,169	20,534	2,011
Attachments for plows and listers		7,417		
Parts for plows and listers, except plowshares		15,346		6,500

See footnotes at end of table.

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TABLE 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 (number of units)	Value f.o.b. plant	Quantity (number of units)	Value f.o.b. plant
Harrows, rollers, pulverizers, and stalk cutters		\$57,423		n.a.
Harrows:				
Spike-tooth harrow sections	355,916	4,857	141,268	\$1,116
Spring-tooth harrow sections	112,177	1,737		
Spring-tooth harrows (heavy duty)	12,816	405	78,106	853
Disc harrows, field type:				
Drawn	180,339	21,114		
Mounted	38,334	4,158		
Disc harrows, heavy duty, brush, and bog type	28,686	5,424	91,375	6,841
Other harrows	1,654	163	n.a.	202
Smooth land rollers, not including lawn rollers	624	66	n.a.	n.a.
Soil pulverizers and packers	26,658	2,694	11,057	617
Ridge busters	198	32	n.a.	n.a.
Stalk cutters:				
1-row	6,571	381		
2-row and larger	17,472	1,352	5,436	193
Land levelers or scrapers (farm size)	40,967	4,594		
Bulldozers, under 5 feet blade length	4,038	395	n.a.	n.a.
Other rollers, pulverizers, and similar equipment	4,178	360		
Attachments		1,591		
Parts		8,100		2,663
Planting, seeding, and fertilizing machinery		73,977		n.a.
Corn planters:				
Drawn:				
1-row	13,113	245	16,243	258
2-row	28,433	2,608	29,664	1,734
3-row and larger	6,751	1,380	1,704	236
Mounted	12,881	1,330	(12)	(12)
Corn and cotton planters:				
Drawn:				
1-row	21,637	463	33,532	538
2-row and larger	4,403	295	6,000	403
Mounted:				
1-row	5,869	232		
2-row	15,331	1,161	2,704	61
3-row and larger	1,005	165		
Listers with planting attachments:				
Drawn	4,666	762		
Mounted	13,555	1,436	3,316	258
Potato planters, drawn or mounted:				
1-row	1,320	180		
2-row and larger	3,236	958	2,942	323
Beet and bean drills	3,127	672	776	84
Garden or vegetable planters:				
Hand, wheel type	51,442	300	51,945	215
Drawn or mounted	25,179	508	n.a.	n.a.
Transplanters, drawn or mounted:				
1-row	4,616	533		
2-row and 3-row	1,408	439	1,932	171
Grain drills, including legume planters:				
1-horse, plain or fertilizer	3,510	95		
Other than 1-horse:				
Fertilizer	24,015	5,448	26,458	3,376
Plain	22,711	5,007		
Broadcast seeders:				
Hand type	156,352	234	89,296	118
End-gate and drawn	15,053	431	11,249	197
Fertilizer distributors:				
Manually operated	45,311	244	n.a.	n.a.
Drawn or mounted	100,524	3,618	38,334	477
Lime spreaders:				
Wheel-type, drawn	23,877	1,881	6,103	237
End-gate and truck body	4,029	1,681	1,269	29
Trailer	14,707	718	n.a.	n.a.
Manure spreaders:				
2-wheel	40,158	7,299	34,291	4,189
4-wheel	21,064	3,923		
Loaders, except hay	65,795	12,379	n.a.	n.a.
Other planting, seeding, and fertilizing machinery		549		668
Attachments		6,586		
Parts		9,712		2,352

See footnotes at end of table.

TABLE 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 (number of units)	Value f.o.b. plant	Quantity (number of units)	Value f.o.b. plant
Cultivators and weeders ¹		\$50,363		n.a.
Corn and cotton type cultivators:				
Horse-drawn:				
1-horse	90,063	613	85,208	\$715
2-horse:				
Walking, 1-row	6,998	368	17,484	536
Riding, 1-row	1,141	62	17,316	671
Tractor-drawn	32,636	3,228	n.a.	n.a.
Mounted:				
1-row	28,552	1,150	70,652	6,107
2-row	167,650	16,444		
4-row and larger	6,729	1,443		
Beet, bean, vegetable, and garden cultivators, drawn or mounted	7,138	427	2,993	179
Rotary hoes and cultivators, drawn or mounted	30,791	2,274	3,486	207
Chisel, orchard, and subsoil cultivators and tillers, drawn or mounted	6,725	2,180	n.a.	n.a.
Field cultivators, drawn or mounted	34,339	3,531	6,994	791
Hand cultivators, wheel-type	545,477	1,991	210,857	380
Weeders, drawn or mounted, except flame:				
Rod	5,968	593	4,151	199
Toothed	32,359	1,004		
Other cultivators and weeders	12,767	794		899
Attachments		5,850		2,493
Parts		8,411		
Sprayers and dusters ²		39,556		n.a.
Power sprayers:				
Orchard and tree:				
Engine powered:				
Under 6 gallons per minute	15,139	3,378	8,045	1,964
6 gallons per minute and over	10,571	9,081		
Tractor power take-off	3,505	2,258		
Field or row-crop:				
Engine powered	2,929	1,629		
Tractor power take-off	2,934	1,124		
Traction sprayers, horse or tractor drawn	2,898	190		
Hand sprayers:				
Under 32 ounces	14,243,164	3,320		
32 ounces and under 1 gallon	4,528,514	2,223		
1 gallon and over:				
Compressed air	743,734	3,468	n.a.	n.a.
Knapsack	20,437	219		
Wheelbarrow and cart	26,196	461		
Flame sprayers, hand	87,696	1,230	n.a.	n.a.
Spray-pumps:				
Power driven	5,854	1,192	2,221	301
Hand driven	53,994	385	n.a.	n.a.
Dusters:				
Orchard and tree:				
Engine powered	1,884	704	1,795	250
Tractor power take-off	3,216	423		
Field or row-crop:				
Engine powered	2,452	557		
Tractor power take-off	6,901	1,031		
Traction	5,203	453	1,575	97
Hand type:				
Crank or knapsack	75,892	844	132,320	223
Plunger	977,194	618		
Attachments		569		
Parts		4,193		551
Harvesting machinery ³		191,570		n.a.
Combines (harvester-threshers):				
Full type:				
6 ft. and under	59,331	44,130	26,519	12,052
Over 6 ft. and under 12 ft.	3,135	3,551		
12 ft. and larger	9,040	15,013		
Self-propelled	5,394	12,235	8,530	9,292
Grain binders, including rice binders	9,393	2,805	17,105	3,169
Windrowers or swathers	4,111	1,348	n.a.	n.a.
Corn pickers:				
Drawn:				
1-row	35,248	16,024	13,878	6,554
2-row	7,788	6,636		
Mounted or semimounted	24,126	12,940		
Potato diggers:				
Walking plow type	288	5	936	12
Drawn:				
1-row	3,980	954	2,250	376
2-row	1,864	759		
Potato harvesters	1,136	606	n.a.	n.a.
Beet lifters	2,572	270	1,652	90
Beet harvesters	1,595	2,053	n.a.	n.a.
Beet loaders	1,012	585	n.a.	n.a.
Peanut diggers	3,193	195	n.a.	n.a.
Pea and bean cutters or pullers	292	36	956	91
Forage harvesters (field and row type), including hay choppers	15,596	11,195	440	240
Other harvesting machinery	17,241	7,797		2,030
Attachments		10,883		
Parts		39,741		10,309

See footnotes at end of table.

TABLE 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 (number of units)	Value f.o.b. plant	Quantity (number of units)	Value f.o.b. plant
Haying machinery ⁹		\$94,865		n.a.
Mowers:				
Drawn	53,244	5,598	84,270	\$5,903
Mounted or semimounted	140,959	15,384	n.a.	n.a.
Rakes:				
Sulky (dump)	34,135	1,919	28,104	916
Side delivery (including combination side rakes and tedders)	59,480	7,447	18,248	1,588
Sweep or buck (horse or tractor drawn)	21,333	1,315	5,479	302
Loose hay loaders	16,597	2,436	15,625	1,544
Hay stackers (stationary and combination)	7,854	1,630	1,368	142
Pick-up hay balers:				
Wire	6,439	6,385		
Twine	20,495	26,685	410	477
Stationary hay and straw balers	6,749	2,251	4,326	1,256
Other haying machinery		1,457		235
Attachments		3,525		4,744
Parts		18,833		
Machines for preparing crops for market or for use ⁹		42,013		n.a.
Stationary threshers:				
Grain, rice, and alfalfa:				
Under 28-inch cylinder	1,083	973	1,505	1,223
28-inch cylinder and larger	346	379	1,922	1,920
Pea and bean	97	130	276	66
Peanut pickers and threshers	2,277	1,400	633	324
Corn shellers:				
Hand	50,048	202	51,400	224
Power (cylinder):				
150 bushels per hour and under	17,461	1,136		
Over 150 bushels per hour	8,038	1,687	7,792	897
Ensilage cutters (silo fillers)	12,957	4,069	9,516	2,014
Corn huskers and combination corn husker-shredders	1,503	882	1,757	771
Feed cutters (hand or power)	1,000	70	1,280	38
Feed grinders and crushers:				
Hand	8,661	40	27,811	70
Power:				
Hammermills and combination roughage mills (farm size)	89,144	11,021	42,901	4,419
Burr mills (farm size)	11,626	599	8,288	303
Feed mixers (farm size)	51,747	2,053	n.a.	n.a.
Maple syrup pans, except furnaces	835	165	n.a.	91
Maple syrup furnaces	425	72	287	36
Grain and corn graders and cleaners (farm size)	19,289	942	3,325	456
Potato sorters and graders (farm size)	1,622	477	1,604	131
Vegetable graders and washers (farm size)	551	304	n.a.	n.a.
Cane mills (farm size)	2,582	303	2,104	124
Tobacco curers	27,322	2,803	n.a.	n.a.
Other machines for preparing crops for market or for use		2,909		1,189
Attachments		3,066		5,443
Parts		6,331		
Barnyard equipment ⁹		8,808		n.a.
Animal stock tanks	141,215	2,681	97,343	1,259
Livestock outside watering bowls	3,698	45	6,571	64
Hog waterers	108,938	1,637	n.a.	n.a.
Livestock water heaters	59,568	942	n.a.	n.a.
Livestock feeders	67,767	2,021	72,356	790
Other barnyard equipment		1,396		(1)
Attachments		69		(1)
Parts		117		
Farm poultry equipment ⁹		20,602		n.a.
Incubators:				
1,000 egg capacity and smaller (quantity represents total egg capacity)	1,352,135	127	2,018,646	191
1,001 through 19,999 egg capacity (quantity represents total egg capacity)	12,690,462	1,637	28,998,603	2,526
20,000 egg capacity and larger (quantity represents total egg capacity)	22,308,980	2,106		
Brooders:				
Floor:				
Electric	130,086	2,110	91,741	1,002
Oil	148,475	1,721	133,967	1,158
Coal	23,666	446	42,529	470
Gas	31,009	632	3,806	47
Wood	2,004	38	n.a.	n.a.
Battery:				
1-2 deck	51,956	437	1,318	17
3 deck	3,896	100	1,959	49
4 deck	939	101	1,152	76
5 deck and larger	14,336	1,548	7,125	614
Growing batteries	15,989	604	9,775	294
Laying batteries	72,688	117	7,686	184
Nests, hens', trap and laying	192,308	1,050	n.a.	n.a.
Poultry feeders:				
Chick	2,952,624	830		
Intermediate type	1,164,907	1,015	3,376,389	1,024
Flock and pullet	668,965	1,289		
Poultry waterers:				
Under 1 gallon capacity	1,780,174	168	4,513,681	984
1 gallon capacity and larger	1,519,262	2,157		
Leg and wing bands (quantity represents thousands of units)	90,642	275	n.a.	n.a.
Other farm poultry equipment		649		1,114
Attachments		183		131
Parts		1,262		

See footnotes at end of table.

TABLE 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 (number of units)	Value f.o.b. plant	Quantity (number of units)	Value f.o.b. plant
Farm dairy machines and equipment⁹		\$31,415		\$10,387
Mechanical milking equipment:				
Stationary pumping outfits, excluding milker units	75,124	5,467		
Portable milker outfits, complete with self-contained power unit:			24,492	1,537
Single milker	5,644	701		
Double milker	5,533	634		
Milker units for stationary pumping outfits:				
Single units	147,827	7,682		
Double units	8,405	474		
Cream separators:				
Hand or power operated:				
250 pounds or less per hour, including bench type	24,198	536	38,350	896
251 through 500 pounds per hour	28,059	1,412		
501 through 800 pounds per hour	38,449	4,015	26,173	1,585
801 through 1,500 pounds per hour	12,100	1,401		
Butter churns, farm size	323,183	991	n.a.	281
Other farm dairy machines and equipment		1,252		4,577
Attachments		331		1,511
Parts		6,429		
Barn equipment⁹		11,803		n.a.
Feed carriers (overhead)	225	7	3,619	109
Litter carriers	10,495	473		
Track for hay carriers (<i>quantity in thousands of feet</i>)	2,007	495	n.a.	n.a.
Track for feed and litter carrier systems (<i>quantity in thousands of feet</i>)	920	217	1,680	291
Feed trucks	7,510	363	992	21
Litter carrier tub trucks	1,459	58	n.a.	n.a.
Hay carriers	56,227	817	38,147	331
Hay forks (harpoon and grapple):				
Loose tine	71,905	676	39,479	153
Rigid tine	12,025	90		
Hay pulleys, sold separately	370,409	353	n.a.	n.a.
Hay slings:				
Rope or chain	38,149	64	21,479	38
Slat	1,582	8		
Cattle stalls shipped with stanchions	209,419	2,268	95,643	622
Cattle stalls shipped without stanchions	53,811	386		
Stanchions shipped separately	541,685	1,654	280,834	747
Livestock pens (<i>quantity in thousands of feet</i>)	129	400	n.a.	130
Livestock water bowls, inside	550,325	1,715	200,742	439
Other barn equipment		858		1,476
Attachments		146		49
Parts		755		
Lawn mowers		71,053		9,804
Hand (reel type)	2,209,126	30,365	1,271,664	6,524
Power, total	362,339	36,523	34,575	3,280
Reel type:				
Hand traction	242,098	24,632		
Power traction	30,232	2,074		
Rotary type:				
Hand traction	211,866	22,558		
Power traction	120,241	11,891	n.a.	n.a.
Gang (cutting units)	100,937	9,140		
Other ¹⁴	19,304	2,751		
	21,239	2,162		
	20,889	2,003		
Other farm machines and equipment (including windmills) and parts and attachments shipped to other plants producing farm equipment ¹⁵		67,274		n.a.
Cranes (except construction power, and overhead traveling cranes), hoists, winches, and derricks (except oil- and gas-well derricks)		108,811		13,278
Cranes (except construction power cranes):				
Locomotive, except wrecking	322	10,292		
Full circle revolving with booms (such as whirleys and hammer heads)	211	7,423	n.a.	4,396
Pillar, jib, and bracket cranes	n.a.	428		
Other cranes, including locomotive wrecking	4,229	9,367		
Hoists:				
Hand chain hoists	259,758	10,701		
Electric chain hoists	30,401	5,048		
Electric wire-rope hoists	21,715	14,056	n.a.	8,612
Air hoists	n.a.	1,462		
Other hoists	n.a.	24,791		
Winches	n.a.	18,584		
Derricks, except oil- and gas-well	n.a.	3,708	n.a.	270
Cranes, hoists, winches, and derricks, not reported by kind	n.a.	2,951		
Excavating and road construction and maintenance machinery		416,548		n.a.
Power cranes, draglines, and shovels (including mine shovels and draglines): ¹⁶				
Crawler mounted: ¹⁷				
Under ½ cu. yd. shovel capacity (or up to and including 5 tons crane lifting capacity)	783	4,826		
½ cu. yd. shovel capacity (or over 5 to 7 tons crane lifting capacity)	3,103	29,723		
¾ cu. yd. shovel capacity (or over 7 to 10 tons crane lifting capacity)	3,175	42,861		
1-1½ cu. yd. shovel capacity (or over 10 to 25 tons crane lifting capacity)	639	15,746		
1¾-2 cu. yd. shovel capacity (or over 25 to 40 tons crane lifting capacity)	449	17,629		
2½ cu. yd. shovel capacity (or over 40 to 50 tons crane lifting capacity)	422	21,379	3,036	35,879
Over 2½ cu. yd. shovel capacity (or over 50 tons crane lifting capacity)	186	22,993		
Truck or wheel (wagon) mounted: ¹⁷				
Under ¾ cu. yd. shovel capacity (or up to and including 10 tons crane lifting capacity)	2,155	21,179		
¾ cu. yd. and over shovel capacity (or over 10 tons crane lifting capacity)	469	11,316		
Walking draglines and walking cranes; and power cranes, draglines, and shovels, not reported by type ¹⁷	n.a.	3,452		
Front end attachments, buckets, grapples, slings, etc., for power cranes, draglines, and shovels, sold separately, and parts for power cranes, draglines, and shovels	n.a.	56,881	n.a.	115,490

See footnotes at end of table.

MACHINERY (EXCEPT ELECTRICAL)

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TABLE 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 (number of units)	Value f.o.b. plant	Quantity (number of units)	Value f.o.b. plant
Excavating and road construction and maintenance machinery—Continued				
Construction machinery for mounting on tractors (track-laying or heavy duty wheel-type):				
Tractor-mounted cranes	1,994	\$2,842	n.a.	(19)
Dozers (angle and bull) for mounting on tractors (five feet blade length and over)	17,657	20,975	5,047	\$4,242
Cable type	5,691	6,508	n.a.	n.a.
Hydraulic type	11,966	14,467	n.a.	n.a.
Cable power control units	10,008	6,909	n.a.	(19)
Loaders, shovel type	9,955	9,786	n.a.	(19)
Earth augers and post-hole diggers	n.a.	2,271	n.a.	(19)
Dredging machinery	n.a.	8,006	n.a.	3,141
Ditchers and trenchers	1,052	8,572	n.a.	1,908
Ladder type	216	2,496		
Wheel and blade type	732	5,375	n.a.	n.a.
Not specified by kind	104	701		
Scrapers		25,678	n.a.	8,098
Carrying and hauling scrapers	6,573	24,328	n.a.	n.a.
Other and not specified by kind		1,350		(19)
Contractor's air tools, hand held (clay diggers, paving breakers, and back-fill tampers)	13,709	2,477		
Graders	n.a.	45,586	n.a.	7,613
Motor, heavy	4,561	30,271		
Motor, light and medium	3,556	10,400		
Pull type and elevating	722	614	n.a.	n.a.
All other types	1,027	762		
Not specified by kind	n.a.	3,530		
Rollers	4,233	12,108		
Tandem, self-propelled	1,839	4,822		
Three-wheeled, self-propelled	1,060	5,200	n.a.	(19)
Pneumatic, drawn	498	528		
Tamping and sheepsfoot	520	912		
Portable, self-propelled	516	646		
Snow plows:				
Rotary and blower	70	484	n.a.	2,313
"W" and single blades and wings (attachments only)	n.a.	4,788		
Brooms:				
Power-driven	685	309		
Traction driven	202	114		
Sweepers, motor pick-up	544	1,217		(19)
Other excavating and road construction machinery (including rippers and rooters, discs, conveyor type loaders, etc.)	n.a.	16,481		
Mixers, pavers, and related equipment		56,751		n.a.
Concrete:				
Mixers, portable, under 3 1/2 cu. ft. capacity (except plaster and mortar):				
Hand operated	22,665	1,612		
Power operated	8,079	1,682	n.a.	6,468
Mixers, portable, 3 1/2 cu. ft. and over (except plaster and mortar)	19,525	24,546		
Mixers, plaster and mortar	4,593	1,862		
Pavers	89	1,774		
Finishers and spreaders	292	1,164		
Batching plants (for concrete, aggregate only, and bulk cement)	1,205	4,989		
Concrete vibrators	3,254	1,285		
Bituminous:				
Portable mixers and patch plants	255	967		(19)
Distributors:				
Truck mounted	586	2,216		
Trailer type:				
Up to and including 800 gallons capacity (maintenance units)	585	614		
Over 800 gallons capacity	74	345		
Asphalt plants (including travel-mix type)	129	5,238		
Kettles, bituminous heating	4,702	1,546		
Heaters and circulators, tank car, direct and steam heating	496	1,367	n.a.	194
Other and unspecified mixers, pavers, and related equipment		5,564		
Specialized mining machinery and equipment		40,462		
Coal cutting machines (used for coal and other soft minerals)	1,533	11,844		(19)
Underground loaders:				
Mobile loading machines (including shovel and gathering types)	637	8,579		
All other underground loaders (including scraper)	1,604	4,810		
Mineral classifying, flotation, separating, concentrating, cleaning, sedimentation, clarifying, and related equipment (except screening machinery and plants)		5,750		
Underground mine cars (including shuttle cars and car dumpers)	17,523	8,910	n.a.	3,688
Specialized mining machinery and equipment, not reported by kind		569		
Crushing, pulverizing, and screening machinery (including equipment for ore, coal, rock, and the processing industries, but excluding small equipment built specifically for grinding feed on farms)		56,340		n.a.
Crushers and crushing plants:				
Portable	1,435	16,985		
Stationary (including crushers on skids)	858	10,284	n.a.	10,432
Pulverizers and grinders	1,119	9,307		
Screening plants, washing plants, and combination washing and screening plants (including combination crushing, washing, and screening plants):				
Portable		1,896		
Stationary		14,862		(19)
Crushing, pulverizing, and screening machinery, not reported by kind		3,006		
Other construction and mining machinery (except oil-field machinery and tools; cranes, other than power; hoists; winches; and derricks)		253,518		n.a.
Drills (other than water well, blast hole, and oil and gas field):				
Portable rock drills, hand held or mounted	33,951	11,459		(19)
Core drills, complete	1,168	3,250		
Other drills, and tools and supplies for drills sold separately		14,147		(19)
All other construction and mining machinery and equipment, complete units		78,266		
Parts and attachments for construction and mining machinery and equipment sold separately (except parts and attachments for power cranes, draglines, and shovels)		140,891		\$0 15,731
Construction and mining machinery, not reported by kind		5,505		

See footnotes at end of table.

TABLE 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 (number of units)	Value f.o.b. plant	Quantity (number of units)	Value f.o.b. plant
Oil-field machinery and tools		\$262,939		\$84,153
Portable drilling rigs, permanently mounted on truck or trailer: ¹				
Oil and gas field:				
Cable tool.....	649	4,831		
Rotary rigs.....	297	9,585		
Water well and blast hole:				
Cable tool.....	1,520	6,895		
Rotary rigs.....	162	2,275		
Oil and gas field drilling equipment, except portable (other than pumps):				
Cable tool drilling surface machinery and equipment:				
Drilling machines and accessories ²	503	5,407		
Other cable tool surface drilling equipment (including rig irons, wheels, reels, beams, pitmans, etc.).....		1,850		
Cable tool drilling subsurface equipment:				
Drilling bits, jars, sockets.....		7,020		
Fishing and specialty tools.....		1,490		
Other cable tool subsurface equipment.....		583		
Rotary drilling surface machinery and equipment:				
Blocks, crown and traveling.....		1,916		
Draw works and accessories ²²	410	10,860		
Rotary tables.....	650	2,491		
Elevators, spiders, slips, hooks, links, and connectors.....		4,367		
Swivels and accessories.....		2,171		
Well-control equipment (blow-out preventers, etc.).....		7,384		
Other rotary drilling surface machinery and equipment (including consolidated rigs and accessories).....		13,414		
Rotary drilling subsurface equipment:				
Bits.....		44,650		
Reamers.....		1,781		
Coring equipment.....		7,493		
Tool joints, subs, and connectors.....		14,541		
Drill collars.....		6,352		
Kelly joints.....	1,124	959	(23)	(23)
Fishing and cutting tools.....		2,482		
Other subsurface rotary drilling equipment.....		912		
Cementing, floating, guiding, and shoe equipment:				
Guide shoes, float collars, and combination guide and float shoes.....		2,232		
Other cementing equipment.....		7,125		
Derricks, substructures and accessories—regular and portable, including equipment shipped "knocked down" and assembled on the site.....		9,809		
Well surveying machinery and equipment.....		3,527		
Production machinery and equipment:				
Flowing well equipment, surface and subsurface:				
Christmas tree assemblies.....		5,251		
Casing and tubing head supports.....		4,210		
Chokes, manifolds, and other accessories.....		608		
Rodless oil lifting machinery and equipment (other than pumps).....		557		
Rod lifting machinery and equipment, surface (including pumps when they are components of a complete assembly):				
Pumping units and accessories, including back crank equipment ²²	14,113	23,202		
Pumping jacks.....		189		
Other surface rod lifting machinery and equipment.....		434		
Rod lifting equipment subsurface, except pumps:				
Sucker, pull and polish rod equipment ²²	1,790,938	11,037		
Other subsurface rod lifting equipment.....		173		
Other production machinery and equipment:				
Packers.....		2,997		
Screens, tubing catchers, etc.....		1,387		
Oil and gas separating, metering and treating equipment.....		9,903		
Oil-field machinery and tools, not specified by type.....		21,471		

n.a.—Not available.

¹ More detailed statistics for steam engines and turbines are shown in table 6-B.² Represents a revision of the previously published 1939 census figures.³ Includes value of gears.⁴ Data not available separately; these statistics were included in the "Motors, generators, and motor-generator sets" industry.⁵ More detailed statistics for internal-combustion engines are shown in tables 6-C to 6-H.⁶ Excludes special types of heavy-duty industrial tractors, which are included in the construction and mining machinery industry.⁷ In 1939, no separate data were collected for parts and attachments by type of tractor. The value of production for parts and attachments for all types of tractors was \$45,999,000.⁸ Over two-thirds of this value represents parts and attachments shipped to other plants producing tractors.⁹ The 1939 data for these commodities, which are taken from the annual survey "Farm machines and equipment," represent manufacturers' sales rather than production as is the case for other 1939 comparative data. In 1939, as in other years, manufacturers' sales, factory production, and factory shipments do not differ significantly for farm equipment items.¹⁰ In 1939, data for tractor drawn 2-way moldboard plows were included with the 1-way plows.¹¹ In 1939, data for ditching plows and terracers were included with "other plows."¹² In 1939, data for mounted corn planters were included with drawn corn planters.¹³ In 1939, other barnyard equipment and parts and attachments for barnyard equipment were included with data for barn equipment.¹⁴ Includes sickle-bar lawn mowers shipped as complete units, lawn edgers, rotary type hand mowers, and special cutting units. Sickle-bar attachments for garden tractors are not included.¹⁵ Over two-thirds of this value represents parts and attachments shipped to other plants producing farm machines and equipment.¹⁶ Excludes equipment for mounting on tractors.¹⁷ Includes value of front end attachments when sold with the machine.¹⁸ Includes parts and attachments for power cranes and draglines are included with "Parts and attachments for construction, mining machinery and equipment sold separately."¹⁹ Not available separately for 1939. Included with "All other construction and mining machinery and equipment," valued at \$57,120,000.²⁰ Includes rebuilt machinery, parts for power cranes and draglines and parts for overhead traveling cranes and monorail systems.²¹ Portable drilling rigs have been classified as "oil and gas field" or "water well and blast hole" depending on the purpose for which they were built, regardless of the use to which they may have been put by the purchaser.²² Quantity includes only number of drilling machines, draw works, pumping units, and sucker rods, respectively. However, the value includes accessories, etc., shipped with the complete units as well as accessories, etc., shipped separately.²³ Comparable detailed data for 1939 are not available.

MACHINERY (EXCEPT ELECTRICAL)

TABLE B.—STEAM ENGINES AND TURBINES, BY TYPE AND HORSEPOWER RATING: 1947 AND 1939
[Money figures in thousands of dollars]

PRODUCT	1947					1939					
	Steam engines (reciprocating)	Steam turbines				Hydraulic turbines	Steam engines (reciprocating)	Steam turbines		Hydraulic turbines	
		Marine (including Navy)		Other than Marine				Marine (including Navy)	Other than Marine		
		Mechanical drive turbines	Turbine-gear units	Mechanical drive turbines	Turbine-gear units						
Total number of units.....	260	40	48	3,474	799	158	308	122	2,271	112	
By horsepower capacity (rated or normal):											
0-9 hp.....				729	79		19		327	4	
10-19 hp.....				493	48	23	38		460	3	
20-49 hp.....	140			841	128		70	10	600	14	
50-99 hp.....			24	577	130	10	29	4	373	10	
100-199 hp.....		16		391	190	19	32	40	217	9	
200-499 hp.....	18			280	172		23	20	228	35	
500-999 hp.....	76			101	36		12				
1,000-4,999 hp.....	26				16		34	2	48	14	
5,000-9,999 hp.....		24					10				
10,000-24,999 hp.....			24		62		12			18	23
25,000-34,999 hp.....							15				
35,000 and over.....											
Total rated horsepower capacity.....	110,874	232,905	265,745	375,875	135,662	1,599,158	117,365	702,760	517,795	836,663	
Value f.o.b. plant.....	\$2,183	\$2,261	\$4,167	\$6,012	\$3,282	\$10,740	\$1,155	\$8,369	\$7,070	\$5,885	

1 Represents a revision of the previously published 1939 census figures.
2 Includes value of gears.

TABLE C.—INTERNAL-COMBUSTION ENGINES (INCLUDING AUTOMOTIVE AND AIRCRAFT), NUMBER PRODUCED: 1947

PRODUCT	Total number of engines produced	PRODUCT	Total number of engines produced
Gasoline and other carburetor engines.....	8,510,486	Diesel and semi-Diesel.....	115,363
Automotive (automobile, truck, and bus).....	5,766,578	Automotive (automobile, truck, and bus).....	15,180
Aircraft.....	18,934	All other.....	100,183
Outboard.....	584,458	Gas.....	3,622
All other.....	2,140,516	Other.....	55,944

1 Includes kerosene and distillate engines.
2 Conventional type only.
3 Consists entirely of carbon dioxide model aircraft engines of special design and dual fuel type engines such as gasoline-kerosene, gasoline-gas, Diesel-gas, etc.

TABLE D.—INTERNAL-COMBUSTION ENGINES (EXCEPT AUTOMOTIVE, AIRCRAFT, AND OUTBOARD), QUANTITY AND VALUE BY HORSEPOWER RATING: 1947
[Money figures in thousands of dollars]

PRODUCT	Total (number of units)	Shipments to other companies		Production for incorporation into products of the same company (including transfers to other plants of the company)	PRODUCT	Total (number of units)	Shipments to other companies		Production for incorporation into products of the same company (including transfers to other plants of the company)
		Quantity (number of units)	Value f.o.b. plant				Quantity (number of units)	Value f.o.b. plant	
Gasoline and other carburetor engines.....	2,140,516	1,595,332	\$154,118	545,184	Diesel and semi-Diesel engines.....	100,183	63,058	\$156,969	37,125
1.9 hp. and under.....	526,364	490,976	13,245	35,388	5.9 hp. and under.....		1,966	533	
2.0-2.9 hp.....	487,710	461,232	21,117	26,478	6.0-10.9 hp.....	14,822	5,078	2,712	891
3.0-4.9 hp.....	205,210	157,995	11,934	47,215	11.0-20.9 hp.....		2,961	2,073	
5.0-5.9 hp.....	56,561	38,341	2,732	18,220	21.0-30.9 hp.....		3,926	3,621	
6.0-6.9 hp.....	39,423	8,962	749	30,461	31.0-40.9 hp.....		3,044	3,110	
7.0-8.9 hp.....	43,040	42,034	2,988	1,006	41.0-50.9 hp.....		1,094	1,304	
9.0-10.9 hp.....	48,314	34,477	4,479	13,837	51.0-70.9 hp.....		10,741	11,440	10,637
11.0-20.9 hp.....	144,918	90,419	13,501	54,499	71.0-100.9 hp.....		21,772	12,656	9,116
21.0-30.9 hp.....	230,332	94,028	16,432	136,304	101.0-150.9 hp.....		18,598	32,061	5,102
31.0-35.9 hp.....	30,117	22,332	5,105	7,785	151.0-200.9 hp.....		6,028	17,893	1,014
36.0-40.9 hp.....	149,077	14,022	3,022	135,055	201.0-300.9 hp.....		1,269	9,311	
41.0-45.9 hp.....	36,967	21,850	6,189	11,521	301.0-400.9 hp.....		712	6,248	67
46.0-50.9 hp.....		3,596	1,217		401.0-500.9 hp.....		300	7,357	35
51.0-60.9 hp.....	46,107	33,147	8,863	12,960	501.0-600.9 hp.....		136	4,895	
61.0-70.9 hp.....	26,887	22,058	5,749	4,829	601.0-700.9 hp.....		65	2,454	242
71.0-80.9 hp.....		9,785	3,818		701.0-800.9 hp.....		166	5,065	
81.0-90.9 hp.....	27,176	14,439	5,336	2,952	801.0-900.9 hp.....		79	5,447	
91.0-100.9 hp.....	13,473	8,411	4,120	5,062	901.0-1000.9 hp.....		666	3,823	596
101.0-150.9 hp.....	25,961	24,606	15,246	1,355	1001.0-1500.9 hp.....		185	9,940	888
151.0-200.9 hp.....		1,765	2,633		1501.0 hp. and over.....		100	9,521	
201.0-400.9 hp.....	2,879			257	Other engines (including gas).....	59,566	56,783	23,510	2,783
401.0 hp. and over.....		662	1,784		20.9 hp. and under.....	53,712	53,712	3,053	
		195	3,859		21.0-50.9 hp.....	2,992	903	745	2,089
					51.0-150.9 hp.....		1,039	1,334	
					151.0-200.9 hp.....	2,862	207	324	694
					201.0 hp. and over.....		922	17,654	

CENSUS OF MANUFACTURES: 1947

TABLE E.—INTERNAL-COMBUSTION ENGINES (EXCEPT AUTOMOTIVE, AIRCRAFT, AND OUTBOARD), QUANTITY AND VALUE, BY PISTON DISPLACEMENT: 1947

[Money figures in thousands of dollars]

PRODUCT	Total (number of units)	Shipments to other companies		Production for in- corporation into prod- ucts of the same com- pany (in- cluding transfers to other plants of the company)	PRODUCT	Total (number of units)	Shipments to other companies		Production for in- corporation into prod- ucts of the same com- pany (in- cluding transfers to other plants of the company)				
		Quantity (number of units)	Value f.o.b. plant				Quantity (number of units)	Value f.o.b. plant					
Gasoline and other carburetor engines	2, 140, 516	1, 595, 332	\$154, 118	545, 184	Diesel and semi-Diesel engines	100, 183	63, 058	\$156, 969	37, 125				
3.9 cu. in. and under.....	32, 095	32, 095	1, 021	-----	16.0-50.9 cu. in.....	8, 391	5, 317	2, 305	717				
4.0-5.9 cu. in.....	491, 487	453, 988	13, 853	37, 499	51.0-100.9 cu. in.....		2, 357	1, 472					
6.0-8.9 cu. in.....	408, 900	396, 777	15, 064	12, 123	101.0-150.9 cu. in.....		6, 412	5, 281					
9.0-10.9 cu. in.....	256, 298	117, 171	7, 236	82, 334	151.0-200.9 cu. in.....	10, 193	2, 598	1, 923	1, 183				
11.0-15.9 cu. in.....					30, 996		15, 518	2, 070		15, 478	201.0-250.9 cu. in.....	9, 324	9, 711
16.0-20.9 cu. in.....	147, 664	56, 793	4, 899	17, 860	251.0-300.9 cu. in.....	7, 685	5, 760	8, 314	1, 925				
21.0-25.9 cu. in.....					30, 659		29, 424	3, 491		1, 235	301.0-400.9 cu. in.....	5, 294	6, 642
26.0-30.9 cu. in.....					30, 996		15, 518	2, 070		15, 478	401.0-500.9 cu. in.....	9, 056	15, 370
31.0-40.9 cu. in.....	65, 034	39, 389	5, 142	25, 645	501.0-600.9 cu. in.....	17, 185	1, 272	2, 492	7, 344				
41.0-50.9 cu. in.....					30, 659		29, 424	3, 491		1, 235	601.0-800.9 cu. in.....	5, 060	11, 697
51.0-75.9 cu. in.....	66, 606	56, 324	8, 733	10, 282	801.0-1000.9 cu. in.....	7, 622	3, 509	11, 313	2, 680				
76.0-100.9 cu. in.....					251, 125		89, 616	15, 474		161, 509	1001.0-1500.9 cu. in.....	3, 629	13, 399
101.0-150.9 cu. in.....	80, 197	33, 413	7, 168	46, 784	1501.0-2000.9 cu. in.....	1, 068	1, 313	8, 287	44				
151.0-175.9 cu. in.....					48, 859		6, 708	1, 865		42, 151	2001.0-3000.9 cu. in.....	595	4, 422
176.0-200.9 cu. in.....	37, 047	29, 604	7, 968	7, 443	3001.0-5000.9 cu. in.....	1, 865	427	6, 663	1, 451				
201.0-225.9 cu. in.....					103, 688		61, 869	18, 673		41, 819	5001.0-10,000.9 cu. in.....	414	10, 875
226.0-300.9 cu. in.....	53, 134	26, 538	10, 834	23, 707	10,001.0-15,000.9 cu. in.....	589	361	11, 789	73				
301.0-350.9 cu. in.....					351.0-400.9 cu. in.....		2, 889	1, 261		23, 707	15,001.0-25,000.9 cu. in.....	155	5, 293
351.0-400.9 cu. in.....	20, 450	8, 923	5, 418	11, 527	25,001.0 cu. in. and over.....	205	205	19, 721	2, 783				
401.0-500.9 cu. in.....					501.0-600.9 cu. in.....		4, 986	3, 970		7, 788	Other engines (including gas) ...	59, 566	56, 783
501.0-600.9 cu. in.....	16, 277	1, 415	2, 013	7, 788	250.9 cu. in. and under.....	(d)	53, 085	2, 685	(d)				
601.0-700.9 cu. in.....					701.0-800.9 cu. in.....		757	819		251.0-500.9 cu. in.....	1, 116	766	
701.0-800.9 cu. in.....					801.0-900.9 cu. in.....		1, 415	2, 013		501.0-1000.9 cu. in.....	1, 263	1, 144	
801.0-900.9 cu. in.....					901.0-1000.9 cu. in.....		339	651		1001.0-2000.9 cu. in.....	642	1, 829	
901.0-1000.9 cu. in.....					1001.0-2000.9 cu. in.....		112	258		2001.0 cu. in. and over.....	677	17, 086	
1001.0-2000.9 cu. in.....					2001.0-5000.9 cu. in.....		607	1, 712					
2001.0-5000.9 cu. in.....		273	4, 170										

^d Withheld to avoid disclosing figures for individual companies.

TABLE F.—OUTBOARD MOTORS, QUANTITY AND VALUE, BY HORSEPOWER RATING AND PISTON DISPLACEMENT: 1947

[Money figures in thousands of dollars]

PRODUCT	Total shipments and interplant transfers		PRODUCT	Total shipments and interplant transfers	
	Quantity (number of units)	Value f.o.b. plant		Quantity (number of units)	Value f.o.b. plant
Outboard motors	584, 458	\$50, 038	Outboard motors—Continued		
By horsepower rating:			By piston displacement:		
2.9 hp. and under.....	83, 951	5, 296	5.9 cu. in. and under.....	219, 012	\$15, 182
3.0-3.9 hp.....	110, 368	6, 733	6.0 cu. in. and over.....	365, 446	34, 856
4.0-5.9 hp.....	247, 696	21, 431			
6.0-7.9 hp.....	99, 514	9, 382			
8.0-8.9 hp.....					
9.0 hp. and over.....	42, 929	7, 196			

MACHINERY (EXCEPT ELECTRICAL)

TABLE G.—DIESEL AND SEMI-DIESEL ENGINES (EXCEPT AUTOMOTIVE), QUANTITY AND VALUE, BY R.P.M.: 1947

[Money figures in thousands of dollars]

PRODUCT	Total			750 r.p.m. and under			Over 750 r.p.m.			
	Shipments to other companies		Production for incorporation into products of the same company (including transfers to other plants of the company)	Shipments to other companies		Production for incorporation into products of the same company (including transfers to other plants of the company)	Shipments to other companies		Production for incorporation into products of the same company (including transfers to other plants of the company)	
	Quantity (number of units)	Value f.o.b. plant		Quantity (number of units)	Value f.o.b. plant		Quantity (number of units)	Value f.o.b. plant		
Diesel and semi-Diesel engines, total	63,058	\$156,969	37,125	3,867	\$56,763	663	59,191	\$100,206	36,482	
By horsepower rating:										
5.9 h.p. and under	1,966	533	9,428	1,976	1,328	(d)	1,966	533	(d)	
6.0-10.9 hp	5,078	2,712					5,078	2,712		
11.0-50.9 hp	11,025	10,108					9,049	8,780		
51.0-70.9 hp	10,741	11,440					10,671	11,191		
71.0-100.9 hp	12,656	18,171					12,520	17,616		
101.0-150.9 hp	13,496	32,051	5,102	262	1,796	13,234	30,255	(d)		
151.0-200.9 hp	5,014	17,893	1,014	133	1,314	4,881	16,579			
201.0-300.9 hp	1,269	9,311	67	253	3,627	1,016	5,684			
301.0-400.9 hp	712	6,248	277	102	2,051	610	4,197			
401.0-800.9 hp	667	19,771	501	17,112	166	2,659	2,659			
801.0-900.9 hp	79	5,447	79	79	5,447					
901.0-1000.9 hp	70	3,823	596	70	3,823					
1001.0-1500.9 hp	185	9,940	185	185	9,940					
1501.0 hp. and over	100	9,521	888	100	9,521					
By piston displacement:										
16.0-50.9 cu. in.	5,317	2,305	717	1,917	1,276	(d)	5,317	2,305	(d)	
51.0-100.9 cu. in.	2,357	1,472					2,357	1,472		
101.0-150.9 cu. in.	6,412	5,281					6,412	5,281		
151.0-300.9 cu. in.	17,682	19,948					11,228	15,765		18,672
301.0-1000.9 cu. in.	24,191	47,514					20,932	349		1,958
1001.0-1500.9 cu. in.	3,629	13,399	103	103	1,027	3,526	12,372			
1501.0-3000.9 cu. in.	1,908	12,709	4,175	198	2,125	1,710	10,584			
3001.0-10,000.9 cu. in.	841	17,538	579	579	13,574	262	3,964			
10,001.0-15,000.9 cu. in.	361	11,789	73	361	11,789					
15,001.0-25,000.9 cu. in.	155	5,293	155	155	5,293					
25,001.0 cu. in. and over	205	19,721	205	205	19,721					

^d Withheld to avoid disclosing figures for individual companies.

TABLE H.—INTERNAL-COMBUSTION ENGINES (EXCEPT AUTOMOTIVE AND AIRCRAFT), NUMBER BY HORSEPOWER RATING: 1947 AND 1939

PRODUCT	1947 shipments			1939 production		
	Gasoline and other carburetor, except outboard	Outboard motors	Diesel and semi-Diesel	Gasoline and other carburetor, except outboard	Outboard motors	Diesel and semi-Diesel
Total	2,140,516	584,458	100,183	348,460	129,335	19,263
5.9 hp. and under	1,275,845	442,015	27,497	215,228	87,000	189
6.0-10.9 hp	130,777			13,472	37,789	905
11.0-20.9 hp	144,918			19,389	1,932	4,639
21.0-50.9 hp	446,493			56,870	2,600	6,255
51.0-100.9 hp	113,643			39,530	14	
101.0-200.9 hp		142,443	24,626	3,597	6,301	
201.0-400.9 hp			2,048	319	482	
401.0-800.9 hp			471	23	178	
601.0-1000.9 hp	28,840		1,218	32	181	
1001.0-5000.9 hp			1,173		135	
5001.0 hp. and over						

NOTE: This table does not include gas and other (dual fuel, etc.) engines. See text for explanation of differences between 1939 and 1947 in the classification of engines by size.

¹ The 1939 data do not include engines manufactured for installation by ship, boat, and tractor builders. The 1947 data include engines produced for incorporation into other products of the same company, such as ships, boats, tractors, pumps, etc.

METALWORKING MACHINERY

[Money figures in thousands of dollars]

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Number of units	Value f.o.b. plant	Number of units	Value f.o.b. plant
Boring machines	1,444	\$25,825	1,493	\$14,166
Horizontal boring, drilling, and milling machines:				
Table type.....	267	5,786	} 341	5,253
Other types (including floor type).....	100	3,901		
Vertical boring and turning mills (including vertical turret lathes).....	331	7,760	417	5,551
Precision boring machines.....	445	5,896	} 702	2,928
Jig boring machines.....	218	1,457		
Other boring machines.....	83	1,025	33	434
Drilling machines (including light industrial types)	n.a.	33,517	n.a.	12,373
Sensitive drilling machines (chuck fitted to spindle nose—No. 1, 2, 3, or 4 morse taper):				
Bench type:				
Average value under \$200.....	1,213	244	} n.a.	975
Average value \$200 and over.....	613	217		
Floor and pedestal types.....	11,072	4,703	n.a.	1,223
Vertical (upright) drilling machines:				
Standard single spindle:				
Average value under \$500.....	1,915	534	} 693	905
Average value \$500 and over.....	884	1,705		
Heavy duty single-spindle drilling machines.....	446	867		
Gang drills.....	249	384	(?)	(?)
Radial drilling machines, plain type:				
Under 13" column.....	758	4,310	} 798	3,561
13" column and over.....	1,808	3,066		
Multiple-spindle drilling machines, way and special types.....	1,139	16,537	738	2,078
Deep hole drilling machines, horizontal and vertical.....	15	184	} 971	3,631
Other drilling machines (including radial other than plain) and drilling machines, not reported by type.....	n.a.	766		
Gear cutting and finishing machines	1,682	17,719	1,730	11,243
Gear hobbing machines.....	499	5,642	426	2,420
Gear shapers, cutters (including planer type), and generators.....	885	9,409	} 1,304	8,823
Gear finishing machines (including honing, lapping and gear-tooth grinding machines, etc.).....	298	2,668		
Grinding and polishing machines (except gear-tooth grinding, honing, lapping, polishing, and buffing machines), including light industrial types	n.a.	56,364	n.a.	32,413
External cylindrical grinding machines:				
Plain.....	480	5,309	1,131	7,012
Universal.....	289	2,039	569	2,386
Roll grinders.....	40	2,222	(?)	(?)
Other external cylindrical grinding machines ¹	267	4,450	(?)	(?)
Internal cylindrical grinding machines (including centerless).....	359	4,167	1,028	7,372
Surface grinding machines:				
Rotary table type, horizontal and vertical.....	387	3,644	} 2,436	4,736
Reciprocating table type, horizontal and vertical spindle (including face grinders):				
Average value under \$1,000.....	682	232		
Average value \$1,000 and over.....	2,226	4,778	n.a.	235
Other surface grinding machines (including planer type).....	n.a.	235		
Disc, bench, floor, and snag grinding machines:				
Disc grinders.....	526	2,369	} 434	518
Bench grinders.....	63,220	2,945		
Floor and snag grinders:			n.a.	294
Average value under \$500.....	6,716	1,456		
Average value \$500 and over.....	251	146		
Thread grinding machines.....	50	1,069	(?)	(?)
Tool and cutter grinding machines:				
Universal.....	1,697	3,013	} 1,433	2,123
Special:				
Average value under \$500.....	948	255		
Average value \$500-\$999.....	448	342		
Average value \$1,000 and over.....	210	825		
Honing machines (except gear honing).....	n.a.	3,409	357	1,359
Lapping machines (except gear lapping).....	135	619	218	515
Polishing and buffing machines:				
Average value under \$500.....	4,403	935	} n.a.	268
Average value \$500 and over.....	2,245	3,342		
Other grinding machines (radius, spline, contour, plate edge, jig grinders, etc.).....	n.a.	7,436	n.a.	5,830
Grinding and polishing machines, not reported by type.....	n.a.	1,127		

See footnotes at end of table.

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Number of units	Value f.o.b. plant	Number of units	Value f.o.b. plant
Lathes (including light industrial types)	n.a.	92,908	n.a.	49,840
Bench lathes (except bench turret lathes):				
Average value under \$500.....	16,819	3,180	15,191	2,288
Average value \$500 and over.....	709	1,122		
Engine lathes (manufacturing and tool room lathes):				
Up to and including 16" swing:			4,756	6,818
Average value under \$2,000.....	6,232	6,302		
Average value \$2,000 and over.....	2,829	13,344	1,542	5,249
17"-23" swing.....	1,767	9,072		
24"-36" swing.....	319	3,663	125	1,133
Over 36" swing.....	42	1,179		
Gap lathes.....	118	464	134	364
Other manufacturing and tool room lathes.....	113	579	(9)	(9)
Speed lathes.....	742	831	(9)	(9)
Turret lathes (except vertical turret lathes):				
Bench type.....	213	326	(9)	(9)
Ram type:			1,937	7,468
Up to and including 1".....	368	1,061		
Over 1".....	658	4,025	723	5,483
Saddle type.....	334	3,846		
Automatic chucking lathes:				
Single-spindle.....	282	2,360	2,877	18,609
Multi-spindle.....	297	6,531		
Automatic between-center lathes.....	520	4,706		
Automatic screw (bar) machines.....	3,341	20,851		
Other lathes (including axle, crankshaft, shell, spinning, boring, and combination boring and turning lathes, etc.).....	506	8,604	n.a.	2,428
Lathes, not reported by type.....	n.a.	862		
Milling machines (including light industrial types)	7,504	35,278	n.a.	24,223
Bench and hand milling machines:				
Average value under \$500.....	582	210		
Average value \$500 and over.....	783	1,578		
Knee type milling machines (except bench type):				
Horizontal plain.....	860	4,307	(7)	(7)
Horizontal universal.....	872	5,708		
Vertical.....	2,287	4,291		
Bed type milling machines:				
Single-spindle.....	365	3,756	126	2,136
Double-spindle and special purpose.....	170	3,233		
Planer type milling machines.....	20	1,240	(7)	1,087
Profiling machines, duplicators, and die-sinking machines.....	300	1,625		
Thread milling machines.....	79	789		
Other milling machines (including spline, routers, cam, engraving and ram type, swivel head milling machines) and milling machines, not reported by type.....	1,186	8,541	(7)	(7)
Other machine tools, except those designed primarily for home workshops, laboratories, garages, service shops, and model makers	n.a.	108,208	n.a.	32,562
Broaching machines:				
Internal broaching machines, horizontal and vertical.....	284	2,132	470	2,296
Other broaching machines.....	248	2,824		
Centering machines.....	70	266	(9)	(9)
Keyseating machines.....	282	409	402	81
Planers:				
Openside.....	81	1,094	59	963
Other planers (including double housing, plate, pit, etc.).....	71	2,024	102	3,522
Shapers (except gear shapers), horizontal crank type:				
Under 20" stroke.....	702	2,002	1,163	1,893
20"-27" stroke (inclusive).....	796	3,156		
28" stroke and over.....	289	1,722		
Slotting machines (except screw and nut slotters).....	31	379	(9)	(9)
Sawing and cut-off machines:				
Abrasive cut-off saws.....	n.a.	892	1,585	859
Power hack saws.....	4,365	2,027		
Other sawing and cut-off machines.....	3,129	2,702		
Contour sawing and filing machines (including band saws).....	9,406	4,350	n.a.	318
Tapping machines.....	n.a.	2,812	623	767
Threading machines (except thread milling machines or thread grinding machines):				
Pipe threading.....	17,060	5,015	n.a.	1,073
Other threading machines (including bolt threading).....	618	2,363	341	608
All other machine tools ⁹	n.a.	23,676	n.a.	10,009
Parts for machine tools, sold separately.....		47,463		10,173
Machine tools designed primarily for home workshops, laboratories, garages, service shops and model makers (except power-driven hand tools) ⁸		30,881		
Drilling machines.....	120,749	6,492	(10)	(10)
Grinding and polishing machines.....	399,251	7,193		
Lathes.....	48,492	5,937		
Other machine tools designed primarily for home workshops, etc.....	124,067	7,011		
Parts, attachments and accessories.....		4,248		
Rebuilt machine tools ¹¹		10,780		4,792
Machine tools, not reported by type.....		4,400		
Rolling-mill machinery and equipment ¹²		96,074		34,605

See footnotes at end of table.

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Number of units	Value f.o.b. plant	Number of units	Value f.o.b. plant
Metalworking presses, except forging presses		94,606		15,742
Hydraulic (except manual).....	3,532	14,463		
Pneumatic (except manual).....	n.a.	253		
Mechanical (except manual).....	18,390	77,901		n.a.
Manual (including arbor, straightening, forcing, and assembly).....	16,314	1,076		
Metalworking presses, not reported by kind (except forging).....		913		
Power-driven hand tools ¹³		112,198		n.a.
Electric (including high cycle):				
Drills:				
$\frac{3}{8}$ -inch chuck size and smaller.....	745,230	12,729		
$\frac{1}{2}$ -inch chuck size.....	280,975	9,352		
$\frac{3}{4}$ -inch chuck size and larger.....	36,651	2,550		
Saws (excluding chain saws).....	165,772	13,106		
Disc sanders.....	69,647	3,495		
Grinders.....	117,142	3,811		
Hammers.....	13,959	1,394		
Other electric power-driven hand tools, including screw drivers, nutrunners, portable polishers, riveters, and refacers.....		14,095		
Pneumatic:			n.a.	n.a.
Drills.....	30,481	4,222		
Saws (excluding chain saws).....	270	56		
Disc sanders.....	n.a.	927		
Grinders.....	30,919	3,394		
Hammers.....	42,798	3,240		
Other pneumatic power-driven hand tools, including screw drivers, nutrunners, portable polishers, riveters, and refacers.....		9,237		
Parts, attachments, and accessories for power-driven hand tools, sold separately.....		29,106		
Power-driven hand tools not reported by type, and powder-actuated hand tools.....		1,484		
Other metalworking machinery		181,593		n.a.
Drawing machines and draw benches.....		10,193		n.a.
Machines for weaving and other wire fabricating (barbed wire, poultry netting, woven-wire fence machines, etc.).....		6,681		n.a.
Bending and forming machines:				
Pipe and structural shape bending.....		1,856		
Plate-bending.....	1,323	6,793		
Roll-forming.....		5,357		n.a.
Other bending and forming machines, including sheet metal.....		8,233		
Die-casting machines.....	397	4,246	n.a.	537
Shearing machines, power:				
Straight.....	3,525	10,402	588	1,376
Other power shearing machines.....	782	2,150	n.a.	640
Forging machines (including forging presses):				
Hammers.....	588	4,344	143	1,775
Forging presses.....	207	3,249	n.a.	688
Other forging machines (bulldozers, headers, upsetters, etc.).....	615	6,964	n.a.	2,655
Metal can-making machines.....	2,546	16,278	n.a.	n.a.
Riveting machines (except hand-held portable type).....		3,346		795
Welding and cutting apparatus, acetylene.....		26,777		3,899
Other metalworking machinery (except machine tools).....		30,969		n.a.
Rebuilt metalworking machinery (except machine tools) ¹¹		445		n.a.
Parts for metalworking machinery (except machine tools), sold separately.....		33,310		14 9,656
Metalworking machinery (except machine tools), not reported by type.....		7,643		
Jigs, fixtures, etc.		314,515		13 81,326
Jigs; fixtures; forming, stamping, and piercing punches and dies; die sets; subpresses; special checking fixtures, etc.; and specially designed tools.....		271,041		n.a.
Stamping tools and dies made in establishments primarily engaged in producing stampings ¹⁶		43,474		
Small cutting tools for machine tools and metalworking machinery		204,233		n.a.
Broaches:				
High-speed steel.....		9,451		
Carbide tipped.....		751		2,731
Drills:				
Carbon steel.....		7,344		2,484
High-speed steel.....		32,461		9,972
Carbide tipped.....		896		n.a.
Reamers:				
Carbon steel.....		2,569		857
High-speed steel.....		10,408		2,837
Carbide tipped.....		2,148		n.a.
Gear hobs:				
Unground.....		1,638		
Ground.....		4,625		3,12
Gear cutters, other than hobbing.....		7,832		2,351
Milling cutters:				
Multiple thread-milling cutters.....		4,639		
Other form relieved cutters.....		2,704		
Solid-end mills.....		3,733		
Inserted blade cutters (including blades sold separately):				
High-speed steel.....		3,837		7,995
Carbide tipped.....		3,834		
Other solid-milling cutters:				
High-speed steel.....		8,072		
Carbide tipped.....		2,003		

See footnotes at end of table.

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Number of units	Value f.o.b. plant	Number of units	Value f.o.b. plant
Small cutting tools for machine tools and metalworking machinery —Continued				
Turning, planer, and shaper tools:				
Form tools:				
High-speed steel.....		3,930		
Carbide tipped.....		9,158		
Other turning, planer, and shaper tools:				2,992
High-speed steel.....		2,173		
Carbide tipped.....		4,321		
Threading tools and dies:				
Ground-thread taps.....		12,918		
Cut-thread taps—carbon steel.....		4,311		5,940
Cut-thread taps—high-speed steel.....		4,801		
Dies.....		7,746		2,583
Chasers.....		6,971		3,056
Pipe stocks complete with dies.....		2,719		1,541
Drop-forging dies.....		4,502		(15)
Die-casting dies.....		8,366		2,093
Other small cutting tools for machine tools and metalworking machinery.....		20,477		n.a.
Small cutting tools for machine tools and metalworking machinery, not reported by type.....		2,895		n.a.
Precision measuring tools.....		33,825		5,579
Comparators.....		1,497		
Gage blocks.....		697		
Micrometers.....		4,249		
Callipers and dividers.....		1,270		n.a.
Gages.....		14,370		
Dial indicators.....		2,595		
Other machinists' precision tools.....		9,147		
Other metalworking accessories.....		77,656		n.a.
Chucks:				
Drill.....		6,139		1,374
Lathe.....		7,378		2,393
Other chucks.....		2,771		564
Chuck-holding devices (including feeding fingers, collets, sleeves, sockets, and drill heads).....		6,870		n.a.
Tools for screw and automatic machines, except taps and dies (including box tools, hollow-drills, and work and tool holders).....		10,641		4,630
Other accessories and attachments for machine tools and metalworking machinery (except small cutting tools), and those not reported by type.....		35,357		n.a.
Toolroom specialties (including levels, angle irons, plates, squares, sine bars, V-blocks, flats, and vises).....		8,500		n.a.
Cutting tools, jigs, fixtures, etc., not reported by type.....		45,022		

n.a.—Not available.
¹ Number of spindles.
² Not collected separately in 1939. Included with other drilling machines.
³ Includes radial drilling machines other than plain types which in 1947 are included with other drilling machines.
⁴ Not collected separately in 1939. Included with other grinding machines.
⁵ Excludes some automotive service equipment designed primarily for repairing motor vehicles and shipped to automotive service stations.
⁶ Not collected separately in 1939. Included with other lathes.
⁷ Data for bench, hand, knee type, bed type, etc., milling machines not collected separately in 1939. Included with other milling machines. The value of production of other milling machines in 1939 was \$21,000,000.
⁸ Not collected separately in 1939. Included with other machine tools.
⁹ Includes rifle working machines; chamfering machines; facing machines; automatic roller cut-off machines; special drilling and tapping machines; horizontal processing machines; special transfer machines; special cylinder block facing machines; shapers other than horizontal crank type; special axle-end-facing machines, etc., and other specially designed machines involving combinations of two or more processes, such as boring, reaming, drilling, facing, turning, and counterboring.
¹⁰ Data on machine tools designed primarily for home workshop, laboratories, etc., not collected separately in 1939. These tools are included to a large extent in the corresponding classifications of machine tools, other than home workshop, etc.
¹¹ Data on rebuilt machine tools and other metalworking machinery do not include machinery rebuilt by nonmanufacturing establishments such as repair shops, etc.
¹² Includes all equipment such as rolling mill stands, rolls, rollers, shears, coilers, uncoilers, etc., which are designed for and form an integral part of rolling mills.
¹³ Includes tools which are controlled by hand and the position of which in operation need not be fixed.
¹⁴ In 1939, parts for power-driven hand tools were included with parts for metalworking machinery.
¹⁵ In 1939, drop forging dies were included with jigs, fixtures, etc.
¹⁶ This item includes only those tools and dies the cost of which was borne directly by the company for which the tool or die was made, whether delivered to that company or kept in the stamping establishment where produced.

SPECIAL-INDUSTRY MACHINERY

[Money figures in thousands of dollars]

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
Dairy and milk products plant machinery and equipment				\$17,082
Pasteurizers:		\$60,865		
Batch or vat-type.....	3,561	5,123		
Continuous or plate-type.....		2,519		2,283
Homogenizers.....		5,502		
Butter churns (except farm-type).....	450	475		
Ice cream freezers.....	1,608	5,111		14,799
Bottling machinery for dairies (washing, sterilizing, filling, capping, labeling, etc.).....		22,136		
Other dairy and milk products plant machinery and equipment, including cream separators (capacity over 1,500 pounds per hour), clarifiers, and butter and cheese-wrapping and packaging machines.....		19,999		
Bakery machinery and equipment		39,441		17,583
Flour handling equipment.....		823		(2)
Dough mixers.....		6,243		3,289
Proof boxes.....		1,440		(3)
Bake ovens:				
Traveling tray.....	342	3,893		4,419
Other.....		5,121		
Slicing machines ²	600	1,813	n.a.	1,649
Wrapping machines ³	799	4,621	n.a.	1,405
Other bakery machinery and equipment.....		15,487		6,821
Bottling machinery, except dairy		34,442		11,959
Carbonators (beverage bottling).....	980	3,180		
Filling-capping machines:				
48 bottles per minute and under.....	589	1,730		
Over 48 bottles per minute.....	838	7,880		
Bottle washers:				(4)
48 bottles per minute and under.....	674	2,674		
Over 48 bottles per minute.....		12,194		
Other bottling machinery, except dairy.....		6,784		
All other food-products machinery		199,985		44,256
Meat- and poultry-packing plant machinery and equipment ⁵		14,056		10,126
Fruit- and vegetable-canning and packing machinery ⁶		36,696		
Flour-mill and grain-mill machinery.....		25,437		6,087
Sugar-plant machinery ⁷		16,949		2,935
Other industrial food-products machinery.....		49,642		8,559
Parts and attachments for industrial food-products machinery.....		14,390		7,035
Commercial food-preparation machines: ¹⁰				
Slicers.....		7,432		4,832
Choppers, grinders, cutters, dicers, and similar machines.....	51,381	15,043	n.a.	3,542
Tenderizers.....	30,869	3,589	n.a.	(11)
Coffee mills.....	6,493	727	n.a.	626
Mixers and whippers (except drink mixers).....	12,486	5,482	n.a.	3,514
Other commercial food-preparation machines, power driven.....		6,770		(8)
Parts and attachments for commercial food-preparation machines.....		3,772		(9)
Textile machinery		379,988		85,600
Fiber-to-fabric:				
Cleaning and opening machinery:				
Carbonizing machines.....		914		(12)
Picker machines.....	765	2,226	288	572
Other cleaning and opening machinery (including garnetting machines).....		6,411		(13)
Carding machines.....	5,592	16,838	470	860
Combing machines.....	459	2,740	237	389
Drawing and roving frames:				
Drawing and preparing.....	5,619	4,491		
Roving.....	1,218	6,001		(14)
Spinning and twisting frames:				
Spinning frames:				
Cotton:				
Number of frames.....	3,933			
Total number of spindles.....	1,049,078	17,180	n.a.	6,155
Other spinning frames (including wool).....		10,221		
Twisting frames:				
Number of frames.....	2,131		1,056	
Total number of spindles.....	316,613	10,232	n.a.	2,778
Yarn preparing machines:				
Winding machines (skein, spool, bobbin, quill, cone, etc.).....		16,177		3,926
Other yarn preparing machines (beaming, warping, slashing, etc.).....		4,209		1,315
Parts, attachments, and accessories for fiber-to-fabric machinery:				
Card clothing for cotton (quantity in square feet).....	1,069,145	3,852	609,808	1,457
Card clothing for wool and other fibers (quantity in square feet).....	984,991	4,093	398,829	1,080
Other parts, attachments, and accessories for fiber-to-fabric machinery.....		26,007		(15)
Fabric machinery: 1				
Power looms.....		34,387		7,472
Parts, attachments, and accessories for power looms:				
Jacquards.....		856		(13)
Other parts, attachments, and accessories for power looms.....		37,655		
Knitting machines:				
Hosiery.....	8,103	35,830	4,509	10,845
Other than hosiery.....		10,113		1,152
Braiding machines.....	10,250	2,272	2,669	458
Other fabric machinery, including lace and embroidery.....		1,371		(12)
Parts, attachments, and accessories for fabric machinery, except power looms.....		15,094		(13)
Bleaching, dyeing, and finishing machinery (including parts, attachments, and accessories).....		30,201		5,907
Machinery for drying stock, yarn, cloth, etc.....		6,063		1,678
All other textile industries machinery.....		28,107		13,598
Textile industries machinery parts, attachments, and accessories, not elsewhere classified.....		42,058		13,961
Textile industries machinery, not reported by type.....		4,389		

See footnotes at end of table.

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
Woodworking machinery (except machinery designed primarily for home workshops, laboratories, garages, service shops, and model makers)		\$125,750		n.a.
Sawmill equipment		20,820		\$2,352
Veneer and plywood-making machinery		7,802		
Woodbox and crate-making machinery		4,077		
Planing machines	12,956	5,914		
Surfacing machines (except hand-held)		3,440		
Sawing machines (except sawmill equipment):				
Quantity reported	105,327	22,250		n.a.
Quantity not reported	n.a.	6,961		
Jointers, matchers, molders, mortisers, shapers, tenoners, and lathes (except power-driven hand-held tools)		15,037		
Other woodworking machinery (except power-driven hand-held tools)		19,331		
Parts, attachments, and accessories		20,118		
Woodworking machinery designed primarily for home workshops, laboratories, garages, service shops, and model makers (except power-driven hand-held tools)		22,526		n.a.
Lathes		1,222		
Sawing machines	516,785	12,510		4,816
Other machines (except power-driven hand-held tools), designed primarily for home workshops, etc.		4,035		
Parts, attachments, and accessories		4,759		n.a.
Woodworking machinery, not reported by type		3,103		
Pulp and paper industries machinery		134,713		31,227
Wood preparation equipment (including barkers, chippers, knotters, splitters, chipscreens, etc.)		2,131		
Pulp mill machinery		9,715		
Paper mill machinery:				
Beaters, jordaners, and other stock preparation equipment		11,339		
Paper machines:				
Fourdriners (including yankee machines) and components		12,905		
Cylinders and components		11,427		
Forming machines, including wet machines used for making a finished product		964		
Calenders, including super calenders		3,878		
Finishing machinery, except calenders		1,943		
Paper and paperboard converting equipment:				(15)
Bagmaking, including shipping sack, machines		3,888		
Envelope making machines	332	2,457		
Corrugated box machines	836	9,127		
Box, carton, and shipping container machines, except corrugated box machines		9,835		
Other pulp mill, paper mill, and paper converting machinery and equipment (including drum, can, and tube machines and toilet roll and napkin machines)		23,345		
Parts and attachments for pulp mill, paper mill, and paper converting machinery and equipment, sold separately		22,760		
Rebuilt pulp and paper industries machinery:				
Rebuilt paper machines (including fourdriners, yankee machines, cylinders, and forming machines)		4,788		
Other rebuilt pulp and paper industries machinery		1,381		
Paper industries machinery, not reported by type		2,830		
Printing-trades machinery and equipment		191,282		52,583
Presses:				
Letterpress (typographical, relief):				
Sheet-fed:				
High-speed cylinder (job) up to and including 22" by 28", including verticals	2,297	12,533		16,839
Cylinder presses over 22" by 28"	582	8,768		
Rotary letterpress (sheet-fed) and platen		7,954		
Roll or web-fed:				
Newspaper (high speed rotary and flat-bed and high-speed platen)		15,701		2,689
Rotary letterpress	55	8,694		
Offset lithographic:				
Sheet-fed, single color	843	7,720	417	3,380
Sheet-fed, multicolor, and web-fed	187	8,134		
Gravure	113	5,807	36	1,052
Other presses (including proof and rebuilt)		6,075		(17)
Typesetting machinery and equipment:				
Typesetting and typecasting machines	2,599	13,006	n.a.	6,399
Mitering machines and saw trimmers		1,205		n.a.
Matrices		9,594		n.a.
Other typesetting equipment		1,704		n.a.
Electrotyping machinery and equipment		1,459		1,015
Stereotyping machinery and equipment		3,116		
Mounting and registering bases, including hooks		1,057		n.a.
Photoengraving and lithographing platemaking equipment (excluding cameras)		1,605		18,881
Bookbinding machinery and equipment, including cutting, folding, gathering, inserting, ruling, etc.		14,620		2,127
Engravers materials and equipment (including metal plates, wood blocks, lithographic stones, etc.)		5,701		2,536
Other printing machinery and equipment:				
Ink rollers		7,140		8,657
Foundry type, rules, leads, slugs, borders, and ornaments		4,646		
Other printing machinery and equipment		14,092		19,211
Parts, attachments, and accessories for printing-trades machinery and equipment, sold separately		25,034		4,697
Printing-trades machinery and equipment, not reported by type		5,917		
Chemical manufacturing industries machinery and equipment		87,375		n.a.
Foundry machinery and equipment		88,196		n.a.
Molding machines	5,057	7,110	n.a.	1,538
Patterns and molds (of metal, wood, etc.)		53,765		n.a.
Core making machines	1,438	1,140		
Blast cleaning equipment		4,994		5,267
Other foundry machinery		21,187		

See footnotes at end of table.

CENSUS OF MANUFACTURES: 1947

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
Plastics-working machinery and equipment		\$43,637		
Compression-molding machines.....	781	5,113		
Extrusion-molding machines.....	456	1,902		
Injection-molding machines.....	357	3,917		n.a.
Patterns and molds (of metal, wood, etc.).....		23,971		
Other plastics-working machinery and equipment.....		8,015		
Plastics-working machinery and equipment, not reported by type.....		719		
Rubber-working machinery and equipment		46,445		\$13,685
Banbury and mill-mixing machinery and warming-up machinery.....		7,878		
Calendering machines.....	52	1,055		
Extruding machines.....	201	1,676		n.a.
Vulcanizing presses.....	974	5,920		
Tire-building equipment.....		6,830		
Other rubber-working machinery.....		23,086		
Petroleum refinery machinery and equipment		22,478		16,360
Other special-industry machinery and equipment ²⁰		226,133		n.a.
Tobacco-manufacturing machinery and equipment:				
Cutting machines.....		1,277		
Other tobacco-manufacturing machinery and equipment (including cigarette- and cigar-making machines).....		18,869		3,337
Clayworking machinery and equipment (brick, tile, and ceramics):				
Pugmills.....	198	1,224		
Other clayworking machinery and equipment.....		5,750		3,035
Cement-making machinery and equipment (except cement kilns)		8,111		
Concrete-products machinery and equipment:				
Concrete-block machines.....		9,514		1,092
Concrete-pipe-making machines.....		1,399		
Other concrete-products machinery and equipment.....		7,061		647
Cotton-ginning machinery and equipment:				
Cotton gins (number represents number of stands).....	1,679	2,752		
Other cotton-ginning machinery and equipment.....		17,681		5,115
Glass-making machinery and equipment:				
Bottle-forming machines.....	147	2,964		
Grinding and polishing machines.....		1,681		
Other glass-making machinery and equipment (including sheet and window glass drawing machines, batch mixing machines, glass presses, plate-rolling mills, and glass tube and rod drawing machines).....		16,964		4,459
Shoemaking and repairing machinery:				
Sole stitching machines.....	3,912	3,041		
Other shoemaking and repairing equipment.....		20,667		10,603
Other special-industry machinery and equipment (including incandescent-lamp-making, electronic-tube-making, paint-making, stone-working, hat-making, leather-working, jewelers, and pharmaceutical)		107,169		n.a.
Special-industry machinery, not reported by type		25,674		

n.a.—Not available.

¹ Does not include value of cream separators over 1,500 lbs. per hour capacity, which were not reported separately in 1939.² In 1939, flour handling equipment and proof boxes were included with other bakery machinery and equipment.³ For combination slicing and wrapping machines, the number and value of slicing units are included with slicing machines, and the number and value of wrapping units with wrapping machines.⁴ Detailed data are not available.⁵ Includes dehairing, killing, stuffing, cooking, rendering, cutting, pressing, grinding, chopping, and canning machines, etc.⁶ Includes slicers, graders, juice extractors, wrappers, pulpers, steaming, cooking, washing, filling, and sealing machines, etc.⁷ Includes cane and beet mills, crushers, pulverizers, crystallizers, granulators, etc.⁸ In 1939, combined data were collected for other industrial food-products machinery and other commercial food-preparation machines.⁹ In 1939, combined data were collected for parts and attachments for industrial food products machinery and commercial food-preparation machines.¹⁰ Includes power-driven machines for use by hotels, restaurants, institutions, meat markets, butcher shops, food-products stores, and similar commercial organizations.¹¹ Included in other industrial food-products machinery.¹² Included in all other textile industries machinery.¹³ Included in textile industries machinery parts and attachments and accessories, not elsewhere classified.¹⁴ Includes grinders, digesters, deckers, thickeners, wet lap machines, bleaching equipment, pulp screens, washers, savealls, and recovery room equipment.¹⁵ Detailed data are not available.¹⁶ Includes a small amount of proof presses.¹⁷ Included in other printing machinery and equipment.¹⁸ For 1939, the figure includes only photoengraving machinery.¹⁹ Includes all rebuilt printing trades machinery.²⁰ Some equipment in this group is leased rather than sold outright. For leased equipment, estimates of the value of products produced during the year were reported. These estimates approximated the value of the products had they been sold outright and were based on market values of the products, tax or insurance valuation, etc.

GENERAL INDUSTRIAL MACHINERY AND EQUIPMENT

[Money figures in thousands of dollars]

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Quantity (units)	Value f.o.b. plant	Quantity (units)	Value f.o.b. plant
Industrial pumps 1		\$158,965		n.a.
Reciprocating pumps:				
Direct-acting steam-driven	12,422	6,328	6,548	\$2,836
Power-operated, other than steam	14,561	7,591	3,828	2,643
Turbine pumps, vertical, including deep-well	24,576	31,015	n.a.	n.a.
Centrifugal pumps:				
1½ inch discharge outlet and under 2	436,211	25,757		
Average value under \$50	313,274	8,946		
Average value \$50 and over	122,937	16,811		
2 and 2½ inch discharge outlet	85,415	13,163	(*)	
3 inch discharge outlet	29,632	8,738		
4 and 5 inch discharge outlet	20,311	11,084		
6 and 7 inch discharge outlet	4,924	4,945		18,630
8 to and including 12 inch discharge outlet	3,791	6,170		
Over 12 inch discharge outlet	1,091	5,047		
Rotary pumps: 4				
100 lbs. per square inch and under, designed pressure:				
10 gals. per minute and under, designed capacity 2	959,733	10,618		
Average value under \$20	917,822	8,659		
Average value \$20 and over	41,911	1,959		
11-25 gals. per minute, designed capacity 2	57,510	1,792		
Average value under \$20	31,329	462		
Average value \$20 and over	26,181	1,330		
26-100 gals. per minute, designed capacity	61,713	3,443		
101-200 gals. per minute, designed capacity	3,911	611		
201-500 gals. per minute, designed capacity	1,468	355		
501 and over gals. per minute, designed capacity	582	750		
101 to and including 500 p.s.i., designed pressure:				
10 gals. per minute and under, designed capacity 2	25,799	1,032	(*)	8,450
Average value under \$50	15,100	187		
Average value \$50 and over	10,699	845		
11-25 gals. per minute, designed capacity	2,498	845		
26-100 gals. per minute, designed capacity	3,953	980		
101-200 gals. per minute, designed capacity	735	351		
201-500 gals. per minute, designed capacity	550	480		
501 and over gals. per minute, designed capacity	263	616		
Over 500 p.s.i., designed pressure:				
10 gals. per minute and under, designed capacity	65,413	2,057		
11-25 gals. per minute, designed capacity	20,906	1,285		
26-100 gals. per minute, designed capacity	9,545	1,364		
101 and over gals. per minute, designed capacity	8,872	1,145		
Other industrial pumps		11,403		4,573
Domestic water systems, including water system pumps, sold separately	762,855	56,693		
Deepwell	305,148	28,342		
Jet	244,999	22,115		
Nonjet	60,149	6,227		
Under 1 horsepower	53,259	4,941		
1-3 horsepower	6,267	909	242,543	16,272
Over 3 horsepower	623	377		
Shallow-well	457,707	28,351		
Jet	116,141	7,579		
Nonjet	341,566	20,772		
Under 500 gals. per hour	289,835	10,453		
500 gals. per hour and over	51,731	4,319		
Air compressors		101,656		21,233
Stationary (including automotive type):				
Up to and including 7½ horsepower	171,104	29,251		
Over 7½ horsepower to and including 100 horsepower	11,580	15,319		
Over 100 horsepower to and including 250 horsepower	583	4,055		
Over 250 horsepower	583	13,842		
Portable:				n.a.
150 cubic ft. of free air per minute and under	48,137	19,104		
Over 150 to and including 400 cubic ft. free air per minute	3,641	15,642		
Over 400 cubic ft. free air per minute	444	3,370		
Air compressors, not reported by type		1,073		
All other pumps, gas compressors, and pumping equipment		202,451		n.a.
Oil-well and oil-field pumps		27,582		5,616
Subsurface pumps for oil-well pumping, including parts and accessories		13,063		
Slush pumps	1,331	10,971		n.a.
Other oil-well and oil-field pumps		3,548		
Domestic hand and windmill pumps		2,711		1,774
Pitcher	174,826	562		
Other hand and windmill pumps	193,706	1,760		n.a.
Domestic hand and windmill pumps, not reported by type	n.a.	389		
Cylinders for domestic water systems, sold separately	150,168	766	n.a.	773
Pump jacks for domestic water systems, sold separately	54,890	1,430	34,848	756
Dry-vacuum pumps	63,296	4,520	n.a.	n.a.
Vacuum pumps, other than dry-vacuum	20,410	4,208	n.a.	1,609
Gas compressors (excluding compressors for ice-making, refrigerating and air-conditioning units)	3,136	29,203	n.a.	n.a.
Power sprayers for liquids (except agricultural)		2,354		n.a.
Parts and attachments for pumps, air and gas compressors, and pumping equipment		78,054		14,866
Other pumps, compressors, and pumping equipment (including paint spraying outfits and equipment and a small amount of pumps and compressors, not reported by type)		51,623		n.a.
Elevators and moving stairways		96,421		20,498
Elevators	6,734	47,951		
Electric passenger (except residence lifts)	2,682	25,296		
Electric freight	2,633	18,721		
Hydraulic freight	1,419	3,934		16,244
Other elevators, moving stairways, and parts and attachments for elevators and moving stairways, sold separately 6		34,894		
Automobile lifts (service station and garage type)	42,920	13,576	18,332	4,254

See footnotes at end of table.

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Quantity (units)	Value f.o.b. plant	Quantity (units)	Value f.o.b. plant
Overhead traveling cranes and monorail systems		\$37,242		n.a.
Overhead traveling cranes:				
Electric.....	2,149	27,987	n.a.	\$6,272
Hand power.....	1,042	1,258		
Monorail systems.....		7,997		(1)
Conveyors and conveying equipment, except overhead traveling cranes and monorail systems		193,468		n.a.
Farm elevators, portable:				
Single chain:				
With flights under 12 inches wide.....	18,010	2,668		
With flights 12 inches wide and larger.....	772	220		
Double chain.....	18,032	5,931	n.a.	(7)
Auger type.....	19,250	2,356		
Farm elevators, stationary.....	1,301	603		
Parts and attachments for farm elevators, and farm elevators, not reported by type.....		4,363		
Conveyors and conveying systems.....		142,573		7 20,774
Gravity conveyors (skate wheel and roller).....		10,262		1,698
Power conveyors (excluding overhead trolley conveyor systems, pneumatic tube systems, and portable conveyors).....		17,604		
Overhead trolley conveyor systems.....		10,904		
Pneumatic tube systems (including foot-power units).....		2,200		7 28,076
Portable conveyors (except farm).....		14,583		
Other conveyors and conveying systems (including specially engineered conveyor installations).....		87,020		
Parts, attachments, and accessories for conveyors and conveying systems, sold separately.....		34,754		n.a.
Conveyors and conveying equipment, not reported by type.....		3,364		
Mechanical stokers		36,033		23,565
Mechanical stokers, by capacity:				
Under 61 lbs. (class I).....	56,905	7,068	90,902	11,652
61 to 100 lbs. (class II).....	4,860			
101 to 300 lbs. (class III).....	4,194			
301 to 1,200 lbs. (class IV).....	2,085	10,482	10,049	8,623
1,201 lbs. and over (class V).....	1,033			
Not reported by capacity.....		842		
Parts, attachments, and accessories for mechanical stokers, sold separately.....		17,641		3,290
Electric industrial furnaces and ovens		16,303		4,154
Metal melting furnaces.....	438	2,884		
Metal processing and heat treating furnaces, including porcelain enameling furnaces.....	1,792	10,482	n.a.	n.a.
Nonmetallic furnaces and kilns.....	n.a.	267		
Industrial ovens, except infra-red.....	n.a.	858		
Infra-red industrial ovens.....	n.a.	909		
Fuel-fired industrial furnaces and ovens		34,313		8,354
Metal melting furnaces.....	n.a.	1,629		
Metal processing and heat treating furnaces, including porcelain enameling furnaces.....	2,086	15,499	n.a.	6,461
Nonmetallic furnaces and kilns.....	n.a.	6,498		
Industrial ovens.....	1,782	10,687	n.a.	1,893
Parts, attachments, and components for industrial furnaces and ovens, sold separately ⁹		23,215		n.a.
Industrial furnaces and ovens, not reported by type ¹⁰		10,732		
Plain bearings and bushings		122,089		n.a.
Unmounted:				
Automobile, truck, and bus type.....		83,002		
Other types.....		34,382		37,192
Mounted.....		4,705		(11)
Speed reducers, gears, and industrial high speed drives, fixed ratio		112,403		11 35,122
Industrial high speed drives, fixed ratio.....		6,782		(11)
Speed reducers, fixed ratio (enclosed):				
Worm gears.....		12,291		
Gearmotors (reducer element only).....		12,376		
Petroleum type gearing.....		580		14,418
Other speed reducers, fixed ratio (enclosed).....		17,605		
Gears, pinions, and racks, unmounted:				
Fine pitch (20 pitch and finer).....		6,607		
Other than fine pitch (less than 20 pitch):				
Railway type gears.....		3,699		20,704
Aircraft engine gears.....		2,974		
Other gears, pinions, and racks (less than 20 pitch).....		47,578		
Speed reducers, gears, and industrial high speed drives (fixed ratio), not reported by type.....		2,011		
Other mechanical power-transmission equipment		185,156		43,929
Variable ratio speed drives.....		12,211		4,269
Clutches:				
Friction type.....		15,097		
Other types (including hydraulic couplings).....		5,414		
Couplings (except hydraulic):				
Rigid type.....		626		
Flexible type.....		9,072		
Universal joints.....		6,251		
Chains for sprocket drives.....		53,409		11 39,660
Sprockets.....		15,623		
Pulleys.....		10,316		
Sheaves:				
Single drive.....		6,814		
Multiple drive.....		16,692		
Other mechanical power-transmission equipment, except automobile, truck, and bus.....		33,631		
Mechanical power-transmission equipment, not reported by type.....		6,634		
Heat exchangers, closed types, industrial.....		52,627		n.a.

See footnotes at end of table.

MACHINERY (EXCEPT ELECTRICAL)

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PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Quantity (units)	Value f.o.b. plant	Quantity (units)	Value f.o.b. plant
General industrial machinery and equipment, not elsewhere classified		\$272,342		n.a.
Hydraulic jacks.....		18,793		n.a.
Steam condensers.....		10,669		n.a.
Packaging and wrapping machines (except food and tobacco).....		33,178		n.a. ¹² \$6,653
Centrifugals and separators, except cream.....		11,946		n.a.
Other general industrial machinery and equipment, not elsewhere classified.....		197,756		n.a.
Industrial trucks, tractors, trailers, portable elevators, and accessories		156,754		
Powered trucks, operator walking.....	7,469	8,053		
Powered trucks, operator riding.....	20,385	66,437		
Fork trucks.....	17,943	56,970		
Electric (storage battery and gasoline-electric powered).....	3,522	15,212		
Gasoline powered.....	14,421	41,758		
Other trucks.....	2,442	9,467		
Electric (storage battery and gasoline-electric powered).....	1,300	5,667		
Gasoline powered.....	1,142	3,800		
Tractors.....	2,460	3,890	(14)	(14)
Electric (storage battery and gasoline-electric powered).....	199	367		
Gasoline powered.....	2,261	3,523		
Portable elevators ¹³	4,653	3,162		
Hand trucks and trailers.....		29,430		
Hand lift.....	n.a.	8,373		
Other ¹⁴		21,057		
Parts, attachments, and miscellaneous equipment, sold separately ¹⁵		41,572		
Industrial trucks and tractors, not reported by type.....		4,210		
Blowers, exhaust and ventilating fans		129,913		
Axial fans:.....				
Directly connected to driver.....		3,361		
Belt driven.....		3,700		
Centrifugal fans and blowers:.....				
Blower-filter units, sold separately.....		5,427		
Classes I and II fans (over 1½" to 6¾" maximum total pressure).....		8,587		
Classes III and IV fans (greater than 6¾" maximum total pressure).....		7,417		
Furnace and light weight air-conditioning blowers.....		6,337		
Industrial fans.....		17,821	(16)	(16)
Small-housed blowers (utility sets).....		4,274		
Propeller fans:.....				
Directly connected to driver.....		17,850		
Belt-driven.....		8,262		
Penthouses, shutters, guards, and other accessories for propeller fans.....		1,571		
Parts for fans and blowers.....		13,108		
Air washers.....		1,682		
Blowers, exhaust and ventilating fans, not reported by type.....		4,874		
Dust collection and other air purification equipment.....		25,642		

n.a.—Not available.

¹ Industrial pumps encompass a broad area, including some pumps for nonindustrial uses. An example is the small pumps used in home heating equipment. To some extent, the size classifications segregate these pumps. In other instances, the differentiation by average value separates these pumps. However, the segregation is not precise.

² The categories of "average value" represent the classification of a company's entire shipment of pumps of a particular type and size group. For example, if Company "X" shipped 400 rotary pumps valued at \$5,000, designed to operate at 100 lbs. per square inch and less and with a designed capacity of less than 10 gals. per minute, and 50 pumps of the same type and size valued at \$1,800, the average value of the 450 pumps is \$15, and all of these 450 pumps would be shown in the classification "Average value under \$20."

³ The 1939 data for quantity of pumps and compressors are not shown since they are understated to the extent that some of the small pumps used for oil burners, heating equipment, machine tool lubrication, etc., are not included.

⁴ The total number and value of 1947 shipments of rotary pumps, all pressures, are shown below. Some of these data cannot be shown by designed pressure without disclosing figures for individual companies.

	Number of pumps	Value f.o.b. plant
Rotary pumps, all pressures, by designed capacity:		
10 gals. per minute and under.....	1,050,945	\$13,707
11-25 gals. per minute.....	80,974	3,922
26-100 gals. per minute.....	75,211	5,787
101-200 gals. per minute.....	13,437	1,952
201-500 gals. per minute.....	2,018	835
501-1000 gals. per minute.....	749	1,031
1001 and over gals. per minute.....	177	490

⁵ For 1939, excludes the value of parts and attachments for elevators and moving stairways, which were not collected separately.

⁶ Includes sidewalk elevators, dumb-waiters, hand-operated freight elevators, and elevators and moving stairways, not reported by type.

⁷ In 1939, farm elevators and monorail systems were included with conveyors and conveying systems.

⁸ The 1939 figure does not include kilns.

⁹ Excludes electric heating units for furnaces and ovens sold separately.

¹⁰ Includes blast furnace work and miscellaneous small furnaces such as bench type furnaces, etc.

¹¹ Data for plain mounted bearings and industrial high speed drives, fixed ratio, not shown separately in 1939. Data for these products are included in the \$39,660,000 figure for "Other mechanical power-transmission equipment (except variable ratio speed drives)."

¹² Includes machines for wrapping and packaging tobacco.

¹³ Does not include farm elevators.

¹⁴ Includes two-wheel, four-wheel, dollies, and platform trucks.

¹⁵ Includes pallets and skids.

¹⁶ Comparable data not available.

OFFICE AND STORE MACHINES

[Money figures in thousands of dollars]

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Quantity (number of units)	Value f.o.b. plant	Quantity (number of units)	Value f.o.b. plant
Computing machines and cash registers, total ¹		\$301,809		n.a.
Accounting and bookkeeping machines (including billing machines with accounting registers)	40,539	50,213	² 13,076	² \$10,536
Adding machines	342,561	47,240	131,726	9,808
Adding machines—electric	161,040	28,817	n.a.	n.a.
Adding machines—nonelectric	181,521	18,423	n.a.	n.a.
Calculating machines	122,879	37,634	31,578	8,608
Calculating machines—electric	97,798	32,172	n.a.	n.a.
Calculating machines—nonelectric	25,081	5,462	n.a.	n.a.
Coin and currency handling machines		6,009		(3) 36,079
Cash registers and other computing machines ⁴		139,556		(5)
Parts and attachments, sold separately		21,157		
Typewriters, total		140,163		39,644
Standard typewriters, except portable (including noiseless and electric)	865,955	93,716	484,440	23,032
Portable typewriters	626,731	30,655	432,850	9,407
Specialized typewriters and typewriter principle machines ⁷		2,993	(4)	(6)
Parts and attachments for typewriters, sold separately		12,525		5,363
Rebuilt typewriters ⁸		274		1,842
Automatic merchandising machines (except coin-operated photographic apparatus, scales, refrigerated beverage and ice cream dispensers), total		14,535		6,154
Food and confection bulk machines	197,489	3,153		
Packaged food and confection machines	28,940	2,909	n.a.	n.a.
Cigarette machines	32,595	5,502		
Other automatic merchandising machines ⁹		2,971		
Amusement and other coin-operated machines (except coin-operated phonographs), total		47,882		12,338
Pin ball machines	138,147	30,566		
Bell type machines and consoles	49,271	11,192	n.a.	n.a.
Other coin-operated amusement machines ¹⁰		6,124		
Scales and balances, total		51,489		13,953
Scales and balances (except laboratory) and accessories and attachments ¹¹		47,158		13,116
Industrial scales (including railroad track and motor truck)		21,886		
Bench and portable		5,115		
Floor and dormant		2,783		
Other industrial scales ¹²		13,988		
Retail and commercial scales		12,963		
Computing	95,497	11,153	n.a.	n.a.
Other retail and commercial scales (including hanging scales for retail use)		1,810		
Household and person-weighing scales		8,805		
Bathroom	1,429,003	5,113		
Baby scales	354,790	1,109		
Miscellaneous, including person-weighing scales		2,583		
Mailing and parcel post scales		931		
Scales and balances, not reported by type		1,695		
Accessories and attachments, sold separately		878		(13)
Laboratory precision balances (including accessories and attachments, sold separately)		2,044		¹³ 429
Parts for scales and balances, sold separately (for repair, service, etc.)		2,287		¹³ 408
Office and store machines and devices, not elsewhere classified, total ¹		116,473		49,462
Check handling machines (including canceling, cutting, dating, endorsing, numbering, protecting, signing, sorting, and writing machines)		4,171		2,094
Dictating machines (including dictating, transcribing, shaving, conference recording, and combination dictating and telephone recording machines)		20,322		6,044
Duplicating machines		14,610		5,307
Stencil		3,523	n.a.	n.a.
Other (including spirit, gelatin, offset, ribbon and ink, and reproducing typewriters)		11,087		
Time-recording and time stamp machines (including watchmen's clocks)		13,992		2,959
Autographic registers		2,084		644
Other office and store machines and devices		16,362,272		15 11,176
Parts and attachments for office and store machines and devices, sold separately		8,663		14 9,809
Rebuilt office and store machines and devices, n. e. c.		(16) 8,663		17 5,675
Supplies for addressing and mailing and duplicating machines		16,359		5,754

n.a.—Not available.

¹ The 1939 and 1947 values are not strictly comparable. The 1947 value represents factory values; the 1939 value, in some cases, is the delivery price to customers.

² Includes a small number of typewriter-bookkeeping-billing machines without accounting registers, which in 1947 are classified in "Typewriters."

³ The 1939 data for "Cash registers and other computing machines" include also coin and currency handling machines. The \$36,079,000 also includes a small quantity of fare boxes and fare registers, which in 1947 are included in Industry 3821, "Mechanical measuring and controlling instruments." However, the value does not include postage meters and postal permit mailing machines which are included in the 1939 comparison figure for "Other office and store machines and devices."

⁴ Although separate data were collected for cash registers and punched card system machines, these could not be shown without disclosing figures for individual companies. This item also includes postage meters and postal permit mailing machines, ticket counting machines, vest pocket and other simple adding or calculating devices, and rebuilt computing machines and cash registers.

⁵ The 1939 data for "Parts and attachments sold separately" are included in the 1939 comparison figure for "Other office and store machines and devices."

⁶ In 1939, specialized typewriters and typewriter principle machines were not collected separately. The major portion of these machines was reported with standard typewriters. The remainder is included in the comparable 1939 figure for "Accounting and bookkeeping machines."

⁷ Includes continuous form-handling machines, typewriter-billing machines without accounting registers, office composing machines, and stencil-cutting typewriters.

⁸ Data on rebuilt typewriters do not include those rebuilt by nonmanufacturing establishments such as repair shops, etc.

⁹ Includes cigar, postage stamp, sanitary napkin, service machines, etc., and automatic merchandising machines not reported by type.

¹⁰ Includes strength testing, skill games, other arcade pieces, etc., as well as a small amount of coin-operated amusement machines not reported by type.

¹¹ The detailed data by types of scales and balances (except laboratory) represent revisions of data originally published in the Facts for Industry Series M39C—Scales and Balances. See text for explanations.

¹² Includes built-in scales, predetermined-weight scales, special purpose industrial scales, railroad track and motor truck scales, and miscellaneous industrial scales.

¹³ In 1939, data for accessories and attachments for scales and balances were not called for separately but were included with parts for scales and balances.

¹⁴ Includes parts and attachments for computing machines, cash registers, and other machines with computing mechanisms, which in 1947 are included under "Computing machines and cash registers."

¹⁵ In 1939, check numbering machines were included with "Other office and store machines and devices," which figure also includes postage meters and postal permit mailing machines. In 1947, postage meters and postal machines are included in "Cash registers and other computing machines."

¹⁶ In 1947, rebuilt office and store machines and devices, n. e. c., were combined with "Other office and store machines and devices" to avoid disclosing figures for individual companies.

¹⁷ Includes rebuilt computing machines, cash registers, and other machines with computing mechanisms, which in 1947 are included with "Computing machines and cash registers."

SERVICE-INDUSTRY AND HOUSEHOLD MACHINES

[Money figures in thousands of dollars]

PRODUCT	1947			1939	
	Total shipments and interplant transfers		Production (number)	Total production for sale and interplant transfer	
	Number	Value f.o.b. plant		Number	Value f.o.b. plant
	<i>Thousands</i>		<i>Thousands</i>	<i>Thousands</i>	
Household laundry equipment		\$433,955			\$66,282
Washing machines, mechanical ¹	4,256	344,716	4,274	1,499	54,124
Small size ²	408	8,042	419	11	99
Standard size, electrically driven.....	3,740	327,058	3,746	1,382	48,512
Nonautomatic, wringer type.....	2,443	168,773	2,441	n.a.	n.a.
Other (full and semiautomatic and nonautomatic spinner type).....	1,297	158,285	1,305	n.a.	n.a.
Standard size, gasoline driven.....	108	9,616	109	106	5,513
Ironers, mechanical (table and portable).....	530	34,834	530	n.a.	4,776
Driers, mechanical (gas and electric).....	65	7,415	65		7,382
Other household laundry equipment and parts, accessories and attachments.....		46,990			
	<i>Units</i>		<i>Units</i>	<i>Units</i>	
Commercial laundry, dry-cleaning, and pressing equipment		93,078			21,107
Commercial laundry equipment and laundry presses.....		50,545			
Washers.....	7,984	12,907	8,017		
Extractors.....	8,499	6,660	8,549		
Drying tumblers.....	9,678	3,624	9,718		
Ironers, flatwork.....	3,526	5,762	3,547		
Presses, laundry.....	21,706	11,624	22,260		
Other commercial laundry equipment and parts, accessories and attachments.....		9,968			
Dry-cleaning equipment and clothing presses.....		39,016		n.a.	n.a.
Dry-cleaning units (synthetic and naphtha types).....	1,503	6,967	1,530		
Washers.....	3,787	4,348	3,792		
Extractors.....	2,360	2,514	2,373		
Drying tumblers.....	7,662	3,217	7,699		
Dry-cleaning (tailor type) presses.....	25,302	10,119	25,344		
Other dry-cleaning equipment and parts, accessories and attachments.....		11,851			
Commercial laundry, dry-cleaning, and pressing machines, not specified by kind.....		3,517			
	<i>Thousands</i>		<i>Thousands</i>	<i>Thousands</i>	
Sewing machines³		97,182			27,846
Household sewing machines.....	626	32,672	621	457	13,422
Household electric cabinet sewing machines.....	362	21,771	389	n.a.	n.a.
Other household sewing machines (including electric portable and foot and hand).....	264	10,901	232	n.a.	n.a.
Industrial (except shoe sole stitching machines).....	175	30,971		59	6,882
Sewing machine parts and attachments for household and industrial sewing machines (except cases and cabinets, and sewing machine needles).....		33,539			7,542
Household type vacuum cleaners⁴		133,107			44,160
Hand type.....	133	1,469	135	353	2,338
Standard types (upright, cylinder, and other general purpose household types) ⁵	3,920	131,638	4,075	1,092	41,822
Other vacuum cleaners and parts for vacuum cleaners		17,540			n.a.
Commercial and industrial vacuum cleaners.....		6,518			915
Portable.....	61	5,212	69	(?)	410
Central system.....		1,306			505
Parts for all types of vacuum cleaners and attachments for commercial and industrial types.....		11,022			(?)
	<i>Units</i>		<i>Units</i>	<i>Units</i>	
Measuring and dispensing pumps		95,488			32,390
Gasoline dispensing pumps:.....		54,857	206,723	110,563	21,294
Filling station type ⁶	203,211	53,390	200,734	93,204	19,433
Computing.....	5,704	1,467	5,980	17,359	1,861
Noncomputing.....	1,281	622	1,302		324
Airport fueling units ¹⁰	47,787	1,801	49,826		
Lubricating-oil outfits (including pump and tank).....	314,164	4,366	310,096		2,000
Lubricating-oil pumps (including barrel pumps).....	n.a.	7,940	n.a.	1,172,505	4,383
Grease pumps.....	n.a.	8,583	n.a.	522,770	2,413
Grease guns.....					
Other measuring and dispensing pumps; and parts, and attachments for measuring and dispensing pumps, sold separately.....		17,319			1,976
Service-industry and household machines, not elsewhere classified		128,656			n.a.
Dishwashing machines (household and commercial types) ¹¹	149,564	28,895	152,169		2,632
Water softeners.....	192,599	13,327	193,448		2,164
Household ¹²	186,831	8,622	187,478		1,117
Commercial and industrial.....	5,768	4,705	5,958		1,047
Floor-waxing and polishing machines, household type.....	184,973	4,606	186,279	(14)	(14)
Floor-waxing and polishing machines, commercial and industrial type, and floor-scrubbing machines ¹³	27,123	5,379	27,876	(14)	(14)
Floor-sanding machines ¹³	100,320	9,564	100,297	(14)	(14)
Carpet sweepers.....	1,593,672	6,243	1,619,308	1,091,747	2,931
Other and not specified service and household machines ¹⁵		60,642		(14)	(14)

See footnotes at end of table.

PRODUCT	1947			PRODUCT	1947		
	Total shipments and interplant transfers		Production (number of units)		Total shipments and interplant transfers		Production (number of units)
	Number of units	Value f.o.b. plant			Number of units	Value f.o.b. plant	
Condensing units—Continued				Other refrigeration machinery and air-conditioning equipment—Continued			
Reported by size and kind:				Heat exchanger equipment ¹⁸ —Continued			
Ammonia refrigerants, reciprocating, water-cooled	1,646	\$2,107		Unit coolers ¹⁹ —Continued			
1/4 to 3 horsepower	18	9		Refrigeration	n.a.	\$13,959	
3 horsepower	47	25		Ceiling and wall mounted	n.a.	9,208	
5 horsepower	313	232		Under 500 B.t.u./hr.	n.a.	7	
7 1/2 horsepower	205	199		500 to 1,000 B.t.u./hr.	n.a.	94	
10 horsepower	384	436		1,001 to 2,000 B.t.u./hr.	n.a.	1,065	
15 horsepower	407	622		2,001 to 4,000 B.t.u./hr.	n.a.	1,083	
20 horsepower and over	272	584		4,001 to 6,000 B.t.u./hr.	n.a.	909	
Condensing units, 1/4 horsepower and over, not reported by size or type	65,033	5,965		6,001 to 8,000 B.t.u./hr.	n.a.	1,324	
				8,001 to 12,000 B.t.u./hr.	n.a.	1,410	
				12,001 to 18,000 B.t.u./hr.	n.a.	1,695	
				Over 18,000 B.t.u./hr.	n.a.	1,621	
Other refrigeration machinery and air-conditioning equipment		227,290		Floor mounted, dry type	n.a.	2,684	
Packaged air-conditioners	74,976	39,509	77,538	5 tons and under	n.a.	767	
Room air-conditioners	42,904	9,930	43,542	5.1 to 7.5 tons	n.a.	785	
Self-contained air-conditioners, except room ¹⁸	32,072	29,579	33,996	7.6 to 10 tons	n.a.	531	
2 tons and under	1,179	893		10.1 to 15 tons	n.a.	429	
3 tons	8,243	5,292		Over 15 tons	n.a.	172	
5 tons	17,978	15,750		Floor mounted, spray type	n.a.	2,067	
7 1/2 tons	1,572	2,096		5 tons and under	n.a.	52	
10 tons	897	1,821		5.1 to 7.5 tons	n.a.	812	
15 tons	569	1,365		7.6 to 10 tons	n.a.	197	
20 tons	184	468		10.1 to 15 tons	n.a.	431	
Over 20 tons	251	957		Over 15 tons	n.a.	575	
Not reported by size	1,199	937		Other heat exchanger equipment		28,246	
Ice-making machines	7,822	3,122		Condensers, shell and tube and shell and coil		5,903	
Heat exchanger equipment ¹⁸		63,025		Shell and tube liquid coolers		1,242	
Evaporative condensers ¹⁹	n.a.	7,875		Shell and coil liquid coolers		426	
Under 3 tons	n.a.	112		Fin coils, heating, other than forced air units		5,358	
3 to 5 tons	n.a.	336		Fin coils, cooling, other than forced air units		10,415	
5.1 to 7.5 tons	n.a.	264		Evaporators, plate type		4,902	
7.6 to 10 tons	n.a.	467		Heat exchanger equipment not reported by kind		6,737	
10.1 to 15 tons	n.a.	528		Centrifugal refrigeration systems ¹⁸	n.a.	7,889	
15.1 to 20 tons	n.a.	445		100 horsepower and under	39	507	
20.1 to 30 tons	n.a.	1,334		101 to 200 horsepower	93	1,412	
30.1 to 60 tons	n.a.	1,972		201 to 300 horsepower	82	1,954	
60.1 to 100 tons	n.a.	2,185		301 to 400 horsepower	41	1,085	
Over 100 tons	n.a.	232		401 to 500 horsepower	23	721	
Unit coolers ¹⁹	n.a.	20,167		501 to 750 horsepower	34	1,270	
Air-conditioning, remote type	n.a.	6,208		751 horsepower and over	16	743	
3 tons and under	n.a.	545		Not reported by size	n.a.	197	
3.1 to 5 tons	n.a.	916		Other parts, components and accessories for air-conditioning and refrigeration equipment		76,848	
5.1 to 10 tons	n.a.	979		Other air-conditioning and refrigeration equipment not called for separately, and air-conditioning and refrigeration equipment not reported by kind ²⁰		36,897	
10.1 to 25 tons	n.a.	2,276					
Over 25 tons	n.a.	1,492					

n.a.—Not available.

¹ Includes those with dishwasher attachments.

² Washing machines with a rated capacity not exceeding four pounds of dry weight.

³ Quantity figures represent the number of heads. They include heads sold with cabinets or cases as well as heads sold separately.

⁴ The 1939 data for industrial, except shoe sole stitching, machines include only a small number of machines designed for use on textiles.

⁵ The 1939 and 1947 values are not strictly comparable. The 1947 value represents factory values. The 1939 value in some cases is the delivery price to customers.

⁶ The value of 131.6 million dollars includes the value of attachments and cleaning tools, both those shipped together with the vacuum cleaners and those shipped separately.

⁷ Comparable quantity figure not available.

⁸ In 1939 data for parts for all types of vacuum cleaners were not collected separately, but were included with parts and attachments for industrial machinery.

⁹ Number of units represents the number of pumps. Twin pumps were counted as two units.

¹⁰ Number of units represents the number of meters.

¹¹ More than four-fifths of the number of dishwashing machines produced and shipped in 1947 were the household type. In 1939, for \$2,353,000 of the value of production, the number of dishwashing machines produced was 12,239.

¹² Includes "for sale to consumer" and "service" types which were combined to avoid disclosing figures for individual companies.

¹³ Although separate statistics were requested for commercial and industrial type floor-waxing and polishing machines and for floor-scrubbing machines, combined figures were reported for these machines in many cases.

¹⁴ Separate statistics not called for in 1939. Included in miscellaneous items of industrial machinery.

¹⁵ Includes garbage disposal units and automotive service equipment such as steam cleaners, valve refacers, piston grinders, etc., as well as miscellaneous types of household and service machines.

¹⁶ Includes refrigerators for house trailers.

¹⁷ These figures cover compressors incorporated into condensing units, unitary equipment, and other equipment by the establishment manufacturing the compressors. They do not include compressors shipped as such.

¹⁸ Detailed data obtained from the Facts for Industry Series M52A, Air Conditioning and Commercial Refrigeration Equipment: 1947, plus revisions. See text for explanation.

¹⁹ Although quantity data were published for these items in the Facts for Industry releases, a number of companies included in the 1947 Census of Manufactures but not in the Facts for Industry survey did not report quantity. For 90 percent of the value of evaporative condensers and 97 percent of the value of unit coolers, quantity data can be obtained from Facts for Industry Series M52A, Air Conditioning and Commercial Refrigeration Equipment: 1947.

²⁰ Includes cabinets for household refrigerators, cabinets for home and farm freezers, absorption and adsorption systems, etc.

BALL AND ROLLER BEARINGS; VALVES; AND MACHINE SHOP PRODUCTS

TABLE 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
		Total shipments and interplant transfers		Total production for sale and interplant transfer (value f.o.b. plant)
		Quantity	Value f.o.b. plant	
Valves and fittings for piping systems, except plumbing and heating valves			\$441,557	\$170,215
Metal valves:				
Gates, globes, angles, checks, butterfly, lubricated plug, cocks, stop and checks, etc. (except automatic regulating valves):				
Iron (all pressures), including fire hydrants	Short ton	112,491	66,027	
Steel, carbon and alloy (all pressures)	do	52,610	65,407	
Brass and bronze (125 lb. W.S.P. and over)	do	31,128	58,328	
Pop safety valves and relief valves (over 15 lb. W.S.P.):				
Iron			2,344	
Steel, carbon and alloy			3,835	
Brass and bronze			4,707	
Automatic regulating valves:				
Diaphragm actuated			24,645	
Float actuated, including float cages	M units	2,073	11,704	
Other automatic regulating valves			17,312	
Compressed gas cylinder valves	M units	1,481	2,543	
Metal fittings and unions (except compression fittings, flared fittings, and bell and spigot pressure and soil pipe fittings):				
Gray-iron fittings, flanges, and flange unions	Short ton	113,352	28,318	
Malleable iron fittings and flanges	do	96,301	45,550	
Malleable iron unions and union fittings	do	24,526	20,505	
Cast and forged carbon and alloy steel fittings, flanges and unions	do	59,083	32,007	
Cast and wrought copper and copper-base alloy fittings, flanges and unions	do	21,143	25,012	(1)
Steam traps (over 15 lb. W.S.P.):				
Thermostatic and combination float and thermostatic			2,472	
Mechanical	M units	369	3,777	
Other metal valves and piping specialties for piping systems, including those not reported by type (except plumbing and heating valves)			27,064	
Plumbing and heating valves and specialties, except plumbers' fittings			65,655	
Gates, globes, angles, checks, butterfly, lubricated plug, cocks, stop and checks, cross, etc.—brass and bronze valves (under 125 lb. W.S.P.):				
Quantity reported	Short ton	13,174	25,380	
Quantity not reported			4,279	
Steam traps (15 lb. W.S.P. and under):				
Radiator traps			1,451	
Other steam traps (15 lb. W.S.P. and under)			1,423	
Other metal plumbing and heating valves and specialties, including those not reported separately by type			33,122	
Other valves and fittings, except plumbers' fittings (faucets, spigots, etc.)			43,167	
Valves and fittings (except plumbers' fittings), not reported by type			8,955	
Fabricated pipe and fittings			109,991	15,532
Ball and roller bearings			352,501	104,874
Antifriction bearings, unmounted:				
Ball bearings:				
Annular, including self-aligning			134,548	
Thrust			9,391	
Other ball bearings			4,521	2 51,222
Roller bearings:				
Cylindrical, including spherical (except thrust)			41,195	
Needle			5,737	
Thrust (all types)			4,274	3 47,432
Other roller bearings (including taper, other than thrust)			96,363	
Balls, sold separately			15,081	2,799
Rollers, sold separately			2,516	1,011
Other antifriction bearing components (including cages, housing closures, collars, races, etc.)			19,629	2,410
Mounted bearings:				
Ball			10,867	(2)
Roller			7,230	(2)
Ball and roller bearings and components, not reported by kind			1,149	
Flexible metal hose and tubing			13,569	3,183
Metallic packing			8,813	3,106
Other machine shop products, including carburetors, pistons, piston rings, and metal bellows			415,273	n.a.

¹ Detailed data not collected separately in 1939.

² Mounted ball bearings are included with unmounted ball bearings for 1939.

³ Mounted roller bearings are included with unmounted roller bearings for 1939.

TABLE B.—PRODUCTION OF CARBURETORS, PISTONS, AND PISTON RINGS, BY TYPE: 1947

[Thousands of units]

PRODUCT	Total	Automobile, truck, and bus uses (including shipments to other plants of the same company and units produced for incorporation into vehicles at the same plant)	Other uses (including shipments to other plants of the same company but excluding units produced for incorporation into other products at the same plant)
Carburetors, except rebuilt.....	¹ 10,862	8,657	2,205
Pistons (machined):			
Aluminum.....	² 50,407	³ 50,407	(³)
Other (including cast iron, steel, etc.).....	⁴ 16,911	16,396	515
Piston rings:			
Oil type.....	201,401	197,582	3,819
Compression type.....	364,582	356,113	8,469

¹ Of the 10,862,000 carburetors, the value for 9,681,000 carburetors (consisting of 7,476,000 automobile, truck, and bus carburetors and 2,205,000 other carburetors) was \$43,335,000.

² Of the 50,407,000 aluminum pistons, the value for 15,872,000 was \$20,101,000.

³ A negligible number of pistons for other uses are included with those for automobile, truck, and bus uses to avoid disclosing figures for individual companies.

⁴ Of the 16,912,000 pistons of other than aluminum, the value for 5,047,000 (consisting of 4,532,000 automobile, truck, and bus pistons and 515,000 other pistons) was \$7,983,000.

Chapter XVII—ELECTRICAL MACHINERY

ELECTRICAL INDUSTRIAL APPARATUS

TABLE A.—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		Total production for sale and interplant transfer	
	Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant
	(M units)		(M units)	
Current-carrying wiring devices		\$153,750		\$39,879
Lamp holders, incandescent type:				
Brass or metal shell, all sizes (excluding outlet box type).....	43,729	6,314	} n.a.	} 9,558
Outlet box lamp holders.....	20,321	4,960		
Other lamp holders, including lumiline.....	110,447	15,604		
Caps, all types, sold separately.....	4,950	348		
Lamp holders, fluorescent type, including cold cathode fluorescent.....	71,808	8,546		
Convenience and power outlets:				
Flush, 15 amperes and under (all types).....	67,433	11,933	} n.a.	} 3,470
Flush, over 15 amperes (all types).....	2,003	1,637		
Surface, all types.....	18,633	3,638		
Attachment plug caps and connector bodies.....	n. a.	9,957	n. a.	2,991
Switches (excluding knife and time switches):				
Appliance and special application switches: ¹				
15 amperes and under.....	58,988	14,066	} n.a.	} 8,161
Over 15 amperes.....	7,191	4,751		
Canopy, fixture, and portable lamp switches.....	23,755	3,643		
Other switches, excluding knife and time switches:				
Flush, rated 10 amperes 125 volt; 5 amperes 250 volt.....	54,924	12,072		
Flush, all other.....	2,098	1,015		
Surface, all types.....	9,972	2,383		
Fluorescent starters and parts.....		11,152		n.a.
Switch and outlet face plates (all types) ²	61,322	3,999	n.a.	1,308
Wire connectors:				
Solderless connectors, including industrial and service.....	n. a.	17,905	n.a.	3,722
Other connectors, including solder lugs and splicing sleeves.....	n. a.	5,282	n.a.	1,369
Other wiring devices, including rosettes, etc.....		10,041		9,310
Current-carrying wiring devices, not specified by kind.....		4,524		
Noncurrent-carrying wiring devices and supplies		161,196		46,108
Stamped metal boxes, covers, and accessories, including conduit boxes:				
Switch boxes.....	51,375	8,350	} n.a.	} 5,991
Outlet boxes.....	85,538	10,997		
Concrete boxes.....	n. a.	901		
Covers and accessories, including supports and bar hangers.....		3,602		
Cast metal boxes, covers, and accessories, including conduit boxes.....		13,727		
Electrical conduit and conduit fittings:				
Underground conduit and underfloor raceways, including fittings and accessories.....		1,800	} n.a.	} 32,505
Other electrical conduit ³		37,532		
Fittings (other than those included above) ⁴		35,508		
Rail bonds for both propulsion and signal circuits.....		2,450		655
Lightning arresters and choke coils for power transmission and distribution circuits and for railway signalling power circuits.....		11,066		5,217
Overhead trolley-line material (except poles, wire, and cable, and pole-line hardware).....		5,464		1,740
Noncurrent-carrying wiring devices and supplies, not specified by kind.....		29,799		
Pole-line and transmission hardware		57,707		n.a.
Pole-line hardware, excluding transmission hardware for high voltage porcelain products.....		50,089		17,614
Transmission hardware for high voltage porcelain products (including clamps and fittings, strain yokes, etc.).....		7,618		n.a.
Wiring devices and supplies, not specified by type.....		3,000		
Carbon and graphite products		68,604		18,585
Brushes (carbon, graphite, metal-graphite, and metal impregnated):				
Automotive brushes (automotive and light truck type, 6 to 12 volts, inclusive).....		4,764	} n.a.	} 4,654
Fractional horsepower brushes (¼ sq. in. or less in cross-section or 1½ in. long or less).....		3,181		
Industrial brushes (over ¼ sq. in. in cross-section and over 1½ in. long).....		8,298		
Electrodes for batteries.....		2,073		
Electrodes for welding and cutting.....		204		
Electrodes for all other purposes, including those for electric furnace and electrolytic use.....				
Miscellaneous carbon, graphite, metal-graphite, and metal-impregnated specialties:		41,471		13,255
For electrical uses, including contacts, pot liners, etc.....				
For mechanical and other uses, including packing rings for steam seal, paste and plates for welding, etc.....		5,254		
Plate stock and rod and powder stock for making brushes and for miscellaneous applications.....		3,359		676
Carbon and graphite products, not specified by type.....				
Electrical integrating instruments		63,650		n.a.
A. C. watt-hour meters:				
Single phase.....	3,277	44,967	} 1,896	} 17,616
Polyphase.....	211	5,096		
Demand meters, including combined watt-hour and demand meters (single or polyphase).....	237	6,862		
Other electrical integrating meters, including combined watt-hour and time switch meters, D.C. watt-hour meters, ampere-hour meters, etc.....		2,121		1,617
Parts for electrical integrating instruments, sold separately, and integrating instruments, not specified by type.....		4,604		n.a.

See footnotes at end of table.

ELECTRICAL MACHINERY

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TABLE 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
	(M units)		(M units)	
Electrical test equipment		\$54,805		n.a.
Oscilloscopes, high frequency type, designed primarily for radio testing.....		766		
Other types of oscilloscopes and oscillographs.....		4,048		
Volt-ohm-milliameters.....		2,535		n.a.
Electronic volt-ohm-milliameters.....		723		
Resistor, capacitor, and inductor measuring equipment.....		1,653		
Analyzers for testing characteristics of internal-combustion engines and auxiliary equipment.....		15,193		\$2,020
Tube characteristic measuring instruments for receiving tubes.....		2,058		584
Micro-wave test equipment.....		2,512		
Signal generators.....		3,774		
Radio frequency measuring equipment.....		1,813		
Other electrical test equipment, including broadcast transmitter test and monitoring equipment.....		9,992		n.a.
Electrical test equipment, not specified by kind.....		9,257		
Parts for test equipment, sold separately.....		481		
Electrical measuring instruments, other than integrating instruments and test equipment ⁶		37,885		n.a.
Indicating instruments:				
Panel type instruments:				
Nominal size 4½ in. and smaller, excluding motor vehicle and aircraft type ⁷	1,039	8,369	692	2,173
Nominal size larger than 4½ in., including all exploded types but excluding motor vehicle and aircraft type ⁷	108	2,155		
Aircraft type ⁸	43	408	n.a.	n.a.
Switchboard type instruments, 4½ in. nominal size and larger with accuracy within 1% of full scale.....	115	3,111	67	1,025
Portable instruments:				
Industrial portable ammeters, voltmeters, watt-varmeters, etc. including hook-on and split core current measuring types.....	68	1,659	27	762
Laboratory type—with accuracies within (±) 1%, up to 1/10% of full scale and better—all case sizes.....	44	2,317	n.a.	(⁹)
Other indicating instruments, including ammeters and voltmeters for motor vehicles but excluding electrical test equipment.....		2,502		(⁹)
Instrument, meter, and tripping transformers (current and potential).....	278	10,628	n.a.	(⁹)
Recording instruments, excluding control types.....	14	1,911	6	553
Instrument relays, all types.....	40	899	n.a.	n.a.
Parts for indicating and recording instruments.....		3,488		n.a.
Indicating and recording instruments, not specified by type.....		458		n.a.
Electrical measuring instruments, not specified by type.....		1,113		n.a.
Motors and generators, and motor-generator sets shipped to other companies and to other plants of the same company		855,577		
Motors, generators, and motor-generator sets shipped to other companies ¹⁰		803,262		
Fractional horsepower motors.....		309,403		
Integral horsepower motors and generators.....		258,705		
Prime mover-generator sets other than steam or hydraulic turbine.....		33,790	(¹¹)	(¹¹)
Motor-generator sets and other rotating equipment.....		37,510		
Motors, generators, and control apparatus for land transportation equipment.....		69,646		
Parts and supplies for motors, generators, and motor-generator sets.....		80,087		
Motors, generators, and motor-generator sets, not specified by type.....		14,121		
Motors, generators, and motor-generator sets shipped to other plants of the same company.....		52,315		
Specialty transformers		80,672		9,899
Control, signalling, doorbell, and toy.....		6,117		939
Luminous tube, including series fluorescent lighting applications.....	1,299	10,742	840	4,389
Ignition, including oil and gas-furnace ignition applications but excluding internal-combustion engine ignition.....	1,171	9,369		
Fluorescent lamp ballasts, all types, including resistance, inductance, and combinations of inductance and capacitance.....	16,051	35,158		
General purpose and miscellaneous applications involving voltages of 600 volts and below.....		17,699		4,571
Specialty transformers, not specified by type.....	(Units)	1,587	(Units)	
Power and distribution transformers ¹²		205,943		51,005
50 KVA and under, 15,000 volts and below.....	925,688	107,886		
51 KVA to and including 200 KVA, 15,000 volts and below.....	27,177	19,785	n.a.	37,744
201 KVA to and including 500 KVA, 15,000 volts and below, and 500 KVA and under of voltage above 15,000.....	14,456	19,388		
Over 500 KVA, all voltages.....		58,684		13,261
Parts and supplies, power regulators, boosters, and reactors		37,463		
Current limiting reactors.....		1,650		
Feeder-voltage regulators and boosters.....		12,976		
Parts and accessories for power, distribution, and specialty transformers.....		22,837		4,160
Liquid filled (all voltages) and dry type transformers above 600 volts for applications other than previously indicated and power, distribution, and specialty transformers, not specified by type.....		2,699		

See footnotes at end of table.

TABLE 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
	(Units)		(Units)	
Switchgear and switchboard apparatus		\$360,988		\$76,982
Panelboards and distribution boards:				
Panelboards, including enclosing cabinets (all types of panelboards; fuse only, combination switch and fuse, and circuit breaker).....		23,013		8,423
Distribution switchboards.....		9,765		2,872
Other, including theater switchboards, and enclosed branch circuit cut-outs not including load centers.....		1,977		3,157
Switches, excluding switches commonly known as snap, toggle, and rotary switches; and switch devices intended primarily to be used with electric motor controls:				
Knife switches, 600 volts and under, open and enclosed, including enclosed manual circuit breaker:				
Open knife switches and parts and switch interiors.....		7,783		8,871
Enclosed switches, including pull out types and enclosed manual circuit breakers.....		49,861		1,774
Time switches.....		5,765		4,801
Other switches (excluding snap, toggle, push, etc.).....		7,845		
Circuit breakers:				
Power circuit breakers:				
Indoor, including oil circuit breakers, all voltages, and oilless circuit breakers over 1,200 volts.....		8,913		3,436
Outdoor, oil and oilless:				
To and including 34,500 volts.....		15,639		3,591
Over 34,500 volts.....		18,441		5,293
Air circuit breakers, 1,200 volts and under:				
With interrupting ratings of 10,000 amperes and under for circuit ratings up to and including 100 amperes in frames not exceeding that rating (in supporting and enclosing housings of insulation materials).....		6,807		
With interrupting ratings of 10,000 amperes and over, including those in frame sizes over 100 amperes (in supporting and enclosing housings of insulation materials), in individual enclosures, generally of steel; and those not enclosed.....		12,131		4,879
Other circuit breakers.....		7,128		
Power switchboards:				
Automatic and manual panels (generator, transformer, feeder-control, etc.).....		15,608		6,508
Metal enclosed switchgear (using power circuit breakers, oil and oilless, and low voltage air circuit breakers).....		63,555		8,440
Metal enclosed bus bar structures, for sale separately.....		11,855		3,185
Relays, regulators, and miscellaneous switchboard devices, for sale separately.....		24,198		
Power switching equipment, including attachments, auxiliaries, bus supports and fittings, and accessories, but not including power fuses sold separately:				
Outdoor.....		18,881		
Indoor.....		3,354		
Power and distribution fuses and fuse links for 2,300 volts and over, A.C. service, excluding distribution cut-outs:				
Outdoor.....		2,747		11,75
Indoor.....		1,945		
Power connectors.....		3,638		
Distribution cut-outs.....		9,431		
Switchgear and switchboard apparatus, not specified by type.....		30,708		
Industrial electrical control equipment (except railway and motor vehicle controllers)		169,910		46,039
A.C. general purpose controls.....		69,748		16,966
D.C. general purpose controls.....		6,514		4,420
General purpose control accessories, including rheostats and resistors.....		43,158		
Resistance welder controls, electronic and magnetic.....		4,306		24,653
Electronic controls, other than resistance welder controls.....		7,678		
Other industrial controls.....		33,383		
Industrial electrical control equipment, not specified by type.....		5,123		
Domestic automatic controls ¹¹		70,732		n.a.
Fuses and fuse equipment under 2,300 volts (except power distribution cut-outs)		20,698		6,880
Nonrenewable plug fuses.....		6,529		1,924
Nonrenewable cartridge fuses.....		3,546		
Renewable plug and cartridge fuses.....		6,186		
Renewal links for renewable plug and cartridge fuses.....		695		4,956
Other fuses and open fuse material, including cut-outs, clips, bases, etc.....		3,534		
Fuses and fuse equipment under 2,300 volts, not specified by type.....		208		
Electrical control apparatus, not specified by type.....		2,644		
Arc welding machines, welding parts, components, and accessories		32,110		8,624
Arc welding machines:				
Alternating current transformer arc welders:				
180 amps. and below.....	32,059	2,799	9,924	1,040
Over 180 amps.....	17,260	3,865		
Direct current arc welders:				
Complete units only:				
Engine driven.....	13,821	10,905	2,255	1,859
Motor driven.....	17,442	7,325	13,070	3,672
Generators only.....	2,051	537		
Automatic welding heads for arc welding.....	552	842		
Accessories for arc welding machinery (including electrode holders, ground clamps, arc torches, and protective devices such as helmets, shields, goggles, etc.).....		4,618		2,053
Arc welding machines, welding parts, components, and accessories, not specified by type; and standard positioners for arc welding.....		1,219		

See footnotes at end of table.

ELECTRICAL MACHINERY

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TABLE 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
	(M pounds)			
Arc welding electrodes		\$43,987		
Mild steel (cut lengths)	343,218	28,109		
Alloy steel (cut lengths), except hard surfacing	21,786	8,794		
Nonferrous (cut lengths), except hard surfacing	3,701	3,007		\$10,736
Hard surfacing (all types, including tool steel)	5,595	3,280		
Electrodes in coils for automatic arc welding (including electrodes for submerged arc welding)	7,433	797		
	(Units)	29,874		
Resistance welders, parts, components, accessories and electrodes				
Spot welders (including single electrode, multielectrode and gun type)	7,900	11,382		
Projection welders	668	3,255		
Seam welders	228	2,032		
Flash and butt welders	1,207	2,356		
Other resistance welders	4,839	3,482		n.a.
Resistance welder transformers (sold separately)	3,257	877		
	(M pounds)			
Resistance welder electrodes	2,140	3,359		
Resistance welder accessories (including electrode holders)		1,431		
Resistance welders, parts, components, accessories and electrodes, not specified by type		1,720		
Electrical welding apparatus, not specified by type		1,645		n.a.
	(Units)	7,629		
High frequency induction and di-electric heating apparatus				
Induction heating apparatus:				
Output rating:				
10 KW and under	n.a.	762		
Over 10 KW and under 50 KW	189	1,467		
50 KW and over	48	1,476		n.a.
Di-electric heating apparatus:				
Output rating:				
10 KW and under	n.a.	1,873		
Over 10 KW	n.a.	532		
High frequency induction and di-electric heating apparatus, not specified by type		1,519		
	(M units)	38,269		
Capacitors for industrial use		19,383		
Power capacitors (including shunt and series capacitors and accessories)				
Other capacitors, excluding communication types other than coupling:				
A.C. capacitors, except electrolytic:				
General purpose for motors, controls, etc.	3,009	2,788		n.a.
Capacitors for fluorescent lamp ballasts	12,846	8,223		
Electrolytic capacitors (A.C. type for motor starting)	4,656	3,857		
D.C. capacitors for general industrial application such as filters, blocking, bypass, and discharge service	5,364	2,105		
Other capacitors, including coupling capacitors and those not specified by type		1,913		
		69,710		n.a.
Miscellaneous electrical equipment for industrial use		408		n.a.
Electric heating units for furnaces and ovens, sold separately				
Industrial electric heating units and devices (including industrial strip, space, and ring heaters, water and oil immersion heaters, metal pots and metal immersion heaters, glue and compound pots, etc.)		13,630		4,610
Rectifying apparatus (excluding communication applications):				
Power mercury arc rectifiers		3,657		
Electronic tube power apparatus		608		2,634
Other rectifying apparatus	1,498	16,844		
Electric soldering irons		3,013	n.a.	n.a.
Other miscellaneous electrical equipment for industrial use, including industrial electrical equipment, not specified by type		31,550		n.a.

n.a.—Not available.

1 Installed generally as a component part of an electrical appliance or piece of electrical equipment.

2 Quantity represents the number of gangs, i.e., a three gang plate is counted as three.

3 Includes the value of rigid (standard weight) conduit, couplings, nipples, bends and elbows; electrical metallic tubing (thin wall conduit) and elbows; and flexible steel conduit shipped by establishments classified in the electrical group of industries. Data for these types of conduit shipped by establishments classified in industries not in the electrical group were not reported separately and therefore are not available for inclusion in these statistics.

4 Includes conduit connectors, pipe straps, staples, service entrance caps and ells, insulating bushings, etc., and fittings for armored cable, nonmetallic wiring systems, and service cables.

5 Includes transfers of plate stock and rod and powder stock to other establishments of the same company for further processing into brushes, etc.

6 Instruments designed fundamentally to indicate, measure, or record electrical quantities but whose scales may be marked in other than electrical quantities.

7 Initial accuracy within (plus or minus) 2 percent of full scale deflection for all types, except rectifier types. Initial accuracy for rectifier types within (plus or minus)

5 percent of full scale deflection.

8 Instruments for measuring electrical quantities only. Includes ammeters, voltmeters, wattmeters, watt-varmeters, frequency meters, phase sequence indicators, etc.

9 Motor vehicle motors, laboratory instruments, other electrical indicating instruments, and instrument, meter, and tripping transformers combined to avoid disclosing figures for individual companies. The combined value of these items in 1939 was \$8,643,000.

10 More detailed statistics for motors, generators, and motor-generator sets are shown in tables 6-B through 6-E.

11 No detailed 1939 comparative data available.

12 Liquid filled (all voltages) and dry type transformers above 600 volts for distribution and power service.

13 Includes automatic electric controls for air conditioning, refrigeration and comfort handling which are capable of handling a current not in excess of 30 amperes or handling directly any motor having a rating not higher than 1½ horsepower.

14 Includes the value of resistance welder electrodes, carbon and graphite welding electrodes, and gas welding wire.

TABLE B.—QUANTITY AND VALUE OF MOTORS, GENERATORS, AND MOTOR-GENERATOR SETS, SHIPPED TO OTHER COMPANIES (COMMERCIAL SHIPMENTS), BY TYPE AND SIZE: 1947

[This table excludes motors, generators, and motor-generator sets transferred to other plants of the same company and those produced and incorporated into other products made in the same establishment]

[Money figures in thousands of dollars]

PRODUCT	1947		PRODUCT	1947	
	Total shipments and interplant transfers			Total shipments and interplant transfers	
	Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant
	(M units)		(Units)		
Fractional horsepower motors¹	37,238	\$309,403	Integral horsepower motors and generators—Continued		
Aircraft (all types):			Direct current motors and generators: ²		
Under 1/20 hp.....	698	4,699	1 to 5 hp.....	38,406	\$6,551
1/20 hp. and over.....	49	1,511	5.1 to 20 hp.....	25,493	14,430
Clock type synchronous and sub-synchronous timing motors.....	2,588	3,941	21 to 50 hp.....	6,430	5,796
1/20 hp. and over but not including 1/20 hp.....			51 to 200 hp.....	3,848	5,659
1/6 hp. and over but not including 1/2 hp.....			201 to 500 hp.....	701	3,340
1/2 hp. and over but not including 1 hp.....			Over 500 hp.....	417	9,938
Universal (other than listed above):			Alternating current generators: ⁴		
Below 1/100 hp. (including toy motors and auto heater motors).....	571	1,812	To but not including .75 KW.....	913	48
1/100 hp. and over but not including 1/70 hp.....	723	4,700	.75 to 3 KW.....	2,463	350
1/70 hp. and over but not including 1/40 hp.....	561	2,298	3.1 to 15 KW.....	2,293	694
1/40 hp. and over but not including 1/20 hp.....	1,001	6,411	15.1 to 40 KW.....	1,822	1,560
1/20 hp. and over but not including 1/6 hp.....	457	3,927	41 to 150 KW.....	1,260	1,747
1/6 hp. and over but not including 1/2 hp.....	1,930	14,372	151 to 400 KW.....	454	1,747
1/2 hp. and over but not including 1 hp.....	233	2,818	Over 400 KW.....	703	16,430
Direct current motors (other than listed above):			Prime mover-generator sets other than steam or hydraulic turbine⁵		33,790
Below 1/20 hp. (including toy motors and auto heater motors).....	3,837	10,281	Gasoline-engine driven generator sets.....	55,158	21,826
1/20 hp. and over but not including 1/6 hp.....	676	3,085	Other generator-set units, including Diesel-engine driven and wind-driven generator sets.....		11,964
1/6 hp. and over but not including 1/2 hp.....	121	3,150	Motor-generator sets and other rotating equipment		37,510
1/2 hp. and over but not including 1 hp.....	43	1,948	Motor-generator sets, including dynamotors, converters, inverters, and frequency changers:		
Shaded pole alternating current motors:			Synchronous converters and double current generators.....	6,785	1,018
Below 1/100 hp. (including toy motors).....	1,944	4,983	Other motor-generator sets:		
1/100 hp. and over but not including 1/70 hp.....	736	2,744	Fractional horsepower (less than 3/4 KW).....	13,169	1,599
1/70 hp. and over but not including 1/20 hp.....	2,063	9,317	3/4 to 150 KW.....	12,984	9,618
1/20 hp. and over but not including 1/6 hp.....	177	1,480	151 to 400 KW.....	431	3,445
Over 400 KW.....			Over 400 KW.....	141	4,510
Other A.C. motors:			Gear motors, all sizes and types.....	138,050	16,530
Below 1/100 hp. (including toy motors).....	3,199	6,544	Other rotating equipment, including selsyns, autotrans, synchroties, synchronous condensers, etc.....		790
1/100 hp. and over but not including 1/70 hp.....	261	1,151	Motors, generators, and control apparatus for land transportation equipment		69,646
1/70 hp. and over but not including 1/40 hp.....	263	2,508	Motors, generators, and control equipment for gasoline-electric and Diesel-electric buses, trucks, and locomotives, including parts and supplies.....		41,873
1/40 hp. and over but not including 1/20 hp.....	541	5,763	Railway motors, generators, and control equipment and motors and control equipment for storage-battery powered transportation equipment, including parts and supplies.....		27,773
1/20 hp. and over but not including 1/6 hp.....	2,824	23,453	Parts and supplies for motors, generators, and motor-generator sets.....		80,087
1/6 hp. and over but not including 1/2 hp.....	9,847	129,990	Motors, generators, and motor-generator sets, not specified by type.....		14,121
1/2 hp. and over but not including 1 hp.....	1,895	53,527			
Fractional horsepower motors, not specified by type.....		2,990			
Integral horsepower motors and generators	(Units)	258,705			
Alternating current motors:					
Single phase, all sizes.....	469,873	28,535			
Polyphase-induction:					
1 to 5 hp.....	940,273	68,076			
5.1 to 20 hp.....	244,604	38,638			
21 to 50 hp.....	60,926	22,077			
51 to 200 hp.....	19,224	13,875			
201 to 500 hp.....	2,039	5,800			
Over 500 hp.....	417	4,093			
Synchronous and other A.C. motors:					
1 to 500 hp.....	2,343	5,906			
Over 500 hp.....	408	3,415			

NOTE: The horsepower shown for A.C. and D.C. motors, 200 horsepower and below, is for open type frame at a speed of 1,800 r.p.m. Motors at other speeds and enclosures are converted to equivalent ratings at 1,800 r.p.m., e.g., a 1/3 hp., 12,000 r.p.m. universal motor has been reported as a 1/20 hp. motor at 1,800 r.p.m.

¹ Excludes starting motors for internal-combustion engines.

² Does not include quantity for \$2,990,000 of fractional horsepower motors, not reported by type.

³ Excludes starting motors and battery charging generators for internal-combustion engines; generators and propulsion motors used as an integral part of land transportation equipment; and arc welding generators.

⁴ Excludes generators used as an integral part of land transportation equipment and arc welding generators.

⁵ Excludes motor-generator sets and generator-set units for incorporation into land transportation equipment.

ELECTRICAL MACHINERY

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TABLE C.—FRACTIONAL HORSEPOWER MOTORS—TOTAL PRODUCTION BY TYPE AND SIZE: 1947

[This table includes fractional horsepower motors shipped to other companies and those produced for incorporation into other products of the same company]
[Thousands of motors]

PRODUCT	Total	Shipments to other companies	Produced for incorporation into other products of the same company (including transfers to other plants of the same company)	PRODUCT	Total	Shipments to other companies	Produced for incorporation into other products of the same company (including transfers to other plants of the same company)
Total fractional horsepower motors¹.....	57,553	34,650	22,903	Direct current (other than listed above):			
Below 1/20 hp.....	25,592	16,398	9,194	Below 1/20 hp.....	6,474	3,837	2,637
1/20 hp. and over.....	31,961	18,252	13,709	1/20 hp. and over but not including 1/6 hp.....	677	676	1
Aircraft (all types):				1/6 hp. and over but not including 1/2 hp.....	132	121	11
Below 1/20 hp.....	701	698	3	1/2 hp. and over but not including 1 hp.....	48	43	5
1/20 hp. and over.....	61	49	12	Shaded pole alternating current:			
Universal (other than listed above):				Below 1/100 hp.....	3,394	1,944	1,450
Below 1/100 hp.....	2,100	571	1,529	1/100 hp. and over but not including 1/70 hp.....	869	736	133
1/100 hp. and over but not including 1/70 hp.....	1,020	723	297	1/70 hp. and over but not including 1/20 hp.....	2,493	2,063	430
1/70 hp. and over but not including 1/40 hp.....	1,043	561	482	1/20 hp. and over but not including 1/6 hp.....	308	177	131
1/40 hp. and over but not including 1/20 hp.....	1,846	1,001	845	Other alternating current:			
1/20 hp. and over but not including 1/6 hp.....	7,581	457	7,124	Below 1/100 hp.....	3,736	3,189	537
1/6 hp. and over but not including 1/2 hp.....	2,966	1,930	1,036	1/100 hp. and over but not including 1/70 hp.....	585	261	324
1/2 hp. and over but not including 1 hp.....	1,248	233	1,015	1/70 hp. and over but not including 1/40 hp.....	477	263	214
				1/40 hp. and over but not including 1/20 hp.....	854	541	313
				1/20 hp. and over but not including 1/6 hp.....	5,443	2,824	2,619
				1/6 hp. and over but not including 1/2 hp.....	11,471	9,847	1,624
				1/2 hp. and over but not including 1 hp.....	2,026	1,895	131

¹ Data for clock-type synchronous and sub-synchronous timing motors are not included in this table.

TABLE D.—INTEGRAL HORSEPOWER MOTORS AND GENERATORS—SHIPMENTS AND INTERPLANT TRANSFERS, BY TYPE AND SIZE: 1947

[This table does not include motors and generators produced for incorporation into other products made in the same establishment]

[Number of motors]

PRODUCT	Shipments and interplant transfers			PRODUCT	Shipments and interplant transfers		
	Total	Shipments to other companies	Transfers to other plants of the same company		Total	Shipments to other companies	Transfers to other plants of the same company
A.C. single phase (all sizes).....	488,680	469,873	18,807	Synchronous and other A.C. motors (all sizes).....	2,876	2,751	125
A.C. polyphase-induction:				Direct current motors and generators (all sizes).....	79,636	75,385	4,251
1 to 5 hp.....	978,102	940,273	37,829	Alternating current generators (all sizes).....	11,192	9,908	1,284
5.1 to 20 hp.....	255,091	244,604	10,487				
21 to 50 hp.....	64,706	60,928	3,780				
Over 50 hp.....	23,530	21,680	1,850				

TABLE E.—MOTORS AND GENERATORS—SHIPMENTS AND INTERPLANT TRANSFERS, COMPARABLE QUANTITY DATA BY TYPE AND SIZE: 1947 AND 1939

[This table excludes motors and generators produced for incorporation into other products made in the same establishment. No comparable data exist for motor-generator sets]

PRODUCT	1947	1939	PRODUCT	1947	1939
	(M units)	(M units)		(Units)	(Units)
Fractional horsepower motors:			Integral horsepower motors and generators:		
Below 1/20 hp.....	19,519	4,842	A.C. single phase (all sizes).....	488,680	85,184
1/20 hp. and over, but not including 1 hp.....	21,268	6,107	A.C. polyphase-induction:		
Clock-type synchronous and sub-synchronous timing motors ¹	2,588	306	1 to 5 hp.....	978,102	363,581
			5.1 to 20 hp.....	255,091	
			21 to 50 hp.....	64,706	
			Over 50 hp.....	23,530	
			Synchronous and other A.C. motors (all sizes).....	2,876	5,172
			Direct current motors and generators (all sizes).....	79,636	n.s.
			Alternating current generators (all sizes).....	11,192	2,973

¹ 1947 data do not include a small amount of interplant transfers which could not be shown without disclosing figures for individual companies; 1939 data are for synchronous timing motors only.

ELECTRICAL APPLIANCES AND LAMPS; INSULATED WIRE AND CABLE; AND ENGINE ELECTRICAL EQUIPMENT

[Money figures in thousands of dollars]

PRODUCT	1947			1939	
	Total shipments and interplant transfers		Production, quantity (thousands of units)	Total production for sale and interplant transfer	
	Quantity (thousands of units)	Value f.o.b. plant		Quantity (thousands of units)	Value f.o.b. plant
Electric fans (including air circulators)	4,330	\$48,656	4,504	n.a.	\$8,286
Desk and wall bracket:					
Oscillating:					
Under 12 inch.....	1,010	7,454	1,024		
12 inch.....	732	10,530	760	1,502	5,816
Over 12 inch.....	272	5,768	296		
Nonoscillating (all sizes).....	1,373	4,612	1,437		
High pedestal.....	206	7,517	214	n.a.	2,470
Other electric fans.....	737	12,775	773		
Electric water heaters, household type		60,478			n.a.
Storage (for permanent installation):					
34 gallons and under.....	983	59,383	987		
35-54 gallons.....	323	16,014	324	82	3,340
55 gallons and over.....	533	32,866	536		
Other permanent installation type, including circulating.....	127	10,503	127		
Portable storage (plug-in farm type).....	501	594	19	n.a.	114
	19	594	19		
Small electric appliances (household type) except fans		224,147			n.a.
Household type cooking and heating appliances:					
Broilers.....	255	1,712	264	n.a.	n.a.
Coffee percolators and urns.....	525	2,872	546	1,802	3,575
Coffee makers, complete units.....	2,438	11,001	2,458	153	1,670
Roasters.....	410	7,666	417		
Toasters:					
Automatic.....	2,840	25,547	2,845	960	6,079
Nonautomatic.....	2,179	5,502	2,179	1,477	1,817
Waffle irons.....	1,867	10,679	1,868	708	2,146
Air space heaters (portable room heaters):					
Fan forced type.....	860	8,399	932	195	512
Convector type, other than fan forced.....	104	525	147		
Radiant type, other than fan forced, including units with both convection and radiant characteristics.....	886	4,732	911	330	547
Hot plates and disc stoves.....	1,453	6,902	1,454		
Other household type cooking and heating appliances ¹		28,204			n.a.
Electric irons:					
Standard household, steam.....	1,156	9,890	1,204	n.a.	n.a.
Standard household other than steam, automatic type (thermostat controlled heat):					
Under 4 pounds.....	5,600	31,421	5,732	2,340	6,638
4 pounds and over.....	2,895	14,839	2,889		
Other electric irons, including tailors', milliners', travel, boudoir, nonautomatic standard household, etc.....	1,353	3,987	1,353		n.a.
Household food preparation appliances:					
Food mixers ²	1,220	21,630	1,232		
Other household food preparation appliances, including juice extractors, drink mixers, and whippers.....		2,935			6,546
Attachments for food mixers, sold separately.....		491			n.a.
Other small electric appliances:					
Electric bed coverings, including blankets and comforters.....	630	12,993	645	904	1,595
Heating pads.....	2,140	6,899	n.a.		
Other small electric appliances (including curling irons, vibrators, hand and face dryers, etc.) and small electric appliances, not specified by kind.....		5,321			n.a.
Domestic ranges, electric ³	1,210	132,235	1,210	275	16,839
Standard type.....	1,022	120,644	1,022		
Apartment house type (ranges up to approximately 24 inches with three or four burners and low oven).....	188	11,591	188	n.a.	n.a.
Commercial cooking and food warming equipment, electric		13,478			3,334
Commercial ranges, ovens, and broilers.....		2,676			944
Other commercial cooking equipment, including griddles, toasters, deep fat fryers, coffee makers, coffee urns, etc.....		8,198			
Commercial food warming equipment, including hot food server units and steam tables.....		2,604			2,390
Dry shavers (electric razors).....	2,500	22,009	2,507	(1)	3,182
Parts and accessories for electrical appliances.....		40,729			n.a.
Electrical appliances, not specified by kind.....		6,605			n.a.

See footnotes at end of table.

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Quantity (thousands)	Value f.o.b. plant	Quantity (thousands)	Value f.o.b. plant
Incandescent electric lamps and electrical discharge lamps, except cold cathode fluorescent		\$191,706		\$79,304
<i>Total reported on quarterly Census Bureau reports, M32B (see text for explanation of differences from 1947 census figure shown above)</i>	1,786,353	194,389	n.a.	n.a.
<i>Large incandescent</i>	946,619	103,105	n.a.	n.a.
Photoflash ⁵	78,251	6,441	n.a.	(*)
Photo flood and photolarger.....	3,577	824	1,866	340
General lighting, 160 watts and below ⁷	631,200	47,233		
General lighting, above 150 watts ⁷	59,584	16,409		
Infrared heat lamps for therapeutic use.....	1,597	1,325	518,300	53,773
Infrared drying lamps for industrial use.....	1,035	721		
Other large incandescent (special purpose) ⁶	171,395	30,152		
<i>Miniature incandescent</i> ⁹	477,889	32,573	n.a.	n.a.
Automotive, glass sealed beam ¹⁰	22,540	10,371		
Automotive, metal sealed beam, (bulbs only).....	11,454	1,540	136,553	7,241
Other automotive miniature.....	239,827	12,410		
Surgical, medical, and dental instrument lamps.....	296	122		
Other miniature incandescent ¹¹	203,772	8,130	n.a.	7,105
<i>Christmas tree (all types)</i>	273,498	9,674		
<i>Electrical discharge (except Christmas tree)</i>	38,329	49,036		
Germicidal, sterile, and bacterial lamps.....	237	784		
Fluorescent, hot cathode.....	33,814	42,501	n.a.	* 5,245
Miscellaneous electrical discharge, including glow, sodium, mercury, photo-chemical, blacklight, sun lamps (bulbs only) etc.....	4,228	5,751		

PRODUCT	1947	1939
	Total shipments and interplant transfers (value f.o.b. plant) ¹²	Total production for sale and interplant transfer (value f.o.b. plant) ¹²
Insulated wire and cable	\$895,128	\$204,428
Communication wire and cable:		
Drop and bridle wire.....	21,564	
Inside and duot telephone wire.....	6,183	
Distribution and jumper wire.....	1,006	
Paper-insulated, lead-covered cable (except coaxial).....	65,031	
Switchboard cable.....	32,735	13 20,424
Coaxial cable:		
Lead sheathed.....	25,702	
Flexible.....	1,294	
Other communication wire and cable.....	33,363	
Signal wire and cable.....	7,534	
Magnet wire:		
Enameled: ¹⁴		
Enameled only.....	90,094	
Enameled and covered.....	21,969	25,431
Not enameled (cloth and fibrous covered).....	22,818	
Weatherproof and slow burning.....	76,256	20,856
Building wire and cable, excluding varnished cambric insulated: ¹⁵		
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:		
Insulated for voltages not exceeding 600 volts:		
Portable power cables.....	14,494	
Varnished cambric insulated, including varnished cambric building wire.....	11,770	
Synthetic.....	5,710	13 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:		
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:		
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	13 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

See footnotes at end of table.

PRODUCT	1947	
	Total shipments and interplant transfers	
	Quantity (thousands of units)	Value f.o.b. plant
Engine electrical equipment		\$337,015
Complete units:		
Battery charging generators for internal combustion engines:		
6 volt—passenger car and light truck type.....	5,334	37,846
12 volt and higher—heavy duty truck and bus type.....	394	6,808
Other.....		5,768
.....	14,165	22,097
Regulators for battery charging generators.....		
Cranking motors for internal combustion engines:		
Passenger car and light truck type.....	5,022	35,029
Farm tractor and heavy duty truck and bus type.....	729	7,654
Other, including aircraft.....		4,813
Ignition apparatus for internal combustion engines:		
Ignition coils.....	11,867	18,358
Distributors.....	6,544	23,027
Ignition magnetos:		
Farm tractor type.....	744	8,852
Other ignition magnetos.....		14,353
Spark plugs: automotive and aircraft types.....	252,116	55,583
Switches specifically designed for use in vehicles and aircraft (all types, ignition, starting, lighting, etc.):		
Automotive vehicles (trucks, buses, and passenger cars).....	69,117	24,849
Other, including aircraft.....		1,749
Other ignition equipment.....		2,339
Component parts:		
Parts for battery charging generators:		
Armatures.....	2,020	6,474
Field coils.....	911	941
Parts for cranking motors.....		2,877
Parts for ignition distributors:		
Distributor heads.....	5,151	2,388
Rotors.....	7,193	1,002
Breaker point sets:		
Contact arms.....	34,336	6,841
Contact supports and screws.....	38,402	4,659
Condensers.....	11,716	2,351
Other engine electrical equipment, principally component parts (other than those listed above).....		40,357

n.a.—Not available.

¹ Includes immersion heaters, faucet attachment water heaters, electric steam radiators, air space heaters for fixed or permanent installation, cookers and casseroles, sandwich grills, heating units for coffee-makers, sold separately, etc.

² Value includes standard attachments sold with mixers.

³ Includes ranges over 2½ kw. but excludes combination types. Data for combination ranges are included in the data for nonelectric domestic cooking stoves, ranges, and appliances.

⁴ For \$2,851,000 of dry shavers produced in 1939 the quantity reported was 747,000.

⁵ Includes all incandescent lamp bulbs designed to provide instantaneous high intensity illumination for photographic purposes.

⁶ Data for photoflash lamps are included in the \$5,845,000 value shown for electrical discharge and other lamps in 1939.

⁷ General lighting includes all large incandescent lamps for general lighting purposes, 15 watts and over; 100-130 volts.

⁸ Other large incandescent lamps for special services such as sign and display; projection; aviation; street lighting; street railway; spot and flood lighting (including reflector spot and flood); train and country home lighting; traffic signal; rough service; showcase; other items for special application; and large incandescent lamps under 15 watts and/or other than 100-130 volts.

⁹ Miniature incandescent includes all lamps operating from small voltages, usually bearing trade numbers.

¹⁰ Includes all glass sealed beam units, specially designed for use on vehicles for highway illumination. These consist of complete units, containing the filament, reflector, and lens element, the latter two of which form the envelope of the bulb.

¹¹ Other miniature incandescent includes all miniature incandescent lamps not covered above, i.e., such as flashlight, radio panel, toy, pin game, and other lamps for special applications.

¹² Includes receipts of insulated wire and cable purchased from other companies or transferred from other plants of the same company for further fabrication. The 1947 data are as follows:

(Thousands of dollars)		(Thousands of dollars)	
Gross shipments of insulated wire and cable.....	\$895,128	Flexible cord, including heater cord.....	\$7,826
Less shipments within the industry for further fabrication.....	15,618	Fixture wire, including heat resistant.....	808
Magnet wire, enameled only.....	878	Automotive and aircraft type wire (including ignition harness sets and cable sets).....	2,925
Building wire, fibrous covered and/or jacketed.....	1,402	Net shipments of insulated wire and cable.....	879,510
Building wire, nonmetallic sheathed cable.....	1,779		

¹³ 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.

¹⁴ Includes synthetic resin enamels and combinations of enameled with other coverings.

¹⁵ Having Underwriters' labels.

¹⁶ Includes farm tractor, aircraft, marine, and stationary and construction machinery types.

COMMUNICATION EQUIPMENT AND RELATED PRODUCTS

[Money figures in thousands of dollars]

PRODUCT	1947			1939	
	Total shipments and interplant transfers		Production (quantity)	Total production for sale and interplant transfer	
	Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant
	(M units)		(M units)	(M units)	
Household radio receivers, television sets, radio-phonographs, phonographs, and record players		\$810,066			\$186,404
Home radio receivers:					
Socket powered:					
Amplitude modulated (AM):					
Table models.....	10,297	164,321	10,611	} 6,891	95,760
Console models.....	113	6,080	152		
Amplitude modulated-frequency modulated (AM-FM):					
Table models.....	219	9,820	236		
Console models.....	27	2,369	23		
Frequency modulated only (including FM converters).....	75	2,078	85		
Battery powered, table and console models.....	549	12,058	558		
Portable radio receivers:					
3 way (A. C., D. C., battery).....	2,225	52,798	2,287	} 1,365	16,087
Other portable radio receivers.....	562	7,874	615		
Automobile radios (broadcast receivers only).....	3,428	102,590	3,472	} 1,583	27,444
Television sets ¹ :					
Table models.....	113	28,759	116	} 4	2,806
Radio console models, including direct viewing and projection types.....	40	21,279	n.a.		
Receiving set chassis, for sale separately:					
Sold to radio manufacturers.....	64	3,829	69	} n.a.	6,608
Sold to others.....	36	1,887	41		
Radio-phonograph combinations, except television sets (including sets with built-in recorders):					
Table models, AM and AM-FM (including portable sets).....	1,450	68,937	1,469	} 475	17,193
Console models:					
AM.....	1,083	105,390	1,130		
AM-FM.....	882	137,655	908		
Phonographs and record players:					
Mechanical reproduction phonographs (with spring or electric motor).....	317	4,317	329	} n.a.	1,677
Electrical phonographs:					
Coin operated.....	98	49,819	99	} n.a.	19,055
Noncoin operated.....	345	6,795	346		
Record players, including record players with automatic record changing devices:					
Complete with case (plug-in or induction types only).....	718	13,365	722	} n.a.	1,774*
For installation in combination sets.....	551	7,136	549		
Household radio receivers, television sets, radio-phonographs, phonographs, and record players, not specified by type.....		940			
	(Units)				
Commercial radio communications, radio navigation aids, and broadcast equipment		225,262			n.a.
Communications equipment (excluding broadcast equipment and home receivers):					
Transmitters (shipboard, aircraft, and other).....		50,510			5,270
Receivers:					
Aircraft.....	7,935	2,752	} n.a.		2,935
Other, including shipboard.....	114,205	16,689			
Transceivers:					
Airborne.....	18,826	7,811	} n.a.		956
Automobile.....	19,863	9,803			
Other, including shipboard.....	9,574	3,536			
Radio navigation aids:					
Radar equipment:					
Search and navigation:					
Airborne.....		25,255	} n.a.		n.a.
Shipboard.....		43,817			
Other.....		4,438			
Fire control:					
Airborne.....		2,066	} n.a.		n.a.
Shipboard and other.....		19,586			
Other, including sonar.....		7,461			
Broadcast equipment:					
AM transmitters.....	531	7,508	} n.a.		n.a.
FM transmitters.....		4,472			
Studio equipment (AM and FM only).....		6,204			
Television equipment (including studio equipment, transmitters, antenna and associated relays, and STL with accompanying equipment).....		7,195			
Other broadcast equipment.....		4,815			
Commercial radio communications, radio navigation aids, and broadcast equipment, not specified by type.....		1,344			
	(M units)				
Electronic type components for communications and industrial electronic controls ²		348,916			75,340
Fixed capacitors (excluding power capacitors):					
Paper capacitors.....	227,789	20,664	} n.a.		(4)
Electrolytic capacitors.....	50,437	19,251			
Mica capacitors.....	72,469	5,410			
Ceramic capacitors.....	89,938	4,067			
Resistors:	393,045	6,442			
Fixed composition resistors.....	39,613	9,676			
Variable composition resistors.....	34,635	2,444			
Wire-wound resistors, two watts and below.....	15,298	2,930			
Fixed and variable wire-wound resistors, above two watts.....	18,827	16,796			
Variable tuning condensers.....		3,908			
Variable trimming condensers and condenser accessories.....		5,094			
Permeability tuning devices.....	2,167	26,320	} n.a.		6,069
RF and IF coils and transformers (including antenna oscillators).....	67,788	16,157			
Audio transformers and reactors.....	19,207	20,984			
Radio power transformers and radio reactors.....	8,480				
Tube sockets:					
Radio receiving type only.....	175,315	6,540	} n.a.		(4)
All other (including transmitting and industrial electronic control types).....	1,103	336			
Radio band-wave, tap, and similar switches.....		8,448			

See footnotes at end of table.

PRODUCT	1947			1939	
	Total shipments and interplant transfers		Production (quantity)	Total production for sale and interplant transfer	
	Quantity	Value f.o.b. plant		Quantity	Value f.o.b. plant
	(M units)		(M units)	(M units)	
Electronic type components for communications and industrial electronic controls— Continued					
Loud speakers and parts:					
Loud speakers:					
Radio	22,312	\$34,317	n.a.		\$9,818
All other speakers (including public address and intercommunication types)	1,409	7,234			
Loud speaker parts (except transmitters)		4,069			(1)
Microphones (all types)	653	3,933	n.a.	n.a.	854
Phonograph and record player accessories and components (except records):					
Automatic record changing mechanisms (excluding phono-motor assemblies)	1,926	22,474			
Phonograph cartridges and pick-ups	5,642	6,744			
Recorder mechanisms only (sold separately without built-in speakers, amplifiers, etc.)	77	1,614			
Vibrators for radio power supplies (for automobile, marine, etc., installations)	5,853	5,786	n.a.		(1)
Other electronic components for communication such as phono-motor assemblies, chassis blanks, connectors, printed circuits, dial assemblies, piezo-electric crystals, crystal holders, crystal detectors, antenna insulators, H.F. wave guides, relays, etc.		74,914			
Electronic type components for communication and industrial electronic controls, not specified by type		12,364			
Recorders, amplifiers, audio equipment, and recording magnetic wire		31,884	n.a.		n.a.
Recorders, complete units, excluding radio-phonograph combinations and recorder mechanisms, sold separately:					
Disc	39	3,246			
Wire and tape	70	6,270			
Amplifiers, complete units		7,032	n.a.		n.a.
Other audio equipment, complete units (including audio equipment such as complete public address systems, slidefilm projection audio units, etc.) and recording magnetic wire		15,336			
Phonograph needles and cutting styli		4,908			605
Phonograph playback needles, steel	1,219,696	592			
Phonograph playback needles, precious metal or jeweled point	14,288	3,931	n.a.		n.a.
Cutting styli, all types		121			
Phonograph needles and cutting styli, not specified by type		264			
Radios and related products (television equipment, radar and related detection apparatus, and phonographs), not specified by type		42,595			n.a.
Radio receiving type tubes (except ballast tubes, voltage regulators, and indicators)		93,932			32,947
Cathode ray tubes (television-receiver type)		267	309		
Other receiving-type tubes (including radio receiving rectifier tubes):					
Standard glass (including GT and GT/G) and lock-in type	128,732	49,621	136,950	109,521	32,947
Miniature glass	33,720	16,801	31,975		
Subminiature and acorn	3,180	2,756	3,085		
Other glass and all metal types	38,032	17,617	37,458		
Transmitting and industrial type tubes, except X-ray		25,321			5,116
High vacuum tubes (nonreceiving types):					
Rectifiers	144	718	169		
Triodes and multigridd tubes, external anode	52	4,126	42		
Gas or vapor tubes (including pool tubes):					
Rectifiers (excluding tungar and rectigon types)	184	945	229		
Grid, ignitor, etc. (control types)	424	3,190	423		
Cathode ray and camera pick-up tubes (excluding television receiver types)	38	1,057	41		(1)
Velocity modulated tubes, magnetrons, gaps, and TR boxes	39	4,610	37		
Miscellaneous types (including internal anode triodes and multigridd tubes, voltage regulators, ballast, photo, vacuum capacitors, vacuum switches, vacuum gauge tubes, etc.)	3,742	9,701	3,628		
Battery charger rectifying tubes (including tungar and rectigon types)	168	343	265		
Transmitting and industrial type tubes, not specified by type		631			
Electronic tubes, other than X-ray, not specified by type		2,871			
Phonograph records		102,015			19,762
Disc records, 78 r.p.m., not including electrical transcriptions:					
Discs, 10 inches and under					
Discs over 10 inches, except electrical transcriptions	298,308	81,417	311,017	n.a.	15,080
Electrical transcriptions, 33 1/3 r.p.m.	33,784	15,987	38,896		
Phonograph records, not specified by type	3,819	4,406	3,823	n.a.	2,024
Phonograph records, not specified by type		205			
Recording blanks, disc type and other (including magnetic disc)	5,993	3,152	6,093		1,758
Phonograph records and recording blanks, not specified by type		658			
Telephone and telegraph equipment		631,919			94,496
Telephone (wire) apparatus and equipment, including military:					
Telephone switchboards and switching equipment (central office and private branch exchange)		284,932			
Telephone instrument sets (including receivers, transmitters, and dials)	4,808	65,700			
Telephone (wire) apparatus and equipment (other than that covered by items above)		258,812	n.a.		n.a.
Telegraph apparatus and equipment (including military), including components, attachments, and accessories		21,012			
Telephone and telegraph equipment, not specified by type		1,463			
Communication equipment, not elsewhere classified		70,724			20,030
Intercommunication equipment, excluding intercommunicating equipment designed primarily for use in telephone and telegraph networks		9,966			
Electric alarm and signal systems and devices, other than railway		20,360			
Railway signals and attachments, electric		31,398			n.a.

n.a.—Not available.

1 Includes television sets with audio limited to television band, television only (production line observation) sets, television-radio sets, and combination phonograph-television-radio sets.

2 Includes television kits and facsimile sets.

3 Excludes capacitors for power factor correction and fluorescent tube ballasts.

4 Data not collected separately in 1939.

5 Includes railroad-highway grade crossing signals and safety control equipment.

MISCELLANEOUS ELECTRICAL PRODUCTS

[Money figures in thousands of dollars]

PRODUCT	1947 ¹			1939 ¹
	Total shipments and interplant transfers			Total production for sale and interplant transfer (value f.o.b. plant)
	Number of cells	Number of units	Value f.o.b. plant	
	(Thousands)	(Thousands)	\$	
Primary batteries, total			\$78,094	\$30,095
General purpose (6 inch), 1.5 volt dry cells, single and multiple unit.....	15,304	13,928	5,208	2,527
Flashlight:				
Standard.....	385,775	385,418	18,664	9,903
Medium.....	21,329	21,327	953	
Penlight.....	52,059	52,059	1,764	
Railroad lantern type.....	19,588	14,516	2,324	
Hearing aid (A and B):				
A, B, and C (other than hearing aid):				
Portable radio type.....	427,615	13,599	14,041	13,470
Farm radio type.....	369,195	6,030	18,309	
Other dry cell primary batteries ²			5,939	
Wet cell primary batteries.....	1,545	1,545	3,381	3,305
Parts and supplies for primary batteries, for sale separately.....			1,640	590
Storage batteries, total			293,358	81,122
Starting, lighting, and ignition (S. L. I.) storage batteries ³			249,328	64,618
Automotive type ⁴		31,248	231,683	(e)
Heavy duty transport motor coach and bus, and diesel starting batteries (except marine).....		406	10,053	
Other S.L.I. (including aircraft and marine).....			7,592	
Storage batteries, other than S. L. I. type.....			38,444	13,367
Industrial truck motive power type.....			9,663	(e)
Motive power, except industrial truck type (including mining and other locomotive).....			8,077	
Farm and emergency lighting.....			2,119	
Other, including communication.....			18,585	
Parts and supplies for storage batteries, for sale separately.....		(Units)	5,586	2,937
X-ray equipment and X-ray tubes, total			49,559	12,619
Medical X-ray equipment:				
Complete X-ray units.....		12,301	26,782	7,826
Components and assemblies (except tubes), sold separately.....			6,788	
Complete dental X-ray units.....		3,546	1,907	71,515
Complete industrial X-ray units.....		617	684	7,730
X-ray accessories and dental and industrial X-ray components and assemblies (except tubes), sold separately.....			2,668	(f)
X-ray rectifying valves.....		21,314	1,351	2,113
X-ray tubes, other than rectifying valves.....		41,372	6,736	
Miscellaneous X-ray equipment and collateral devices.....			2,643	(f)
Electrotherapeutic apparatus, total			7,601	5,823
Ultra-violet health lamp fixtures.....			2,508	1,603
Infra-red health lamp fixtures.....			860	232
Electro-diathermic and similar apparatus.....			3,995	3,988
Electrotherapeutic apparatus, not specified by kind.....			238	
X-ray and therapeutic apparatus, not specified by type or kind			1,708	
Lamp components ⁵			27,316	n.a.
Electric hearing aids.....			(Thousands)	
Christmas tree lighting outfits ¹⁰		270	16,888	93,671
Other electrical products.....		16,940	24,452	n.a.
			16,262	n.a.

n.a.—Not available.

¹ For 1947, value of shipments; for 1939, value of production. In both 1947 and 1939, there was no appreciable difference between production and shipments of these products.

² Includes A, B, and C type batteries (other than portable and farm radio) which cannot be shown separately without disclosing the operations of individual companies.

³ Includes storage batteries for tractor, aircraft, locomotive, and marine uses in addition to automobile, truck, and bus.

⁴ For \$63.6 million of this total, the number of batteries produced was 17.4 million.

⁵ All types designed primarily to fit passenger cars, regardless of application. Many of these batteries are used in commercial vehicles and light trucks.

⁶ No comparable data available.

⁷ X-ray accessories and miscellaneous X-ray equipment were not listed separately in 1939 and are included in the values shown for medical, dental, and industrial X-ray equipment.

⁸ Includes lamp bases, supports, lead-ins, and filaments; and cold cathode fluorescent lamp electrodes; does not include lamp bulb blanks.

⁹ Includes a small value of nonelectric hearing aids. These data were included in the 1939 census as part of the industry "Surgical Supplies and Equipment, Not Elsewhere Classified; Orthopedic Appliances."

¹⁰ Value includes value of bulbs made or purchased and assembled into Christmas tree lighting outfits.

Chapter XVIII—TRANSPORTATION EQUIPMENT

MOTOR VEHICLES AND EQUIPMENT

TABLE A.—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		Total production for sale and interplant transfer	
	Quantity (units)	Value f.o.b. plant	Quantity (units)	Value f.o.b. plant
Passenger cars		\$4,085,547		\$1,806,310
Complete vehicles, knocked-down or assembled ¹	3,554,532	4,080,311	2,824,203	1,799,503
Chassis for sale separately.....	4,197	5,236	21,227	6,807
Other vehicles produced on chassis of own manufacture		1,859,397		n.a.
Trucks, truck tractors and truck chassis, knocked-down or assembled ² : Basic chassis: ⁴				
Gross vehicle weight:				
5,000 lbs. and less.....	375,191	249,273		
5,001-10,000 lbs.....	184,757	147,522		
10,001-14,000 lbs.....	257,711	229,835		
14,001-16,000 lbs.....	293,439	331,887		
16,001-19,500 lbs.....	42,054	75,338		
19,501-26,000 lbs.....	43,703	113,132		
Over 26,000 lbs.....	27,018	135,098		
Bodies and other equipment billed with basic chassis ⁴		337,688		
Motor coaches (excluding trolley busses) ⁵	19,052	226,616		
Fire department vehicles ⁶	1,191	12,708	7,955	75,696
Vehicles produced on purchased chassis ⁸		20,267		n.a.
Ambulances.....	1,240	5,023		
Hearses and undertakers' wagons.....	2,352	9,952	2,840	6,428
Fire department vehicles ⁶	790	3,457	(?)	(?)
Busses.....	376	1,835	(?)	(?)
Bodies for sale separately to other than vehicle manufacturers, for mounting on new chassis ⁹		177,197		n.a.
Truck (include platform, stake, van, tank, dump, etc.).....	n.a.	131,327		
Bus.....	22,980	36,061		
Truck and bus bodies, not reported separately by type.....	n.a.	9,809		
Truck trailers		133,590	26,094	28,891
Truck trailers (5 ton capacity and over) as reported monthly on Form M45F ¹⁰	52,995	127,285		
Complete units.....	49,964	122,615		
Vans.....	24,183	62,635		
Insulated and refrigerated.....	2,104	7,558		
All other closed top (including furniture).....	20,302	50,886		
Open top.....	1,777	4,191		
Platforms.....	11,810	22,295		
With cattle and stake racks.....	3,113	6,247		
With grain bodies.....	1,473	2,447		
All other.....	7,224	13,601		
Tanks.....	3,963	17,894	26,094	28,801
Petroleum.....	3,467	15,336		
All other.....	496	2,558		
Pole and logging.....	5,480	7,377		
Single axle.....	3,778	2,588		
Tandem axle.....	1,702	4,789		
Low-bed heavy haulers.....	2,304	6,894		
Off-highway.....	149	629		
Dump trailers.....	718	1,810		
All other trailers.....	1,357	3,081		
Trailer chassis, sold separately.....	3,031	4,670		
Truck trailers, of less than 5 ton capacity ¹¹	n.a.	6,305		
Automobile trailers (for attachment to passenger cars)		134,182		7,945
Trailer coaches (housing types only).....	76,372	121,834	11,782	7,504
Other automobile trailers (commercial-display, utility, camp, etc.) and chassis for automobile trailers, sold separately.....		12,348		441

NOTE: In 1939, 3,524,831 motor vehicles, valued at \$2,275 million were produced. Factory sales of motor vehicles during 1939, compiled on monthly summaries by the Bureau of the Census amounted to 3,577,292 vehicles and chassis, 52,461 more than the 1939 Census of Manufactures figure. This difference was largely accounted for by the fact that the monthly figures included data for foreign assemblies from parts made in the United States, whereas some manufacturers, in filing their returns, reported these as parts. Moreover, the monthly figures represented factory sales, while the Census of Manufactures report referred to production. In addition, the returns made by some of the establishments for the Census of Manufactures were on a fiscal year basis. The 3,577,292 vehicles and chassis sold included 2,866,796 passenger cars and 710,496 trucks, busses, and truck chassis.

- n.a.—Not available.
- ¹ Includes station wagons, ambulances, hearses, and taxicabs if produced on passenger car chassis. Value includes extra equipment billed with vehicles.
- ² Includes trucks, such as pick-up, sedan delivery, panel, or other commercial cars made on passenger car chassis if these chassis are of own manufacture. Includes station wagons, ambulances, hearses, and taxicabs if produced on truck chassis. Includes all truck chassis whether or not to be used for transportation of property, such as fire apparatus, street sprinklers, school busses, ambulances, etc., but excludes specialized road construction machinery.
- ³ These figures include trucks and busses built on chassis of own manufacture and those built on purchased chassis, separate data for which were not collected in 1939.
- ⁴ The sum of values reported for basic chassis and bodies and other equipment billed with basic chassis represents the total value received from the sale of trucks, truck tractors, and truck chassis. Amounts reported for basic chassis represent values of the basic chassis, based on average wholesale prices realized during 1947. The amount reported for bodies and other equipment billed with basic chassis represents (1) the value received for bodies and other equipment shipped with the basic chassis; and (2) any plus or minus differences not included in the amounts reported for basic chassis owing to the use of average wholesale prices for computing the values of the basic chassis.
- ⁵ Includes all coaches or coach chassis delivered to common carriers or franchised operators for city, intercity, charter hire or sight-seeing use and integral type school coaches. Other types of school busses or school bus chassis were excluded.
- ⁶ Separate data are shown for fire department vehicles produced on chassis of own manufacture and for fire department vehicles produced on purchased chassis. A small number of fire department vehicles, however, are produced on chassis furnished by customers. Data for such vehicles are not included here but are included in the value of bodies for sale to other than vehicle manufacturers.
- ⁷ These figures include fire apparatus, built on chassis of own manufacture and fire apparatus built on purchased chassis, separate data for which were not collected in 1939.
- ⁸ A small number of trucks, street cleaning apparatus, and other vehicles produced on purchased chassis were reported in 1947. Data for these commodities are not shown since they are believed to be incomplete. For the 4,758 vehicles produced on purchased chassis for which separate data are shown above, the cost of the chassis was reported at \$5,955,000.
- ⁹ Truck and bus bodies built by garages, service stations, and other establishments, whose activities were primarily nonmanufacturing during 1947 were excluded from these data. It is believed that a substantial number of truck bodies are built by such nonmanufacturing establishments.
- ¹⁰ Revised—See text on industry.
- ¹¹ Includes a small number of trailer chassis shipped by companies not producing complete trailers.

TRANSPORTATION EQUIPMENT

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TABLE B.—PRODUCTION AND USE OF PARTS FOR PASSENGER CARS, TRUCKS, AND BUSES: 1947

[Figures in thousands of units]

PRODUCT	Total number of units produced ¹	Total number of units used in assembly of new vehicles	Total number of units for replacement and other purposes ¹
Engines, new (with or without cylinder heads, fuel pumps, water pumps, and other standard components):			
Gasoline.....	5,767	4,680	1,087
Diesel and semi-Diesel.....	15	13	2
Carburetors.....	8,657	4,680	3,977
Pistons:			
Aluminum.....	50,407	22,650	27,757
All other.....	16,396	8,218	8,178
Piston rings:			
Oil type.....	197,582	47,901	149,681
Compression.....	356,113	62,148	293,965
Water pumps.....	9,485	5,546	3,939
Storage batteries.....	² 31,652	4,693	² 26,959
Battery charging generators.....	5,728	4,693	1,035
Starting motors.....	² 5,751	4,693	² 1,058
Spark plugs.....	³ 252,116	30,797	³ 221,319
Mufflers (exhaust).....	13,559	4,693	8,866
Muffler tailpipes.....	8,125	4,693	3,432
Radiators, complete.....	5,817	4,693	1,124
Radiator cores (includes cores incorporated in complete radiators).....	5,840	4,693	1,147
Wheels (passenger car and truck and bus types—including those for truck trailers and trailer coaches).....	29,088	24,691	4,397
Universal joints.....	12,937	6,976	5,961
Shock absorbers.....	21,340	16,696	4,644
Fan belts and similar type belts for motor vehicle engines.....	35,667	5,678	29,989
Clutch disc and facing assemblies.....	11,778	4,472	7,306

¹ In 1947, the number of motor vehicle parts for the replacement market was derived from the figures on "Total Number of Units Produced" reported by parts producers and motor vehicle manufacturers and the figures on "Total Number of Units Used in Assembly of New Vehicles in 1947" reported by motor vehicle producers. The number of units produced included some parts suitable for use in motor vehicles but which may have been used for other purposes. However, all parts included were "new" parts. Rebuilt engines, carburetors, pistons, etc., were excluded from the 1947 Census of Manufactures.

In 1939, the Census Bureau made a special survey on replacement sales of motor vehicle parts. Data were collected on the number of units sold to the United States replacement market. The 1939 data on number of units (in thousands) are available for the following replacement parts: Carburetors—476; Pistons, aluminum—6,979; Pistons, cast iron—1,654; Piston rings, oil type—73,162; Piston rings, compression type—93,144; Piston rings, not reported as to kind—4,373; Storage batteries—12,352; Spark plugs—78,201; Mufflers—5,028.

² Includes a small quantity used for farm tractors.

³ Includes a very small quantity of aircraft type spark plugs, the number of which are not segregated to avoid disclosing figures for individual companies.

AIRCRAFT AND PARTS

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

[Money figures in thousands of dollars]

PRODUCT	1947		1939		PRODUCT	1947		1939							
	Total shipments and interplant transfers		Total production for sale and interplant transfer			Total shipments and interplant transfers		Total production for sale and interplant transfer							
	Number	Value f.o.b. plant	Number	Value f.o.b. plant		Number	Value f.o.b. plant	Number	Value f.o.b. plant						
Military type aircraft.....	2, 100	\$265, 328	1 921	} n.a.	Aircraft engine parts and accessories; experimental and research work on engines, total.....	\$199, 489									
Personal type civil aircraft (under 3,000 pounds airframe weight).....	15, 591	57, 020	(1)							} 14, 935	Aircraft engine parts and accessories:				
Commercial type civil aircraft (3,000 pounds airframe weight and over).....	279	122, 073													
Modifications, conversions, and overhaul of previously accepted or delivered aircraft, total.....		28, 203			For other than United States military customers.....	61, 700									
Military.....		2 11, 173		} n.a.	Experimental and research work on aircraft engines.....	2 63, 046									
Civil.....		2 17, 030				Aircraft propellers and propeller parts.....	6 43, 851		6 38, 984	5 \$14, 514					
Aircraft engines, total.....		237, 078		\$74, 282	Aircraft parts and auxiliary equipment, not elsewhere classified.....		215, 446		37, 223						
For United States military customers.....	(2)	187, 758		n.a.											
For other than United States military customers.....	16, 351	49, 320													

n.a.—Not available.

¹ The 1939 Census of Manufactures reporting form did not collect comparable data on number of aircraft. The source of these figures is the "Civil Aeronautics Administration Statistical Handbook of Civil Aviation, 1948."

² Figures are largely billings or receipts rather than value of products shipped.

³ Data on total engine acceptances by U. S. military customers not available. Acceptances of military conventional (other than jet) aircraft engines amounted to 2,683. The value figure includes both conventional and jet engines.

⁴ Includes shipments of engines for non-man-carrying aircraft and billings for experimental work, research studies, and other services. Experimental work for which payments were not received are not included.

⁵ Includes a small amount of pontoons and parachutes.

⁶ Number represents complete propeller assemblies. Separate value figures on propellers, propeller blades, and other propeller parts are not available.

TABLE B.—NUMBER, AIRFRAME WEIGHT, AND VALUE OF AIRCRAFT SHIPPED, BY NUMBER OF PLACES, HORSEPOWER, AND TYPE OF PLANE: 1947

[Money figures in thousands of dollars; airframe weight in thousands of pounds]

PRODUCT	Number	Airframe weight	Value	PRODUCT	Number	Airframe weight	Value
Complete aircraft, total.....	17, 970	29, 328	\$444, 421	Civil aircraft—Continued			
Military aircraft.....	2, 100	11, 402	265, 328	By horsepower of all engines:			
Civil aircraft, total.....	15, 870	17, 926	179, 093	1-74 horsepower.....	3, 371	1, 720	\$6, 955
By number of places:				75-99 horsepower.....	3, 953	2, 242	10, 022
2-place.....	7, 534	4, 140	18, 866	100-399 horsepower.....	8, 238	7, 435	38, 641
3-to 5-place.....	8, 057	7, 334	38, 154	400 horsepower and over.....	308	6, 529	123, 475
Over 5-place.....	279	6, 452	122, 073	By type of plane:			
				Personal.....	15, 591	11, 474	57, 020
				Commercial.....	279	6, 452	122, 073

NOTE: Complete aircraft includes all man-carrying airplanes, balloons, airships, gliders, helicopters, and autogiros shipped in either assembled or knocked-down condition.

SHIP AND BOAT BUILDING; RAILROAD AND MISCELLANEOUS TRANSPORTATION EQUIPMENT

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

[Money figures in thousands of dollars]

PRODUCT	1947		PRODUCT	1947	
	Number of vessels worked on ¹	Value of work done ¹		Number of vessels worked on ¹	Value of work done ¹
Ship building and ship repairing, total		\$756,510	Ship building and ship repairing—Continued		
Ship building—self-propelled vessels.....		184,177	Ship repairing—Continued		
Nonmilitary.....	318	132,009	Commercial and pleasure vessels—other than		
Military.....		52,188	Maritime Commission.....		\$343,177
Ship building—nonpropelled vessels.....	956	25,549	Number of vessels reported.....	55,548	333,628
Ship repairing.....		544,768	Number of vessels not reported.....		9,549
Maritime Commission vessels.....		147,927	Army, Navy, or Coast Guard vessels.....		48,452
Number of vessels reported.....	5,519	141,739	Number of vessels reported.....	2,945	41,329
Number of vessels not reported.....		6,188	Number of vessels not reported.....		7,123
			Ship repairing, not reported by type.....		5,212
			Ship building and ship repairing, not reported separately.....		2,016

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Quantity ² (number of units)	Value f.o.b. plant ²	Quantity ² (number of units)	Value of work done during year ²
Boat building		\$65,279		n.a.
Motorboats, inboard (excluding sailboats with auxiliary power and lifeboats)	15,465	45,173	3,247	\$3,599
Less than 16 ft. in length.....	4,247	1,111		
16 ft. or over and less than 26 ft. in length.....	7,654	15,675	n.a.	n.a.
26 ft. or over and less than 40 ft. in length.....	2,941	17,023		
40 ft. or over and not more than 65 ft. in length.....	623	11,364		
Sailboats (65 ft. in length and less)	2,524	3,802	2,403	1,049
Sailboats with permanently installed auxiliary power.....	201	2,023		
Sailboats without permanently installed auxiliary power:			n.a.	n.a.
Less than 16 ft. in length.....	1,174	480		
16 ft. or over and not more than 65 ft. in length.....	1,149	1,299		
Canoes, including square stern canoes	7,885	1,025	4,105	237
Rowboats including those intended for rowing or outboard motor use	66,149	8,858	22,226	1,420
Less than 16 ft. in length.....	62,742	8,412	22,226	1,420
16 ft. and over in length.....	3,407	546		
Dinghies, dories, and similar small craft	599	599		
Lifeboats, scows, barges, and lighters, 65 ft. in length or less	5,349	4,808		n.a.
Boats, not specified by type		914		
Boat repairing		34,378		
Repair work done on Army, Navy, or Coast Guard boats.....		3,175		(?)
Repair work done on all boats other than Army, Navy, or Coast Guard boats.....		31,203		
Boat building and repairing, not reported separately.....		9,380		

PRODUCT	1947			1939	
	Total shipments and interplant transfers			Total production for sale and interplant transfer	
	Quantity (number of units)	Weight ³ (short tons)	Value f.o.b. plant ⁴	Quantity (number of units)	Value f.o.b. plant
Locomotives and parts ⁵			\$395,924		\$56,377
Locomotives, new:					
Railroad road service type (including combination line and switching type):					
Steam, except turbine.....	433	61,174	51,443	91	13,259
Straight-electric.....	26	3,990	4,597	21	4,839
Diesel-electric ⁶	1,061	133,540	171,153	(?)	21,841
Switching type:					
Steam.....	56	2,512	1,720		
Diesel-electric:				(?)	(?)
Under 1,000 horsepower.....	243	20,045	15,029		
1,000 horsepower and over.....	414	45,396	41,290		
Industrial and mining type:				75	\$ 750
Diesel-electric and Diesel-mechanical.....	580	10,431	6,764	239	1,508
Electric (storage battery, trolley, and third rail).....	732	7,270	8,387	36	\$ 450
Steam and gasoline-mechanical.....	64	493	360		
Locomotives, rebuilt.....	42	2,051	1,508	n.a.	n.a.
Parts for locomotives, including tenders for sale separately ⁷			93,973		13,710
Passenger train cars ¹²			77,779		18,912
Passenger train cars, new:					
Coach.....	411	25,640	35,553		
Coach combination.....	62	3,896	6,042		
Club, lounge, parlor, observation, sleeping, and combination.....	124	7,982	13,787		
Dining and dining combination.....	79	5,122	8,614	283	18,912
Baggage, express, and nonpassenger combination.....	222	10,859	9,281		
Postal, postal nonpassenger combination, express refrigeration, and milk.....	159	6,659	3,939		
Passenger train cars, rebuilt.....	120	4,255	563	n.a.	n.a.

See footnotes at end of table.

TABLE 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 (number of units)	Weight ³ (short tons)	Value f.o.b. plant ⁴	Quantity (number of units)	Value f.o.b. plant
Freight train cars and industrial rail cars ¹²			\$392,695		¹³ \$68,272
Freight train cars, new:					
Box.....	51,203	1,020,178	198,194	12,123	33,490
Hopper (coal, coke, cement, etc.).....	18,766	427,739	66,908	7,564	¹⁴ 17,412
Gondola.....	9,631	141,210	25,353	3,525	8,792
Refrigerator.....	6,015	164,767	46,230	(¹⁴)	(¹⁴)
Flat.....	1,074	26,963	3,940	846	1,850
Caboose.....	162	3,382	1,064	130	445
Other cars, including tank, dump, and ballast cars.....	6,901	206,623	38,207	¹⁴ 1,992	¹⁴ 6,283
Freight train cars, rebuilt.....	4,199	101,978	9,039	n.a.	n.a.
Industrial rail cars (not suitable for use on common carriers).....	3,962	12,995	3,730	n.a.	n.a.
Self-propelled cars, street, rapid-transit, and interurban.....			34,495		
Trackless trolley cars.....	1,163	11,184	17,824	143	1,065
Street railway cars, subway cars, and self-propelled cars, including maintenance-of-way self-propelled cars.....		n.a.	16,671		n.a.
Parts for passenger cars and freight cars, self-propelled cars and street, rapid-transit, and interurban cars ¹⁵			¹⁶ 208,300		¹⁷ 53,035

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
Bicycles and parts.....			117,349		
Bicycles, complete.....	M.....	2,875	82,947	1,253	22,467
Parts for bicycles, including frame sets, and motorbike parts which are interchangeable with bicycle parts.....			34,402		
Motorcycles, motorbikes, motor scooters, and parts.....			41,303		¹⁸ 16,451
Motor scooters.....	M.....	87	12,475		
Motorcycles, motorbikes, and parts for motorcycles.....			27,203		
Parts for motorbikes and motor scooters.....			1,625		
Transportation equipment, not elsewhere classified.....			52,040		5,376
Horse-drawn farm wagons, trucks, and other farm transportation equipment:					
Farm wagons, complete with boxes.....	Units.....	25,650	3,999		
Farm wagon gears, without boxes.....	do.....	123,325	12,606		
Farm wagon truck gears, without boxes:					
Steel tires.....	do.....	5,839	329		
Rubber tires.....	do.....	62,822	6,401		
Farm truck and wagon boxes and racks.....	do.....	49,937	3,729		3,248
Farm sleighs and bobsleds.....	do.....	1,837	103		
Farm trailers.....	do.....	24,125	2,615		
Cane wagons and carts.....	do.....	2,209	579		
Other farm transportation equipment.....			812		
Attachments.....			1,349		
Parts.....			3,492		
Other horse-drawn vehicles, such as buggies, sulkies, sleighs, etc., including parts and attachments.....			780		154
Hand carts and push carts, including attachments.....			1,770		
Wheelbarrows:					
Wood body and frame.....	Units.....	34,389	253		
All metal.....	do.....	259,119	2,733	454,594	1,974
Wood and metal.....	do.....	357,771	3,773		
Other transportation equipment, not specified by type.....			6,717		

n.a.—Not available.

¹ In 1939 ships were defined as vessels 5 gross tons and over. In 1947 ships were defined as vessels over 65 feet in length. Since the classifications shown in 1939 are not generally comparable to those published for 1947, no 1939 data are published by type of vessel. By the 1939 definition, the total value of work done in ship building and ship repairing amounted to \$317.5 million, of which \$85.4 million represented value of repair work done. The number of vessels reported under ship repairing represents the number of vessels upon which completion of repair jobs occurred during the year. Each visit made by a vessel to a repair yard was considered as a separate vessel.

² In 1939, boats were defined as vessels of less than 5 gross tons. In 1947, they were defined as vessels 65 feet or less in length. The data for these years are therefore not strictly comparable. However, the degree of noncomparability is believed to be relatively minor for the products where 1939 data are shown. The value data are not entirely comparable in that value of shipments was collected in 1947 and value of work done was collected in 1939. By the 1939 definition, the total value of work done in boat building and boat repairing amounted to \$9.5 million, of which \$1.8 million represented value of repair work done.

³ Weight of locomotives or railroad cars is the empty light weight or "tare" weight.

⁴ Values of new locomotives or cars built by railroads for own use represented amounts at which they were written into property accounts. The values reported for rebuilt locomotives or cars by railroad companies represented the additional values written into the property accounts. In 1947, 7,595 new railroad cars, valued at \$37.9 million were shipped by railroad repair shops. In 1939, 4,436 new cars valued at \$12.3 million were produced in railroad repair shops. Similar data for locomotives are not shown to avoid disclosing figures for individual companies.

⁵ Includes new and rebuilt locomotives produced in railroad repair shops. However, locomotive parts produced in railroad repair shops are not included.

⁶ For 1947 the quantity of Diesel-electric railroad road service locomotives represents a total of the number of A units and B units reported. These were reported by type of unit and by horsepower but separate figures are not shown to avoid disclosing figures for individual companies. In 1939, 261 Diesel-electric railroad locomotives were reported, some of which may have been switching types. See footnote 7.

⁷ Switching type locomotives were not reported separately in 1939. If they met Interstate Commerce Commission requirements for locomotives operating on railroads or railway track subject to I.C.C. regulation, or if for export they included the usual devices associated with railroad equipment, they were classified as railroad locomotives. Otherwise they were classified as industrial or mining locomotives. In 1947 switching locomotives include those which have been shipped to railroad users. Locomotives for switching use for industrial users have been generally reported under industrial and mining locomotives in 1947.

⁸ The classification of 22 locomotives, valued at \$1.1 million shown in 1939 as "Other railroad locomotives" has been revised. These included 3 railroad road service locomotives, the value of which has been included in "Parts for locomotives" and 19 industrial and mining locomotives, which have been retabulated into their proper classifications.

⁹ Tenders for sale separately were combined with "parts" to avoid disclosing figures for individual companies both in 1939 and in 1947.

¹⁰ Includes \$6.3 million adjustment for increase in work in process.

¹¹ Includes locomotive parts valued at \$2.8 million obtained from retabulated data for 5 establishments misclassified in 1939.

¹² The 1947 total for this class of product includes rebuilt cars as shown in the commodity detail. The comparable 1939 total for the class of product does not include rebuilt cars, separate data for which were not received from car builders in 1939. In interpreting the census data on new passenger cars and new freight cars, it should be understood that the census data include "express refrigeration and milk cars and express baggage cars" under the heading of passenger train cars.

¹³ Does not include 1939 commodity data for industrial rail cars, separate data for which are not available.

¹⁴ Data for 1939 revised. Refrigerator cars included in "Other cars."

¹⁵ Although new and rebuilt cars produced in railroad repair shops are included in this table, data on car parts produced in these shops are excluded.

¹⁶ Includes \$27.6 million adjustment for increase in work in process.

¹⁷ Includes railroad car parts, valued at \$20.1 million, obtained from retabulated data for 11 establishments misclassified in 1939. Also includes \$12.9 million adjustment for increase in work in process.

¹⁸ Combined to avoid disclosing figures for individual companies.

TRANSPORTATION EQUIPMENT

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TABLE B.—SELF-PROPELLED VESSELS OVER 65 FEET IN LENGTH, BY TYPE OF VESSEL, BY TYPE OF PROPULSION, AND BY GROSS TONNAGE CLASSES: 1947

[Money figures in thousands of dollars]

PRODUCT	Vessels worked on during 1947					Vessels delivered during 1947					
	Number of vessels	Value of work done	Gross tonnage	Dead-weight tonnage (long tons)	Horse-power	Number of vessels	Contract value of vessels delivered	Value of work done	Gross tonnage	Dead-weight tonnage (long tons)	Horse-power
Total		\$184,177									
Military.....		52,168									
Nonmilitary.....	318	132,009	533,263	708,871	692,626	223	\$182,725	\$83,865	300,989	367,912	418,319
NONMILITARY VESSELS											
By type of vessel:											
Passenger cargo combination—over 2,000 gross tons.....	8	20,435	81,587	89,206	81,200	7	40,758	13,743	66,227	76,130	63,200
Cargo, bulk and refrigerated—over 2,000 gross tons.....	42	62,952	237,817	354,810	315,800	27	86,588	38,081	151,295	209,290	198,600
Cargo bulk—up to and including 2,000 gross tons.....	35	4,019	17,004	23,106	20,932	30	5,641	3,074	12,215	18,181	17,620
Tankers.....	10	4,552	102,656	178,036	87,425	4	3,897	2,202	17,382	35,236	16,325
Fishing vessels, including trawlers—steel.....	99	13,000	31,942	26,956	46,370	66	11,488	6,811	12,786	10,994	26,470
Fishing vessels, including trawlers—wood.....	28	2,242	3,720	3,280	8,726	24	2,402	1,936	3,180	2,680	7,351
Tow boats.....	31	8,808	11,306	-----	51,225	17	5,493	4,916	5,996	-----	27,175
Tug boats.....	16	2,208	2,703	-----	18,260	10	1,543	1,176	1,788	-----	12,160
Ferry boats, passengers—auto.....	6	1,966	7,814	3,508	10,828	4	2,378	1,475	6,035	2,248	9,428
Yachts, steel.....	14	2,182	2,615	1,596	10,790	12	2,671	2,075	2,288	1,380	9,390
Yachts, wood.....	7	624	609	511	2,940	7	1,083	624	609	511	2,940
Other vessels, including self-propelled dredges.....	22	9,021	33,490	27,862	38,130	15	18,783	7,752	21,190	11,262	27,660
By type of propulsion:											
Turbine and turbine-electric ¹	59	82,616	433,713	614,032	473,525	36	137,407	51,492	241,347	307,536	272,025
Diesel.....	251	47,009	93,361	93,211	204,133	181	42,584	30,114	53,790	58,848	132,925
Diesel-electric.....	8	2,384	6,189	1,628	14,968	6	2,734	2,259	5,852	1,528	13,368
By gross tonnage classes:											
Over 2,000 gross tons.....	63	96,686	452,102	638,560	518,300	40	149,210	61,748	254,946	324,164	304,000
100 to 2,000 gross tons.....	221	32,483	78,659	68,597	160,888	156	30,926	19,950	43,677	42,259	104,573
Under 100 gross tons.....	34	2,840	2,502	1,714	13,438	27	2,589	2,167	2,366	1,489	9,746

¹ Includes a very small number of vessels with reciprocating engines which are not shown separately to avoid disclosing figures for individual companies.

TABLE C.—NONPROPELLED VESSELS OVER 65 FEET IN LENGTH, BY TYPE OF VESSEL: 1947

[Money figures in thousands of dollars]

TYPE OF SHIP	Vessels upon which work was done during 1947		Vessels delivered during 1947			
	Number of vessels	Value of work done during 1947	Number of vessels	Gross tonnage	Deadweight tonnage (long tons)	Contract value of vessels delivered
Total	956	\$25,549	618	365,007	404,937	\$23,167
Hopper barges.....	392	8,289	256	139,264	193,792	7,338
Tank barges.....	157	6,991	101	128,573	97,667	5,796
Deck and covered cargo barges.....	278	5,151	211	49,895	77,411	5,175
Dredges.....	10	1,779	7	11,025	7,917	2,672
Car floats.....	25	786				
Other nonpropelled vessels such as cargo lighters, floating drydocks, drill barges, pump barges, etc.....	94	2,553	143	36,250	28,150	2,186

¹ Combined to avoid disclosing figures for individual companies.

Chapter XIX—INSTRUMENTS AND RELATED PRODUCTS

INSTRUMENTS; SURGICAL, DENTAL, AND OPHTHALMIC GOODS

[Money figures in thousands of dollars]

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
	<i>(M units)</i>		<i>(M units)</i>	
Aircraft and nautical instruments and apparatus, except flight instruments and radio aids		\$35,868		n.a.
Aircraft engine instruments.....		4,992		n.a.
Other aircraft and nautical instruments, except flight instruments and radio aids.....		30,876		n.a.
Integrating meters, nonelectrical types		63,262		\$19,810
Gas meters.....	1,355	22,459	769	7,503
Water meters.....	1,338	23,246	577	6,650
Other liquid meters, including gasoline dispensing.....		17,557		5,657
Industrial process instruments, including indicating, recording, and controlling instruments (except electrical quantity measuring and automotive types)		192,005		n.a.
Thermometers:				
Industrial and laboratory.....	9,266	12,549	n.a.	3,659
Clinical.....	9,296	5,360	n.a.	1,575
Household.....	13,494	4,051	n.a.	1,431
Temperature instruments, other than thermometers.....		74,028		20,076
Pressure and vacuum instruments.....		27,535		n.a.
Fluid flow and liquid instruments.....		19,211		3,942
Other industrial process instruments (except electrical quantity measuring and automotive types).....		36,066		
Physical properties testing and inspection equipment, including hardness, strength of materials, wear, abrasion, and similar testers.....		13,205		
Motor vehicle instruments		39,495		n.a.
Speedometers for motor vehicles.....		11,433		n.a.
Other motor vehicle instruments for indicating electrical quantities (fuel level, oil pressure, etc.).....		28,062		
Other mechanical measuring and controlling instruments		17,194		
Mechanical measuring and controlling instruments, not specified by kind		12,328		
Laboratory, scientific, and engineering instruments (except electrical quantity measuring, surgical, medical, and dental)		116,297		n.a.
Aircraft flight instruments and automatic pilots, except compasses.....		20,478		n.a.
Surveying and drafting instruments.....		27,095		n.a.
Other laboratory, scientific and engineering instruments (except electrical quantity measuring, surgical, medical, and dental).....		68,724		
Optical instruments and lenses		45,554		n.a.
Photographic and projection lenses and prisms.....		21,087		
Optical measuring instruments (refractometers, colorimeters, spectrometers, spectrographs, spectrophotometers, polariscopes, contour projectors, metallographic equipment, etc.).....		3,909		638
Field glasses, prismatic and nonprismatic; terrestrial and celestial telescopes.....		4,293		7,247
Other optical instruments, lenses, parts and accessories, including microscopes, microprojectors, and photomicrographic equipment.....		16,265		
Surgical and medical instruments		41,327		n.a.
Surgical instruments:				
Steel instruments for general surgery.....		6,630		
Soft metal instruments such as speculums, etc.....		1,103		
Surgical knives and blades.....		1,016		
Suture needles.....		935		
Orthopedic instruments, such as bone drills, bone plates, etc.....		1,663		
Veterinary instruments (including instruments for horses, cattle, small animals, and poultry).....		880		
Diagnostic apparatus (including electromedical) ¹		13,860		
Hypodermic syringes.....		8,394		
Hypodermic needles.....		4,112		
Other surgical and medical instruments and those not specified by type.....		2,734		
Surgical and orthopedic appliances and supplies		145,034		n.a.
Surgical and hospital sterilizers.....		6,029		1,171
Surgical dressings ²		46,705		20,070
Sterile surgical sutures.....		8,436		3,756
Unsterilized suture materials.....		3,791		1,710
Artificial limbs (prosthetic).....		4,865		1,850
Arch supports and other foot appliances.....		3,158		
Trusses.....		3,851		1,929
Adhesive plaster (medicated and nonmedicated).....		20,300		9,739
Elastic stockings, elastic braces, suspensories, and other elastic supports.....		13,174		
Orthopedic appliances (braces).....		2,581		9,908
Other surgical and orthopedic supplies and appliances (catheters, anesthesia apparatus, corn removers, bunion pads, etc.).....		32,144		
Personal safety devices, not elsewhere classified (such as safety kits, snake bite outfits, safety helmets, etc.)		32,197		n.a.
	<i>(M gross dozens)</i>			
Sanitary napkins and tampons		49,047		15,710
Sanitary napkins.....	1,832	37,948		
Tampons.....	538	11,099		n.a.

See footnotes at end of table.

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
Dental instruments, equipment, and supplies, total		\$72,060		\$29,919
Dental metals ¹	(<i>M troy ounces</i>)			
Dental alloys for amalgams	598	17,910	n.a.	8,256
	1,172	1,612	n.a.	(⁴)
Porcelain and resinous teeth	(<i>M teeth</i>)			
Denture materials	123,264	11,248	n.a.	6,951
Waxes, cements, low-fusing alloys, impression materials, and other consumable supplies		2,943		⁵ 1,412
Dental gypsum products (including investments, plasters, stones)		4,721		2,418
Burrs, drills, abrasive points, wheels, disks, and similar tools for use with hand pieces		892		1,150
Dental hand instruments (forceps, pliers, broaches, cutting instruments, etc.)		3,851		843
Dental office equipment (including dental chairs, equipment units, cabinets, lights, etc.)		3,267		
Dental laboratory equipment (including furnaces, casting machines, lathes, benches, polishing units, flasks, blow pipes, presses, etc.)		14,588		⁶ 8,880
Other dental products, n.e.c. ⁷		2,931		
Dental instruments, equipment, and supplies, not specified by kind		4,048		
		3,469		
Ophthalmic goods	(<i>M units</i>)	105,338		38,246
Ophthalmic metal frames, mountings, and parts:				
Semirimless mountings	6,184	12,045		
Other metal frames, mountings, and temples or parts shipped separately ⁸	3,064	8,503		
Other ophthalmic frames, except metal ¹⁰	17,033	16,707	n.a.	16,187
Sun glass frames:				
Quantity reported	3,655	2,823		
Quantity not reported		652		
Ophthalmic focus lenses:				
Single vision lenses, ground and polished	37,773	14,432		
Single vision moulded blanks:				
Quantity reported	6,468	947	n.a.	12,264
Quantity not reported		284		
Multivision lenses (bifocals and trifocals; finished, semifinished, and blanks)	15,386	19,890		
Industrial goggles, eye protectors, mountings, and parts		5,860		2,534
Sun or glare glasses and sun goggles	23,696	11,534		4,372
Other ophthalmic goods, instruments, apparatus, and accessories ¹¹		8,628		2,889
Ophthalmic goods, not specified by type		3,033		

n.a.—Not available.

¹ Excludes some speedometers produced by plants of motor vehicle companies for incorporation into cars and trucks of their own assembly.

² Includes electrocardiograph, metabolism, blood pressure apparatus, etc.

³ Includes cotton gauze and bandages in all their various forms and applications.

⁴ Dental metals are made to some extent by secondary smelters and refiners, but the amount of such shipments was not reported separately and is therefore not included in these figures. The 1939 data cover only dental gold.

⁵ Included in the \$8,880,000 for other dental products.

⁶ Excludes rubber denture materials.

⁷ Includes dental sterilizers and excludes dental X-ray machines.

⁸ Includes dental alloys and amalgams.

⁹ Quantity includes only the total number of metal frames and mountings.

¹⁰ Includes zylonite and shell, with and without metal parts.

¹¹ Includes silt lamps, test charts, simple readers and magnifiers, cases, holders, etc.

PHOTOGRAPHIC EQUIPMENT; CLOCKS, WATCHES, AND WATCHCASES

TABLE 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		
		Total shipments and interplant transfers		Total production for sale and interplant transfer		
		Quantity	Value f.o.b. plant	Quantity	Value f.o.b. plant	
Photographic equipment and supplies, total			\$433, 807		¹ \$126, 513	
Motion picture equipment, except film			90, 102		n.a.	
Cameras:						
35 mm.....	Number	841	1, 820	}	4, 607	
16 mm.....	do.	51, 008	5, 556			
8 mm.....	do.	274, 122	14, 904			
Projectors:						
35 mm.....						
Standard projector mechanisms (including unit-type projectors).....	do.	6, 841	4, 035	2, 726	² 1, 287	
Sound reproducing equipment.....			2, 822		n.a.	
Arc lamphouses.....	do.	8, 060	1, 965		n.a.	
16 mm sound.....	do.	57, 409	17, 906	}	6, 303	
16 mm silent.....	do.	35, 449	4, 133			
8 mm.....	do.	215, 533	15, 437			
Motion picture projection screens.....			5, 599		n.a.	
Developing and printing equipment for motion picture film.....			1, 679		n.a.	
Parts, attachments, accessories, and other miscellaneous equipment (excluding lenses for sale separately).....			14, 246		n.a.	
Still picture equipment, except film			95, 822		n.a.	
Still cameras (excluding photocopying and microfilming):						
Hand type cameras						
Variable focus (or focusing type) with adjustable shutter speeds						
Using roll film, 35 mm or under.....	do.	322, 392	11, 075	}		
Using roll film, over 35 mm and sheet and pack film.....	do.	402, 368	11, 796			
Fixed focus and/or time and single shutter speed						
Using roll film, 35 mm or under.....	do.	134, 434	934	}	12, 739	
Using roll film, over 35 mm.....	do.	5, 427, 724	15, 450			
View and studio cameras (designed primarily for use on tripod or stand).....	do.	14, 774	964			
Process cameras for photoengraving and photolithography ³						
Under 31" x 31".....	do.	758	1, 530			
31" x 31" and over.....	do.	105	617			
Other still cameras (excluding photocopying and microfilming).....	do.	1, 691	1, 940			
Photocopying equipment (including contact type).....			3, 529		n.a.	
Blueprinting and Van Dyke equipment, and whiteprinting equipment (direct process type).....			5, 773			
Projectors, including slide, lantern, strip film, etc.....			5, 584		824	
Enlargers ⁴	Number of heads.	79, 825	4, 482	n.a.	n.a.	
Other still picture equipment, parts, attachments, accessories (excluding lenses for sale separately), and microfilming equipment (including cameras, readers, and microfilming enlargers).....			31, 444		n.a.	
Still picture equipment, except film, not specified by type.....			704		n.a.	
Film	TSFSM in 000's ⁵	619, 142	142, 773		66, 598	
X-ray film.....	do.	102, 134	31, 525		10, 237	
Photographic glass plates and slides.....	do.	4, 863	2, 479	}	868	
Sheet film and pack film.....	do.	32, 078	12, 596		n.a.	
Graphic arts film (requiring paraformaldehyde developer).....	do.	29, 271	7, 234		55, 403	
Other film, including motion picture black and white and color film, amateur roll film, still color film, arofilm, microfilm, etc. ⁶	do.	450, 796	88, 939			
Photographic (sensitized) paper and cloth			60, 079		21, 204	
Blueprint type.....	do.	852, 101	5, 945		3, 316	
Silver halide type:						
Designed for continuous-tone reproduction (photo finishing, portraiture, etc.).....	do.	523, 321	30, 034	}	17, 888	
Designed for line reproduction, photocopying and recording.....	do.	284, 420	11, 541			n.a.
Van Dyke type.....	do.	41, 410	814			
Diaz type.....	do.	895, 255	9, 276			
Photographic (sensitized) paper and cloth, not specified by type.....			2, 469			
Prepared photographic chemicals (developers, fixers, and toners)			9, 199		(?)	
Other photographic equipment and supplies (largely film base, paper base and other raw materials) ⁷			35, 832		n.a.	

See footnotes at end of table.

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TABLE 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
Clocks and clock parts			\$103,634		\$25,933
Electric clocks, complete, frequency motor:					
Alarm	Number	4,036,633	13,162	929,336	2,058
Household, except alarm ⁸	do	5,693,175	21,376	2,162,916	5,099
Commercial	do	511,992	3,307		
Spring wound and weight operated clocks:					
Alarm	do	14,717,550	27,733	10,070,666	8,934
Household, except alarm ⁸	do	436,871	3,118	1,149,420	2,546
Commercial	do	14,145	481		
Automobile, including manual and electro magnet wound	do	2,924,524	13,040	1,559,672	3,374
Other clocks, complete, including tower, street, master, magnet operated secondary clocks, chronometers, etc.			1,854		859
Clock movements, complete, for timepiece use:					
Electric	do	1,579,670	3,384	416,959	444
Spring wound	do	161,229	288		
Timing mechanisms, not for timepiece use, including interval timers, driving, recording, time switch and other devices, but excluding time-recording and time-stamp machines: ⁹					
Electric	do	1,922,537	6,791		1,646
Spring wound	do	3,675,266	6,245		
Clock cases and clock parts			2,855		973
Watches with domestic movements, and parts			93,728		
Jeweled watches—jeweled lever escapement type:					
Men's wrist	do	1,092,723	28,303	(10)	(10)
Women's wrist	do	1,178,648	31,609		
Pocket	do	121,935	3,507		
Non-jeweled and jeweled watches—pin lever escapement type:					
Wrist	do	4,282,940	17,906		
Pocket	do	4,918,151	7,073		
Watch movements, complete, for sale separately ¹¹		14,621	245		
Watch parts, except watchcases, for sale separately ¹¹			5,085		
Watches with imported movements			105,018		
Jeweled watches—jeweled lever escapement type:					
7 Jewels and under:					
Men's wrist	do	333,297	3,834	(10)	(10)
Women's wrist	do	436,438	5,251		
Pocket	do	4,014	48		
Other	do	14,404	197		
Over 7 Jewels:					
Men's wrist	do	1,622,051	35,647		
Women's wrist	do	2,398,287	56,312		
Pocket	do	68,054	1,449		
Other	do	7,832	159		
Watches with imported movements, not specified by type ¹²	do	179,613	2,121		
Interplant transfers of clock and watch parts and semi-finished components			28,126		
Clocks, watches and parts, not specified by type			2,014		
Watchcases ¹³			40,385		9,074
Men's wrist—for watches with jeweled lever escapements:					
Karat gold and platinum	do	341,712	4,477	9,929	
Gold filled, rolled gold plate and sterling silver (including R.G.P. with steel back) ¹⁴	do	3,656,342	9,929		
Women's wrist—for watches with jeweled lever escapements:					
Karat gold and platinum	do	1,043,946	11,272	n.a.	n.a.
Gold filled, rolled gold plate and sterling silver (including R.G.P. with steel back) ¹⁴	do	4,113,227	8,950		
Pocket—for watches with jeweled lever escapements	do	377,107	1,779		
Wrist—for watches with pin lever escapements ¹⁵	do	3,432,794	2,220		
Karat gold and platinum watchcases, not reported by type	do		503		
Other watchcases and watchcases, not specified by type ¹⁶	do		1,255		

n. a.—Not available.

¹ Data for photographic chemicals were not collected separately in 1939 and were not included in this industry in 1939.² Value includes some pedestals, sound reproducing equipment, arc lamphouses, etc. for 35 mm projectors, which were not collected separately in 1939.³ Stands and attachments shipped with process cameras are included in value.⁴ Quantity includes heads shipped separately as well as complete units. Value includes the value of heads shipped separately, stands shipped separately and complete units shipped.⁵ Total square feet of sensitized material.⁶ Motion picture film, amateur roll film and other film have been combined to avoid disclosing the operations of individual companies. Motion picture film was reported in linear feet by width and has been converted to TSFSM. Amateur roll film and other film were collected in TSFSM.⁷ Includes a small amount of photographic equipment and supplies not specified by type.⁸ Includes chime and strike, kitchen, desk, mantle, wall and timers and switch clocks.⁹ Timing mechanisms which also show the time of day are included as clock movements or clock timers.¹⁰ See table 6-B for comparable 1939 data for watches.¹¹ Includes only watch parts and watch movements produced domestically. Watch parts and movements imported by watch assemblers and resold in the same condition are excluded.¹² Includes some watches with pin lever escapements.¹³ Approximately 20 percent of the total number and value of watchcases for 1947 were "transferred to other plants of the same company" where they were used in the assembly of watches.¹⁴ Includes watchcases of "other metals" amounting to less than 1 percent, which are not shown separately to avoid disclosing data for individual companies. R. G. P. represents rolled gold plate.¹⁵ Not shown separately by type of material to avoid disclosing data for individual companies.¹⁶ Includes novelty watchcases not shown separately to avoid disclosing data for individual companies.

CENSUS OF MANUFACTURES: 1947

TABLE B.—WATCHES (INCLUDING WATCHES PRODUCED WITH DOMESTIC AND IMPORTED MOVEMENTS),
BY TYPE OF WATCHCASE: 1947 AND 1939

[Money figures in thousands of dollars]

PRODUCT	1947		1939	
	Total shipments and interplant transfers		Total production for sale and interplant transfer	
	Quantity (number)	Value f.o.b. plant	Quantity (number)	Value f.o.b. plant
Jeweled watches—jeweled lever escapement type	7,277,683	\$166,316	3,585,884	\$40,183
Men's wrist watches.....	3,048,071	67,784	2,048,275	18,987
Karat gold and platinum.....	309,125			
Gold filled, rolled gold plate and sterling silver (including R.G.P. with steel back).....	2,618,434	n.a.	n.a.	n.a.
Other metals.....	103,362			
Not specified by type.....	20,150			
Women's wrist watches.....	4,013,373	93,172	1,405,620	19,038
Karat gold and platinum.....	686,462			
Gold filled, rolled gold plate and sterling silver (including R.G.P. with steel back).....	3,192,713	n.a.	n.a.	n.a.
Other metals.....	102,470			
Not specified by type.....	31,728			
Pocket.....	183,244	4,701	131,983	2,158
Other.....	32,995	659		
Non-jeweled and jeweled watches—pin lever escapement type	9,201,091	24,979	8,895,539	7,597
Wrist watches.....	4,282,940	17,906	2,007,252	3,084
Gold filled, rolled gold plate and sterling silver (including R.G.P. with steel back).....	1,216,155			
Other metals.....	3,066,785	n.a.	n.a.	n.a.
Pocket.....	4,918,151	7,073	6,888,287	4,513
Watches, complete, not specified by type.....	179,613	2,121		

n.a.—Not available.

NOTE: In order to show the relationship between the watch industry and the watchcase industry, watch plants were requested to report whether the watchcases consumed in the watches shipped were produced in their own plants or were purchased from other companies. In total, 6.0 million watchcases were produced in plants that shipped the completed watches and were classified in the watch industry. Nearly all of these were made by producers of watches with pin lever escapements. The remaining 10.6 million watchcases were purchased from other companies or received from other plants of the same company. Approximately 20 percent of these watchcases were received by the watch plants from other plants of the same company, classified in the watchcase industry.

Chapter XX—MISCELLANEOUS MANUFACTURES

JEWELRY, SILVERWARE, AND PLATED WARE

[Money figures in thousands of dollars]

PRODUCT	1947	1939	PRODUCT	1947	1939
	Total value of shipments and interplant transfers (f.o.b. plant)	Total value of production for sale and interplant transfer (f.o.b. plant)		Total value of shipments and interplant transfers (f.o.b. plant)	Total value of production for sale and interplant transfer (f.o.b. plant)
Jewelry (precious metal), total -----	\$231,453	\$62,159	Lapidary work ⁶ -----	\$30,138	
Jewelry made of platinum metals and karat gold -----	133,254	44,816	Shipments of finished products made from own materials: -----		
Rings: -----			Diamonds -----	20,560	
Rings, complete -----	71,101		Other natural precious and semi-precious stones -----	793	
Ring mountings, for sale separately -----	17,396	27,899	Synthetic stones -----	3,132	
Men's jewelry, except watch attachments ¹ -----	3,572		Receipts for work done on materials owned by others: -----		
Women's and children's jewelry, except watch attachments ² -----	15,343	10,881	Receipts for lapidary work on diamonds -----	1,403	n.a. ⁷
Watch attachments (bracelets for watches) -----	8,245		Receipts for lapidary work on other natural precious and semi-precious stones (including the drilling of pearls) -----	93	
Religious jewelry ³ -----	1,118		Receipts for lapidary work on synthetic stones -----	206	
Fraternal, college and school jewelry and emblems, including military insignia (except rings) -----	8,105	4 5,500	Lapidary work not specified by type of product or by ownership of the material -----	3,951	
Other jewelry worn or carried about the person ⁴ -----	1,298	536	Silverware and plated ware -----	218,605	\$59,710
Jewelry made of platinum metals and karat gold, not specified by type -----	7,076		Flatware: ⁸ -----		
Jewelry made of gold filled, rolled gold plate, palladium filled, rolled palladium plate, and sterling silver -----	81,539	16,085	Sterling silver -----	61,516	9,897
Rings, complete and ring mountings, for sale separately -----	5,041	1,737	Electrosilver plated: -----		
Men's jewelry, except watch attachments ¹ -----	8,569		Hotel patterns -----	9,788	2,411
Women's and children's jewelry, except watch attachments ² -----	27,938	10,109	Commercial patterns -----	62,779	23,009
Watch attachments (bracelets for watches) -----	28,552		Other flatware ⁹ -----	15,633	* 5,351
Religious jewelry ³ -----	3,272		Hollow ware, except electrical appliances: -----		
Fraternal, college and school jewelry and emblems, including military insignia (except rings) -----	2,800	4 2,872	Sterling silver -----	20,074	5,263
Other jewelry worn or carried about the person ⁴ -----	3,046	1,367	Electrosilver plated: -----		
Jewelry made of gold filled, etc., not specified by type -----	2,321		Hotel patterns -----	3,743	1,021
Jewelry (precious metal) not specified by kind of material or type of jewelry -----	16,660	1,258	Commercial patterns -----	13,619	4,666
Jewelers' findings and materials -----	71,260	22,489	Other hollow ware ¹⁰ -----	6,056	2,511
Jewelers' findings, such as joints, pins, clasps, spring rings, ring blanks and other unassembled parts -----	22,633		Toiletware, ecclesiastical ware, novelties, trophies, baby goods, and other plated ware: -----		
Machine chain -----	10,430		Sterling silver -----	4,377	1,949
Stock shop products, such as flat stock, wire and tubing -----	37,829	n.a.	Electrosilver plated -----	3,851	1,639
Jewelers' findings, not specified by kind -----	368		Other toiletware, ecclesiastical ware, novelties, trophies, and other plated ware -----	6,569	1,993
			Silverware and plated ware not specified by kind and interplant transfers of parts and components ¹¹ -----	10,600	

n.a.—Not available.

¹ Includes collar and cuff buttons, studs, watch chains, money clips, identification bracelets, scarf pins, tie and collar holders, etc.

² Includes necklaces, bracelets, brooches, pins, clips, earrings, lockets, etc.

³ Includes rosaries, chaplets, religious medals, crosses, etc.

⁴ Data on fraternal jewelry rings are included with rings for 1947. For 1939, fraternal rings were included in the item "Fraternal, college, and school jewelry."

⁵ Includes cigar and cigarette cases and lighters, compacts, vanity cases, etc.

⁶ Includes value of shipments of finished products made from own materials and receipts for work done on materials owned by others.

⁷ The 1939 report form did not collect detailed commodity statistics.

⁸ Flatware includes all knives, forks, spoons, etc., made wholly of metal. Knives, forks, spoons, etc., not made wholly of metal, such as those with plastic handles, are included as table cutlery in the cutlery industry. In 1947, table cutlery amounted to \$14.6 million. Since 1939 classifications for cutlery and flatware were not based on type of handle, 1939 data are not strictly comparable. The \$5.3 million represents the value of other flatware reported by the silverware industry in 1939. However, the total for table and kitchen cutlery and other flatware amounted to \$38.7 million in 1947 as compared to \$10.3 million in 1939.

⁹ Includes other plated flatware, stainless steel and other metal flatware, not plated.

¹⁰ Includes other plated hollow ware, stainless steel, and other metal hollow ware not plated.

¹¹ Includes knife blades sold separately.

MUSICAL INSTRUMENTS AND PARTS; TOYS; SPORTING AND ATHLETIC GOODS

[Money figures in thousands of dollars]

PRODUCT	1947			1939	
	Total shipments and interplant transfers		Production	Total production for sale and interplant transfer	
	Quantity (units)	Value f.o.b. plant	Quantity	Quantity	Value f.o.b. plant
Pianos, total	147,393	\$51,621	148,252	111,245	\$18,031
Verticals, uprights, or consoles, 37 inches or less in height.....	70,709	21,329	70,846	95,205	13,286
Verticals, uprights, or consoles, over 37 inches in height.....	72,401	26,059	72,652		
Grand pianos, six feet and under in length.....	4,051	3,910	4,504	15,589	4,513
Grand pianos, over six feet in length.....	232	323	250	451	232
Organs, total		14,453			4,128
Pipe and reed.....	(1)	14,516		(1)	12,032
Electronic.....	8,843	9,937	8,846	(2)	2,096
Piano and organ parts and materials, total		22,947			n.a.
Piano parts and materials.....		16,567			4,983
Organ parts and materials.....		6,380		(3)	
Musical instruments and parts, except pianos and organs		31,653			11,384

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
Toys and games, except dolls and children's vehicles, total			\$185,928		\$50,449
Toy trains and equipment (mechanical and electrical).....			22,774		4,800
Mechanical toys, except trains (propelled by springs or electricity, gear driven, miniature steam engines, etc.).....			15,957		2,472
Structural toy sets.....			4,866		2,265
Doll carriages and doll carts.....	Thousand	1,000	8,778	1,281	2,190
Model sets, construction (airplanes, ships, trains, etc.) ⁴			5,187	(5)	(5)
Metal toys, other than those listed above.....			39,372		11,737
Wooden toys, other than those listed above.....			20,076		5,090
Other toys and games, including parts.....			55,915		21,895
Toys and games, not specified by kind.....			13,003		
Dolls, total			63,199		n.a.
Dolls, complete (except rubber dolls).....	Thousand	17,154	21,271	11,495	9,378
Rubber dolls.....	do	15,287	18,526	(6)	(6)
Doll clothes and doll parts.....			7,661		3,151
Stuffed toy animals.....	Thousand	9,123	11,737	n.a.	3,934
Dolls and doll parts, not specified by kind.....			4,004		
Baby carriages, walkers, strollers, and tenders, total			24,196		6,030
Baby carriages, including combination carriage-strollers.....	Thousand	807	17,657		4,777
Strollers.....	do	227	2,596	587	
Baby walkers.....	do	810	3,943	511	1,253
All other children's vehicles, total			61,478		11,866
Velocipedes and tricycles, excluding chain-driven tricycles.....	Thousand	4,024	28,078		4,312
Chain-driven tricycles.....	do	233	3,947	1,259	
Scooters.....	do	1,130	2,451	589	866
Children's wagons (coaster, express, and other).....	do	2,625	12,536	2,398	3,021
Sleds.....	do	1,770	4,622	908	975
Other children's vehicles (including children's automobiles, sidewalk cycles, three-wheel play cars, etc.).....			5,785		2,027
Parts for children's vehicles, sold separately.....			4,079		665
Children's vehicles, not specified by kind			784		
Fishing tackle, total			58,729		12,574
Wood and bamboo fishing rods.....	Thousand	954	6,096	n.a.	1,849
Metal fishing rods.....	do	2,895	10,546	1,204	1,633
Fishing reels.....	do	5,227	16,816	2,505	3,599
Flies, snelled hooks, leaders, and artificial bait.....	do		14,136		
Other fishing tackle (including fishing poles, fish hooks, floats, furnished lines, and sinkers).....	do		10,184		5,493
Fishing tackle, not specified by kind.....			951		

See footnotes at end of table.

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
Golf, tennis, and baseball equipment; footballs and basketballs, etc.			74,096		n.a.
Golf balls:					
Up to and including \$5.60 per dozen	Thousand doz.	628	2,725	2,882	5,603
Over \$5.60 per dozen	do.	1,779	10,703		
Golf clubs:					
Irons:					
Up to and including \$3.60 each	Thousand	685	1,902	2,856	6,558
Over \$3.60 each	do.	2,043	8,854		
Woods:					
Up to and including \$4.20 each	do.	125	441		
Over \$4.20 each	do.	1,015	5,885		
Tennis balls	Thousand doz.	671	2,461	609	1,452
Tennis racket frames, sold separately	Thousand	310	807	253	677
Tennis rackets, complete	do.	357	1,081	687	1,421
Baseballs:					
Up to and including \$10.80 per dozen	Thousand doz.	273	1,265	537	1,991
Over \$10.80 per dozen	do.	381	5,139		
Soft or indoor type baseballs	do.	405	3,819	311	1,260
Baseball bats (including indoor bats)	Thousand	3,332	3,188		(^c)
Baseball mitts and gloves	Thousand doz.	182	8,236		96
Footballs	do.	303	6,956		216
Basketballs	do.	90	5,114		42
Inflated athletic balls, other than footballs and basketballs	do.	72	1,607		19
All other golf, tennis, etc. equipment			3,913		203
All other sporting and athletic goods, total			65,301		n.a.
Billiard and pool tables and accessories			5,306		2,968
Bowling alleys	Units	2,652	4,997	n.a.	(^d)
Bowling alley playing supplies, including bowling balls, pins, etc.			11,395		(^e)
Skates:					
Roller:					
Sidewalk roller skates			7,976	n.a.	3,588
Rink roller skates	Thousand prs.	(^g) 466	2,018		
Ice:					
Figure ice skates			1,593		1,844
Tubular ice skates			1,476		
Playground equipment			3,214		1,734
Winter sports equipment, including skis and ski equipment, snow shoes, sleighs, bobsleds, toboggans, etc.			3,577		n.a.
Other sporting and athletic goods, including boxing goods, caddy bags, etc. (but excluding athletic clothing and shoes)			23,039		* 19,301
All other sporting and athletic goods, not specified by kind			710		
Sporting and athletic goods, not specified by kind			11,999		

n.a.—Not available.

¹ Value of pipe and reed organs combined to avoid disclosing the operations of individual companies. The value of pipe organs constitutes the major portion of the total value shown. Quantity is not shown because of combination of dissimilar items.

² Includes a relatively small value of electric guitars and other electric musical instruments, combined to avoid disclosing the operations of individual firms. Quantity is not shown because of combination of dissimilar items.

³ A valid comparison between 1947 and 1939 cannot be made due to differences in method of reporting (see text).

⁴ This classification includes model construction sets, consisting of prefabricated materials and parts, sold as a unit for assembly by the final user. It excludes parts and accessories sold separately, such as wood, motors, rubber, glue, paint, etc. which may be used for model construction.

⁵ Not collected separately.

⁶ Comparable data not available. Included with "other sporting and athletic goods, etc." in 1939.

⁷ Includes golf club shafts sold separately, which cannot be published without disclosing the operations of individual companies. Also includes golf, tennis, baseball, basketball, etc. equipment not specified by kind.

⁸ Not reported by a sufficient number of establishments to permit publication of data on quantity.

⁹ Quantity not shown because of an unknown amount of duplication resulting from the reporting of skates, and shoe and skate combination outfits for the same skates. The value also contains an unknown amount of duplication.

OFFICE SUPPLIES; COSTUME JEWELRY; AND MISCELLANEOUS NOTIONS

[Money figures in thousands of dollars]

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
Pens and mechanical pencils			\$137,574		\$21,744
Fountain pens, complete, all types, except ball.....	M.....	36,931	63,741	29,852	12,220
Ball-point type pens, complete.....	do.....	30,437	23,149	(1)	(1)
Desk pen sets:					
Fountain pen type (including ball-point pen type).....	M sets.....	707	2,308	489	686
Inkwell-reservoir (dip) type.....	do.....	1,042	1,450		
Pen points for use with ordinary penholders, for sale separately, excluding pen points for fountain pen or desk pen set use.....	M gross.....	1,286	1,200		2,815
Miscellaneous pen and mechanical pencil parts, for sale separately ³			15,117		
Pencils, mechanical.....	M.....	70,404	28,201	43,353	6,023
Pens and mechanical pencils, not specified by type.....			2,408		
Lead pencils and crayons			45,492		14,349
Pencils, nonmechanical:					
Black lead.....	M gross.....	9,677	26,100	5,223	7,545
Other (indelible, colored, etc.).....	do.....	1,213	1,450	569	1,701
Refill leads for mechanical pencils, for sale separately.....			2,569		1,049
Other pencil leads and pencil parts, for sale separately (except erasers).....			2,672		4,712
Crayons, including chalk, pastel, charcoal, etc.:					
Wax.....			6,692		2,040
Other materials (chalk, gypsum, etc.).....			1,352		1,302
Lead pencils, pencil parts, and crayons, not specified by type.....			1,026		
Hand stamps, stencils, and brands			27,555		
Rubber stamps.....			9,335		
Metal stamps, marking dies, and seals (including hand presses for seals and marking dies).....			8,248		(2)
Other marking devices, such as stencils, letters, figures, and numerals, stamp pads, branding irons, etc.....			6,419		
Hand stamps, stencils, and brands, not specified by type.....			3,553		
Artists' materials.....			14,029		(2)
Carbon paper and inked ribbons			47,563		
Typewriter ribbons.....			11,017		n.a.
Other inked ribbons.....			2,569		5,427
Coated carbon paper (roll and flat stock) ⁶			18,428		1,755
One-time carbon paper (roll and flat stock) ⁶			8,614		11,727
Spirit process master copies ⁶			3,321		
Gelatin process master copies ⁶			2,371		n.a.
Carbon paper and inked ribbons, not specified by type.....			1,243		
Costume jewelry and costume novelties (except precious metal)			164,006		
Base metal, whether or not electroplated with gold, silver, chromium, etc.:					
Rings.....			2,236		
Men's jewelry, except watch attachments ⁷			9,296		
Women's and children's jewelry and costume novelties, except watch attachments.....			61,565		
Watch attachments (bracelets for watches).....			2,983		
Fraternal, college, and school jewelry and emblems, including military insignia (except rings).....			3,508		(2)
Religious jewelry ⁸			992		
Other jewelry worn or carried about the person ⁹			47,095		
Imitation pearls (including necklaces).....			13,272		
Other costume jewelry and costume novelties (made of plastic, wood, leather, etc.).....			8,683		
Costume jewelry and costume novelties, not specified by type.....			14,376		
Feathers, plumes and artificial flowers.....			38,291		(2)
Buttons and button blanks			57,045		30,423
Buttons:					
Metal.....	M gross.....	8,083	6,688	6,966	3,241
Plastic:					
Casein and casein compound.....	do.....	7,124	5,217	13,828	3,066
Other plastics:					
Thermosetting.....	do.....	31,743	5,538		
Thermoplastic.....	do.....	9,003	4,729	23,072	10 6,877
Pearl or shell:					
Fresh water.....	do.....	8,254	8,166	11,238	3,046
Ocean.....	do.....	5,087	7,902	9,131	5,307
Vegetable ivory.....	do.....	778	756	2,702	1,535
Other buttons (fabric covered, wood, bone and hoof, leather, etc.).....			4,637		11 4,216
Button blanks or molds, backs and parts for sale as such.....			8,135		3,135
Buttons and button blanks, not specified by type.....			5,227		(11)

See footnotes at end of table.

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
Needles, pins, fasteners, and similar notions			\$147,137		n.a.
Needles:					
Knitting machine:					
Latch.....	M.....	98,538	4,941	74,313	\$2,737
Spring-beard.....	do.....	174,257	2,489	152,112	1,710
Sewing machine (household and industrial dry-thread).....	do.....	265,747	6,046	180,221	2,130
Other needles (shoe machine, hand sewing, hand knitting, crocheting, darning, etc.).....				3,684	1,061
Pins (except jewelry):					
Common or toilet (including stuck pins).....	M lbs.....	3,224	3,043	(12)	1,530
Hairpins, metal:					
"Bobby" type.....	do.....	7,330	8,920	3,726	1,892
Other types.....	do.....	1,989	1,049	6,400	1,246
Safety pins.....	M gross.....	16,828	5,075	12,064	1,627
Other pins (hat-pins, glass-head pins, plastic hairpins, etc.).....				1,328	n.a.
Fasteners, buckles, and apparel trimming:					
Zippers or slide fasteners.....	M ¹³	617,284	57,630	n.a.	18,876
Snap fasteners:					
Sew on type.....	Great gross.....	642,692	1,634		2,453
Other snap fasteners.....			8,577		
Metal buckles for wearing apparel (excluding costume jewelry) ⁷			7,111		n.a.
Other fasteners, buckles, and apparel trimming (including hooks and eyes).....			20,851		n.a.
Tape (hook and eye and snap fastener).....	Gross yds.....	149,299	4,191		n.a.
Hair curlers, except those designed for beauty parlor use ¹⁴			3,083		2,042
Needles, pins, fasteners, and similar notions, not specified by kind.....			7,485		

n.a.—Not available.

¹ Not produced in 1939.

² Comparable 1939 data for individual products not available.

³ Includes parts such as penholders, pen points for fountain pen or desk pen set use, renewal parts, etc.

⁴ Data for 1939 were retabulated to exclude mechanical pencil parts from the classification "Other pencil parts."

⁵ The 1939 reporting form did not request detailed commodity statistics.

⁶ A total of 18,139 tons of paper was used in the manufacture of these items.

⁷ Men's dress belt buckles, sold separately, are included under costume jewelry. Metal buckles for attachment to belts by manufacturers are included under "Needles, Fasteners, and Similar Notions."

⁸ Includes rosaries, chaplets, religious medals, crosses, etc.

⁹ Includes cigar and cigarette cases and lighters, compacts, vanity cases, etc.

¹⁰ Revised 1939 data. These data include 7,356,000 gross of plastic buttons, valued at \$1.7 million produced by establishments classified in the "Fabricated Plastic Products" industry. These plastic buttons, which were other than casein or casein compound type, were not included in the commodity totals previously published.

¹¹ Buttons not reported by type included with other buttons in 1939.

¹² Common or toilet pins were reported in 1939 with two units of measure: 2,827,000 pounds valued at \$1.0 million and 2,101,000 packs of 3,360 pins valued at \$0.5 million.

¹³ When zippers or slide fasteners were sold in continuous chains, they were reported on the basis of 12 inches constituting one unit.

¹⁴ Excludes curlers sold with home-type permanent wave kits.

FABRICATED PLASTICS PRODUCTS, NOT ELSEWHERE CLASSIFIED, AND OTHER MISCELLANEOUS MANUFACTURED PRODUCTS

[Money figures in thousands of dollars]

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
Molded plastics products, except plastic caps		\$240,100		\$32,895
Compression molded, transfer molded, and cast.....		107,086		
Injection molded.....		99,500		
Cold molded.....		5,034		n.a.
Extrusion molded.....		20,506		
Not specified by process.....		1,314		
Laminated sheets, rods, and tubes.....		35,630		11,004
Fabricated plastics products, n.e.c.		183,501		n.a.
From thermosetting laminates.....		36,343		
From other laminates.....		7,025		9,643
From sheets, rods, and tubes, and from other semifabricated forms, except laminated and vulcanized fiber.....		131,515		n.a.
Plastic caps:				
For glass bottles and other glass containers.....		6,610		n.a.
Other, including caps for collapsible tubes.....		1,092		n.a.
Not specified by kind.....		916		n.a.
Plastics products, not specified by process or by kind.....		18,949		n.a.
	(M doz.)		(M doz.)	
Brooms, upright ²		24,385		12,721
Household floor brooms.....		19,942	2,642	10,126
Made of broomcorn.....	2,327	18,574	2,480	9,009
Made of other materials.....	183	1,368	162	1,117
Other brooms (industrial, whisk, toy, hearth, etc.).....		3,737		2,595
Made of broomcorn.....		1,870		1,851
Made of other materials.....		1,867		744
Brooms, not specified by kind.....		706		n.a.
Paint and varnish brushes		54,556		12,747
Made of pure bristle.....	5,077	45,194		
Made of synthetic bristle.....	183	2,816		
Made of other materials, including mixtures.....	353	2,361	n.a.	n.a.
Not specified by kind.....		4,185		
Other brushes		82,252		30,743
Toilet brushes.....		36,058		13,502
Tooth brushes.....	5,498	9,525	n.a.	7,719
Shaving brushes.....	306	3,789	n.a.	1,040
Other toilet brushes (hairbrushes, etc.).....		22,744		4,743
Artists' brushes and hair pencils.....		4,540		1,710
Maintenance brushes, household and industrial.....		20,140		
Industrial brushes, other than maintenance.....		11,199		
Power driven (rotary, end, cup, jewelers' and dentists' brushes, etc.).....		8,719		
Other.....		2,480		
Twisted-in-wire brushes.....		7,617		1,491
Other brushes, not specified by kind.....		2,698		3,875
Brooms and brushes, not specified by kind.....		7,106		n.a.
Cork products ⁸		35,111		17,029
Stoppers.....		4,737		3,194
Discs and washers ⁹		5,769		1,901
Insulation products (blocks, boards, pipe covering, cork tile, cork lags, etc.).....		18,648		6,401
Sheets and blocks of cork composition.....		1,124		(10)
Other articles made of natural cork.....		1,817		1,999
Other articles made of composition cork.....		688		1,933
Cork products, not elsewhere classified or specified by kind ¹¹		2,328		1,601
	(Mil. matches)		(Mil. matches)	
Matches		56,386	419,707	25,536
In boxes of over 100 matches.....		182,343	19,119	9,500
20 cubic inches boxes.....		100,250		
16 cubic inches boxes.....		82,093		
In boxes of not over 100 matches.....		80,014	86,581	n.a.
Strike anywhere.....		25,191	52,720	6,177
Strike on box.....		54,823	33,861	3,007
In books, and other.....		234,061	26,607	3,170
Candles.....		18,666		9,859
Fireworks and pyrotechnics.....		15,331		6,624
Jewelry and instrument cases.....		45,156		4,553
Lamp shades.....		27,343		n.a.

See footnotes at end of table.

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
Wood caskets and coffins	(M caskets)	67,165	(M caskets)	¹⁴ 31,720
Cloth covered.....	876	43,360	713	19,917
Natural finish-lined.....	192	21,101	447	11,803
Natural finish-unlined.....	15	761		n.a.
Wood caskets and coffins, not specified by kind.....	n.a.	1,943		
Metal caskets and coffins		67,975	¹⁴ 337	¹⁴ 20,365
Finished, trimmed, and lined.....	357	58,667	n.a.	n.a.
Finished and trimmed, but unlined.....	39	3,666		
Shells only (raw or primed).....	¹³ 252	5,642		
Other caskets, boxes, vaults, and morticians' supplies		33,818		15,988
Other caskets and coffins (masonite, molded plastic, etc.).....	12	1,664	n.a.	123
Wooden outer burial boxes.....	302	3,521	¹⁶ 430	¹⁶ 2,669
Metal burial vaults (12 gauge metal or heavier).....	92	4,892	¹⁷ 161	¹⁷ 6,122
Inner liners sold as such.....	272	3,136	n.a.	671
Embalming chemicals, burial garments, and morticians' equipment and supplies.....		11,337		⁽¹⁵⁾ 6,403
Other products of the industry (wood and metal shipping cases, etc.).....		9,268		
Morticians' goods, not specified by kind		¹⁹ 4,106		n.a.

n.a.—Not available.

¹ The detailed 1939 data for plastics products are not directly comparable with the 1947 product figures. There were \$76,116,000 worth of plastics products produced for sale in 1939. Of this total, \$22,574,000 could not be distributed according to the 1947 classifications and the 1939 figure for molded products is understated by an undetermined amount.

² Excludes the value of brooms made in institutions for the blind, which amounted to slightly more than \$1 million in 1939. No comparable data were collected for 1947.

³ Includes \$400,000 worth of brooms made of broomcorn mixed with other materials.

⁴ Excludes hair pencils.

⁵ In 1939, separate data were obtained for household and industrial brushes, but without indication as to whether they were maintenance brushes. The statistics for 1939 are not directly comparable with the separate maintenance-brush and nonmaintenance industrial brush categories listed for 1947, and are, therefore, shown in total only.

⁶ Includes the value of hair pencils.

⁷ Includes total shipments (\$6.3 million) of 232 small establishments, classified in the "Brooms and brushes" industry, for which no detailed breakdown of shipments was obtained.

⁸ Excludes cork gaskets and cork linoleum products, which are classified in other industries. Data for cork gaskets were included in the published 1939 statistics, combined with cork discs and washers, but have been excluded from this table to conform to the 1947 data.

⁹ Excludes the value of cork discs and washers produced and fitted into crowns and other closures in the same plant. A total of approximately 320 million gross crowns were shipped by manufacturers in 1947.

¹⁰ Not available; probably included in the \$1.9 million worth of "Other articles made of composition cork" for 1939.

¹¹ Primarily shredded and granulated cork.

¹² Includes a small unspecified amount of miners' squibs. For 1947 data on squibs, see "Explosives" industry.

¹³ Statistics on the total production of lamp shades were not collected in 1939.

¹⁴ Includes data for some shipping cases not separately reported. Metal caskets and coffins data for 1939 also include approximately 5,400 metal cloth-covered caskets and coffins with a value of about \$364,000.

¹⁵ Estimated in part.

¹⁶ Includes data for wooden shipping cases.

¹⁷ Includes data for metal shipping cases.

¹⁸ Data for wood and metal shipping cases included in figures for wooden outer burial boxes, metal burial vaults, and to some extent, caskets and coffins.

¹⁹ Includes total shipments (\$2.9 million) of 86 small establishments, classified in the "Morticians' goods" industry, for which no detailed breakdown of shipments was obtained.

SIGNS AND ADVERTISING DISPLAYS AND OTHER MISCELLANEOUS MANUFACTURED PRODUCTS

[Money figures in thousands of dollars]

PRODUCT	1947		Total production (quantity)	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
	(units)		(units)		(units)
Fire extinguishing equipment		\$30,871			n.a.
Hand extinguishers meeting specifications of Underwriters' Laboratories and Factory Mutual Laboratories:					
Soda acid.....	182,015	2,482	190,040		
Foam.....	77,362	1,332	80,319		
Carbon dioxide.....	229,100	6,304	240,681		
Hand pump (using water or calcium chloride solution).....	38,437	556	39,466		
Vaporizing liquid (carbon tetrachloride base).....	877,998	6,564	898,057		
Other extinguishers meeting specifications of Underwriters' Laboratories and Factory Mutual Laboratories.....	61,300	1,738	61,553	n.a.	n.a.
All other hand extinguishers:					
Grenade type (including manual and automotive types).....	480,695	1,159	482,846		
Other hand extinguishers (includes dry powder types).....	249,090	550	255,556		
Other chemical fire extinguishing equipment (two wheeled chemical fire engines and fixed systems, except water sprinkler systems) ¹		4,978			
Parts and attachments for chemical fire extinguishing equipment.....		5,208			
Small arms ²		54,932			n.a.
Pistols and revolvers.....	250,076	8,381	247,814	90,447	\$1,585
Rifles:					
Center fire, repeating.....	137,042	5,127	126,442		
Rim fire, repeating.....	691,103	12,091	670,394	359,583	3,992
Center fire and rim fire, single shot ³	427,057	4,105	420,908	263,229	882
Shotguns:					
Double barrel and single barrel, repeating ⁴	561,986	17,241	552,208		
Single barrel, single shot.....	303,769	3,421	303,167	486,429	6,102
Other small arms and parts and attachments for small arms.....		4,566			n.a.
Small arms ammunition.....		77,489			28,413

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
	(M units)		Quantity	Value f.o.b. plant
Beauty and barber shop equipment		\$23,471		n.a.
Permanent waving equipment and accessories (machine and machineless).....		9,026		
Permanent waving machines.....	11	1,986	n.a.	\$2,021
Protector clamps and spacers.....	1,492	688		
Permanent waving machine pads (excluding solutions).....	231,622	1,154		
Machineless waving pads (excluding solutions).....	369,758	3,357	n.a.	\$3,639
Other permanent waving equipment.....		1,841		
Cold wave supplies (excluding solutions).....		694		n.a.
Hair dryers (excluding hand dryers).....	44	2,355	n.a.	2,019
Hair clippers (hand and electric).....	1,778	5,083	n.a.	\$1,202
Hydraulic and reclining chairs and couch units.....		2,270		n.a.
Other beauty and barber shop equipment.....		3,275		n.a.
Beauty and barber shop equipment, not specified by type.....		768		
Signs and advertising displays		212,126		85,771
Luminous tubing and bulb signs ⁷		53,555		25,507
Nonelectric signs and advertising displays.....		101,023		40,930
Window, backbar, counter, and lobby cut-outs and displays.....		28,254		12,270
Metal signs by any application process: ⁸				
Porcelain enameled.....		9,715		
All other metal signs.....		24,066		28,660
Screen processed signs (other than metal).....		9,762		
All other signs and advertising displays ⁹		29,226		
Advertising novelties.....		25,011		15,634
Signs and advertising displays, not specified by type.....		32,537		3,700

See footnotes at end of table.

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
Umbrellas, parasols, and canes	(M units)			
Umbrellas ¹⁰		\$32,699		\$11,154
Umbrella parts	¹¹ 8,221	23,732	n.a.	8,289
		8,275		2,763
Frames	(M dozen)			
Handles	1,000	5,876	n.a.	2,002
Other parts		1,862		761
Canes		537		102
Umbrellas, parasols, and canes, not specified by kind		296		
		396		
Tobacco pipes and cigarette holders	(M units)			
Tobacco pipes		19,021		7,427
Brnr		37,971		7,179
Corn cob		28,336	n.a.	6,425
Other pipes and pipes, not specified by kind		6,971		350
Pipe parts and accessories	¹² 2,664	1,659		404
Cigar and cigarette holders		132		248
		844		
Soda-fountain and beer-dispensing equipment		33,307		n.a.
Soda-fountain equipment (cooler box, fountainette, and similar equipment)		27,846		n.a.
Beer-dispensing equipment		5,461		
Models and patterns (except paper)		12,640		n.a.
Furs, dressed and dyed		24,836		n.a.
Hair work		7,835		n.a.
Miscellaneous fabricated products, not elsewhere classified		141,294		n.a.

n.a.—Not available.

¹ Includes a small amount of fire extinguishing equipment, not reported by type.

² Includes shipments to U. S. Military establishments by private manufacturing concerns. However, shipments by government establishments are not included.

³ Center fire and rim fire single shot combined to avoid disclosing figures for individual companies.

⁴ Double barrel and single barrel repeating shotguns combined to avoid disclosing figures for individual companies.

⁵ Data for 1939 include value of solutions for permanent waving pads. In 1947 these solutions have been reported separately but are classified in the chemical group of industries.

⁶ Includes a small amount of clippers for other than barber or toilet use, which are not shown separately to avoid disclosing figures for individual companies.

⁷ Includes signs sold and rented. The value of signs reported as produced for rental use amounted to \$4.5 million. See text for explanation of method of valuing signs produced for rental.

⁸ Includes point-of-sale signs, road signs, truck signs, highway and street markers, and all other metal signs.

⁹ Includes sign letters.

¹⁰ Less than 5 percent of the total value of umbrellas shown for each year consist of beach, garden, and wagon umbrellas, insofar as can be determined from separately reported information. The value of a negligible quantity of parasols reported separately each year is also included.

¹¹ Contains an estimate of between 10 and 15 percent; includes approximately 100,000 beach, garden, and wagon umbrellas reported separately.

¹² Contains an estimate of between 15 and 20 percent.