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(Continued on inside back cover)

*To firms furnishing figures for the department store studies, to members of the National Retail Dry Goods Association, which financed the work, and to educational institutions, etc., the list price of Bulletins Nos. 92, 96, and 100 is \$1.00, and the regular discounts apply.

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APPENDIX

Composition of the Various Classes of Manufacturing Activity in Massachusetts and in the United States as Measured by Number of Wage Earners in 1929

Classification	Wage Earners		Classification	Wage Earners	
	Massachusetts	United States		Massachusetts	United States
Leather Goods			Iron and Steel Products—Continued		
Boots and shoes, other than rubber	55,093	205,640	Forgings, iron and steel, not made in steel works or rolling mills	2,146	20,882
Leather, tanned, curried, and finished	10,707	49,932	Screw machine products and wood screws	1,768*	19,881
Trunks, suitcases and bags	485	11,359	Cast iron pipe and fittings	*	19,741
Pocket-books, purses, and card-cases	696	10,430	Tools, not including edge tools, machine tools, files, or saws	2,860*	19,305
Boot and shoe findings, not made in shoe factories	4,844	10,376	Typewriters and parts	*	16,945
Boot and shoe cut stock, not made in shoe factories	2,814*	9,499	Cash registers, adders, calculators, and tabulators	*	16,840
Gloves and mittens, leather	*	9,203	Bolts, nuts, washers, and rivets, not made in plants connected with rolling mills	1,377	16,175
Leather goods, not elsewhere classified	459	6,035	Cutlery and edge tools (not including silver and plated cutlery)	3,467	14,991
Saddlery and harness	46	3,339	Wrought pipe, welded and heavy riveted, not made in rolling mills	*	11,417
Belting and packing, leather	433	2,602	Sewing machines and attachments	586	10,467
Lasts and related products	728	1,760	Metal doors, shutters, sash, frames, molding, and trim	302	9,557
Total	76,305	320,175	Washing machines, wringers, and ironing machines, household	*	8,189
Cotton Goods			Firearms	1,692*	6,838
Cotton goods	70,788	424,916	Meters, gas and water and gas generators	*	6,101
Cotton smallwares	2,924	15,281	Springs, steel, except wire not made in rolling mills	21	5,842
Bags, other than paper, not made in textile mills	74	11,828	Saws	627	4,137
Awnings, tents, sails, and canvas covers	308	7,162	Scales and balances	*	4,118
Total	74,094	459,187	Steel barrels, kegs, and drums	*	4,110
Iron and Steel Products			Files	*	3,974
Foundry and machine shop products, n.e.c.	21,243*	454,441	Nails, spikes, etc., not made in rolling mills or wire works	780	2,027
Steel works and rolling mill products	*	394,574	Galvanizing and coating, not done in rolling mills	46	1,125
Structural and ornamental metal, not made in rolling mills	1,377	54,947	Foundry supplies	*	853
Hardware, n.e.c.	775	52,306	Iron and steel, processed or welded	25	511
Stoves and ranges (other than electric), and warm air furnaces	2,033	46,616	Textile machinery and parts	10,597	27,019
Stamped ware, enamelled ware, and metal stampings	1,409	40,000	Total	63,049	1,462,822
Steam and hot water heating apparatus and steam fittings	2,879	39,621	Woolen Goods		
Tin cans, n.e.c.	605	31,497	Worsted goods	29,962	88,485
Plumbers' supplies, not including pipe or vitreous china	629	27,960	Woolen goods	15,711	58,474
Blast furnace products	*	24,960	Wool shoddy	503	1,762
Wire drawn from purchased rods	4,178	22,467	Wool scouring	635	1,302
Wire work, n.e.c.	1,627	22,388	Woolpulling	*	596
			Horse-blankets, nets, and related products	*	582
			Total	46,811	151,201

*Not reported.
n.e.c. Not elsewhere classified.

Classification	Wage Earners	
	Massachusetts	United States
Other Textiles		
Knit goods	8,817	208,488
Silk and rayon goods	7,390	130,467
Dyeing and finishing textiles	14,450	79,327
Carpets and rugs, wool	4,297	32,623
House furnishing goods, n.e.c., and miscellaneous textile articles	1,703	15,794
Cordage and twine	1,882	14,489
Asbestos products, other than steam packing and boiler covering	*	8,092
Trimmings (not made in textile mills) and stamped art goods for embroidering	112	7,934
Lace goods	*	6,854
Embroideries	45	6,622
Linoleum	*	5,544
Felt goods	863	5,540
Jute goods	**	4,931
Waste processed	469	3,905
Artificial leather	318	2,590
Asphalted base floor covering	*	2,345
Linen goods	880	2,195
Regalia	79	1,757
Carpets and rugs, rag	76	1,529
Oil cloth	*	1,412
Upholstering materials, n.e.c.	*	1,410
Flags and banners	*	938
Cloth sponging and refinishing	41	902
Mats and matting, grass, and coir	*	467
Hair cloth	*	450
Belting, other than leather or rubber, not made in textile mills	*	255
Flax and hemp	*	47
Total	41,422	546,907

Electrical Machinery		
Electrical machinery, apparatus and supplies	28,844	328,722
Elevators and elevator equipment		
Lighting equipment, electric and gas, lamps and reflectors	493	23,580
Total	29,337	352,302

Food		
Bread and other bakery products	10,413	200,841
Meat packing, wholesale	2,594	122,505
Canned and dried fruits and vegetables, preserves, jellies, fruit butters, pickles, and sauces	518	98,866
Confectionery	7,471	63,501
Manufactured ice	288	32,184
Beverages, non-alcoholic	1,304	28,281
Flour and other grain mill products	65	27,028
Ice cream	975	22,399
Butter	14	19,097
Sugar-beet or cane (refining only—no growing)	*	13,912
Canning and preserving: fish, crabs, shrimps, oysters, and clams	907	13,612

*Not reported.
**Reported with felt.
n.e.c. Not elsewhere classified.

Classification	Wage Earners	
	Massachusetts	United States
Food—Continued		
Food preparations, n.e.c.	488	10,616
Feeds, prepared for animals and fowl	157	10,223
Sugar	*	9,815
Coffee and spices, roasting and grinding	467	9,053
Peanuts	*	7,933
Poultry killing, dressing and packing, wholesale	*	7,760
Condensed and evaporated milk	30	7,065
Corn syrup, corn sugar, corn oil, and starch	*	6,730
Cereal preparations	*	6,488
Chocolate and cocoa products, not including confectionery	899	6,249
Sausage, meat puddings, headcheese, etc., and sausage casings, not made in meat packing establishments	485	5,897
Macaroni, spaghetti, Vermicelli, and noodles	192	5,072
Flavoring extracts and flavoring syrups	153	5,041
Cheese	*	3,401
Baking powder, yeast, and other leavening compounds	*	3,006
Shortenings (other than lard) vegetable cooking oils and salad oils	*	2,712
Chewing gum	*	2,265
Rice cleaning and polishing	*	1,589
Oleomargarine, not made in meat packing establishments	*	1,534
Liquors, distilled and ethyl alcohol	*	1,484
Vinegar and cider	66	979
Malt	*	590
Liquors, vinous	*	186
Total	27,486	757,923

Paper and Allied Products		
Paper	12,138	103,320
Boxes, paper, n.e.c.	5,349	55,654
Pulp, wood and other fiber	223	24,729
Paper goods, n.e.c.	4,053	20,227
Stationery goods, n.e.c.	2,331	11,078
Envelopes	2,211	10,367
Bags, paper, exclusive of those made in paper mills	193	6,970
Wall paper	*	4,705
Pulp goods and molded composition products	*	3,558
Card-cutting and designing	232	2,338
Card board, not made in paper mills	*	609
Total	26,730	243,555

Heavy Machinery		
Railroad repair shops, steam	4,144	368,681
Motor vehicles, not including motorcycles	*	226,116
Motor vehicle bodies and parts	3,393	221,332
Engines, turbines, tractors, waterwheels, and windmills	221	62,702
Ship and boat building, steel and wooden, including repairs	3,635	55,089
Machine tools	3,361	47,391
Agricultural implements	*	41,663
Cars, electric and steam railroad, not made in repair shops	*	40,015

Classification	Wage Earners	
	Massachusetts	United States

Heavy Machinery—Continued

Railroad repair shops, electric	1,094	29,475
Machine tool accessories	3,239	26,682
Pumps, hand and power, and pumping equipment	2,558	23,106
Aircraft and parts	*	14,710
Locomotives, other than electric, not made in repair shops	*	11,045
Motorcycles, bicycles, and parts	1,206	4,392
Safes and vaults	*	3,033
Total	22,851	1,175,432

Printing, Publishing, and Engraving

Printing and publishing, book and job	9,341	150,649
Printing and publishing, newspaper and periodical	5,775	129,660
Bookbinding and blankbook making	2,645	24,754
Signs and advertising novelties	359	20,000
Lithographing	1,052	18,979
Photo-engraving, not done in printing establishments	679	12,353
Engraving, steel, copperplate, and plate printing	769	10,130
Stereotyping and electrotyping, not done in printing establishments	362	6,487
Labels and tags	60	4,474
Engraving (other than steel, copperplate, or wood) chasing, etching and die-sinking	329	2,240
Printers' supplies	41	1,004
Printing and publishing, music	82	810
Type founding	*	467
Engravers' materials	*	313
Engraving, wood	†	142
Total	21,494	382,462

Rubber Goods

Rubber tires and tubes	9,764	83,263
Rubber belting and hose	*	*
Rubber boots and shoes	11,163	25,659
Rubber goods, n.e.c.	†	40,226
Total	20,927	149,148

Furniture and Finished Lumber

Lumber and timber products, n.e.c.	1,016	419,084
Furniture, including store and office fixtures	8,598	193,399
Planing mill products, including general millwork	2,011	90,134
Boxes, wooden, except cigar boxes	1,797	39,554
Refrigerators	181	26,667
Wood turned and shaped and other wooden goods, n.e.c.	833	18,712
Mattresses and bed springs, n.e.c.	671	17,187

*Not reported.
†Included in steel and copper.
‡Reported with tires and tubes.
n.e.c. Not elsewhere classified.

Classification	Wage Earners	
	Massachusetts	United States

Furniture and Finished Lumber—Continued

Musical instruments, organs and pianos	1,356	15,440
Radios and phonographs	343	14,416
Caskets, coffins, burial cases, and other morticians' goods	418	13,033
Cooperage	483	10,691
Baskets and rattan and willow ware, not including furniture	131	9,353
Wall plaster, wall board, and floor composition	*	7,462
Carriages and sleds, children's	1,436	7,102
Mirrors and other glass products made of purchased glass	97	4,782
Window shades and fixtures	151	4,708
Mirror and picture frames	165	4,446
Boxes, cigar, wooden	*	4,374
Window and door screens and weather strips	173	4,034
Cork products	*	3,842
Carriages, sleds, wagons, and sleighs	*	3,554
Excelsior	*	1,241
Total	19,860	904,224

Clothing

Clothing, women's, n.e.c.	6,874	187,500
Clothing (except work clothing), men's, youths', and boys', n.e.c.	5,551	149,868
Shirts and nightwear, men's	1,277	59,830
Clothing, work (including sheep-lined and blanket-lined coats but not including shirts), men's	749	38,201
Millinery	1,307	32,206
Furnishing goods, men's, n.e.c.	1,321	26,588
Hats, fur felt	241	16,539
Fur goods	228	15,752
Corsets and allied garments	706	13,664
Gloves and mittens, cloth or cloth and leather combined made from purchased fabrics	*	9,279
Handkerchiefs	*	6,014
Hats and caps, except felt and straw, men's	220	5,826
Furs, dressed and dyed	*	5,167
Suspenders, garters, and other elastic woven goods, made from purchased webbing	644	4,341
Hats, straw, men's	*	3,380
Collars, men's	*	2,952
Hat and cap materials, men's	*	2,564
Hats, wool felt	*	2,028
Clothing, men's, buttonholes	*	292
Total	19,118	581,991

Chemicals

Petroleum refining	1,071	80,596
Chemicals, n.e.c.	2,936	62,109
Gas, manufactured	4,006	43,065
Turpentine and rosin	*	40,157
Rayon manufacture	*	39,106
Paints and varnishes	789	29,211
Fertilizers	387	20,926
Coke	*	20,552
Patent medicines	1,564	16,434

Classification	Wage Earners	
	Massachusetts	United States

Chemicals—Continued

Oil, cake and meal, cottonseed	*	15,825
Soap	*	14,363
Perfumes, cosmetics, and toilet preparations	106	13,109
Wood preserving	63	13,077
Druggists' preparations	104	10,688
Lime	317	8,554
Ammunition and related products	*	7,223
Explosives	*	5,614
Grease and tallow	624	5,475
Salt	*	5,458
Wood distillation and charcoal manufacturing	*	4,648
Compressed and liquefied gases	108	3,390
Glue and gelatin	729	2,993
Cleaning and polishing preparations	115	2,713
Oil, cake and meal, linseed	*	2,715
Lubricating oils, greases (not made in refineries)	*	2,577
Mucilage, paste, etc. (not including glue or rubber cement)	27	414
Ink, printing	*	2,448
Tanning materials, natural dyestuffs, mordants, sizes, etc.	200	2,419
Bone black, carbon black, and lampblack	*	1,915
Fireworks	*	1,811
Blackings, stains, and dressings	381	1,617
Oils, n.e.c.	39	1,234
Candles	*	781
Drug grinding	*	677
Combs and hairpins (not made of metal or rubber)	531	656
Fuel	*	426
Ink, writing	*	416
Oils, essential	*	265
Bluing	*	105
Total	14,187	485,852

Jewelry, Clocks, Watches, Silverware, etc.

Jewelry	5,422	27,922
Clocks, watches, recording devices and materials, and parts (not including watch cases)	485	21,450
Instruments, professional and scientific, and gauges (except machinists' gauges)	671	16,876
Silverware and plated ware	2,697	15,735
Pens, fountain and stylographic, pen points (gold, steel, and brass)	227	4,600
Watch cases	*	3,404
Jewelry and instrument cases	496	2,269
Gold leaf and foil	133	1,177
Gold, silver, and platinum refining and alloying	18	931
Lapidary work	*	506
Total	10,252	94,870

Non-Ferrous Metals

Non-ferrous metals, alloys, etc.	1,861	79,183
Copper, tin, sheet iron work	1,316	28,593

*Not reported.
 ||Reported with smelting, other.
 n.e.c. Not elsewhere classified.

Classification	Wage Earners	
	Massachusetts	United States

Non-Ferrous Metals—Continued

Aluminum products	112	21,210
Smelting and refining, copper		14,544
Smelting and refining, zinc		11,618
Needles, pins, hooks and eyes, and snap fasteners	*	6,242
Electroplating	391	5,928
Smelting and refining, lead		4,819
Smelting and refining, other	64	4,134
Musical instruments and parts, n.e.c.	206	3,176
Collapsible tubes	*	1,821
Tin and other foils, not including gold and silver	*	1,710
Fire extinguishers	*	740
Total	3,950	183,718

Other Manufacturing Industries

Cigars and cigarettes	1,169	105,308
Clay products (other than potters) and non-clay refractories	676	93,336
Glass	171	67,527
Marble, granites, slates, and other stone products	2,064	37,817
Pottery, including porcelain ware	*	35,409
Cement	*	33,368
Fancy miscellaneous articles	2,102	18,722
Toys	1,714	16,660
Concrete products	673	16,505
Photographic apparatus and materials, and projection apparatus	*	12,967
Tobacco, chewing and smoking, snuff	*	10,811
Sporting and athletic goods	1,778	10,793
Motion pictures	*	10,784
Optical goods	*	9,701
Buttons	41	9,034
Surgical and orthopedic appliances and related products	*	7,910
Brushes other than rubber	1,002	7,261
Models and patterns, not including paper patterns	550	6,778
Glass products except mirrors	*	6,029
Roofing, built-up and roll; asphalt shingles; roof coatings, other than paint	*	6,027
Pencils, lead (including mechanical)	*	5,703
Dairymen supplies	*	5,450
Dentists' supplies and equipment except instruments	90	4,559
Brooms	41	4,542
Emery and abrasive wheels	*	3,873
Matches	*	3,760
Artificial and preserved flowers and plants	*	3,216
Hand stamps, stencils, and brands	133	2,971
Umbrellas, parasols, and canes	109	2,855
Soda fountains and accessories apparatus	*	2,764
Paving materials, blocks (except brick, stone, and mixtures)	113	2,375
Statuary and art goods (except concrete, factory production)	117	2,112
Pipes (tobacco)	*	1,680
Mineral and earths, ground or otherwise treated	72	1,679
Carbon paper and inked ribbon	*	1,251
Sand paper, emery	*	1,228

Classification	Wage Earners	
	Massachusetts	United States

Other Manufacturing Industries—Continued

Artists' materials	*	1,167
Nets (fish), seines	*	903
Sand-lime brick	*	566
Theatrical scenery and stage equipment	*	547
Graphite, ground and refined	*	494
Ivory, shell and bone work	*	391
Hair work	22	359
Crucibles	*	321

*Not reported.

Classification	Wage Earners	
	Massachusetts	United States

Other Manufacturing Industries—Continued

China firing and decorating, not done in potteries	*	317
Feathers, plumes, and manufactures thereof	*	257
Hones, whetstones	*	174
Whips	*	57
Billiard tables	33	1,390
Steam and other packing	151	7,266
All other industries	26,800	*
Total	39,621	586,974

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UNEMPLOYMENT AND PROSPECTS FOR
REEMPLOYMENT IN MASSACHUSETTS
WITH PARTICULAR REFERENCE TO
MANUFACTURING INDUSTRIES

BY

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FOREWORD

This study was initiated in March, 1935, under the joint auspices of the Harvard Professors' Committee on Unemployment Studies and the Commissioner of the Massachusetts Department of Public Welfare. Through the Commissioner, funds were made available from the Emergency Relief Administration to pay for clerical work performed by a small staff of unemployed persons taken from the relief rolls of Boston and Cambridge.

The authors take this opportunity to thank all who assisted in the task, and particularly to commend the loyalty of many of the relief workers, who labored under trying conditions when on several occasions relief funds were exhausted and the prospects of remuneration uncertain.

Special thanks are due to Mr. Richmond F. Bingham, Instructor in Business Statistics at the Harvard Graduate School of Business Administration, who prepared the charts; to Mr. Edward A. Schrader, who assisted in the construction of the statistical tables; and to Miss Gertrude M. Clark, who prepared the manuscript.

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Boston, Massachusetts
August, 1936

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