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Manufactures of the NON-FERROUS METALS IN CANADA 1937 and 1938

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NOTES ON STATISTICS OF PRODUCTION

In the collection of production data, the Dominion Bureau of Statistics makes a division between primary and secondary production. In the first-named class are separate sections for the collection of statistics on (a) **Agricultural Products,** (b) **Furs,** (c) **Fish,** (d) **Forest Products,** (e) **Mineral Products.**

In the second are included (a) **Manufacturing** and (b) **Construction.**

Manufacturing is subdivided into nine groups of industries, producing concerns being classified according to the principal component material of their major products. For example, manufactures of leather goods are classified under "Animal Products"; the pulp and paper industry under "Wood and Paper", etc. An outline of the scheme of classification in use for manufacturing industries is given below:—

Manufactures of:

(1) **Vegetable Products,** including—Coffee, Tea and Spices; Fruit and Vegetable Preparations, including Preserving, Canning, Pickles, Vinegar and Cider; Flour and Grist Mill Products; Bread and other Bakery Products; Biscuits and Confectionery; Macaroni and Vermicelli; Distilled and Brewed Liquors and Wines; Aerated Waters; Rubber Products; Prepared Breakfast Foods, Starch and Glucose; Sugar; Tobacco Products; Linseed Oil and Oil Cake.

(2) **Animal Products,** including—Fish and Fish Products; Dairy Factory Products; Slaughtering and Meat Packing; Leather and Leather Products; Furs and Fur Products.

(3) **Textiles and Textile Products,** including—Cotton Textiles (Cloth, Yarn, Thread and Waste); Woollen Textiles (Cloth, Yarn, Blankets, Felt and Waste); Silk Products; Factory-Made Clothing; Carpets, Rugs and Mats; Cordage, Rope and Twine; Hats and Caps; Hosiery and Knitted Goods; Cotton and Jute Bags; Dyeing, Cleaning and Laundry Work; Dyeing and Finishing of Textiles, Awnings, Tents and Sails.

(4) **Wood and Paper,** including—Pulp and Paper; Paper Goods; Printing, Publishing and Lithographing; Furniture; Carriages, Wagons and Sleighs; Boxes, Baskets and Crates; Cooperage; Woodenware; Lumber; Planing Mills; Sash and Door Factories; Hardwood Flooring; Coffins and Caskets; Trees and Shoe Findings; Handles; Spools and Wood Turning; Boatbuilding.

(5) **Iron and Steel and Their Products,** including—Primary Iron and Steel (Pig Iron, Ferro-Alloys, Steel and Rolled Products); Castings and Forgings; Heating and Cooking Apparatus; Boilers, Tanks and Engines; Farm Implements; Machinery; Automobiles; Auto Parts; Aircraft; Shipbuilding; Bicycles; Railway Rolling Stock; Wire and Wire Goods; Sheet Metal Products; Hardware, Cutlery and Tools; Miscellaneous Iron and Steel Products; Bridge Building and Structural Steel.

(6) **Manufactures of the Non-Ferrous Metals,** including—Aluminium Products; Brass and Copper Products; White Metal Alloys; Jewellery and Silverware; Electrical Apparatus and Supplies; Miscellaneous Non-Ferrous Metal Products; Non-Ferrous Smelting and Refining.

(7) **Manufactures of the Non-Metallic Minerals,** including—Asbestos Products; Cement; Cement Products; Coke and Gas; Glass (blown, cut, ornamental, etc.); Lime; Petroleum Products; Products from Domestic Clays; Products from Imported Clays; Salt; Sand-Lime Brick; Dressed Stone; Artificial Abrasives and Abrasive Products; Gypsum Products; Miscellaneous Non-Metallic Mineral Products, including (a) Artificial Graphite and Electrodes, (b) Mica Products, (c) Miscellaneous Non-Metallic Mineral Products, n.e.s.

(8) **Chemicals and Allied Products,** including—Coal Tar Distillation; Acids, Alkalies and Salts; Compressed Gases; Fertilizers; Medicinal and Pharmaceutical Preparations; Paints, Pigments and Varnishes; Soaps, Washing Compounds and Cleaning Preparations; Toilet Preparations; Inks; Adhesives; Polishes and Dressings; Hardwood Distillation; Miscellaneous Chemical Products, including: (a) Boiler Compounds, (b) Cellulose Products, (c) Insecticides, (d) Sweeping Compounds, (e) Explosives, Ammunition and Fireworks, (f) Disinfectants, (g) Matches, (h) Miscellaneous Chemical Products, n.e.s.

(9) **Miscellaneous Products,** including—Brooms and Brushes; Electric Light and Power; Musical instruments, etc.

The statistics of manufactures are also classified according to the **use** or **purpose** of the end product as follows:—

(1) **Food,** including—Breadstuffs; Fish; Nuts; Fruits and Vegetables; Meats; Milk Products; Oils and Fats; Sugar; Infusions; Miscellaneous.

(2) **Drink and Tobacco,** including—Beverages, alcoholic; Beverages, non-alcoholic; Tobacco.

(3) **Clothing,** including—Boots and Shoes; Fur Goods, Garments and Personal Furnishings; Gloves and Mitts; Hats and Caps; Knitted Goods; Waterproofs; Miscellaneous.

(4) **Personal Utilities,** including—Jewellery and Time-Pieces; Recreational Supplies; Personal Utilities, n.e.s.

(5) **House Furnishings.**

(6) **Books and Stationery.**

(7) **Vehicles and Vessels.**

(8) **Producers' Materials,** including—Farm Materials; Manufacturers' Materials; Building Materials; General Materials.

(9) **Industrial Equipment,** including—Farming Equipment; Manufacturing Equipment; Trading Equipment; Service Equipment; Light, Heat and Power Equipment; General Equipment.

(10) **Miscellaneous.**

EXPLANATORY NOTES

Classification of Industries.—The annual census of production in Canada, which is carried out by the Dominion Bureau of Statistics, divides the manufacturing plants into *nine main groups* according to the *principal component material of their major products*. These main groups in turn are subdivided into industries to which the various firms are classified in accordance with the nature of their *main products*. An outline of the scheme of classification is given on the next preceding page.

Scope of Present Report.—The present report presents statistics for the Manufactures of the Non-Ferrous Metals, one of the nine major groups, and covers all manufacturing plants that used non-ferrous metals as their principal materials. This group in turn is subdivided into seven industries, as follows:—*(a)* aluminium products (other than smelter output); *(b)* brass and copper products; *(c)* white metal alloys, including solders, babbitt, etc.; *(d)* jewellery and silverware; *(e)* electrical apparatus and supplies; *(f)* non-ferrous metal smelting and refining, and *(g)* miscellaneous non-ferrous metal products. A special chapter is devoted to a review of each of these industries.

Period Covered.—The returns from the manufacturers relate to the calendar year or to the business year which corresponded most nearly to that of the calendar year, and cover a year's operations except for establishments which began or discontinued business within the year.

Establishments Covered.—The census of manufactures covers only manufacturing and assembling operations. Works engaged solely in repairs have been excluded but when concerns did both manufacturing and repair work their reports covered their entire operations. Wholesale and retail establishments also have been excluded and firms which carried on a wholesale or retail business in addition to manufacturing were instructed to confine their statements to manufacturing operations only.

Number of Plants.—Final compilations include figures only for establishments which operated all or part of the year. As a rule, a report was received for each single plant or factory but in a few cases a single report covered two or more plants located in the same city or town and operated under a common ownership. On the other hand, when firms carried on more than one trade in the same establishment they were sometimes asked to make a separate return for each industry, in which event the single plant was counted as two or more establishments. In the majority of industries, however, the number of plants is identical with the number of establishments.

Capital Employed.—Firms were asked to report only the capital employed for manufacturing purposes and were instructed to exclude any investment which was not a proper charge on manufacturing operations. Investments in other establishments were excluded as also were investments in land, building and equipment which were not used in manufacturing or which were under construction at the end of the year. In cases where the building or machinery was rented, the concerns were instructed to estimate the values on the basis of annual rentals. The value of fixed assets was computed at the "present value" or the original cost less reasonable depreciation plus any increases in land values. Inventory values were as at the end of the year.

Salaried Employees and Salaries.—Salaried employees include all supervisory and office employees such as managers, superintendents, professional and office or clerical employees and travelling salesmen who were attached to the plant and who devoted all or the greater part of their time to such work. Employees in branch offices or salesmen on part time were excluded. In reporting the number of salaried employees the firms were instructed to give the number on the most representative date or the average for the year. In cases where the owner was also a manual worker such owner was considered to be a salaried employee. Salaried workers on new construction were excluded.

Salaries covered the actual amount of money paid to all salaried employees as defined above.

Wage-Earners and Wages.—All manual workers, whether skilled or unskilled, who were engaged in the production or delivery of manufactured products, were classed as wage-earners. Foremen and overseers who performed work similar to the other employees under their supervision were also included under this category. Wage-earners employed on new construction were excluded. Firms were asked to give the number of workers on the pay-roll on the last work-day of each month. The average for the year in a single establishment was calculated by adding the monthly figures and dividing by 12. The average for an industry was obtained by adding the averages for individual establishments. No distinction was made between full-time and part-time workers.

Wages covered the actual amounts paid during the year to the wage-earners as defined on page 3. Owing to the inclusion of part-time workers the figure obtained by dividing total wages by the average of employees does not represent the average wages received by full-time wage-earners.

Fuel and Electricity.—All fuel and electricity for heating or power purposes was included under this heading. Coke, gas and fuel oil made for the makers' own use were included. Any coal or coke charged directly to melting furnaces or used as raw material in making manufactured goods was excluded. The value represents the cost delivered at the works.

Power Equipment.—Firms were instructed to report under this heading all power units whether in use during the year or not.

Materials Used.—Under this heading was included all materials used in the production of the goods recorded on the returns of the reporting companies. The value represents the cost delivered at the works. Any goods purchased for resale without further manufacture were excluded, as also were any charges for such items as rent, insurance, depreciation, new machinery, and new construction or plant repairs. The cost of containers and packing materials was included.

Products.—Firms were instructed to report under this heading the quantity and value of all goods made during the year whether for home consumption or for export and whether sold during the year or not. The gross value represents the selling value at the works or the amounts actually received at the factories from the sale of their products, the value for any unsold products being computed at average prices. In cases where goods were transferred to another plant or department which was covered by a separate report, the producers were asked to give the transfer values as entered in their books. In certain specific industries the value of factory sales was asked for instead of the value of production but in most instances and unless otherwise specified the value shown is the value of actual output.

The products made by the establishments in a given industry, on the one hand, usually include minor products different from those covered by the industry designation, and, on the other hand, may not include the entire output of products normally belonging to the industry because some goods of this class may be made as secondary products in other industries. In the detailed tables for individual industries the figures relating to specific products are, therefore, likely to be incomplete. In most cases this fact is indicated by an asterisk and total figures are given in special tables. The alphabetical list for all industries also helps to avoid any misunderstanding, by combining production data for all industries in the group.

Net Value of Products.—The gross value of products is not a satisfactory measure of the importance of a given industry because only a part of this value is actually created within the industry, another, and often a larger part being contributed by the value of the materials used. Again the finished products of one industry become the raw materials of another, thus leading to a multiplication in values as the materials go through the different manufacturing processes. This duplication is eliminated and a truer measure of the importance of an industry indicated by the "net value of production" which is obtained by deducting the cost of materials, fuel and electricity, from the gross selling value of products.

Imports and Exports.—The quantities and values are based upon the declarations of importers (import entries) and of exporters (export entries) as subsequently checked by Customs officials. The weight is the net weight of the goods; that is, it excludes the weight of the covers or receptacles, except for certain goods as definitely provided in the Customs tariff.

Imports represent "Imports entered for Consumption" which means that the goods have passed into the custody of the importer and that duty has been paid on the dutiable portion. The value of merchandise imported is, under the provisions of the law, the fair market value or price thereof when sold for home consumption in the principal markets of the country from which, and at the same time when, the said merchandise was exported directly to Canada.

The value of exports of Canadian merchandise is the actual cost or the value at the time of exportation at the points in Canada whence consigned for export.

Re-exports include only exports of foreign merchandise which has been imported. The value of such commodities is the actual cost of such goods.

Profits and Production Costs.—Profits cannot be calculated from the census statistics as data have not been collected for certain general overhead expenses such as insurance, depreciation, advertising, taxes, rent, interest, etc.

Abbreviations.—The letters "n.o.p." or "n.e.s." mean "not otherwise provided for" or "not elsewhere specified".

Units of Measure.—The "ton" used throughout this report is the "short or net ton (2,000 pounds)" unless otherwise specified. The "gallon" is the "Imperial gallon".

PREFACE

This report presents figures on production, capital, employees, etc., for the manufacturing plants in Canada which use non-ferrous metals as their principal materials. Smelters and refineries, brass foundries, jewellery and silverware factories, electrical equipment factories and other such works which were engaged in fabricating non-ferrous metals come in this category.

The importance of this group of factories to Canada's industrial life is indicated by the fact that, in 1938 the 520 plants employed 44,440 workers and produced goods worth $434,699,676.

Statistics given herein are for the years 1937 and 1938, bringing up-to-date, in printed form, the yearly records which were started in 1920.

Attention is directed to the notes on the preceding pages which outline the Bureau's classification of industries for the collection of production statistics and describe the various terms used in the report.

The alphabetical lists of materials (Table 21) and products (Table 22) provide convenient summaries for the several industries in this group. A similar list of products for all manufacturing industries in Canada is published annually by the Bureau and may be obtained upon request.

Statistics of imports and exports are available on a monthly basis, and detailed reports are published quarterly and annually.

This report has been prepared by Mr. Harold McLeod, B.Sc., under the direction of Mr. W. H. Losee, B.Sc., Chief of the Mining, Metallurgical and Chemical Branch of the Bureau.

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DOMINION BUREAU OF STATISTICS,
OTTAWA, March 12, 1940.

TABLE OF CONTENTS

PAGE

List of Publications ... Inside front and back covers
Notes on Statistics of Production ... 2
Explanatory Notes ... 3
Preface ... 5
Table of Contents ... 6

CHAPTER ONE—**General Review**

Summary Text ... 7
Principal Statistics, by Industries, 1934-1938 ... 9
Principal Statistics, by Provinces, 1934-1938 ... 10
Principal Statistics, by Provinces and by Industries, 1937 and 1938 ... 11
Capital Employed, 1937 and 1938 ... 13
Employees, Salaries and Wages, 1937 and 1938 ... 15
Power Equipment, 1937 and 1938 ... 18
Fuel and Electricity Used, 1937 and 1938 ... 20
List of Materials, 1937 and 1938 ... 24
List of Products, 1937 and 1938 ... 26
Imports and Exports, 1937 and 1938 ... 31

CHAPTER TWO—**The Aluminium Products Industry**

Principal Statistics ... 36
Capital Employed ... 37
Employees, Salaries and Wages ... 37
Fuel and Power ... 38
Materials Used ... 39
Products Made ... 39
Production of Aluminium Kitchen Utensils ... 39
Imports and Exports ... 40
Directory of Firms ... 42

CHAPTER THREE—**The Brass and Copper Products Industry**

Principal Statistics ... 43
Size of Establishments ... 45
Capital Employed ... 45
Employees, Salaries and Wages ... 46
Fuel and Power ... 47
Materials Used ... 48
Products Made ... 49
Production of Brass and Iron Valves ... 49
Imports ... 50
Directory of Firms ... 51

CHAPTER FOUR—**The White Metals Alloys Industry**

Principal Statistics ... 55
Capital Employed ... 56
Employees, Salaries and Wages ... 57
Fuel and Power ... 57
Materials Used ... 58
Products Made ... 58
Production of Babbitt, Solders, Type and Type Metal ... 59
Imports and Exports ... 59
Directory of Firms ... 60

CHAPTER FIVE—**The Jewellery and Silverware Industry**

Principal Statistics ... 62
Capital Employed ... 63
Employees, Salaries and Wages ... 64
Fuel and Power ... 65
Materials Used ... 66
Products Made ... 66
Production of Jewellery, Clocks and Watches, and Watch Cases ... 67
Production of Silverware ... 67
Imports and Exports ... 67
Directory of Firms ... 68

CHAPTER SIX—**The Electrical Apparatus and Supplies Industry**

Principal Statistics ... 70
Capital Employed ... 72
Employees, Salaries and Wages ... 73
Fuel and Power ... 74
Materials Used ... 75
Products Made ... 76
Production of Transformers ... 78
Production of Electrical Conduit ... 78
Production of Generators ... 78
Production of Motors ... 79
Production of Washing Machines ... 79
Production of Electric Ironers ... 80
Production of Electrical Wires and Cables ... 80
Production of Vacuum Cleaners and Parts ... 80
Production of Electric Batteries ... 81
Production of Electric Lighting Fixtures ... 81
Production of Stoves ... 82
Production of Electric Refrigerators ... 82
Production of Domestic Water Heaters ... 83
Production of Radio Tubes ... 83
Production of Radio Sets ... 81
Production of Oil Burners ... 83
Production of Incandescent Lamps ... 83
Production of Wiring Devices ... 84
Production of Electrical Switchgear ... 83
Imports and Exports ... 84
Directory of Firms ... 85

CHAPTER SEVEN—**The Non-Ferrous Metal Smelting and Refining Industry**

Principal Statistics ... 89
Employees, Salaries and Wages ... 90
Fuel and Power ... 91
Capacity of Copper Smelters and Refineries ... 92
Metal Prices ... 92
World Production of Copper ... 93
Capacity Lead Smelting ... 94
World Production of Lead ... 94
Capacity of Electrolytic Zinc Plants ... 94
World Production of Zinc ... 95
World Production of Aluminium ... 96
World Production of Nickel Ore ... 95
Production of Gold ... 96
Production of Silver ... 96
Directory of Firms ... 97

CHAPTER EIGHT—**The Miscellaneous Non-Ferrous Metal Products Industry**

Principal Statistics ... 98
Capital Employed ... 99
Employees, Salaries and Wages ... 99
Fuel and Power ... 100
Materials Used and Products Made ... 100
Directory of Firms ... 101

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MANUFACTURES OF THE NON-FERROUS METALS IN CANADA, 1938

CHAPTER ONE

GENERAL REVIEW

Production in Canada of non-ferrous metals and their manufactures was valued at $434,699,676 in 1938 according to final figures compiled from the Census of Industry reports for that year. This value was 10 per cent below the corresponding total for 1937 but was higher than for any other year on record.

For the group as a whole there were 520 factories in operation in 1938 compared with 525 in 1937. Capital employed advanced 6·8 per cent to $327,463,534; the number of workers declined 0·4 per cent to 44,440; salaries and wages increased 0·5 per cent to $58,010,696; and the cost of materials for manufacturing dropped 10·6 per cent to $252,624,911.

Six of the seven industries in this group showed declines in production in 1938 as compared with 1937. Aluminium manufactures dropped 3 per cent to $6,924,088; brass and copper products, 19·5 per cent to $27,727,637; white metal alloys, 15·2 per cent to $9,011,283; electrical apparatus, 8·8 per cent to $90,129,119; non-ferrous smelting and refining, 9·7 per cent to $287,295,733; and miscellaneous non-ferrous metal products, 1·1 per cent to $1,588,662. Output for the jewellery and silverware industry increased 2·1 per cent to $13,374,183.

Most of the factories were located in Ontario and Quebec. In 1938 Ontario had 343 establishments or 66 per cent of the total for all Canada, and their output valued at $275,082,615 accounted for 63 per cent of the Dominion total. Quebec had 114 manufacturing plants in this group and an output valued at $114,110,551; British Columbia had 30 establishments and a production of $27,435,261 and Manitoba had 22 plants with an output at $12,392,036. There were also 8 factories in Alberta, 2 in New Brunswick and 1 in each of Nova Scotia and Saskatchewan. Compared with 1937, the value of production declined $37 millions in Ontario, $12 millions in British Columbia, $0·3 millions in Nova Scotia and New Brunswick, and $2·6 millions in Saskatchewan and Alberta, but advanced $4 millions in Quebec and $1·3 millions in Manitoba.

Capital employed in 1938 totalled $327,463,534, of which $186,386,103 was given as the value of land, buildings, machinery and tools, $72,081,493 as the inventory value of materials, finished products, and other supplies on hand and stocks in process, and $68,995,938 as the total of cash, bills and accounts receivable and other working capital. The smelting and refining industry and the electrical apparatus industry together accounted for 86 per cent of the total investment, the former showing a total of $184,337,126 and the latter, $97,122,970; brass and copper products came next at $22,991,460; jewellery and silverware, $9,687,335; white metal alloys, $7,197,855; aluminium products, $4,798,855; and the miscellaneous group, $1,327,933.

Factories in Ontario employed capital amounting to $202,260,631 and the works in Quebec reported a total of $86,395,471. For the other provinces the totals were: British Columbia, $289,978,505; Manitoba, $6,320,602; Nova Scotia and New Brunswick, $572,028; Saskatchewan and Alberta, $2,936,297.

The number of employees in the non-ferrous metal fabricating plants was 44,440 in 1938 compared with 44,614 in 1937. Salaried workers included 6,917 males and 2,207 females, a total of 9,124 who were paid $17,684,199 during the year. Wage-earners averaged 35,317 in number, including 30,729 males and 4,588 females and payments for wages during the year amounted to $40,326,497.

Concerns in Ontario employed 28,885 workers; in Quebec, 10,637; in British Columbia, 3,905; in Manitoba, 539; in New Brunswick and Nova Scotia, 266; in Saskatchewan and Alberta, 208.

The electrical industry employed the largest number of workers with an average pay-roll of 20,353 hands; smelting and refining was next at 12,788; brass and copper products, 5,030; jewellery and silverware, 3,299; aluminium products, 1,372; white metal alloys, 1,252; and the miscellaneous group, 346.

Expenditures for fuel and power totalled $17,382,441 in 1938 compared with $16,940,211 in 1937. Electric power alone cost $8,135,611 in 1938 and $7,184,862 in 1937, the quantities being 2,990,083,606 k.w.h. and 2,487,139,971 k.w.h. respectively.

Plants in Ontario used fuel worth $6,081,017 and electric power worth $2,171,088 while concerns in Quebec paid out $1,556,403 for fuel and $3,450,507 for electricity.

Consumption of bituminous coal in 1938 was reported at 779,694 tons and anthracite coal at 5,008 tons. Coke, including that used in blast furnaces, amounted to 299,688 tons; fuel oil, 23,841,224 gallons; manufactured gas, 219,786 M cubic feet; natural gas, 61,510 M cubic feet; gasoline, 147,398 gallons; kerosene, 16,969 gallons; wood, 14,341 cords; and other fuel, $12,282.

Power installations included 52 steam engines rated at 19,395 h.p., 12 internal combustion engines at 527 h.p., 19 hydraulic turbines at 55,550 h.p., 21,436 electric motors at 460,469 h.p. run by purchased power and 1,534 electric motors at 12,082 h.p. run by power generated in the producing plants. The number of boilers in use was 193 and the total rating of these installations was given at 38,630 h.p.

Imports into Canada of non-ferrous metals and their products were valued at $38,395,767 in 1938 compared with $47,016,907 in 1937. Exports were appraised at $255,516,252 in 1938 and $307,701,616 in 1937.

Table 1.—Principal Statistics of the Manufactures of the Non-Ferrous Metals in Canada, by Industries, 1934-1938

Year	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works	Net value of production
		$		$	$	$	$	$
Aluminium Products								
1934	16	3,759,900	789	826,597	104,115	2,115,100	3,745,433	1,526,218
1935	19	3,791,756	998	1,089,487	128,653	3,258,310	4,992,640	1,605,677
1936	19	3,884,241	1,101	1,194,999	119,320	3,799,688	5,438,281	1,519,273
1937	18	4,630,491	1,345	1,535,112	140,180	4,525,571	7,156,243	2,490,492
1938	19	4,798,855	1,372	1,619,082	136,690	4,078,112	6,924,088	2,709,286
Brass and Copper Products								
1934	125	22,325,567	3,932	4,187,652	523,103	11,177,964	19,309,314	7,608,247
1935	124	21,993,841	4,246	4,649,912	544,147	10,584,600	19,187,022	8,058,275
1936	126	22,890,531	4,596	5,293,457	567,108	14,182,328	24,947,467	10,198,031
1937	125	23,686,294	5,094	6,310,384	625,961	21,498,095	34,453,160	12,329,104
1938	127	22,991,460	5,030	6,155,367	577,601	16,002,647	27,727,637	11,147,389
White Metal Alloys								
1934	31	4,847,914	790	840,698	78,141	3,138,319	5,227,047	2,010,587
1935	32	5,521,720	797	911,644	83,503	3,993,110	6,182,402	2,105,789
1936	35	5,882,190	894	1,017,732	99,860	4,356,439	6,905,041	2,448,742
1937	38	7,155,603	1,222	1,360,216	108,519	5,749,842	9,011,283	3,152,922
1938	35	7,197,855	1,252	1,434,089	109,787	4,506,881	7,660,254	3,043,586
Jewellery and Silverware								
1934	107	7,528,257	2,420	2,650,948	93,618	3,418,798	7,859,902	4,347,486
1935	112	7,953,330	2,770	3,032,350	99,594	4,519,732	9,592,659	4,973,333
1936	113	8,834,230	2,959	3,354,169	112,126	5,022,990	10,684,548	5,549,432
1937	121	9,794,908	3,316	3,801,230	112,616	6,647,300	13,093,546	6,333,630
1938	118	9,687,335	3,299	3,852,566	110,816	6,780,352	13,374,183	6,483,015
Electrical Apparatus and Supplies								
1934	174	77,980,366	13,657	15,220,022	986,528	21,308,006	50,234,811	27,940,277
1935	182	75,499,255	15,549	17,594,759	1,070,801	25,409,806	61,152,834	34,672,227
1936	186	79,794,524	17,037	19,501,882	1,187,942	30,484,408	72,288,548	40,616,138
1937	191	97,187,905	21,706	26,291,436	1,331,249	41,695,446	98,841,992	55,815,297
1938	188	97,122,970	20,353	24,978,077	1,199,103	35,916,344	90,129,119	53,013,672
Miscellaneous Non-Ferrous Metal Products								
1934	20	999,053	291	312,863	14,623	229,589	920,924	676,712
1935	21	1,179,766	309	349,969	14,730	337,338	1,170,035	817,967
1936	18	1,177,641	333	382,902	14,671	333,438	1,163,555	815,446
1937	19	1,370,847	361	433,403	14,265	552,909	1,606,087	1,038,913
1938	20	1,327,933	346	421,552	14,897	369,763	1,588,662	1,204,002
Total for All Industries Listed Above								
1934	**473**	**117,141,057**	**21,879**	**24,038,780**	**1,800,128**	**41,387,776**	**87,297,431**	**44,109,527**
1935	**490**	**115,939,668**	**24,669**	**27,628,121**	**1,941,428**	**48,102,896**	**102,277,592**	**52,233,268**
1936	**497**	**122,463,357**	**26,920**	**30,745,141**	**2,101,027**	**58,179,351**	**121,427,440**	**61,147,062**
1937	**512**	**143,826,048**	**33,041**	**39,731,781**	**2,332,790**	**80,669,163**	**164,162,311**	**81,160,358**
1938	**507**	**143,126,408**	**31,652**	**38,460,733**	**2,148,894**	**67,654,099**	**147,403,943**	**77,600,950**
Non-Ferrous Metal Smelting and Refining								
1934	14	146,047,422	8,298	11,059,206	3,564,712	78,325,552	149,936,239	68,045,975
1935	14	145,086,299	8,944	12,687,356	3,776,381	123,027,694	186,245,658	59,441,583
1936	14	143,858,717	10,015	14,346,050	3,856,490	154,604,285	229,737,420	71,276,645
1937	14	162,696,595	11,570	17,990,947	14,607,421	201,862,965	318,278,251	101,807,865
1938	14	184,337,126	12,788	19,549,963	15,233,547	184,970,812	287,295,733	87,091,374
GRAND TOTAL								
1934	**487**	**263,188,479**	**30,177**	**35,097,986**	**5,364,840**	**119,713,328**	**237,233,670**	**112,155,502**
1935	**504**	**261,025,967**	**33,613**	**40,315,477**	**5,717,809**	**171,130,590**	**288,523,250**	**111,671,851**
1936	**511**	**266,322,074**	**36,935**	**45,091,191**	**5,957,517**	**212,783,636**	**351,164,860**	**132,423,707**
1937	**525**	**306,522,643**	**44,611**	**57,722,728**	**16,940,211**	**282,532,128**	**482,440,562**	**182,908,223**
1938	**520**	**327,463,534**	**44,440**	**58,010,696**	**17,382,441**	**252,621,911**	**434,699,676**	**181,692,324**

Table 2.—Principal Statistics of the Manufactures of the Non-Ferrous Metals in Canada, by Provinces, 1934-1938

Year	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works	Net value of production
		$		$	$	$	$	$
Nova Scotia and New Brunswick*								
1934	5	680,024	257	219,237	23,887	74,600	408,863	310,376
1935	5	695,924	281	234,886	24,833	81,516	428,007	321,658
1936	4	652,021	284	229,360	23,541	104,868	550,781	422,372
1937	5	787,420	365	334,085	32,274	244,106	848,522	572,142
1938	3	572,028	266	241,123	23,122	113,191	530,224	393,911
Quebec								
1934	110	56,795,895	6,566	7,869,398	1,032,162	32,322,584	57,108,642	23,753,896
1935	109	54,367,793	7,426	8,878,421	1,074,246	44,648,218	69,505,463	23,782,999
1936	114	59,689,009	8,077	9,814,710	817,191	53,183,872	82,417,242	28,416,179
1937	118	75,839,501	10,393	12,626,010	3,839,668	67,196,933	110,296,455	39,259,854
1938	114	86,395,471	10,637	13,472,428	5,006,910	68,787,062	114,110,551	40,316,579
Ontario								
1934	318	157,449,563	19,433	22,395,615	2,059,703	72,575,785	150,327,372	75,691,884
1935	330	158,043,544	21,951	26,009,921	2,266,463	97,748,981	180,945,758	80,930,314
1936	334	170,527,387	24,818	29,829,205	2,372,817	130,130,736	227,615,259	95,111,706
1937	343	194,238,903	30,146	39,121,940	9,227,759	171,799,405	312,232,649	131,205,485
1938	343	202,260,631	28,885	37,746,410	8,252,105	152,241,431	275,082,615	114,589,079
Manitoba								
1934	20	4,382,967	543	434,613	86,826	2,215,032	7,588,338	5,286,480
1935	19	5,622,261	327	452,207	51,618	8,511,858	9,383,623	820,147
1936	19	5,042,353	332	466,636	46,217	6,154,527	8,049,669	1,848,925
1937	21	6,703,169	364	477,672	342,862	9,796,266	12,087,723	1,948,595
1938	22	6,320,602	539	765,131	367,821	10,567,122	12,392,036	1,457,093
Saskatchewan† and Alberta								
1934	8	1,144,231	130	102,086	20,334	294,787	922,984	607,863
1935	9	1,493,749	79	110,977	11,189	1,836,802	2,003,169	155,178
1936	9	2,276,514	106	157,029	9,904	3,141,249	4,731,521	1,580,368
1937	9	3,110,205	112	156,337	155,447	5,102,831	7,708,505	2,450,227
1938	9	2,936,297	208	298,991	169,763	3,947,343	5,148,989	1,031,883
British Columbia								
1934	27	43,035,799	3,248	4,077,037	2,141,928	12,230,540	20,877,471	6,505,003
1935	33	41,402,696	3,549	4,629,065	2,289,460	18,303,215	26,257,230	5,664,555
1936	32	28,134,790	3,318	4,594,251	2,687,847	20,068,384	27,800,388	5,044,157
1937	30	25,843,445	3,234	5,006,684	3,342,201	28,392,587	39,266,708	7,531,920
1938	30	28,978,505	3,905	5,486,613	3,562,720	16,968,762	27,435,261	6,903,779
Canada								
1934	487	263,488,479	30,177	35,097,986	5,364,810	119,713,328	237,233,670	112,155,502
1935	504	261,625,967	33,613	40,315,477	5,717,809	171,130,590	288,523,250	111,674,851
1936	511	266,322,074	36,935	45,081,191	5,957,517	212,783,636	351,164,860	132,423,707
1937	525	306,522,643	41,614	57,722,728	16,910,211	282,532,128	482,440,562	182,968,223
1938	520	327,461,531	44,410	58,010,696	17,382,411	252,624,911	431,699,676	164,692,324

*Includes 2 firms in New Brunswick in each year.

†Includes 1 firm in Saskatchewan in each year. Data for the Flin Flon smelter, on the Manitoba-Saskatchewan boundary, are divided between these two provinces, but the plant is counted only once in the grand totals.

Table 3.—Principal Statistics of the Manufactures of Non-Ferrous Metals in Canada, by Industries and by Provinces, 1937

NOTE.—Under the Statistics Act the Bureau is not permitted to publish information which will in any way reveal the operations of individual concerns. Therefore, in the analyses by provinces, separate figures are not shown for the industries in which there were only 1 or 2 plants in operation. Data for these concerns are, however, included in the totals.

Provinces and industries	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works	Net value of production
NOVA SCOTIA AND NEW BRUNSWICK:—	No.	$	No.	$	$	$	$	$
Brass and copper products	2	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	2	.....	.....	.....	.....	.....	.....	.....
Electric apparatus and supplies	1	.....	.....	.....	.....	.....	.....	.....
Total	**5**	**787,420**	**345**	**334,085**	**32,274**	**244,106**	**848,522**	**572,142**
QUEBEC:—								
Aluminium products	3	881,421	324	331,261	20,074	1,366,835	1,708,469	321,560
Brass and copper products	30	7,361,977	1,407	1,773,108	213,729	6,431,703	10,204,934	3,559,442
White metal alloys	11	1,373,712	152	210,126	19,165	1,830,224	2,417,910	568,521
Jewellery and silverware	37	1,630,826	890	900,796	14,975	1,068,186	2,582,827	1,499,666
Electrical apparatus and supplies	30	23,527,941	5,590	6,610,037	342,569	10,220,362	23,455,526	12,892,595
Miscellaneous non-ferrous metal products	3	103,835	45	56,376	2,834	39,235	126,399	84,330
Non-ferrous metal smelting and refining	4	40,959,789	1,985	2,744,306	3,226,322	46,240,328	69,800,390	20,333,740
Total	**118**	**75,839,501**	**10,393**	**12,626,010**	**3,839,668**	**67,196,933**	**110,296,455**	**39,259,854**
ONTARIO:—								
Aluminium products	15	3,749,070	1,021	1,203,851	120,106	3,158,736	5,447,774	2,168,932
Brass and copper products	78	14,632,058	3,159	3,981,848	350,210	14,099,139	22,170,620	7,721,271
White metal alloys	23	5,364,946	1,036	1,100,956	81,886	3,554,168	6,058,767	2,422,713
Jewellery and silverware	69	8,618,041	2,351	2,818,530	94,742	5,481,995	10,317,959	4,741,222
Electrical apparatus and supplies	136	72,979,088	15,884	19,416,686	967,261	31,080,611	74,510,006	42,462,134
Miscellaneous non-ferrous metal products	15	1,266,512	315	376,981	11,421	513,271	1,478,609	953,917
Non-ferrous metal smelting and refining	7	88,229,188	6,380	10,223,088	7,602,133	113,911,485	192,248,914	70,735,296
Total	**343**	**194,238,903**	**30,146**	**39,121,940**	**9,227,759**	**171,799,405**	**312,232,619**	**131,205,485**
MANITOBA:—								
Brass and copper products	5	529,410	94	124,013	21,316	469,444	754,454	263,694
White metal alloys	2	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	3	30,104	10	7,980	780	4,770	21,536	15,986
Electrical apparatus and supplies	9	382,564	126	137,416	13,950	220,739	500,802	266,113
Miscellaneous non-ferrous metal products	1	.....	.....	.....	.....	.....	.....	.....
Non-ferrous metal smelting and refining	1	.....	.....	.....	.....	.....	.....	.....
Total	**21**	**6,703,169**	**364**	**477,672**	**342,862**	**9,796,266**	**12,087,723**	**1,948,595**
SASKATCHEWAN AND ALBERTA:—								
Brass and copper products	1	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	3	8,512	5	4,987	169	11,274	21,783	10,340
Electrical apparatus and supplies	4	88,406	22	21,129	2,216	26,882	47,431	18,333
Non-ferrous metal smelting and refining	1	.....	.....	.....	.....	.....	.....	.....
Total	**9**	**3,110,205**	**112**	**156,337**	**155,447**	**5,102,831**	**7,708,505**	**2,450,227**
BRITISH COLUMBIA:—								
Brass and copper products	9	130,196	52	62,150	4,673	61,363	170,227	154,191
White metal alloys	2	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	7	95,874	51	64,046	1,539	78,770	141,443	61,134
Electrical apparatus and supplies	11	199,806	83	105,618	5,105	146,062	326,711	175,544
Non-ferrous metal smelting and refining	1	.....	.....	.....	.....	.....	.....	.....
Total	**20**	**25,843,445**	**3,234**	**5,006,684**	**3,342,201**	**28,382,587**	**39,266,708**	**7,531,920**
Canada, 1937:—								
Aluminium products	**18**	**4,630,491**	**1,345**	**1,535,112**	**140,180**	**4,525,571**	**7,156,243**	**2,490,492**
Brass and copper products	**125**	**23,686,291**	**5,094**	**6,310,384**	**625,961**	**21,198,095**	**34,453,160**	**12,329,104**
White metal alloys	**38**	**7,155,603**	**1,222**	**1,360,216**	**108,519**	**5,719,842**	**9,011,283**	**3,152,922**
Jewellery and silverware	**121**	**9,791,968**	**3,316**	**3,801,230**	**112,616**	**6,647,300**	**13,093,546**	**6,233,630**
Electrical apparatus and supplies	**191**	**97,187,905**	**21,706**	**26,291,436**	**1,331,249**	**41,695,416**	**98,841,992**	**55,815,297**
Miscellaneous non-ferrous metal products	**19**	**1,370,847**	**361**	**433,403**	**14,265**	**552,909**	**1,606,087**	**1,038,913**
Non-ferrous metal smelting and refining	**14**	**162,696,595**	**11,570**	**17,990,947**	**14,607,421**	**201,862,965**	**318,278,251**	**101,807,865**
Total	**525**	**306,522,643**	**44,614**	**57,722,728**	**16,940,211**	**282,532,128**	**482,440,562**	**182,968,223**

Table 4.—Principal Statistics of the Manufactures of Non-Ferrous Metals in Canada, by Industries and by Provinces, 1938

(See note at beginning of Table 3)

Provinces and industries	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works	Net value of production
	No.	$	No.	$	$	$	$	$
NOVA SCOTIA AND NEW BRUNSWICK:—								
Brass and copper products	2	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	1	.....	.....	.....	.....	.....	.....	.....
Total	**3**	**572,028**	**266**	**241,123**	**23,122**	**113,191**	**530,224**	**393,911**
QUEBEC:—								
Aluminium products	3	923,013	390	427,723	24,760	1,302,681	1,742,956	415,515
Brass and copper products	29	7,406,370	1,421	1,757,966	195,382	5,016,788	8,287,418	3,075,248
White metal alloys	11	1,325,669	157	202,631	18,307	1,321,261	1,780,964	441,396
Jewellery and silverware	37	1,640,400	890	914,687	14,518	948,481	2,320,692	1,357,693
Electrical apparatus and supplies	27	22,905,949	5,215	6,449,159	304,978	8,407,807	20,937,284	12,224,499
Miscellaneous non-ferrous metal products	3	91,618	40	43,025	2,601	32,674	86,792	51,517
Non-ferrous metal smelting and refining	4	52,102,452	2,524	3,677,237	4,446,364	51,757,370	78,954,445	22,750,711
Total	**114**	**86,395,471**	**10,637**	**13,472,428**	**5,006,910**	**68,787,062**	**114,110,551**	**40,316,579**
ONTARIO:—								
Aluminium products	16	3,875,842	982	1,191,359	111,930	2,775,431	5,181,132	2,293,771
Brass and copper products	81	14,141,438	3,165	3,890,160	329,007	10,374,685	17,885,982	7,182,290
White metal alloys	20	5,496,595	1,058	1,179,072	83,853	2,902,783	5,401,743	2,415,107
Jewellery and silverware	68	7,885,108	2,322	2,836,403	93,894	5,765,150	10,854,201	4,995,157
Electrical apparatus and supplies	136	73,524,692	14,908	18,247,713	872,121	27,106,345	68,249,332	40,270,866
Miscellaneous non-ferrous metal products	15	1,229,726	304	377,795	12,253	334,946	1,497,602	1,150,403
Non-ferrous metal smelting and refining	7	96,107,230	6,146	10,023,908	6,749,047	102,982,091	166,012,623	56,281,485
Total	**343**	**202,260,631**	**28,885**	**37,746,410**	**8,252,105**	**152,241,431**	**275,082,615**	**114,589,079**
MANITOBA:—								
Brass and copper products	5	498,929	89	130,797	20,586	291,032	569,404	257,786
White metal alloys	2	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	2	.....	.....	.....	.....	.....	.....	.....
Electrical apparatus and supplies	10	387,428	123	150,348	14,501	236,785	543,149	291,863
Miscellaneous non-ferrous metal products	2	.....	.....	.....	.....	.....	.....	.....
Non-ferrous metal smelting and refining	1	.....	.....	.....	.....	.....	.....	.....
Total	**22**	**6,320,602**	**539**	**765,131**	**367,821**	**10,567,122**	**12,392,036**	**1,457,093**
SASKATCHEWAN AND ALBERTA:—								
Brass and copper products	1	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	3	8,955	7	8,412	167	11,584	23,086	11,335
Electrical apparatus and supplies	4	80,692	26	22,131	1,862	28,184	67,050	37,004
Non-ferrous metal smelting and refining	*1	.....	.....	.....	.....	.....	.....	.....
Total	**9**	**2,936,297**	**208**	**298,991**	**169,763**	**3,947,343**	**5,148,989**	**1,031,883**
BRITISH COLUMBIA:—								
Brass and copper products	9	149,832	66	93,314	5,290	88,177	236,052	142,585
White metal alloys	2	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	7	127,330	65	81,966	1,446	50,067	155,335	103,822
Electrical apparatus and supplies	11	224,209	81	108,726	5,641	137,223	332,304	189,440
Non-ferrous metal smelting and refining	1	.....	.....	.....	.....	.....	.....	.....
Total	**30**	**28,978,505**	**3,905**	**5,486,613**	**3,562,720**	**16,968,762**	**27,435,361**	**6,903,779**
Canada, 1938:—								
Aluminium products	**19**	**4,798,855**	**1,372**	**1,619,082**	**136,690**	**4,078,112**	**6,924,088**	**2,709,286**
Brass and copper products	**127**	**22,991,460**	**5,030**	**6,155,367**	**577,601**	**16,002,647**	**27,727,637**	**11,147,389**
White metal alloys	**35**	**7,197,855**	**1,252**	**1,434,089**	**109,787**	**4,506,881**	**7,660,254**	**3,043,586**
Jewellery and silverware	**118**	**9,687,335**	**3,299**	**3,852,566**	**110,816**	**6,780,352**	**13,374,183**	**6,483,015**
Electrical apparatus and supplies	**188**	**97,122,970**	**20,353**	**24,978,077**	**1,199,103**	**35,916,344**	**90,129,119**	**53,013,672**
Miscellaneous non-ferrous metal products	**20**	**1,327,933**	**346**	**421,552**	**14,897**	**369,763**	**1,588,662**	**1,204,002**
Non-ferrous metal smelting and refining	**14**	**184,337,126**	**12,788**	**19,549,963**	**15,233,547**	**184,970,812**	**287,295,733**	**87,091,374**
Total	**520**	**327,463,534**	**44,440**	**58,010,696**	**17,382,441**	**252,624,911**	**434,699,676**	**164,692,324**

*Data for the Flin Flon smelter, situated on the Manitoba-Saskatchewan boundary, are divided between the two provinces but this work is counted as only one plant in the final total.

Table 5.—Capital Employed in the Manufactures of the Non-Ferrous Metals in Canada by Industries and by Provinces, 1937

Provinces and industries	Present value of lands, buildings, machinery and tools	Inventory value of materials on hand, stocks in process, fuel, other supplies and finished products on hand	Operating capital, (cash, bills and accounts receivable, etc.)	Total
	$	$	$	$
NOVA SCOTIA AND NEW BRUNSWICK:—				
Total*	**353,139**	**345,078**	**89,203**	**787,420**
QUEBEC:—				
Aluminium products	442,385	132,463	306,573	881,421
Brass and copper products	4,841,960	1,289,381	1,230,636	7,361,977
White metal alloys	530,612	288,686	554,414	1,373,712
Jewellery and silverware	637,935	602,214	390,677	1,630,826
Electrical apparatus	11,975,764	6,443,727	5,108,450	23,527,941
Miscellaneous non-ferrous metal products	52,542	28,344	22,949	103,835
Non-ferrous metal smelting and refining	23,491,056	4,059,516	13,409,217	40,959,789
Total	**41,972,254**	**12,844,331**	**21,022,916**	**75,839,501**
ONTARIO:—				
Aluminium products	1,802,081	858,684	1,088,305	3,749,070
Brass and copper products	7,147,843	3,586,869	3,897,346	14,632,058
White metal alloys	2,562,466	981,191	1,821,289	5,364,946
Jewellery and silverware	2,905,705	2,906,734	2,205,602	8,018,041
Electrical apparatus	21,466,487	23,085,345	28,427,256	72,979,088
Miscellaneous non-ferrous metal products	402,704	491,858	371,950	1,266,512
Non-ferrous metal smelting and refining	72,139,317	13,848,923	2,240,948	88,229,188
Total	**108,426,603**	**45,759,604**	**40,052,696**	**194,238,903**
MANITOBA:—				
Brass and copper products	274,576	106,728	148,106	529,410
Electrical apparatus	161,096	146,344	75,124	282,564
Total*	**4,553,471**	**344,411**	**1,805,287**	**6,703,169**
ALBERTA AND SASKATCHEWAN:—				
Electrical apparatus	52,188	26,055	10,163	88,406
Total*	**2,145,327**	**106,880**	**857,988**	**3,110,205**
BRITISH COLUMBIA:—				
Brass and copper products	71,480	19,616	39,100	130,196
Jewellery and silverware	32,496	39,261	24,117	95,874
Electrical apparatus	72,649	69,368	57,789	199,806
Total*	**11,742,903**	**11,231,397**	**2,869,145**	**25,843,445**
Canada:—				
Aluminium products	2,244,466	991,147	1,394,878	4,630,491
Brass and copper products	12,796,651	5,405,594	5,484,049	23,686,294
White metal alloys	3,292,468	1,369,900	2,493,235	7,155,603
Jewellery and silverware	3,609,534	3,555,713	2,629,661	9,794,908
Electrical apparatus	33,733,084	29,770,839	33,683,982	97,187,905
Miscellaneous non-ferrous metal products	455,746	520,202	394,899	1,370,847
Non-ferrous metal smelting and refining	113,061,758	29,018,306	20,616,531	162,696,595
Total	**169,193,707**	**70,631,701**	**66,697,235**	**306,522,643**

*Totals also include data for industries in which there were only one or two plants in operation; for the number and distribution of these factories see Tables 3 and 4.

Table 6.—Capital Employed in the Manufactures of the Non-Ferrous Metals in Canada, by Industries and by Provinces, 1938

Provinces and industries	Present value of lands, buildings, machinery and tools	Inventory value of materials on hand, stocks in process, fuel, other supplies and finished products on hand	Operating capital, (cash, bills and accounts receivable, etc.)	Total
	$	$	$	$
NOVA SCOTIA AND NEW BRUNSWICK:—				
Total*	**252,521**	**253,156**	**66,351**	**572,028**
QUEBEC:—				
Aluminium products	434,492	139,560	348,961	**923,013**
Brass and copper products	4,668,197	1,466,284	1,271,889	**7,406,370**
White metal alloys	591,909	294,176	439,584	**1,325,669**
Jewellery and silverware	656,803	589,447	394,150	**1,640,400**
Electrical apparatus	12,030,477	5,396,385	5,479,087	**22,905,949**
Miscellaneous non-ferrous metal products	51,816	25,405	14,397	**91,618**
Non-ferrous smelting and refining	28,217,693	4,816,732	19,068,027	**52,102,452**
Total	**46,651,387**	**12,727,989**	**27,016,095**	**86,395,471**
ONTARIO:—				
Aluminium products	1,889,821	799,114	1,186,907	**3,875,842**
Brass and copper products	7,175,964	3,497,859	3,467,615	**14,141,438**
White metal alloys	2,524,703	1,079,867	1,892,025	**5,496,595**
Jewellery and silverware	2,536,393	2,975,080	2,373,635	**7,885,108**
Electrical apparatus	28,803,180	19,820,898	24,900,614	**73,524,692**
Miscellaneous non-ferrous metal products	405,994	386,569	437,163	**1,229,726**
Non-ferrous smelting and refining	75,527,593	17,814,987	2,764,650	**96,107,230**
Total	**118,863,648**	**46,371,374**	**37,022,609**	**202,260,631**
MANITOBA:—				
Brass and copper products	275,970	142,096	80,863	**498,929**
Electrical apparatus	162,552	128,111	96,765	**387,428**
Total*	**3,527,316**	**449,530**	**2,343,756**	**6,320,602**
ALBERTA AND SASKATCHEWAN:—				
Electrical apparatus	35,345	24,452	20,895	**80,692**
Total*	**1,646,040**	**142,404**	**1,147,853**	**2,936,297**
BRITISH COLUMBIA:—				
Brass and copper products	81,297	31,572	36,963	**149,832**
Jewellery and silverware	29,632	54,020	43,678	**127,330**
Electrical apparatus	102,001	71,642	50,566	**224,209**
Total*	**15,445,191**	**12,134,040**	**1,399,274**	**28,978,505**
Canada:—				
Aluminium products	**2,324,313**	**938,674**	**1,535,868**	**4,798,855**
Brass and copper products	**12,568,707**	**5,442,211**	**4,880,542**	**22,991,460**
White metal alloys	**3,296,360**	**1,473,861**	**2,427,634**	**7,197,855**
Jewellery and silverware	**3,246,905**	**3,635,129**	**2,815,301**	**9,687,335**
Electrical apparatus	**41,133,555**	**25,441,488**	**30,547,927**	**97,122,970**
Miscellaneous non-ferrous metal products	**463,710**	**412,109**	**452,114**	**1,327,933**
Non-ferrous metal smelting and refining	**123,352,553**	**31,748,021**	**26,236,552**	**181,337,126**
Total	**186,386,103**	**72,081,493**	**68,995,938**	**327,463,531**

*Totals also include data for industries in which there were only one or two plants in operation, for the number and distribution of these factories see Tables 3 and 4.

Table 7.—Employees, Salaries and Wages in the Manufactures of the Non-Ferrous Metals in Canada, by Industries and by Provinces, 1937

Provinces and industries	Salaried employees		Wage-earners		Total employees	Salaries	Wages	Total salaries and wages
	Male	Female	Male	Female				
						$	$	$
NOVA SCOTIA AND NEW BRUNSWICK:—								
Total*	**54**	**6**	**284**	**21**	**365**	**74,893**	**259,192**	**334,085**
QUEBEC:—								
Aluminium products	15	5	304	.....	324	40,735	290,526	331,261
Brass and copper products	232	49	1,032	94	1,407	568,758	1,204,350	1,773,108
White metal alloys	41	10	99	2	152	116,769	93,357	210,126
Jewellery and silverware	101	46	527	216	890	293,007	607,789	900,796
Electrical apparatus and supplies	1,087	392	2,922	1,189	5,590	2,688,570	3,921,467	6,610,037
Miscellaneous non-ferrous metal products	9	4	24	8	45	34,079	22,297	56,376
Non-ferrous metal smelting and refining	239	32	1,714	.....	1,985	510,144	2,234,162	2,744,306
Total	**1,724**	**538**	**6,622**	**1,509**	**10,393**	**4,252,062**	**8,373,948**	**12,626,010**
ONTARIO:—								
Aluminium products	123	50	718	130	1,021	295,249	908,602	1,203,851
Brass and copper products	500	143	2,338	178	3,159	1,159,073	2,822,775	3,981,848
White metal alloys	128	71	591	246	1,036	303,482	797,474	1,100,956
Jewellery and silverware	300	157	1,451	443	2,351	863,050	1,955,480	2,818,530
Electrical apparatus and supplies	2,892	1,044	9,182	2,766	15,884	7,313,550	12,103,136	19,416,686
Miscellaneous non-ferrous metal products	70	31	160	54	215	182,425	194,556	376,981
Non-ferrous metal smelting and refining	339	60	5,981	.....	6,380	1,202,017	9,021,071	10,223,088
Total	**4,352**	**1,556**	**20,421**	**3,817**	**30,146**	**11,318,846**	**27,803,094**	**39,121,940**
MANITOBA:—								
Brass and copper products	24	.....	69	1	94	59,166	64,847	124,013
Electrical apparatus and supplies	31	8	85	2	126	77,766	59,650	137,416
Total*	**77**	**11**	**273**	**3**	**364**	**189,331**	**288,341**	**477,672**
ALBERTA AND SASKATCHEWAN:—								
Electrical apparatus and supplies	5	2	14	1	22	8,264	12,865	21,129
Total*	**20**	**2**	**89**	**1**	**112**	**46,544**	**109,793**	**156,337**
BRITISH COLUMBIA:—								
Brass and copper products	9	2	41	.....	52	16,735	45,415	62,150
Jewellery and silverware	11	1	39	.....	51	19,603	44,443	64,046
Electrical apparatus and supplies	23	3	56	1	83	50,951	54,667	105,618
Total*	**313**	**58**	**2,862**	**1**	**3,234**	**914,093**	**4,092,591**	**5,006,684**
Canada, 1937:—								
Aluminium products	**138**	**55**	**1,022**	**130**	**1,345**	**335,981**	**1,199,128**	**1,535,142**
Brass and copper products	**821**	**198**	**3,781**	**294**	**5,094**	**1,896,008**	**4,414,376**	**6,310,384**
White metal alloys	**177**	**86**	**711**	**248**	**1,222**	**415,282**	**944,934**	**1,360,216**
Jewellery and silverware	**425**	**207**	**2,025**	**659**	**3,316**	**1,187,041**	**2,614,189**	**3,801,230**
Electrical apparatus and supplies	**4,038**	**1,449**	**12,280**	**3,959**	**21,766**	**10,139,101**	**16,152,335**	**26,291,436**
Miscellaneous non-ferrous metal products	**79**	**35**	**185**	**62**	**361**	**216,504**	**216,899**	**433,403**
Non-ferrous metal smelting and refining	**842**	**141**	**10,567**	.....	**11,570**	**2,575,849**	**15,415,096**	**17,990,947**
Total	**6,540**	**2,171**	**30,551**	**5,352**	**44,614**	**16,795,769**	**40,926,959**	**57,722,728**

*Totals also include data for industries in which there were only one or two plants in operation; for the number and distribution of these factories see Tables 3 and 4.

Table 8.—Employees, Salaries and Wages in the Manufactures of the Non-Ferrous Metals in Canada, by Industries and by Provinces, 1938

Provinces and industries	Salaried employees		Wage-earners		Total employees	Salaries	Wages	Total salaries and wages
	Male	Female	Male	Female				
						$	$	$
NOVA SCOTIA AND NEW BRUNSWICK:—								
Total*	**53**	**5**	**195**	**13**	**266**	**71,977**	**169,146**	**241,123**
QUEBEC:—								
Aluminium products	17	5	368	.....	**390**	44,410	383,313	**427,723**
Brass and copper products	250	56	1,048	67	**1,421**	610,208	1,147,758	**1,757,966**
White metal alloys	42	8	106	1	**157**	106,043	96,588	**202,631**
Jewellery and silverware	114	45	522	209	**890**	315,430	599,257	**914,687**
Electrical apparatus and supplies	1,131	375	2,707	1,002	**5,215**	2,922,535	3,526,624	**6,449,159**
Miscellaneous non-ferrous metal products	6	3	25	6	**40**	20,756	22,269	**43,025**
Non-ferrous metal smelting and refining	260	37	2,227	.....	**2,524**	555,859	3,121,378	**3,677,237**
Total	**1,820**	**529**	**7,003**	**1,285**	**10,637**	**4,575,241**	**8,897,187**	**13,472,428**
ONTARIO:—								
Aluminium products	142	53	677	110	**982**	340,868	850,491	**1,191,359**
Brass and copper products	582	153	2,260	170	**3,165**	1,343,549	2,546,611	**3,890,160**
White metal alloys	116	72	615	255	**1,058**	336,587	842,485	**1,179,072**
Jewellery and silverware	296	150	1,428	448	**2,322**	845,290	1,991,113	**2,836,403**
Electrical apparatus and supplies	3,043	1,062	8,539	2,264	**14,908**	7,588,559	10,659,154	**18,247,713**
Miscellaneous non-ferrous metal products	85	39	139	41	**304**	203,165	174,630	**377,795**
Non-ferrous metal smelting and refining	253	74	5,819	.....	**6,146**	1,066,011	8,957,897	**10,023,908**
Total	**4,517**	**1,603**	**19,477**	**3,288**	**28,885**	**11,724,029**	**26,022,381**	**37,746,410**
MANITOBA:—								
Brass and copper products	25	.....	64	.....	**89**	69,638	61,159	**130,797**
Electrical apparatus and supplies	35	6	80	2	**123**	87,867	62,481	**150,348**
Total*	**106**	**9**	**422**	**2**	**539**	**260,138**	**504,993**	**765,131**
ALBERTA AND SASKATCHEWAN:—								
Electrical apparatus and supplies	6	2	18	.....	**26**	8,047	14,084	**22,131**
Total*	**33**	**2**	**173**	.....	**208**	**78,529**	**220,462**	**298,991**
BRITISH COLUMBIA—								
Brass and copper products	9	2	55	.....	**66**	22,581	70,733	**93,314**
Jewellery and silverware	10	1	54	.....	**65**	19,050	62,916	**81,966**
Electrical apparatus and supplies	24	4	53	.....	**81**	52,474	56,252	**108,726**
Total*	**387**	**59**	**3,459**	.....	**3,905**	**974,285**	**4,512,328**	**5,486,613**
Canada, 1938:—								
Aluminium products	**159**	**58**	**1,045**	**110**	**1,372**	**385,278**	**1,233,804**	**1,619,082**
Brass and copper products	**923**	**215**	**3,642**	**250**	**5,030**	**2,140,485**	**4,014,882**	**6,155,367**
White metal alloys	**167**	**86**	**743**	**256**	**1,252**	**468,656**	**965,433**	**1,434,089**
Jewellery and silverware	**432**	**198**	**2,012**	**657**	**3,299**	**1,193,613**	**2,658,953**	**3,852,566**
Electrical apparatus and supplies	**4,239**	**1,449**	**11,397**	**3,268**	**20,353**	**10,659,482**	**14,318,595**	**24,978,077**
Miscellaneous non-ferrous metal products	**92**	**42**	**165**	**47**	**346**	**224,401**	**197,151**	**421,552**
Non-ferrous metal smelting and refining	**904**	**159**	**11,725**	.....	**12,788**	**2,612,284**	**16,937,679**	**19,549,963**
Total	**6,916**	**2,207**	**30,729**	**4,588**	**44,440**	**17,684,199**	**40,326,497**	**58,010,696**

*Totals also include data for industries in which there were only one or two plants in operation; for the number and distribution of these factories see Tables 3 and 4.

Table 9.—Wage-Earners Employed in the Manufactures of the Non-Ferrous Metals in Canada, by Months and by Industries, 1937

Months	Aluminium products	Brass and copper products	White metal alloys	Jewellery and silverware	Electrical apparatus and supplies	Miscellaneous non-ferrous metal products	Non-ferrous metal smelting and refining	Total
	No.	No.	No.	No.	No.	No.	No.	No.
January	1,016	3,787	829	2,481	13,570	202	9,814	**31,699**
February	1,032	4,007	875	2,532	13,960	213	9,842	**32,461**
March	1,042	4,103	886	2,560	14,759	211	9,966	**33,527**
April	1,100	4,245	894	2,611	15,542	213	10,153	**34,758**
May	1,100	4,234	904	2,612	16,139	233	10,458	**35,680**
June	1,119	4,223	918	2,638	16,913	250	10,814	**36,875**
July	1,203	4,148	924	2,634	17,001	260	11,047	**37,217**
August	1,211	4,214	980	2,717	17,429	251	11,172	**37,974**
September	1,215	4,185	1,054	2,845	17,867	250	11,031	**38,447**
October	1,248	4,074	1,078	2,918	17,774	251	10,895	**38,238**
November	1,275	4,031	1,081	2,885	17,457	252	10,868	**37,849**
December	1,256	3,888	1,048	2,794	16,290	243	10,749	**36,268**
Average	**1,152**	**4,075**	**959**	**2,684**	**16,219**	**247**	**10,567**	**35,903**

Table 10.—Wage-Earners Employed in the Manufactures of the Non-Ferrous Metals in Canada, by Months and by Provinces, 1937

Months	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan and Alberta	British Columbia	Canada
	No.	No.	No.	No.	No.	No.	No.	No.
January	23	271	6,597	21,730	248	85	2,745	**31,699**
February	20	320	6,908	22,289	267	87	2,570	**32,461**
March	23	298	7,357	22,872	265	86	2,626	**33,527**
April	24	313	7,709	23,583	280	88	2,761	**34,758**
May	18	326	7,955	24,220	281	88	2,792	**35,680**
June	18	329	8,399	24,852	274	94	2,909	**36,875**
July	18	354	8,382	25,073	267	91	3,032	**37,217**
August	17	313	8,862	25,371	277	90	3,044	**37,974**
September	18	312	9,105	25,694	289	88	2,941	**38,447**
October	18	209	9,006	25,656	293	89	2,967	**38,238**
November	21	191	8,935	25,322	291	90	2,999	**37,849**
December	20	183	8,387	24,336	280	89	2,973	**36,268**
Average	**20**	**285**	**8,131**	**24,238**	**276**	**90**	**2,863**	**35,903**

Table 11.—Wage-Earners Employed in the Manufactures of the Non-Ferrous Metals, in Canada, by Months and by Industries, 1938

Months	Aluminium products	Brass and copper products	White metal alloys	Jewellery and silverware	Electrical apparatus and supplies	Miscellaneous non-ferrous metal products	Non-ferrous metal smelting and refining	Total
	No.	No.	No.	No.	No.	No.	No.	No.
January	1,277	3,871	971	2,660	15,119	215	11,677	**35,790**
February	1,240	3,856	985	2,685	14,628	208	11,707	**35,309**
March	1,167	3,879	978	2,690	14,776	210	11,830	**35,528**
April	1,158	3,831	983	2,684	14,613	188	12,089	**35,546**
May	1,095	3,911	970	2,558	14,799	203	12,052	**35,588**
June	1,117	3,902	981	2,545	14,987	212	11,934	**35,678**
July	1,127	3,873	981	2,526	15,269	213	11,814	**35,803**
August	1,138	3,907	1,017	2,614	15,412	211	11,744	**36,043**
September	1,171	3,885	1,048	2,734	14,918	213	11,594	**35,563**
October	1,146	3,927	1,063	2,768	14,902	223	11,625	**35,654**
November	1,110	4,004	1,043	2,821	13,801	230	11,377	**34,386**
December	1,111	3,878	979	2,747	12,961	211	11,250	**33,137**
Average	**1,155**	**3,892**	**999**	**2,669**	**14,665**	**212**	**11,725**	**35,317**

Table 12.—Wage-Earners Employed in the Manufactures of the Non-Ferrous Metals in Canada, by Months and by Provinces, 1938

Months	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan and Alberta	British Columbia	**Canada**
	No.	No.	No.	No.	No.	No.	No.	**No.**
January	24	153	8,042	23,542	426	174	3,429	**35,790**
February	26	159	7,895	23,292	425	174	3,338	**35,309**
March	25	163	8,097	23,225	426	175	3,417	**35,528**
April	21	175	8,301	23,018	425	170	3,436	**35,546**
May	17	198	8,365	22,916	422	175	3,495	**35,588**
June	17	206	8,536	22,852	397	168	3,502	**35,678**
July	16	209	8,835	22,594	408	171	3,570	**35,803**
August	16	194	8,729	22,905	431	178	3,590	**36,043**
September	17	200	8,372	22,793	443	178	3,560	**35,563**
October	17	195	8,440	22,853	423	175	3,551	**35,654**
November	17	212	8,247	21,993	436	166	3,315	**34,386**
December	19	214	7,605	21,379	427	178	3,315	**33,137**
Average	**18**	**190**	**8,288**	**22,765**	**424**	**173**	**3,459**	**35,317**

Table 13.—Power Equipment in Plants Engaged in the Manufacture of the Non-Ferrous Metals in Canada, by Kinds and by Industries, 1937

Industries	Steam engines and turbines	Gasoline, gas and oil engines	Hydraulic turbines or water wheels	*Total primary equipment*	Electric motors run by purchased power	**Total**	Electric motors run by power generated in the same plant	*Total electric motors*	Stationary boilers
Aluminium products No.					337	**337**		*337*	4
H.P.					6,565	**6,565**		*6,565*	525
Brass and copper products No.	8	2	1	*11*	1,584	**1,595**	27	*1,611*	35
H.P.	1,295	83	25	*1,403*	24,596	**25,999**	358	*24,954*	3,154
White metal alloys No.					539	**539**		*539*	2
H.P.					4,367	**4,367**		*4,367*	83
Jewellery and silverware No.					1,103	**1,103**		*1,103*	18
H.P.					3,733	**3,733**		*3,733*	1,010
Electrical apparatus and supplies No.	16	4	8	*28*	10,436	**10,464**	1,021	*11,457*	105
H.P.	7,270	287	4,407	*11,964*	69,153	**81,117**	5,329	*74,482*	12,927
Miscellaneous non-ferrous metal products No.					62	**62**		*62*	2
H.P.					345	**345**		*345*	175
Non-ferrous metal smelting and refining No.	27	10	11	*48*	6,125	**6,173**	636	*6,761*	36
H.P.	10,285	455	51,125	*61,865*	288,040	**319,905**	8,571	*296,611*	20,850
Total No.	**51**	**16**	**20**	*87*	**20,186**	**20,273**	**1,684**	*21,870*	**202**
H.P.	**18,850**	**825**	**55,557**	*75,232*	**396,799**	**472,031**	**14,258**	*411,057*	**38,724**

Table 14.—Power Equipment in Plants Engaged in the Manufacture of the Non-Ferrous Metals in Canada, by Kinds and by Provinces, 1937

Provinces	Steam engines and turbines	Gasoline, gas and oil engines	Hydraulic turbines or water wheels	*Total primary equipment*	Electric motors run by purchased power	**Total**	Electric motors run by power generated in the same plant	*Total electric motors*	Stationary boilers
Nova Scotia No.					5	**5**		*5*	
H.P.					28	**28**		*28*	
New Brunswick No.	2			*2*	35	**37**		*35*	3
H.P.	550			*550*	511	**1,061**		*511*	500
Quebec No.	22	2	12	*36*	5,563	**5,599**	43	*5,606*	45
H.P.	8,530	90	51,150	*59,770*	54,507	**111,277**	658	*55,165*	10,815
Ontario No.	27	5	8	*40*	11,664	**11,704**	1,641	*13,305*	148
H.P.	9,770	345	4,407	*14,522*	205,570	**220,092**	13,600	*219,170*	23,159
Manitoba No.					220	**220**		*220*	1
H.P.					3,786	**3,786**		*3,786*	20
Saskatchewan and Alberta No.					72	**72**		*72*	
H.P.					1,763	**1,763**		*1,763*	
British Columbia No.		9		*9*	2,627	**2,636**		*2,627*	5
H.P.		390		*390*	130,634	**131,024**		*130,634*	4,230
Total No.	**51**	**16**	**20**	*87*	**20,186**	**20,273**	**1,684**	*21,870*	**202**
H.P.	**18,850**	**825**	**55,557**	*75,232*	**396,799**	**472,031**	**14,258**	*411,057*	**38,724**

Table 15.—Power Equipment in the Plants Engaged in the Manufacture of the Non-Ferrous Metals in Canada, by Kinds and by Industries, 1938

Industries		Steam engines and turbines	Gasoline, gas and oil engines*	Hydraulic turbines or water wheels	*Total primary equipment*	Electric motors run by purchased power	**Total**	Electric motors run by power generated in the same plant	*Total electric motors*	Stationary boilers
Aluminium products	No.	.....	.....	.....	.....	465	465	.....	*465*	6
	H.P.	.....	.....	.....	.....	7,257	7,257	.....	*7,257*	660
Brass and copper products	No.	8	1	1	*10*	1,665	1,675	27	*1,692*	39
	H.P.	1,295	75	25	*1,395*	24,567	25,962	358	*24,925*	3,329
White metal alloys	No.	.....	.....	.....	.....	563	563	.....	*563*	3
	H.P.	.....	.....	.....	.....	4,490	4,490	.....	*4,490*	143
Jewellery and silverware	No.	.....	.....	.....	.....	1,141	1,141	.....	*1,141*	15
	H.P.	.....	.....	.....	.....	3,729	3,729	.....	*3,729*	1,075
Electrical apparatus and supplies	No.	16	2	7	*25*	10,487	10,512	1,041	*11,528*	91
	H.P.	7,545	45	4,400	*11,990*	69,568	81,558	5,566	*76,134*	12,148
Miscellaneous non-ferrous metal products	No.	.....	.....	.....	.....	83	83	.....	*83*	2
	H.P.	.....	.....	.....	.....	354	354	.....	*354*	100
Non-ferrous metal smelting and refining	No.	28	10	11	*49*	7,032	7,081	466	*7,498*	37
	H.P.	10,555	437	51,125	*62,117*	350,504	412,621	6,158	*356,662*	21,175
Total	**No.**	**52**	**13**	**19**	*84*	**21,436**	**21,520**	**1,534**	*22,970*	**193**
	H.P.	**19,395**	**557**	**55,550**	*75,502*	**460,469**	**535,971**	**12,082**	*472,551*	**38,630**

* Includes one 30 h.p. diesel engine in use in the electrical apparatus industry.

Table 16.—Power Equipment in Plants Engaged in the Manufacture of the Non-Ferrous Metals in Canada, by Kinds and by Provinces, 1938

Provinces		Steam engines and turbines	Gasoline, gas and oil engines*	Hydraulic turbines or water wheels	*Total primary equipment*	Electric motors run by purchased power	**Total**	Electric motors run by power generated in the same plant	*Total electric motors*	Stationary boilers
Nova Scotia	No.	.....	.....	.....	.....	4	4	.....	*4*	.....
	H.P.	.....	.....	.....	.....	23	23	.....	*23*	.....
New Brunswick	No.	2	.....	.....	*2*	40	42	.....	*40*	3
	H.P.	550	.....	.....	*550*	519	1,069	.....	*519*	500
Quebec	No.	21	2	12	*35*	5,892	5,927	48	*5,940*	42
	H.P.	8,505	95	51,150	*59,750*	62,366	122,116	722	*63,088*	11,114
Ontario	No.	29	2	7	*38*	12,296	12,334	1,486	*13,782*	142
	H.P.	10,340	90	4,400	*14,830*	225,079	239,909	11,360	*236,439*	22,766
Manitoba	No.	.....	.....	.....	.....	350	350	.....	*350*	1
	H.P.	.....	.....	.....	.....	26,463	26,463	.....	*26,463*	20
Saskatchewan and Alberta	No.	.....	.....	.....	.....	130	130	.....	*130*	.....
	H.P.	.....	.....	.....	.....	13,071	13,071	.....	*13,071*	.....
British Columbia	No.	.....	9	.....	*9*	2,724	2,733	.....	*2,724*	5
	H.P.	.....	372	.....	*372*	132,948	133,320	.....	*132,948*	4,230
Total	**No.**	**52**	**13**	**19**	*84*	**21,436**	**21,520**	**1,534**	*22,970*	**193**
	H.P.	**19,395**	**557**	**55,550**	*75,502*	**460,169**	**535,971**	**12,082**	*472,551*	**38,630**

* Includes one 30 h.p. diesel engine in use in Quebec.

Table 17.—Fuel and Electricity used in the Manufacture of the

Industries	Anthracite coal	Bituminous coal		Coke	Fuel oil
		Canadian	Imported		
	Short tons	Short tons	Short tons	Short tons	Imp. gals.
Aluminium products—					
Quantity	3	61	2,107	2,798	120,722
Value $	45	579	12,566	25,220	9,785
Brass and copper products—					
Quantity	1,571	5,718	11,526	4,567	1,709,252
Value $	15,255	33,771	64,757	42,731	133,205
White metal alloys—					
Quantity	76	649	1,841	656	251,841
Value $	938	4,588	13,469	6,589	20,653
Jewellery and silverware—					
Quantity	268	848	4,912	35	35,351
Value $	2,781	5,643	31,862	359	2,911
Electrical apparatus and supplies—					
Quantity	3,342	26,833	40,437	1,939	1,478,423
Value $	25,559	154,940	234,510	21,729	103,293
Miscellaneous non-ferrous metal products—					
Quantity	73	1	610	4	4,200
Value $	807	10	3,800	27	420
Non-ferrous metal smelting and refining*—					
Quantity	52	559,855	101,718	332,121	20,479,957
Value $	807	3,415,771	606,457	3,323,798	1,109,770
Total—					
Quantity	**5,385**	**593,965**	**163,151**	**342,120**	**24,079,746**
Value $	**46,192**	**3,615,302**	**967,421**	**3,420,453**	**1,380,037**

*Coke and coal charged to non-ferrous smelting furnaces have been included under fuel. For details of these charges see Table 119.

Table 18.—Fuel and Electricity used in the Manufacture of the

Industries	Anthracite coal	Bituminous coal		Coke	Fuel oil
		Canadian	Imported		
	Short tons	Short tons	Short tons	Short tons	Imp. gals.
Provinces					
Nova Scotia—					
Quantity	48	46	.....	.....	350
Value $	672	431	.....	.....	38
New Brunswick—					
Quantity	.....	1,819	.....	.....	158,976
Value $	.....	8,892	.....	.....	13,036
Quebec—					
Quantity	2,718	118,216	8,494	5,293	4,912,164
Value $	23,209	882,098	56,723	48,256	275,336
Ontario—					
Quantity	2,616	335,509	154,331	274,803	17,844,066
Value $	22,298	1,945,351	907,200	2,813,379	958,838
Manitoba—					
Quantity	.....	30,754	326	190	83,564
Value $	.....	225,579	3,498	2,228	8,875
Saskatchewan and Alberta—					
Quantity	3	14,719	.....	11	.....
Value $	13	109,003	.....	129	.....
British Columbia—					
Quantity	.....	92,902	.....	61,823	1,080,626
Value $	.....	443,948	.....	556,461	123,914
Total—					
Quantity	**5,385**	**593,965**	**163,151**	**342,120**	**24,079,746**
Value $	**46,192**	**3,615,302**	**967,421**	**3,420,453**	**1,380,037**

See note to Table. 17.

Non-Ferrous Metals in Canada, by Kinds and by Industries, 1937

Gasoline	Kerosene	Gas		Wood	Other fuel	Electricity purchased	Total cost at works	Electricity generated for own use
		Manufactured	Natural					
Imp. gals.	Imp. gals.	M cu. ft.	M cu. ft.	Cords	$	K.W.H.	$	K.W.H.
3,435	2,066	10,077	8,903	5	.....	10,463,792	.....	.....
835	404	8,876	4,828	51	.....	76,991	**140,180**	.....
7,266	655	21,648	23,757	387	.....	30,179,276	.....	54,200
1,516	127	16,220	9,303	2,474	9,484	297,118	**625,961**	.....
13,513	515	29,300	11,684	4	.....	3,877,425	.....	.....
2,164	100	8,877	6,239	48	.....	44,854	**108,519**	.....
3,881	470	18,943	536	52	.....	3,808,844	.....	.....
735	77	16,082	532	413	104	51,117	**112,616**	.....
10,467	5,371	137,375	29,676	246	.....	72,826,211	.....	11,275,180
2,479	850	103,645	13,480	936	253	669,575	**1,331,249**	.....
3,278	.....	2,661	424	.....	.....	360,747	.....	.....
535	.....	2,408	202	.....	.....	6,056	**14,265**	.....
109,691	6,768	29,949	119	16,930	.....	2,365,523,676	.....	239,262,152
21,951	1,407	4,489	96	78,648	5,076	6,039,151	**14,607,421**	.....
151,531	**15,845**	**249,953**	**75,099**	**17,624**	.....	**2,487,139,971**	.....	**250,591,532**
30,215	**2,965**	**160,597**	**34,680**	**82,570**	**14,917**	**7,184,862**	**16,940,211**	.....

Non-Ferrous Metals in Canada, by Kinds and by Provinces, 1937

Gasoline	Kerosene	Gas		Wood	Other fuel	Electricity purchased	Total cost at works	Electricity generated for own use
		Manufactured	Natural					
Imp. gals.	Imp. gals.	M cu. ft.	M cu. ft.	Cords	$	K.W.H.	$	K.W.H.
20	30	.....	.....	.....	.....	20,500	.....	.....
7	10	.....	.....	.....	270	855	**2,283**	.....
.....	.....	31	.....	.....	.....	553,896	.....	.....
.....	.....	63	.....	.....	.....	8,000	**29,991**	.....
21,345	4,554	76,451	.....	5,528	.....	1,072,543,111	.....	225,184,982
5,607	926	41,875	.....	22,283	9,081	2,474,274	**3,839,668**	.....
128,628	11,051	166,217	49,346	11,163	.....	658,452,713	.....	25,396,550
24,122	1,976	113,305	30,140	54,893	5,313	2,350,944	**9,227,759**	.....
1,418	160	3,733	.....	272	.....	111,903,436	.....	.....
440	40	3,153	.....	1,614	.....	97,435	**342,862**	.....
110	.....	643	25,753	33	.....	55,446,426	.....	.....
35	.....	236	4,540	154	163	41,174	**155,447**	.....
10	50	2,878	.....	628	.....	588,219,889	.....	.....
4	13	1,965	.....	3,625	90	2,212,180	**3,342,201**	.....
151,531	**15,845**	**249,953**	**75,099**	**17,624**	.....	**2,487,139,971**	.....	**250,591,532**
30,215	**2,965**	**160,597**	**34,680**	**82,570**	**14,917**	**7,184,862**	**16,940,211**	.....

Table 19.—Fuel and Electricity used in the Manufacture of the

Industries	Anthracite coal	Bituminous coal		Coke	Fuel oil
		Canadian†	Imported		
	Short tons	Short tons	Short tons	Short tons	Imp. gals.
Aluminium products—					
Quantity	26	40	2,183	2,559	120,028
Value $	348	327	13,178	20,440	9,433
Brass and copper products—					
Quantity	1,105	6,149	10,518	4,084	1,486,139
Value $	12,951	37,533	61,940	36,646	113,805
White metall alloys—					
Quantity	101	800	1,323	654	244,152
Value $	1,245	4,833	10,211	6,791	19,682
Jewellery and silverware—					
Quantity	220	349	4,982	45	39,203
Value $	2,280	2,150	32,267	404	3,242
Electrical apparatus and supplies—					
Quantity	3,435	21,730	41,423	1,025	1,374,401
Value $	26,599	127,124	239,978	11,195	96,723
Miscellaneous non-ferrous metal products—					
Quantity	70	2	655	4	.....
Value $	775	15	4,231	27	.....
Non-ferrous metal smelting and refining*—					
Quantity	51	504,956	184,584	291,317	20,577,301
Value $	821	3,127,947	1,089,070	2,743,911	1,083,969
Total—					
Quantity	**5,008**	**534,028**	**245,668**	**299,688**	**23,841,224**
Value $	**45,019**	**3,299,949**	**1,450,875**	**2,819,414**	**1,326,854**

*Coke and coal charged to non-ferrous smelting furnaces have been included under fuel. For details of these charges see Table 119.
†Includes 2 tons of lignite coal valued at $20 used in the brass and copper products industry.

Table 20.—Fuel and Electricity used in the Manufacture of the

Provinces	Anthracite coal	Bituminous coal		Coke	Fuel oil
		Canadian†	Imported		
	Short tons	Short tons	Short tons	Short tons	Imp. gals.
Nova Scotia—					
Quantity	50	24	.....	.....	.....
Value $	850	240	.....	.....	.....
New Brunswick—					
Quantity	.....	1,897	.....	.....	76,270
Value $	.....	9,198	.....	.....	6,102
Quebec—					
Quantity	2,042	129,346	8,653	6,583	7,313,997
Value $	18,992	969,648	59,741	62,662	364,501
Ontario—					
Quantity	2,892	251,097	236,665	224,827	15,377,339
Value $	24,823	1,488,773	1,387,209	2,139,099	834,127
Manitoba—					
Quantity	24	35,294	350	149	77,464
Value $	354	250,440	3,925	2,006	8,705
Saskatchewan and Alberta—					
Quantity	.....	17,195	.....	12	3,045
Value $	.....	122,942	.....	133	548
British Columbia—					
Quantity	.....	99,175	.....	68,119	993,109
Value $	.....	458,708	.....	615,514	112,871
Total—					
Quantity	**5,008**	**534,028**	**245,668**	**299,688**	**23,841,224**
Value $	**45,019**	**3,299,949**	**1,450,875**	**2,819,414**	**1,326,854**

See note to Table 19.
† Includes 2 tons of lignite coal valued at $20 used in Manitoba.

Non-Ferrous Metals in Canada, by Kinds and by Industries, 1938

Gasoline	Kerosene	Gas		Wood	Other fuel	Electricity purchased	Total cost at works	Electricity generated for own use
		Manufactured	Natural					
Imp. gals.	Imp. gals.	M cu. ft.	M cu. ft.	Cords	$	K.W.H.	$	K.W.H.
2,419	3,470	9,681	4,651	2	.....	13,957,249	.....	.....
643	634	8,171	2,619	20	.....	80,877	**136,690**	.....
12,018	1,146	24,683	25,549	298	.....	25,089,836	.....	.....
2,457	211	17,739	10,828	1,638	9,378	272,455	**577,601**	.....
12,913	472	24,859	11,556	36	.....	3,884,206	.....	.....
2,066	89	9,028	6,638	253	.....	48,951	**109,787**	.....
2,576	127	20,800	606	60	.....	3,725,384	.....	.....
458	19	19,017	624	441	95	49,819	**110,816**	.....
8,145	4,306	133,068	18,700	212	.....	58,239,784	.....	10,040,300
2,447	694	91,312	13,050	856	482	588,643	**1,199,103**	.....
5,072	.....	2,709	148	2	.....	305,535	.....	.....
923	.....	2,504	117	8	.....	6,297	**14,897**	.....
104,255	7,448	3,986	300	13,731	.....	2,884,881,612	.....	265,451,572
19,884	1,524	5,085	297	70,143	2,327	7,088,569	**15,233,547**	.....
147,398	**16,969**	**219,786**	**61,510**	**14,341**	.....	**2,990,083,606**	.....	**275,491,872**
28,878	**3,171**	**152,856**	**34,173**	**73,359**	**12,282**	**8,135,611**	**17,382,441**	.....

Non-Ferrous Metals in Canada, by Kinds and by Provinces, 1938

Gasoline	Kerosene	Gas		Wood	Other fuel	Electricity purchased	Total cost at works	Electricity generated for own use
		Manufactured	Natural					
Imp. gals.	Imp. gals.	M cu. ft.	M cu. ft.	Cords	$	K.W.H.	$	K.W.H.
20	30	.....	.....	.....	.....	12,000	.....	.....
6	9	.....	.....	.....	300	600	**2,005**	.....
.....	.....	25	.....	.....	.....	394,359	.....	.....
.....	.....	52	.....	.....	.....	5,765	**21,117**	.....
23,223	6,467	47,287	.....	5,246	.....	1,561,140,170	.....	255,316,072
5,907	1,232	39,284	.....	25,641	8,795	3,450,507	**5,006,910**	.....
122,764	10,252	165,127	46,278	8,149	.....	609,321,340	.....	20,175,800
22,549	1,874	107,760	29,916	42,057	2,830	2,171,088	**8,252,105**	.....
1,098	220	3,497	.....	153	.....	127,698,571	.....	.....
343	56	3,326	.....	890	.....	97,776	**367,821**	.....
.....	.....	26	15,232	21	.....	63,514,329	.....	.....
.....	.....	28	4,257	100	171	41,584	**169,763**	.....
293	.....	3,824	.....	772	.....	628,002,637	.....	.....
73	.....	2,406	.....	4,671	186	2,368,291	**3,542,720**	.....
147,398	**16,969**	**219,786**	**61,510**	**14,341**	.....	**2,990,083,606**	.....	**275,491,872**
28,878	**3,171**	**152,856**	**34,173**	**73,359**	**12,282**	**8,135,611**	**17,382,441**	.....

Table 21.—Alphabetical List of Materials Used in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1937 and 1938

NOTE.—This table is a composite alphabetical list of all materials used in manufacturing as specified on the various questionnaires sent to the manufacturers of non-ferrous metal products. The letters "n.e.s." mean not elsewhere specified. The "ton" is the short ton of 2,000 pounds unless otherwise specified. The quantity figures should not be regarded as being absolutely accurate as some concerns could not give quantities in all cases and estimates had to be made.

Materials	Industry number (see list on page 31)	Unit of measure	1937		1938	
			Quantity	Cost at works	Quantity	Cost at works
				$		$
Acid, sulphuric	5	lb.	4,446,397	65,288	4,123,474	60,279
Aluminium—						
Castings	1-2-5	lb.	623,844	400,155	459,222	171,657
Ingots	1-2-5	lb.	19,618,268	3,532,627	18,002,584	3,061,191
Punchings	5	lb.	54,974	34,521	81,102	44,224
Rods and bars	1-5	lb.	802,003	179,293	645,068	147,565
Scrap	1-2-3-5	lb.	3,594,029	507,887	4,366,396	593,422
Circles for making aluminium ware	1	lb.	1,495,318	424,876	1,400,259	410,969
Sheets and strips	1-2-3-5-6	lb.	1,524,124	354,286	1,545,354	378,474
Wire	1	lb.	73,391	30,178	39,428	17,990
Other and unclassified	1-2-5	lb.	532,959	210,032	449,353	171,058
Ammonium chloride (sal ammoniac)	5	lb.	1,135,702	35,466	1,182,147	35,436
Antimony	3-5	lb.	759,850	105,932	590,176	79,959
Antimony ore	3	lb.	293,462	12,496	145,440	7,575
Argon	5	cu. ft.	149,541	64,146	119,292	49,738
Asbestos—						
Board	5	lb.	232,034	34,226	178,401	32,477
Yarn	5	lb.	119,140	37,323	71,851	27,424
Tape	5	lb.	.....	16,730	14,945	13,602
Babbitt	3	lb.	2,225,769	241,040	1,371,027	169,481
Bakelite, all forms	5	.....	.....	255,794	.....	274,853
Battery boxes	5	No.	750,088	374,942	668,309	381,867
Battery separators, wood	5	.....	.....	181,335	.....	180,180
Brass—						
Bars and rods	2-5	lb.	1,981,338	326,198	1,576,575	259,858
Castings	2-5	lb.	1,475,788	459,642	878,272	271,108
Ingots	2-5	lb.	1,675,016	181,513	2,148,190	191,583
Plates and sheets	2-4-5-6	lb.	2,370,051	493,229	2,001,107	382,536
Pipe and tubing	2-5	lb.	573,117	140,259	547,277	126,379
Scrap	2-3-5	lb.	9,772,510	895,974	7,206,880	549,835
Wire	2	lb.	824,810	196,354	523,139	133,777
Lamp bases	5	.....	.....	217,228	.....	237,681
Screws	5	.....	.....	93,702	.....	69,371
Other and unclassified	2-5	.....	.....	260,893	.....	155,809
Brass and bronze bars, sheets, etc.	3	lb.	.....	.....	6,351	2,078
Britannia metal, including blanks for plating	1-4	.....	.....	88,165	.....	92,119
Bronze—						
Ingots	2	lb.	1,863,934	180,793	1,006,388	72,544
Scrap	2	lb.	13,554,153	1,562,553	10,852,696	869,088
Bars and rods	2-5	lb.	438,307	88,610	415,107	76,675
Plates, sheets and strip	2-5	lb.	169,248	45,560	119,806	41,613
Pipe and tubing	2-5	lb.	12,381	3,416	1,726	575
Wire	2	lb.	770,459	298,488	472,314	179,417
Castings	2-5	lb.	449,719	121,246	243,458	66,223
Other and unclassified	2-5-6	.....	.....	23,177	.....	20,871
Cadmium	3	lb.	65,796	84,993	46,305	38,333
Carbon plates, blanks, etc.	5	.....	.....	86,185	.....	71,335
Carbon brushes	5	.....	.....	27,107	.....	19,739
Carbon electrodes	5	.....	.....	81,391	.....	85,302
Celluloid	4-6	.....	.....	29,669	.....	19,612
Copper—						
Castings	2-5	lb.	171,287	42,463	89,121	27,861
Ingots, billets, slabs, etc.	2-3-5	lb.	111,491,043	14,262,052	102,309,102	10,788,662
Rods and bars	2-5	lb.	34,380,139	4,567,500	24,160,834	3,047,785
Tubing and pipe	2-5	lb.	525,264	166,758	410,873	113,108
Scrap	2-3-5	lb.	7,064,748	860,062	6,734,184	535,025
Sheets and plates	2-4-5	lb.	1,935,444	436,017	1,920,486	378,607
Wire, bare	2-5	lb.	5,680,385	954,399	5,193,709	791,237
Wire, enamelled	5	.....	.....	546,076	.....	395,887
Wire, other, insulated	5	.....	.....	954,553	.....	821,389
Other and unclassified	2-6	lb.	97,599	19,761	.....	5,621
Cork sheet	5	.....	.....	20,122	.....	18,679
Cotton and linen yarns	5	.....	.....	794,913	.....	662,865
Cotton sheets, tapes and webbings	5	.....	.....	131,987	.....	89,003
Dental sundries	4	.....	.....	5,589	.....	.....
Drosses	3	lb.	4,566,581	166,577	4,953,143	133,708
Electrical apparatus purchased, other	5	.....	.....	2,254,559	.....	2,366,742
Fibre rod, sheet, tubing	5	.....	.....	167,001	.....	110,929
Foundry facings	2	lb.	254,631	8,599	215,841	6,567
Flatware (butter knives, salad servers, etc.)	4	.....	.....	3,951	.....	4,046
Frit for enamelling	5	lb.	638,278	52,689	578,014	48,315
Glass bulbs, tubing and cane	5	.....	.....	614,335	.....	470,111
Glass linings and blanks	4	.....	.....	96,880	.....	110,437

Table 21.—Alphabetical List of Materials Used in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1937 and 1938—(continued)

Materials	Industry number (see list on page 31)	Unit of measure	1937		1938	
			Quantity	Cost at works	Quantity	Cost at works
				$		$
Gold, fine	4			955,362		930,836
Gold, old and scrap, for refining or remelting	4			1,489,474		1,426,243
Gold alloys	4			78,773		494,965
Gold-filled wire and stock	4			137,964		94,301
Insulating varnishes, japans, lacquers	5			160,076		96,866
Insulating waxes	5			126,344		97,962
Insulators, porcelain	5			461,946		347,934
Iron and steel—						
Pig iron	2-5	long ton	4,087	101,804	2,743	68,106
Scrap iron and steel	2	short ton	1,750	23,331	1,425	17,422
Iron castings	2-5-6	short ton	8,128	990,313		825,090
Steel castings	2-5	short ton	894	144,532	439	107,600
Steel forgings	5	short ton	1,471	194,109	225	35,668
Steel rods and bars	2-3-5-6	short ton	3,459	460,669	4,058	490,943
Iron and steel pipe	5	short ton	7,232	735,819		686,055
Steel sheets and strips	1-2-5-6	short ton	24,497	2,394,720	18,211	1,802,928
Steel wire	1-2-5			481,528		362,303
Structural steel	5	short ton	3,359	200,153	2,467	145,780
Bolts, nuts and screws	5			346,081		298,964
Steel stampings	5			297,893		379,260
Other iron and steel	1-2-3-5			310,933		289,889
Jewellers' findings, waste and scrap	4			388,146		283,702
Lead—						
Pig	2-3-5	lb.	32,677,399	1,723,935	34,054,513	1,514,570
Scrap, battery plate	3	lb.	9,385,401	305,955	9,459,490	239,602
Scrap, other	2-3-5	lb.	3,112,052	158,316	3,368,298	132,339
Sheets	5	lb.	21,805	2,136	19,259	1,668
Other	2-5	lb.	797,158	53,030	881,154	49,772
Lead oxide (litharge and red lead)	5	lb.	4,620,202	334,607	1,764,571	123,903
Lumber	2-5	M bd. ft.	5,975	258,791	5,841	255,171
Manganese dioxide	5	lb.	4,207,634	75,970	4,187,176	84,368
Metals, other non-ferrous (details not given)	2-3-4			348,040		298,150
Mica	5	lb.		87,829		66,877
Mineral wool	5	lb.	385,588	8,194	404,535	9,423
Motors, electric, purchased	5			392,457		423,435
Nickel	2-3	lb.	541,398	159,536	449,375	140,249
Nickel-chrome sheets	2-3	lb.	43,000	30,846	52,000	39,270
Nickel-silver, including blanks for plating	2-3-4			499,042		632,823
Nickel-silver tubing	5	ft.	94,019	6,436	70,542	4,410
Nitrogen	5	cu. ft.	498,074	5,992	435,413	5,363
Oil, switch	5	imp. gal.	59,230	14,558	25,363	6,131
Oil, transformer	5	imp. gal.	623,820	147,333	760,672	173,176
Ores, concentrates and residues for smelting and refining	7			191,303,251		173,070,377
Paint	5			199,647		256,951
Paper	5			394,504		302,372
Plating and polishing supplies	2			11,425		
Platinum	4			112,295		85,503
Precious and semi-precious stones	4			575,972		455,056
Pressboard	5			105,288		77,736
Radio cabinets	5			1,430,301		1,024,044
Radio parts for assembling	5			2,911,622		2,605,550
Radio tubes purchased	5	No.	1,614,417	1,026,564	1,337,846	755,270
Refrigerator cabinets	5			80,000		65,822
Refrigerator parts	5					991,897
Rouge and other polishes	4			47,310		42,556
Rubber, crude	5	lb.	1,382,803	102,382	844,370	108,963
Rubber, other	5-6	lb.		263,769	1,055,578	143,631
Sands, moulding	2	lb.	9,992,068	23,105	10,527,249	19,371
Scrap, kind unclassified	3	lb.	6,913,006	485,704	4,369,911	225,243
Silk, artificial	5	lb.	22,116	28,919	22,637	26,580
Silver, fine	4			480,215		505,039
Silver, sterling	4					345,874
Silver alloys	4			414,474		15,681
Solder	3-4			17,744		7,388
Springs, clock and watch	4			28,906		28,531
Steel, alloy	5					63,091
Steel, cutlery	4			158,042		151,111
Talc	5	lb.	418,932	5,256	298,362	3,853
Tanks, steel	5	no.	12,682	115,235		104,201
Thermometers and thermostats	5	no.	35,627	88,045		44,114

Table 21—Alphabetical List of Materials Used in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1937 and 1938—(concluded)

Materials	Industry number (see list on page 31)	Unit of measure	1937		1938	
			Quantity	Cost at works	Quantity	Cost at works
				$		$
Tin—						
Ingots	2-4	...	...	297,203	...	191,909
Scrap	2-3	lb.	7,450	3,126	69,603	24,985
Pig	3	lb.	3,207,124	1,798,833	2,756,326	1,168,745
Other	2-5-6	...	...	33,539	...	24,038
Trimmings, handles, etc., for aluminium ware	1	...	...	123,658	...	122,545
Tungsten wire	5	...	...	52,768	...	50,594
Type metal	3	lb.	1,501,488	64,058	1,454,266	64,322
Watch cases	4	...	...	48,169	...	75,437
Watch and clock crystals	4	...	...	18,948	...	20,241
Watch parts, other, including complete movements	4	...	...	197,827	...	208,626
Wire, resistance	5	...	...	94,094	...	90,707
Zinc—						
Ingots and slabs	1-2-3-5	lb.	9,681,585	555,177	8,195,252	412,248
Sheets	5	lb.	2,712,989	242,631	2,603,282	218,897
Scrap	2-3	lb.	1,023,132	36,689	675,183	17,308
Other	2-6	...	...	47,066	...	12,381
Zinc chloride	5	lb.	423,498	24,385	436,562	21,909
Containers	...	...	...	1,199,728	...	1,047,989
All other materials	1-2-3-4-5-6-7	...	...	22,069,520	...	22,573,239
Total	...	...	...	**282,532,128**	...	**252,624,911**

Table 22.—Alphabetical List of Products Made in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1937 and 1938

NOTE.—In this table all commodities shown on the reports received from the manufactures of non-ferrous metal products are listed in alphabetical order. However, it is necessary to point out that all of these items were not printed on the questionnaires which were sent to the producers and that in many cases the item was simply written in as additional information by the reporting firm. In such cases the figures may not represent the entire Canadian output. Again, some of the articles which are listed may have been made also by concerns which have been classified to other industrial groups; the figure (1) indicates that the figures are incomplete for this reason.

The asterisk in the production column indicates that the commodity was reported by only one or two concerns, in which case the Statistics Act does not permit the publication of separate figures.

The letters "n.e.s." mean "not elsewhere specified"

Products	Industry number (See list on page 31)	Unit of measure	1937		1938	
			Quantity	Selling value at works	Quantity	Selling value at works
				$		$
Addressograph plates and frames	3	...	...	*	...	*
Air conditioners or humidifiers, motor driven (1)	5	no.	3,358	93,309	5,162	177,230
Aluminium—						
Bars and ingots	2-3	lb.	1,114,862	182,047	1,134,681	196,625
Castings (other than die castings) (1)	1-2	lb.	3,396,080	1,028,942	2,950,235	927,344
Scrap	1	lb.	1,250,942	216,888	1,316,399	222,370
Other, including bars, rods, moulding and cable fittings, bottle caps and seals, wire, cable, sheets, match plates and other small articles	1-2-3	...	...	4,098,294	...	3,947,368
Ammeters, switches, coils, distributors, condensers, etc., for automobiles	5	...	...	*	...	...
Antifreeze (1)	5	gal.	*	*	*	*
Appliances, motor-driven, not elsewhere specified	5	...	...	102,767	...	139,280
Automobile parts (1)	5	...	...	422,776	...	556,355
Babbitt metal	2-3	lb.	2,921,555	648,451	2,230,907	456,104
Bakelite products (1)	5	...	...	69,115	...	32,142
Batteries—						
Storage—						
For automobile and internal combustion engine starting and ignition	5	no.	662,100	2,821,072	643,840	2,682,248
For farm lighting plants	5	no. of cells	...	119,229	21,446	114,125
For railway service	5	no. of cells	5,718	120,924	4,461	84,763
For telephone switchboards	5	no.	*	*	1,675	36,736
For motorcycle starting	5	no.	2,548	7,738	2,685	8,187
For all other purposes	5	...	...	448,036	...	415,622

Table 22.—Alphabetical List of Products Made in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1937 and 1938—(continued)

Products	Industry number (See list on page 31)	Unit of measure	1937 Quantity	1937 Selling value at works	1938 Quantity	1938 Selling value at works
				$		$
Batteries—(concluded)						
Primary dry cell—						
6 inch cells	5	no. of cells	1,382,526	376,223	1,127,008	309,133
"B" and "C" for radio	5	no. of cells	24,274,227	1,388,023	23,550,787	1,347,703
Flashlight	5	no. of cells	11,242,463	664,007	10,584,108	627,887
All other	5			*		*
Primary wet cell type, all purposes	5			*		*
Parts and supplies	5			424,994		*
Bells and gongs	2			16,850		13,293
Blanks, nickel-silver, for plating	4			137,678		127,937
Boilers, electric steam (1)	5			*		*
Bottle caps, moulded.. (1)	3			*		*
Brass—						
Ingots	2–3	lb.	3,524,066	451,436	4,304,910	325,119
Castings (1)	2–3	lb.	4,541,727	915,529	2,743,003	621,325
Scrap	2	lb.	317,937	36,889	268,981	22,258
Other, including bars, rods, tubing, sheets, plate, strips, etc	2			3,662,070		2,162,905
Bronze—						
Ingots	2					*
Castings (1)	2–3	lb.	1,760,768	462,622	1,409,118	366,583
Scrap	2	lb.	59,980	3,440	*	*
Other, including bars, rods, sheets, plates, strip, tubing, etc	2	lb.	2,466,291	709,745	1,984,794	482,624
Bronze and aluminium powders	2			*		*
Brushes, carbon, for generators and motors	5			208,122		113,539
Carbons, illuminating	5			*		
Capacitors (static condenser) for power factor correction	5			*		65,977
Castings—						
Die	1–2–3	lb.	2,616,290	605,890	2,481,535	623,440
Other non-ferrous, including nickel, cadmium and zinc	2–3	lb.	548,095	276,044	603,743	175,676
Grey iron (1)	2	lb.	4,242,463	192,599	2,198,519	148,711
Chains, tire, non-skid (1)	2			*		*
Cigarette lighters and cases	6			175,307	*	*
Clippers, electric	5			32,929	*	*
Clocks and watches	4–5			1,480,608		1,423,035
Coffee makers, glass, electric—						
Commercial	5	no.	14,812	53,981	*	*
Domestic	5	no.			20,339	66,017
Conduit, electrical—						
Flexible (steel and non-metallic)	5	ft	5,268,069	88,826	3,760,619	65,898
Rigid iron	5	lb.	13,749,409	1,201,439	11,700,092	945,502
Conduit fittings	2–5			387,185		182,528
Converter equipment—						
Motor generator sets, A.C. to D.C	5	no.	99	375,320	*	*
Synchronous converters and double current generators	5			*		*
Other converter equipment	5			*		*
Cooking and heating apparatus, not elsewhere specified	2–5			66,148		101,964
Copper—						
Ingots	2–3	lb.	2,289,858	267,502	2,124,395	180,262
Castings	2–3	lb.	71,765	18,780	92,873	19,184
Wire rods	2			*		*
Scrap	2			198,040		167,973
Other, including pipe, tubing, plates, sheets, etc	2			2,779,042		2,430,717
Cutlery (1)	4			429,927		436,193
Cutouts and fuses—						
Primary cutouts, 15,000 volts and less, except oil type	5	no.	21,638	208,034		142,885
Primary cutouts, over 15,000 volts, except oil type	5			*		*
Primary cutouts, oil type	5			*		*
Cutouts for cartridge and plug fuses	5			46,109		112,672
Cartridge fuses	5	no.	914,840	84,631		72,800
All other fuses and fuse renewals	5			268,154		239,269
Dental supplies	4			*		14,486
Elements, heating, for stoves	5			49,519		134,772
Fans, A.C. and D.C.—						
Portable type	5	no.	*	*	9,062	71,118
All other types	5	no.	6,966	22,018	6,858	26,313
Fasteners, zipper	2–3			919,639		1,034,434
Fasteners, metal (except zipper)	2			*		*
Feeder regulators, all type	5	no.	*	*	*	*
Fencers, electric (battery)	5				*	*
Fire extinguishers	2			195,646		207,186

Table 22.—Alphabetical List of Products Made in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1937 and 1938—(continued)

Products	Industry number (See list on page 31)	Unit of measure	1937 Quantity	1937 Selling value at works	1938 Quantity	1938 Selling value at works
				$		$
Flashlights	5			*		*
Flatware—electro-plated on nickel-silver	4			1,290,119		1,511,648
Flatware—sterling silver	4			274,230		183,404
Foil (tin, lead, aluminium, etc.)	1-3			*		*
Furnaces, electric, all types	5	no.	57	133,589	50	90,233
Furniture trimmings, metal	2			*		
Gauges	2			*		*
Generators, electric—						
Alternating current	5	no.	64	900,123	80	1,296,354
Direct current, including exciters	5	no.	44	55,071	48	176,149
Steam turbo-generator sets	5	no.	*	*	*	*
Accessories and parts for generators	5-6			486,981		261,514
Glassware	4			60,986		5,000
Gold leaf	4			*		14,140
Gold-filled wire and other gold filled stock	4			*		137,344
Gold, fine, recovered from scrap and sweepings	4			1,530,228		1,402,375
Gold, fine, (new) melted and rolled, etc., for use in arts and industries	4			*		184,033
Gold alloys made	4			570,086		997,559
Gold and platinum findings	4			*		66,100
Hair dryers, electric	5			78,499		86,326
Hair curlers and novelties	1					*
Hair pins	2					*
Hardware, automobile (1)	2					*
Hardware, builders' (1)	2					83,877
Hardware, furniture and cabinet (1)	2					*
Hardware, drapery (1)	2			*		
Hardware, casket (1)	5					*
Hat blocks and dies, aluminium	1			*		18,265
Heaters—air and space, electric	1-5-6			60,143		57,106
Heaters—automobile engine (1)	5			*		*
Heaters—aeroplane engine	5					*
Heaters, water, electric—						
Circulating type (1)	5	no.	3,258	44,555	2,985	47,189
Immersion type (1)	5	no.	17,714	55,534	14,309	45,269
Storage tank type (1)	5	no.	307	26,746	184	8,227
Heating pads, electric	5	no.	16,651	41,070	11,018	29,613
Hollowware—						*
Electro-plated on Britannia metal	4			439,889		447,439
Electro-plated on nickel-silver	4			269,523		250,393
Electro-plated on brass or copper	4			836,137		865,346
Sterling silver	4			166,078		164,101
Hooks and eyes	2			66,911		74,674
Industrial heating equipment, not elsewhere specified	5			*		*
Instruments and meters (except ammeters for automobiles)—						
Demand meters	5			*		*
Watthour meters	5	no.	136,726	1,237,010	167,864	1,404,313
Electrical indicating instruments	5			*		*
Electrical graphic instruments	5			*		*
Other electrical instruments and meters	5			76,844		65,733
Parts for instruments and meters	5			166,337		133,384
Irons, flat, electric—						
Automatic	5	no.	183,147	321,302	36,178	150,433
Non-automatic	5	no.			140,164	220,405
Irons, gasoline	6	no.	22,158	75,167	*	*
Jewellery of all kinds	1-4			3,381,564		3,325,982
Kitchenware, aluminium	1-2			1,349,199		1,373,511
Lamps, incandescent—						
Standard size, all types	5	no.	25,689,598	4,477,267	20,634,204	3,409,585
Miniature size, all types	5	no.	12,362,115	744,011	11,087,021	597,196
Lamps and lanterns, railway and marine	6			40,004		29,583
Lamps and lanterns, portable, gasoline	6	no.	52,505	213,612	66,925	277,787
Lamp and lantern burners	6			21,264		*
Lasts, boot and shoe, aluminium	1			*		*
Lead—						
Antimonial, bars and ingots	3	lb.	7,920,364	461,496	7,644,802	377,937
Bars and ingots (except antimonial)	2-3	lb.	3,129,050	180,575	3,063,458	145,930
Castings	3	lb.	110,685	19,832	760,613	38,511
Pipe	3	lb.	2,693,794	295,878	2,318,001	218,167
Sheet	3	lb.	1,876,259	181,951	2,521,575	200,848
Traps and fittings	3	lb.	606,130	126,387	610,018	115,192
Miscellaneous	3	lb.		74,186	396,370	53,129

Table 22.—Alphabetical List of Products Made in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1937 and 1938—(continued)

Products	Industry number (See list on page 31)	Unit of measure	1937 Quantity	1937 Selling value at works	1938 Quantity	1938 Selling value at works
				$		$
Lighting fixtures—						
Interior, residential	2-5	...	...	1,120,958	...	966,862
Interior, metal reflectors	5	...	...	190,774	...	129,327
Interior, store and office	2-5	...	...	...	...	169,385
All other interior lighting fixtures	5	...	...	285,520	...	129,923
Exterior lighting standards	5	...	...	12,348	...	23,497
Exterior lighting fixtures	2-5	...	...	106,452	...	142,008
Exterior lighting control devices	5	...	...	*	...	*
Searchlights and floodlights	5	...	...	30,399	...	54,232
Other lighting equipment	2-5	...	...	336,014	...	368,421
Lightning rods and supplies	2	...	...	77,331	...	81,515
Line material—						
Pole line hardware (1)	5	...	...	*	...	540,784
Other, including overhead trolley	5	...	...	238,265	...	...
Machinery, n.e.s (1)	2-5	...	...	225,304	...	221,031
Mantles, lamp, incandescent	6	...	...	177,946	...	117,438
Meters—						
Gas	2	no.	11,727	144,868	15,475	164,674
Water	2	no.	*	*	*	*
Parts	2	...	...	76,929	...	75,285
Mixers, food (domestic)	5	...	...	*	...	*
Motors, electric, A.C. and D.C., and parts (for detailed breakdown of this item see Table 98)	5	...	...	7,672,278	...	6,161,573
Munitions (1)	2	...	...	...	...	*
Nickel-silver plates and sheets	2	...	...	*	...	*
Nickel-silver, other	2	...	...	*	...	*
Ornamental and architectural work, brass and bronze (1)	2	...	...	62,064	...	84,849
Ornamental and architectural work, iron (1)	2	...	...	81,837	...	84,484
Ovens, commercial cooking ovens (bakeries, restaurants, etc.)	5	...	...	*	...	*
Ovens, industrial (japanning, etc.)	5	...	...	*	...	*
Panel boards and cabients	5	...	...	395,633	...	332,480
Percolators, electric	5	no.	8,399	34,722	*	*
Phonographs, gramophones and records	5	...	...	324,294	...	472,613
Pins	2	...	...	*	...	*
Platinum recovered from scrap and sweepings	4	...	...	18,772	...	11,598
Platinum products, including alloys, crucibles, electrodes, etc	4	...	...	23,469	...	18,300
Plumbers' fittings, brass—						
Closet tank fittings	2	...	...	61,357	...	64,178
Lavatory and bath faucets	2	...	...	199,170	...	178,541
Sink faucets	2	...	...	159,402	...	176,084
Stops, and stops and drains	2	...	...	147,785	...	167,225
Taps, drains, supplies and other tubular fittings	2	...	...	340,252	...	270,897
Tub fillers and showers	2	...	...	126,874	...	150,719
Any other plumbing fittings (1)	2	...	...	630,139	...	735,048
Pneumatic apparatus parts, etc	5	...	...	*	...	*
Pot scourers of copper wire	2	...	...	*	...	*
Radio apparatus and supplies	5-6	...	...	13,257,976	...	10,555,711
Railway car bearings and fittings	2	...	...	3,341,579	...	2,367,949
Rectifiers for storage battery charging	5	no.	...	27,672	1,212	41,357
Refrigerators, electric (1)	5	...	...	6,731,428	...	7,775,974
Refrigerators, ice (1)	5	...	...	*	...	*
Relays and contractors, electrical	5	...	...	*	...	...
Scrap and dross, kind not specified (1)	3-4	lb.	...	46,740	619,829	23,207
Screens	6	...	...	17,044	...	31,044
Shavers, electric, and parts	5	...	...	*	...	*
Shot, dropped and moulded	3	...	...	*	...	*
Silver, fine, recovered from scrap and sweepings	4	...	...	92,976	...	96,575
Silver, fine, melted and rolled, etc., for use in arts and industries	4	...	...	...	...	200,036
Silver, sterling, made, melted and rolled, etc.	4	...	...	...	...	313,853
Silver alloys made	4	...	...	40,005	...	28,620
Silver, sterling, and silver solder for arts and industries	4	...	...	*	...	...
Silver, fine, for plating	4	...	...	*	...	...
Smelter and refinery products	...	...	...	318,278,251	...	287,295,733
Solders, all kinds	2	lb.	5,805,921	1,622,387	5,064,436	1,208,704
Soldering paste	3	...	*	*	...	*
Spray painting equipment (1)	6	...	...	186,697	*	*
Sprays and atomizers, for perfume, etc	6	...	...	51,708	...	46,684
Spectacle frames, parts and cases	4	...	...	*	...	263,862
Stampings and spinnings, all kinds. (1)	1-2-5-6	...	...	451,978	...	502,608

Table 22.—Alphabetical List of Products Made in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1937 and 1938—(continued)

Products	Industry number (See list on page 31)	Unit of measure	1937		1938	
			Quantity	Selling value at works	Quantity	Selling value at works
				$		$
Steam boiler trimmings, including gauge cocks and water gauge mountings	2	.....	.....	66,983	.....	82,220
Stoves, rangettes, cooking plates, electric (1)	5–6	.....	.....	1,235,441	.....	1,094,528
Stoves, camp, gasoline	6	no.	9,219	41,809	*	*
Switchgear and protective equipment—						
Switchboard panels and equipment	5	.....	.....	1,434,807	.....	1,438,628
Lightning arresters, other than radio, 15,000 volts and below	5	.....	.....	164,983	.....	149,907
Lightning arresters, above 15,000 volts	5	.....	.....	109,781	.....	138,475
Oil circuit breakers	5	.....	.....	698,578	.....	797,013
Air circuit breakers	5	.....	.....	306,352	.....	277,561
Disconnecting switches—						
Up to and including 15,000 volts	5	.....	.....	244,967	.....	243,324
Over 15,000 volts	5	.....	.....		.....	130,655
Generator voltage regulators and accessories	5	.....	.....	*	.....	*
Parts and supplies	5	.....	.....	261,761	.....	338,444
Switches, time	5	.....	.....	*	.....	38,490
Tanks, all kinds (1)	2–6	.....	.....	182,888	.....	198,293
Telephone material, including telephones, transmitters, receivers, parts and supplies, etc.	5	.....	.....	6,199,096	.....	5,623,676
Therapeutic lamps, etc., electric	5	.....	.....	34,232	.....	89,659
Thermit for forging	1	.....	.....	*	.....	*
Thermometers for stoves	6	.....	.....	.....	.....	*
Thermos bottles	6	.....	.....	167,598	.....	*
Thermostats and controls	5	.....	.....	*	.....	*
Toasters, electric—						
Commercial	5	no.	53,952	53,614	35,959	42,946
Domestic—Sandwich	5	no.	26,479	57,998	26,683	61,349
All other	5	no.	84,598	147,119	76,669	147,846
Toiletware and dresserware, sterling silver	4	.....	.....	*	.....	183,263
Tin—						
Bars and ingots	3	lb.	251,814	149,797	159,971	76,933
Pipe, block	3	lb.	*	*	*	*
Traffic signals and controls	5	.....	.....	*	.....	167,614
Transformers—						
Distribution transformers, 200 k.v.a. and under and 15,000 volts and below	5	no.	16,016	2,157,947	17,226	2,179,979
Power transformers 200 k.v.a. to and including 7,500 k.v.a. and 15,000 volts to and including 132,000 volts	5	no.	414	1,974,035	292	1,457,707
Power transformers over 7,500 k.v.a. or over 132,000 volts	5	no.	33	609,702	27	1,299,277
Current transformers	5	no.	.....	211,712	2,702	110,983
Potential transformers	5	no.			1,955	73,560
Constant current transformers	5	no.	14	4,725	50	15,913
Series lamp transformers	5	no.	347	7,611	864	31,063
Luminous tube transformers	5	no.	18,117	132,707	7,136	64,949
Ignition transformers	5	no.			2,053	14,779
Radio transformers	5	.....	.....	248,178	.....	160,263
All other transformers	5	no.	.....	111,079	15,310	161,216
Parts and supplies	5	.....	.....	166,816	.....	217,488
Tubes, collapsible	3	.....	.....	*	.....	*
Tubing, chrome-nickel, for electric ranges	3	.....	.....	*	.....	*
Type and type metal	2–3	lb.	4,166,091	407,819	3,652,111	357,235
Typesetting and trade composition	3	.....	.....	*	.....	.....
Vacuum cleaners and parts (1)	5	.....	.....	1,983,670	.....	1,763,530
Vacuum tubes—						
Radio receiving tubes	5	no.	3,320,687	1,760,109	1,969,598	1,108,408
Other vacuum tubes, including X-ray	5	no.	22,098	67,255	24,290	92,137
Valves, iron body (1)	2	no.	34,790	520,495	31,183	348,589
Valves, all other (1)	2	.....	.....	1,366,599	.....	1,138,571
Violet ray generators and lamps	5	.....	.....	.....	*	*
Waffle irons, domestic, electric	5	no.	6,365	21,416	2,704	9,443
Washing machines, electric (1)	5	no.	*	*	*	*
Watch cases	4	no.	.....	292,966	636,063	174,056
Weatherstripping	6	.....	.....	59,958	.....	59,950
Welding portions, rail	1	.....	.....	*	.....	*
Welding equipment, electric arc	5	.....	.....	241,220	.....	130,802
Welding electrodes	5	.....	.....	*	.....	10,993
Welding apparatus, other	5	.....	.....	21,412	.....	*
Wires and cables—						
Copper, bare	5	.....	.....	3,348,854	.....	2,094,475
Aluminium, bare	5	.....	.....	*	.....	*
Weatherproof	5	.....	.....	1,582,800	.....	1,416,084
Rubber insulated, braided	5	.....	.....	2,815,097	.....	2,351,706
Cambric insulated, braided	5	.....	.....	143,696	.....	105,895
Rubber insulated, leaded	5	.....	.....	348,877	.....	360,687
Cambric insulated, leaded	5	.....	.....	465,064	.....	*
Paper insulated, leaded	5	.....	.....	*	.....	615,593

Table 22.—Alphabetical List of Products Made in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1937 and 1938—(concluded)

Products	Industry number (See list below)	Unit of measure	1937 Quantity	1937 Selling value at works	1938 Quantity	1938 Selling value at works
				$		$
Wires and cables—(concluded)						
Rubber insulated telephone wires	5	.....	.....	1,027,827	.....	282,713
Paper insulated telephone cable	5	.....			.....	1,025,250
Flexible cords, except telephone and switchboard cords	5	.....	.....	1,073,069	.....	900,195
Signal and control cable	5	.....	.....	.....	*	*
Magnet wire—Enamelled	5	.....	.....	.....	.....	731,694
All other	5	.....	.....	.....	.....	425,590
Armoured cable	5	.....	.....	793,217	.....	721,043
Non-metallic sheathed cable	5	.....	.....	.....	.....	334,759
Steel wire rope (1)	5	.....	.....	679,964	.....	*
All other wires and cables	5	.....	.....	2,957,667	.....	1,112,650
Wire cloth, brass and bronze	2	sq. ft.	2,963,571	1,461,322	1,988,309	994,086
Wire cloth, monel	2	.....	.....	.....	*	*
Wire, chromel resistance	5	lb.	*	*	*	*
Wiring Devices—						
Sockets, brass shell	5	.....	.....	170,801	.....	227,462
Sockets, porcelain and moulded	5	.....	.....	121,829	.....	130,071
Switches, surface and flush types	5	.....	.....	232,547	.....	211,512
Switches, enclosed safety type	5	.....	.....	445,778	.....	398,019
Switches, canopy	5	.....	.....	44,339	.....	32,982
Switches, all other	5	.....	.....	283,668	.....	252,636
Receptacles (convenience outlets) single and duplex	5	.....	.....	189,755	.....	141,631
Wall plates for switches and outlets	5	.....	.....	.....	.....	47,410
Attachment plugs, caps and cord connectors	5	.....	.....	.....	.....	73,693
Plug devices, caps and heater plugs	5	.....	.....	.....	.....	82,375
Cord sets, all types	5	.....	.....	418,009	.....	235,124
Other wiring devices	5	.....	.....	1,563,619	.....	882,272
X-ray apparatus	5	.....	.....	*	.....	*
Zinc:—						
Bars and ingots	3	lb.	2,745,916	134,524	2,382,531	104,516
Sheets for photo engraving	2	.....	.....	*	.....	*
Amount received for custom work and repairs	1-2-4-5-6	.....	.....	1,533,350	.....	1,578,133
Products reported by only 1 or 2 firms as indicated by asterisks (*) above	.....	.....	.....	24,623,602	.....	22,044,897
All other products, kind not specified	.....	.....	.....	3,517,538	.....	3,390,209
Total			.....	**482,440,562**	.....	**434,699,676**

KEY TO THE NUMBERED INDUSTRIES

1. Aluminium Products. 2. Brass and Copper Products. 3. White Metal Alloys. 4. Jewellery and Silverware. 5. Electrical Apparatus and Supplies. 6. Miscellaneous Non-Ferrous Metal Products. 7. Non-Ferrous Metal Smelting and Refining.

Table 23.—Imports of Non-Ferrous Metals and Their Products, 1937 and 1938

Classification		Total Imports for Consumption (Merchandise) 1937	Total Imports for Consumption (Merchandise) 1938	Imports from United Kingdom 1937	Imports from United Kingdom 1938	Imports from United States 1937	Imports from United States 1938
Aluminium—							
Alumina	Cwt.	2,518	1,457	98	140	2,420	1,280
	$	28,662	17,302	1,097	1,515	27,565	15,499
Bauxite (ore)	Cwt.	6,078,468	7,365,187	628	723	2,548,606	1,165,321
	$	3,772,870	2,359,933	621	601	2,862,827	887,847
Cryolite	Cwt.	138,138	127,985	.....	.....	2,872	3,456
	$	596,250	542,397	.....	.....	23,854	30,190
Pigs, ingots, etc	Cwt.	796	1,381	765	1,179	31	202
	$	20,114	36,780	19,110	30,750	1,004	6,030
Scrap	Cwt.	12,343	11,003	11,037	7,047	62	2,936
	$	197,989	102,742	176,105	61,637	962	31,125
Angles, channels, beams, etc	Cwt.	419	1,526	190	762	229	764
	$	18,404	62,526	8,508	30,724	9,896	31,802
Bars, rods and wire	Cwt.	2,556	1,817	1,391	1,543	1,165	274
	$	87,000	69,163	46,708	57,566	40,292	11,597
Aluminium leaf or foil	$	145,524	114,844	38,340	37,399	30,779	27,883
Pipes and tubes	Cwt.	1,452	1,197	898	574	554	623
	$	77,053	64,058	46,762	39,694	30,291	24,364
Plates, sheets and strips	Cwt.	20,034	17,091	17,766	14,139	2,169	2,130
	$	676,789	615,540	567,409	469,241	105,095	96,242
Aluminium powder	Lb.	246,799	146,251	169,284	123,080	60,271	9,220
	$	86,733	53,735	60,194	44,245	20,250	4,139
Kitchen, etc., hollowware	$	82,580	84,725	6,625	8,922	69,032	68,737
Other aluminium	$	789,433	775,509	21,953	26,702	749,238	731,312
Total Aluminium and Its Products	$	6,579,401	4,899,254	993,432	808,996	3,971,085	1,966,757

Table 23.—Imports of Non-Ferrous Metals and Their Products into Canada, Calendar Years 1937 and 1938—(continued)

Classification	Total Imports for Consumption (Merchandise)		Imports from United Kingdom		Imports from United States	
	1937	1938	1937	1938	1937	1938
Brass—						
Blocks, ingots or pigs.....Cwt.	819	642	68	67	751	575
$	11,646	7,221	810	898	10,836	6,323
Scrap.....Cwt.	1,403	574	24	39	969	535
$	14,448	5,332	92	128	12,784	5,204
Bars and rods.....Cwt.	5,110	3,205	3,956	2,285	1,154	696
$	89,705	50,342	62,978	32,588	26,727	15,647
Strips, sheets, plates.....Cwt	3,123	2,335	1,414	1,069	1,709	1,077
$	76,967	51,221	30,005	19,753	46,962	28,465
Tubing.....Lb	863,467	402,055	299,320	160,378	561,519	240,169
$	219,413	105,313	73,447	49,372	145,333	55,424
Metal caps for manufacture electric batteries..... $	17,957	16,833	.....	.....	17,957	16,833
Cups for manufacture of shells..... $	60,516	45,661	38,871	37,024	21,645	8,637
Valves..... $	404,103	286,083	4,992	3,323	398,619	276,845
Water meters and parts, n.o.p.....No.	912	577	505	473	407	104
$	16,632	14,953	6,260	6,801	10,372	8,152
Wire, plain.....Lb.	357,177	138,224	72,837	20,755	251,969	115,229
$	99,174	37,794	15,253	4,033	75,212	33,217
Wire cloth..... $	32,985	24,696	22,805	13,200	7,356	9,407
Other..... $	2,392,922	1,907,515	181,711	164,122	2,092,187	1,627,234
Total Brass and Its Products.... $	3,436,468	2,552,964	437,224	331,242	2,865,990	2,091,388
Copper—						
Blocks, pigs, ingots.....Cwt.	155	122	13	3	142	119
$	1,941	1,441	324	41	1,617	1,400
Scrap.....Cwt.	46	878	1	.....	22	165
$	455	8,434	16	.....	223	1,225
Bars and rods.....Cwt.	13,897	13,171	188	94	13,709	13,077
$	220,533	179,104	4,471	1,565	216,062	177,539
Strips, sheets, plates.....Cwt.	7,073	1,662	2,042	277	5,019	1,385
$	155,463	36,813	38,892	5,377	116,391	31,436
Tubing.....Lb.	675,896	343,071	73,674	77,886	602,222	257,320
$	193,637	93,255	20,417	20,587	173,220	71,330
Rollers used in printing of fabrics.... $	124,315	65,525	81,723	25,099	18,506	31,892
Wire, n.o.p.....Lb.	37,576	16,352	20,440	649	17,136	15,703
$	6,831	3,351	2,886	207	3,945	3,144
Wire cloth..... $	7,523	3,284	5,726	2,153	1,227	1,073
Other..... $	536,168	402,486	47,208	36,158	470,812	353,482
Total Copper..... $	1,246,866	793,693	201,663	91,187	1,002,003	672,521
Lead and Its Products..... $	190,289	140,745	94,218	64,572	72,758	53,654
Nickel—						
Nickel, nickel-silver, German silver, in ingots or blocks, n.o.p.....Lb.	20,061	24,226	.....	.....	20,061	24,226
$	5,636	6,603	.....	.....	5,636	6,603
Bars, rods, sheets, etc.....Lb.	818,946	830,904	.....	25	818,946	830,879
$	326,469	330,131	.....	17	326,469	330,114
Nickel-silver and German silver in bars, rods, strips, etc.....Lb.	97,327	82,569	74,525	59,349	22,802	23,220
$	25,785	22,107	16,534	13,279	9,251	8,828
Nickel-chromium.....Lb.	46,246	43,472	.....	.....	46,246	43,472
$	45,264	41,805	.....	.....	45,264	41,805
German silver manufactures..... $	178,572	134,791	54,386	9,546	122,088	122,445
Nickel-plated ware..... $	887,535	864,393	97,978	129,176	587,145	511,158
Other..... $	3,459	1,508	1,799	1,183	1,414	265
Total Nickel and Its Products... $	1,472,720	1,401,338	170,697	153,201	1,097,267	1,021,218
Precious Metals—						
Electro-plated ware..... $	1,379,171	1,141,374	163,461	93,944	1,139,489	978,879
Gold, unmanufactured, for commercial purposes.....Oz.	4,993	2,496	2,680	1,037	2,304	1,251
$	137,669	71,402	70,731	27,501	66,643	37,151
Gold, silver and Dutch or schlag metal leaf..... $	68,027	61,269	36,504	35,078	16,500	10,922
Gold, manufactures of, n.o.p..... $	39,297	28,606	13,904	1,780	23,426	25,784
Platinum wire, bars, strips, sheets, etc. $	295,632	238,389	284,574	229,379	11,058	9,010
Platinum crucibles..... $	6,800	2,093	1,678	220	5,122	1,873
Platinum retorts, pans, condensers, etc., for use by manufacturers of sulphuric acid..... $	7,602	52,229	.....	.....	7,602	52,229
Silver in bars, blocks, etc., unmanufactured.....Oz.	1,987,082	2,011,048	758,243	237,604	1,228,839	1,773,444
$	870,388	850,488	345,764	102,998	524,624	747,490
Toilet articles of all kinds, chiefly of silver..... $	60,452	33,216	53,721	30,951	5,073	1,105
Silver manufactures, n.o.p..... $	362,439	293,193	311,162	250,730	35,054	28,935
Other..... $	4,244	3,737	346	262	1,086	423
Total Precious Metals and Their Products..... $	3,231,721	2,775,996	1,281,845	772,843	1,835,677	1,893,801

Table 23.—Imports of Non-Ferrous Metals and Their Products into Canada, Calendar Years 1937 and 1938—(continued)

Classification	Total Imports for Consumption (Merchandise)		Imports from United Kingdom		Imports from United States	
	1937	1938	1937	1938	1937	1938
Tin—						
Blocks, bars, pigs ... Cwt.	58,798	52,752	20,040	17,300	2,476	180
$	3,115,643	2,205,449	1,065,122	730,772	129,800	7,587
Tinfoil ... Lb.	63,683	19,092	7,459	2,380	56,213	16,642
$	26,148	6,593	3,662	772	22,468	5,780
Collapsible tubes ... $	36,830	45,484	8,804	25,845	27,959	18,561
Total Tin and Its Products ... $	3,178,621	2,257,526	1,077,588	757,389	180,227	31,928
Zinc—						
Spelter ... Cwt.	20	27	.....	.....	20	27
$	199	201	.....	.....	199	201
Blocks, pigs, bars, rods, etc ... Cwt.	194	59	1	.....	170	45
$	2,805	643	20	.....	2,672	562
Strips, sheets, plates for marine boilers ... Cwt.	70,406	67,716	555	740	45,536	47,616
$	574,545	467,114	5,071	4,684	415,343	361,150
Dust ... Cwt.	14,995	13,739	1,203	1,469	4,700	5,695
$	78,508	70,294	9,132	8,402	40,792	40,373
Slugs or discs for electric storage batteries ... $	.....	20,582	.....	.....	.....	20,582
Other ... $	244,349	206,948	1,626	1,461	235,739	201,077
Total Zinc and Its Products ... $	900,406	765,782	15,849	14,547	694,745	623,945
Babbitt metal in blocks, bars, plates and sheets ... Cwt.	439	7,825	124	4,871	315	267
$	14,871	40,869	6,223	23,332	8,648	6,265
Chromium metal and tungsten metal ... Lb.	122,288	43,527	73,697	16,780	8,290	4,347
$	96,900	30,328	62,121	11,606	8,944	5,786
Phosphor-tin and bronze ... Lb.	1,432,245	595,098	382,300	169,368	350,087	255,865
$	440,556	158,137	107,379	38,926	100,493	67,359
Other alloys, n.o.p. ... $	82,707	65,972	5,180	4,484	47,490	61,324
Total Alloys, n.o.p. ... $	635,034	295,306	180,903	78,348	195,575	140,734
Clocks ... No.	145,265	136,325	4,203	4,425	85,463	92,283
$	370,908	316,943	13,523	14,756	228,169	206,666
Watches ... $	162,010	188,523	4,390	2,396	13,910	8,444
Clock and watch cases, movements, parts, etc ... $	1,703,864	1,704,071	15,004	16,291	644,421	565,214
Time recorders ... $	26,727	42,639	2,933	4,416	23,652	38,196
Electrical Apparatus—						
Batteries, primary ... $	213,865	159,573	57,203	17,234	154,659	138,961
Batteries, storage ... $	180,367	91,191	111,783	11,110	68,215	79,857
Apparatus for heating ... $	71,211	46,351	2,790	1,338	67,338	44,771
Dynamos, generators ... $	774,228	585,458	176,817	131,092	489,178	365,530
Fuses, fuse plugs, etc ... $	115,490	68,746	339	1,449	114,818	65,773
Lamps, electric arc ... $	6,424	14,710	2	.....	5,940	14,669
Incandescent lamps—						
Carbon filament ... No.	805,563	73,412	393	.....	146,449	45,724
$	21,103	4,401	136	.....	5,114	3,377
Metal filament ... No.	9,690,269	10,182,669	9,164	16,724	2,274,819	1,772,029
$	251,095	242,257	4,559	9,630	117,166	129,423
Head, side, tail and flashlights ... $	454,078	421,739	6,918	13,068	395,998	356,719
Electric light fixtures ... $	815,966	779,964	24,213	27,850	735,258	701,548
Lightning arresters, etc ... $	50,956	55,273	104	358	50,657	54,915
Electrical instruments for recording altitude, density, electrolysis, etc ... $	59,533	98,443	17,556	39,578	41,692	56,157
Meters ... $	239,919	182,146	50,243	30,023	184,039	145,049
Motors ... $	2,368,865	1,933,579	435,906	337,833	1,891,223	1,498,789
Rheostats, controllers, etc ... $	769,228	580,298	40,897	28,550	679,844	550,431
Irons, and complete parts ... $	64,972	65,208	73	.....	64,867	65,133
Sockets, outlets, etc ... $	39,199	24,690	207	1,414	38,422	23,276
Spark plugs, magnetos, etc ... $	21,139	11,624	715	83	20,323	11,541
Switches, switchboards, etc ... $	855,134	751,178	91,678	163,433	724,747	470,493
Telegraph apparatus ... $	213,443	121,800	10,833	20,930	202,610	100,710
Telephone apparatus ... $	971,730	799,832	77,469	95,476	803,438	702,522
Transformers and parts ... $	256,540	409,265	113,916	221,229	114,087	83,233
Radio tubes ... No.	484,227	440,294	1,164	330	483,061	439,964
$	290,698	213,433	10,084	1,106	280,609	212,327
Radio receiving sets and other radio and wireless apparatus, electric, n.o.p. (to March 31, 1937) ... $	592,717	.....	56,579	.....	535,131	.....
Radio receiving sets (from April 1, 1937) ... No.	5,151	8,200	9	4	5,140	8,282
$	136,783	184,109	379	141	136,351	183,823
Radio and wireless apparatus, electric, n.o.p. (from April 1, 1937) ... $	2,128,635	2,114,846	156,973	195,031	1,970,571	1,919,082
Dry shaving machines ... $	353,392	496,300	20	219	352,988	496,074
Steam turbo-generator sets ... No.	20	3	5	3	2	.....
$	694,521	325,447	361,122	236,544	176,062	85,791
Welding apparatus ... $	134,075	116,474	5,129	9,800	128,811	106,467
Electric apparatus, n.o.p. ... $	2,360,891	2,155,191	174,483	230,532	2,092,533	1,826,483
Total Electrical Apparatus ... $	15,506,144	13,053,526	1,989,126	1,825,051	12,732,689	10,492,929

Table 23.—Imports of Non-Ferrous Metals and Their Products into Canada, Calendar Years 1937 and 1938—(concluded)

Classification	Total Imports for Consumption (Merchandise)		Imports from United Kingdom		Imports from United States	
	1937	1938	1937	1938	1937	1938
Gas apparatus ... $	154,241	154,913	8,115	10,983	133,248	125,899
Printing materials (except machinery)—						
Stereotypes ... Sq. in.	5,220,183	4,050,878	116,983	108,435	5,100,252	3,934,908
$	271,135	314,813	5,506	4,715	265,099	308,799
Other ... $	399,890	416,498	25,804	40,579	369,985	372,052
Antimony, not ground ... Lb.	1,176,790	856,986	...	...	442,456	204,346
$	136,836	85,461	...	...	42,279	15,307
Manganese, oxide of ... Cwt.	1,544,529	421,000	189	353	46,692	40,325
$	802,269	403,673	499	1,026	92,303	89,172
Chrome ores and ores of metals, n.o.p. (to March 31, 1938) ... Cwt.	677,878	191,377	59,641	36,156	169,334	101,772
$	1,265,915	378,496	288,329	101,471	479,574	126,137
Chrome ore (from April 1, 1938) ... Cwt.	...	182,066	...	...	...	17,426
$	...	142,399	...	...	...	19,299
Ores, n.o.p. (from April 1, 1938) ... Cwt.	...	755,360	...	24,774	...	451,264
$	...	658,669	...	58,563	...	183,278
Mercury ... Lb.	394,354	49,584	142,394	10,008	101,483	31,276
$	371,178	49,564	136,299	8,868	100,227	34,437
Bells, for use in churches only ... $	27,795	22,776	13,528	4,178	5,845	5,733
Bells and gongs, n.o.p. ... $	40,120	48,372	2,003	2,441	27,188	32,303
Zipper fasteners ... $	257,734	386,752	435	774	32,227	32,515
Buckles, clasps, hooks and eyes, etc. ... $	236,536	205,233	34,080	23,168	185,893	171,662
Wire, covered with any material ... $	149,621	127,954	10,169	24,129	138,595	103,672
Wire, tinsel ... $	37,201	26,295	...	...	6,304	3,697
Wire, twisted, etc., including wire rope and cable ... $	32,340	20,043	9,088	7,461	23,066	12,165
Wire of all kinds, n.o.p. ... $	168,362	135,792	25,481	25,013	140,155	109,036
Lamps and lanterns ... $	56,755	25,351	4,150	2,882	27,354	12,276
All other non-ferrous metals ... $	3,947,800	3,544,407	259,698	556,221	3,514,127	2,800,112
Total Non-Ferrous Metals and Their Products ... $	**47,016,907**	**38,395,767**	**7,301,579**	**5,807,707**	**31,141,637**	**24,364,956**

Table 24.—Exports from Canada of Non-Ferrous Metals and Their Products, Calendar Years 1937 and 1938

Classification	Total Exports of Canadian Produce (Mdse.)		Exports to United Kingdom		Exports to United States	
	1937	1938	1937	1938	1937	1938
Aluminium—						
Scrap ... Cwt	27,187	20,124	12,821	7,129	7,807	5,236
$	375,518	276,539	202,752	117,244	58,729	32,552
Bars, blocks, ingots, etc. ... Cwt.	970,029	1,294,487	458,254	678,251	256,453	22,337
$	17,592,909	23,052,552	8,781,947	12,012,734	3,814,624	343,577
Kitchen utensils and hollowware ... $	21,780	22,776	14,475	13,468	112	240
Manufactures, n.o.p. ... $	633,268	392,020	107,842	55,280	76,752	48,345
Total Aluminium and Its Products ... $	18,623,475	23,743,887	9,107,016	12,198,726	3,950,117	424,714
Brass—						
Scrap, dross, ashes ... Cwt.	118,650	80,528	14,793	17,773	76,044	48,696
$	913,931	443,113	139,741	107,107	526,057	230,546
Bars, rods, strips, etc. ... Cwt.	4,906	6,000	3,360	2,292	...	...
$	87,030	102,340	49,311	28,703	...	...
Valves ... $	211,449	205,010	141,683	159,003	751	858
Manufactures, n.o.p. ... $	402,543	338,363	237,602	213,087	5,136	2,919
Total Brass and Its Products ... $	1,614,953	1,088,826	568,337	487,900	531,944	234,323
Copper—						
Fine—in ore, matte, regulus ... Cwt.	738,676	1,098,061	11,649	33,781	510,481	585,119
$	7,409,381	7,637,581	119,530	255,044	5,104,451	4,052,784
Blister ... Cwt.	108,843	305,273	...	...	108,843	305,273
$	1,333,073	3,056,241	...	...	1,333,073	3,056,241
Old and scrap ... Cwt.	55,510	34,374	1,312	2,444	36,998	22,257
$	549,638	205,059	10,040	11,210	337,781	118,130
Ingots, bars, cakes, slabs and billets Cwt.	2,961,413	3,635,287	2,259,667	2,165,283	32	338
$	38,705,380	35,858,006	29,894,197	21,452,449	503	3,393
Rods, strips, sheets ... Cwt.	512,248	535,129	375,991	387,577	14	17
$	7,310,329	5,767,622	5,404,062	4,076,527	261	555
Wire and cable, insulated ... $	436,834	435,784	4,161	4,257	402	197
Manufactures, n.o.p. ... $	410,647	354,509	319,661	324,350	1,299	6,387
Total Copper and Its Products ... $	56,155,282	53,314,802	35,751,651	26,123,837	6,777,770	7,237,687

Table 24.—Exports from Canada of Non-Ferrous Metals and Their Products, Calendar Years 1937 and 1938—(concluded)

Classification		Total Exports of Canadian Produce (Mdse.)		Exports to United Kingdom		Exports to United States	
		1937	1938	1937	1938	1937	1938
Lead—							
In ore	Cwt.	165,296	71,623	.....	.....	104,375	66,363
	$	862,850	345,394	.....	.....	598,847	322,714
In pigs, refined lead, etc.	Cwt.	3,531,396	3,098,641	2,306,658	2,391,619	10	415
	$	16,978,147	8,637,797	10,886,174	6,656,476	71	1,469
Total Lead and Its Products	$	17,840,997	8,983,191	10,886,174	6,656,476	598,918	324,183
Nickel—							
In matte or speiss	Cwt.	808,082	886,482	442,238	553,858	141,426	78,973
	$	14,544,952	15,956,929	7,960,420	9,969,894	2,545,000	1,421,514
Nickel contained in oxide	Cwt.	51,052	36,835	2,692	16,079	17,554	3,496
	$	1,491,728	1,199,118	91,476	531,093	352,978	73,435
Fine	Cwt.	1,368,536	1,053,723	413,206	429,546	791,255	435,567
	$	42,876,537	35,340,370	16,533,895	17,029,686	19,781,786	10,890,796
Total Nickel and Its Products	$	58,913,217	52,496,417	24,585,791	27,530,673	22,679,764	12,385,745
Precious Metals—							
Gold bullion, other than monetary	Oz.	3,030,042	1,935,227	71,592	.....	2,958,450	1,933,454
	$	105,724,140	67,659,295	2,511,436	.....	103,212,704	67,611,818
Gold-bearing quartz, dust, etc.	Oz.	211,359	240,766	818	645	206,944	239,381
	$	7,101,093	8,192,591	26,945	22,401	6,956,199	7,838,908
Jewellers' sweepings	$	1,338,358	1,211,204	465,520	492,763	872,838	718,441
Platinum and other metals of the platinum group contained in concentrates, etc.	$	8,374,795	9,320,325	8,111,340	9,023,427	.....	.....
Platinum, old and scrap	Oz.	671	1,106	430	587	241	519
	$	27,760	44,490	16,744	18,940	11,016	25,550
Silver contained in ore, etc.	Oz.	5,769,332	5,868,827	35,543	698	5,324,684	5,573,016
	$	2,567,412	2,540,860	13,882	285	2,385,930	2,410,746
Silver bullion	Oz.	14,620,025	22,682,687	2,758,044	715,808	11,239,967	21,713,359
	$	6,556,357	9,838,462	1,245,757	309,904	5,026,640	9,419,185
Total Precious Metals	$	131,689,915	98,807,227	12,391,624	9,867,720	118,465,327	88,030,648
Zinc—							
In ore	Cwt.	656,958	458,410	.....	.....	1,705	.....
	$	2,618,641	1,154,812	.....	.....	3,873	.....
Spelter	Cwt.	2,683,780	2,644,241	1,780,567	1,987,789	144,967	47,835
	$	12,739,242	8,626,901	8,388,962	6,563,273	813,510	161,147
Scrap, dross and ashes	Cwt.	63,938	23,641	8,183	5,542	4,154	4,947
	$	133,303	34,235	22,330	8,567	14,356	14,341
Total Zinc and Its Products	$	15,491,186	9,816,008	8,411,292	6,571,840	831,739	175,488
Clocks, watches and parts	$	465,063	520,266	69,370	93,967	4,707	2,065
Electrical Apparatus—							
Batteries, storage	$	212,844	214,161	207	14	5,229	1,245
Batteries, n.o.p.	$	96,616	89,612	18,153	10,801	1,000	953
Radio and wireless apparatus	$	199,211	193,414	95,462	24,277	7,138	4,051
Telegraph and telephone apparatus	$	191,181	322,865	629	.....	1,877	370
Dynamos, generators and motors	$	490,943	506,072	145,901	138,976	3,960	5,636
Electric stoves and parts	$	1,503,146	1,044,707	150,233	163,825	646	2,934
Electrical heating and cooking devices, domestic, n.o.p.	$	23,302	30,755	1,364	7,573	346	65
Spark plugs, magnetos, etc.	$	747,240	625,926	373,208	47,017	256	513
Electrical apparatus, n.o.p.	$	845,492	1,086,648	238,884	320,166	18,596	13,697
Total Electrical Apparatus	$	4,309,975	4,114,160	1,024,041	712,649	39,048	28,564
Electrotypes and stereotypes	$	20,023	10,058	4,773	2,722	12,506	10,846
Cobalt in ore	Cwt.	924	664	13	.....	750	616
	$	58,712	40,983	795	.....	48,054	37,837
Ores, other, n.o.p.	Ton	378	6,717	108	110	270	108
	$	28,032	346,516	8,060	2,940	19,972	5,802
Cobalt, metallic	Lb.	7,576	83,579	2,400	2,800	5,176	80,779
	$	10,834	122,101	3,000	3,500	7,834	118,601
Cobalt alloys	Lb.	51,939	49,674	49,787	48,668	.....	.....
	$	84,629	79,278	80,555	77,583	.....	.....
Plated ware, n.o.p.	$	20,883	32,698	1,212	981	4,430	7,461
Metallic, scrap, dross, ashes, n.o.p.	Cwt.	580,579	499,941	11,969	51,387	523,326	390,471
	$	581,085	388,624	111,966	144,388	385,394	185,697
Metals, other, unmanufactured, n.o.p.	$	1,300,232	853,813	642,829	658,915	514,676	145,230
Metals, other, manufactured, n.o.p.	$	493,123	751,397	209,312	340,210	29,762	20,096
Total Non-Ferrous Metals and Their Products	$	**307,781,616**	**255,516,252**	**103,857,798**	**91,475,627**	**154,898,862**	**109,374,987**

CHAPTER TWO

THE ALUMINIUM PRODUCTS INDUSTRY

As reviewed in this chapter the Aluminium Products Industry covers only the operations of factories which were occupied chiefly in casting, rolling or fabricating aluminium to make bars, rods, sheets, wire, cable, foil, cooking utensils, commercial castings, boot and shoe lasts, etc. It does not include the two aluminium smelters, one at Arvida, Quebec, and one at Shawinigan Falls, Quebec, as these works have been classified to the Non-Ferrous Smelting and Refining Industry which is reviewed in Chapter Seven of this report. Nor does it include the aluminium castings, cable, utensils, etc., which were made as secondary or minor products of brass and iron foundries or other manufacturing establishments.

Nineteen factories were classified in this industry in 1938, including 2 rolling mills, 8 establishments engaged chiefly in making cooking utensils, 3 in making hat dies, 1 in making boot and shoe lasts, 1 in making die castings, 1 in making thermit rail welding materials, 2 in making miscellaneous stampings and spinnings, and 1 in making aluminium curlers and wave clips. Capital employed by these concerns amounted to $4,798,855, employees numbered 1,372, salaries and wages totalled $1,619,082, materials used in manufacturing processes cost $4,078,112 and production was valued at $6,924,088. This output value was 3 per cent less than in 1937 which in turn was 32 per cent over 1936.

Output of aluminium cooking utensils in this industry was valued at $1,361,185 in 1938 but, in addition, concerns in other industries made aluminiumware worth $168,095, bringing the total for Canada to $1,529,280. In 1937 the total was reported at $1,534,199 and in 1936 at $1,327,141.

Table 25.—Principal Statistics, 1920-1938

Years	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works†	Cost of materials at works	Gross selling value of products at works	Net value of production
		$		$	$	$	$	$
1920	8	8,579,197	1,120	1,513,385	80,675	3,164,751	9,445,614	6,200,188
1921	8	8,131,088	481	609,170	58,530	1,704,432	3,633,616	1,870,654
1922	9	7,632,722	707	817,864	51,663	1,997,488	3,851,925	1,802,774
1923	11	8,994,806	1,007	1,196,287	542,350	3,192,546	7,017,830	3,282,934
1924	11	8,936,025	1,098	1,362,774	294,024	3,454,116	7,700,822	3,952,682
1925	12	9,191,213	1,169	1,406,919	766,231	3,688,761	9,137,305	4,682,313
1926	12	3,930,336	428	554,024	48,293	801,835	1,917,810	1,067,682
1927	12	4,189,658	485	625,669	54,562	976,901	2,318,894	1,287,431
1928	14	5,094,213	609	805,393	75,430	1,865,328	3,192,696	1,251,938
1929	14	5,264,388	723	930,216	91,438	2,754,726	4,263,801	1,417,637
1930	14	5,217,665	808	1,065,195	92,572	2,184,658	4,343,436	2,066,206
1931	14	4,540,834	793	923,546	79,364	2,066,851	3,597,764	1,451,549
1932	14	3,906,196	661	678,400	66,628	1,375,902	2,703,112	1,260,682
1933	15	3,654,541	638	671,267	77,615	1,458,444	2,778,274	1,242,215
1934	16	3,759,900	789	826,597	104,115	2,115,100	3,745,433	1,526,218
1935	19	3,791,756	998	1,089,487	128,653	3,258,310	4,992,640	1,605,677
1936	19	3,884,241	1,101	1,194,999	119,320	3,799,688	5,438,281	1,519,273
1937	18	4,630,491	1,345	1,535,112	140,180	4,525,571	7,156,243	2,490,492
1938	19	4,798,855	1,372	1,619,082	136,690	4,078,112	6,924,088	2,709,286

†Electricity not included 1920 to 1922.

Table 26.—Size of Establishments, According to Production, Employees and Capital, 1937 and 1938

—	1937				1938			
	Number of plants	Capital employed	Number of employees	Gross selling value of products	Number of plants	Capital employed	Number of employees	Gross selling value of products
		$		$		$		$
(a) Production								
Under $25,000	7	128,386	27	74,636	8	169,271	29	77,227
$25,001 to $100,000	3	101,257	50	176,267	4	224,094	84	257,515
Over $100,000	8	4,400,848	1,268	6,905,340	7	4,404,890	1,259	6,589,346
Total	**18**	**4,630,491**	**1,345**	**7,156,243**	**19**	**4,798,855**	**1,372**	**6,924,088**
(b) Number of employees								
Under 10	7	128,386	27	74,636	8	169,271	29	77,227
10 and over	11	4,502,105	1,318	7,081,607	11	4,629,584	1,343	6,846,861
Total	**18**	**4,630,491**	**1,345**	**7,156,243**	**19**	**4,798,855**	**1,372**	**6,924,088**
(c) Capital employed								
Under $25,000	6	69,503	30	73,502	8	104,359	37	95,128
$25,001 to $100,000	5	214,411	94	306,498	3	153,130	41	151,182
Over $100,000	7	4,346,577	1,221	6,776,183	8	4,541,366	1,294	6,677,778
Total	**18**	**4,630,491**	**1,345**	**7,156,243**	**19**	**4,798,855**	**1,372**	**6,924,088**

Table 27.—Capital Employed, 1937 and 1938

Capital employed as represented by:	1937	1938
	$	$
Present value of lands, buildings, machinery and other equipment	2,244,466	2,324,313
Inventory value of materials, finished products, fuel and other supplies on hand, and stocks in process	991,147	938,674
Operating capital (cash, bills and accounts receivable, prepaid expenses, etc.)	1,394,878	1,535,868
Total	**4,630,491**	**4,798,855**

Table 28.—Employees, Salaries and Wages, 1937 and 1938

—	1937	1938
Salaried employees—		
Male	138	159
Female	55	58
Total	193	217
Wage-earners—		
Male	1,022	1,045
Female	130	110
Total	1,152	1,155
Total employees	**1,345**	**1,372**
Salaries $	335,984	385,278
Wages $	1,199,128	1,233,804
Total salaries and Wages $	**1,535,112**	**1,619,082**

Table 29.—Wage-Earners, by Months, 1937 and 1938 (On the last work-day of each month)

Month	1937			1938		
	Male	Female	Total	Male	Female	Total
January	906	110	1,016	1,161	116	1,277
February	914	118	1,032	1,127	113	1,240
March	921	121	1,042	1,053	114	1,167
April	975	125	1,100	1,043	115	1,158
May	976	124	1,100	984	111	1,095
June	985	134	1,119	1,000	117	1,117
July	1,063	140	1,203	1,015	112	1,127
August	1,072	139	1,211	1,034	104	1,138
September	1,075	140	1,215	1,048	123	1,171
October	1,112	136	1,218	1,042	104	1,146
November	1,140	135	1,275	1,009	101	1,110
December	1,128	128	1,256	1,019	92	1,111
Average	**1,022**	**130**	**1,152**	**1,045**	**110**	**1,155**

Table 30.—Hours Worked per Week by Wage-Earners, 1938

Regular hours worked per week	Per cent of wage-earners	Regular hours worked per week	Per cent of wage-earners
30 hours or less	2·6	49-50 hours	5·7
31-43 hours	13·2	51-54 hours	1·4
44 hours	26·1	55 hours	2·6
45-47 hours	13·5	56-64 hours	0·5
48 hours	34·0	65 hours or over	0·4

Table 31.—Fuel and Electricity Used, 1937 and 1938

Kinds	Unit of measure	1937		1938	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal—Canadian	short ton	61	579	40	327
Imported	short ton	2,107	12,566	2,183	13,178
Anthracite coal	short ton	3	45	26	348
Coke	short ton	2,798	25,220	2,559	20,440
Gasoline	Imp. gal.	3,435	835	2,419	643
Kerosene	Imp. gal.	2,066	404	3,470	634
Fuel oil	Imp. gal.	120,722	9,785	120,028	9,433
Gas—Manufactured	M cu. ft.	10,077	8,876	9,681	8,471
Natural	M cu. ft.	8,903	4,828	4,651	2,619
Wood	cord	5	51	2	20
Electricity purchased	K.W.H.	10,403,792	76,991	13,957,249	80,877
Total	$	.....	**140,180**	.....	**136,690**

Table 32.—Power Equipment, 1937 and 1938

—	Ordinarily in use		In reserve or idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
1937				
Steam engines and steam turbines	.....	.....	.....	.....
Electric motors operated by purchased power	336	6,545	1	20
Total	**336**	**6,545**	**1**	**20**
Stationary boilers	4	525	.....	.....
1938				
Steam engines and steam turbines	.....	.....	.....	.....
Electric motors operated by purchased power	463	7,212	2	45
Total	**463**	**7,212**	**2**	**45**
Stationary boilers	5	535	1	125

Table 33.—Materials Used in Manufacturing, 1937 and 1938

Materials	1937		1938	
	Short tons	Cost at works	Short tons	Cost at works
		$		$
Aluminium ingots, sheets, circles, etc.	10,830	4,118,972	10,295	3,741,609
Handles, trimmings, etc.	.....	123,658	.....	122,545
All other materials	.....	282,941	.....	213,958
Total	.....	**4,525,571**	.....	**4,078,112**

Table 34.—Products Made, 1936-1938

Products	1936	1937	1938
	$	$	$
Aluminium cooking utensils (a)	1,143,692	1,337,216	1,361,185
All other products (b)	4,294,589	5,819,027	5,562,903
Total	**5,438,281**	**7,156,243**	**6,924,088**

(a) In addition to the above output, aluminium cooking utensils valued at $168,095 in 1938, $196,983 in 1937 and $183,449 in 1936 were made as minor products by concerns in other industrial groups.

(b) Includes aluminium wire, cable, rods, bars, sheets, castings, hat dies and boot and shoe lasts; also plaster hat blocks, electric space heaters and zinc die castings. Figures for these commodities cannot be shown separately as in each case there were only one or two producers in this industry.

Table 35.—Total Production in Canada of Aluminium Hollow-ware and Kitchenware, 1925-1938

(From all industries)

Years	Selling value at works	Years	Selling value at works
	$		$
1925	1,056,920	1932	1,042,438
1926	1,028,261	1933	969,948
1927	1,571,269	1934	1,173,877
1928	1,457,679	1935	1,328,527
1929	1,303,010	1936	1,327,141
1930	1,671,984	1937	1,534,199
1931	1,303,108	1938	1,529,280

Table 36.—Imports into Canada, and Exports of Aluminium and Its Products, 1937 and 1938

—	1937		1938	
	Quantity	Value	Quantity	Value
		$		$
Imports				
Alumina ... cwt.	2,518	28,662	1,457	17,302
Bauxite ore ... cwt.	6,078,468	3,772,870	7,365,187	2,359,933
Cryolite or kryolite ... cwt.	138,138	596,250	127,985	542,397
Aluminium in pigs, ingots, blocks, notch bars, slabs, billets and blooms ... cwt.	796	20,114	1,381	36,780
Aluminium scrap ... cwt.	12,343	197,989	11,003	102,742
Aluminium angles, channels, beams, and other rolled or drawn sections or shapes ... cwt.	419	18,404	1,526	62,526
Aluminium in bars, rods and wire ... cwt.	2,556	87,000	1,817	69,163
Aluminium leaf, n.o.p., or foil, less than ·005 in thickness, plain or embossed, with or without backing ... $	...	138,665	...	107,321
Aluminium leaf, less than ·005 millimetres in thickness ... $	...	6,859	...	7,523
Aluminium pipes and tubes ... cwt.	1,452	77,053	1,197	64,058
Aluminium in plates, sheets and strips, including circles ... cwt.	20,034	676,789	17,091	615,540
Aluminium powder ... lb.	246,799	86,733	146,251	53,735
Aluminium wire and cable, twisted or stranded, reinforced with steel or not ... cwt.	18	639	14	512
Aluminium kitchen or household hollow-ware, n.o.p. ...	...	82,580	...	84,725
Aluminium, manufactures of, n.o.p. ...	...	788,794	...	774,997
Total ...	...	**6,579,401**	...	**4,899,254**
Exports				
Aluminium scrap ... cwt.	27,187	375,518	20,124	276,539
Aluminium in bars, blocks, ingots, sheets, etc. ... cwt.	970,029	17,592,909	1,294,487	23,052,552
Aluminium kitchen utensils and hollow-ware ...	...	21,780	...	22,776
Aluminium, manufactures of, n.o.p. ...	...	633,268	...	392,020
Total ...	...	**18,623,475**	...	**23,743,887**
Re-exports				
Aluminium, and manufactures of ...	...	33,859	...	54,039

Table 37.—Exports from Canada of Manufactures of Aluminium, by Countries of Destination, 1937 and 1938

Countries of Destination	1937		1938	
	Aluminium kitchen-ware and hollow-ware	Manufactures of aluminium, n.o.p.	Aluminium kitchen-ware and hollow-ware	Manufactures of aluminium, n.o.p.
	$	$	$	$
Argentina ...	...	12,090	...	11,174
Australia ...	15	20,003	...	5,813
Bolivia ...	...	6,242	...	9,589
Brazil ...	...	4,021	...	91,013
British India ...	...	158,926	...	2,243
Chile ...	...	13,289	...	2,486
China ...	...	32,317	...	3,076
Cuba ...	...	2,654	...	566
Mexico ...	...	10,369	...	5,349
New Zealand ...	129	46,216	1,042	62,243
Peru ...	1,042	4,925	...	977
Portugal ...	...	16,164	...	1,429
Sweden ...	...	19,878	...	16,301
United Kingdom ...	14,475	107,842	13,468	55,280
United States ...	112	76,752	240	48,345
Venezuela ...	...	32,425	...	22,057
Other countries ...	6,007	69,155	7,030	54,079
Total ...	**21,780**	**633,268**	**21,780**	**392,020**

Primary Production of Aluminium.—(From the annual report of the Mineral Production of Canada):—The reduction of aluminium ores and the production of primary aluminium in Canada is confined to the province of Quebec. In this province the Aluminum Company of Canada, Limited, operates an ore treatment plant at Arvida and reduction plants at both Arvida and Shawinigan Falls. These three plants were in continuous operation throughout 1938. At the Arvida ore plant concentrates were made from British Guiana bauxite and aluminium ingot was produced in the two reduction works. The bauxite from British Guiana is washed and dried before being shipped; at Arvida, Quebec, it is treated by a standard chemical process to remove impurities, and pure aluminium oxide is recovered. Cryolite, necessary in the production of the metal, is imported from Greenland.

World production of aluminium in 1938, as reported by the American Bureau of Metal Statistics, totalled approximately 583,597 metric tons compared with 489,830 metric tons in 1937 and 255,801 metric tons in 1928. During 1938, Canada produced 66,000 metric tons of the metal and ranked third as a world producer of aluminium. The average price per pound for aluminium in 1938 was recorded at 20 cents by the American Bureau of Metal Statistics and is in excess of the price actually realized on large-scale business.

Table 38.—Exports from Canada of Aluminium Ingots, Bars, Blocks, Sheets, etc., by Countries of Destination, 1937 and 1938

Countries to which exported	1937		1938	
	Quantity	Value	Quantity	Value
	cwt.	$	cwt.	$
United Kingdom	458,254	8,781,947	678,251	12,012,734
United States	256,453	3,814,524	22,337	343,577
Italy	9,921	201,112	.....	.....
Brazil	1,144	23,886	2,104	47,278
China	23,510	410,727	33,465	648,350
Australia	9,829	211,904	3,685	83,578
Japan	176,588	3,429,570	310,963	6,005,450
Germany	6,959	143,004	123,912	1,687,465
British India	602	14,036	7,541	157,890
Belgium	1,876	37,621	2,402	48,792
Mexico	368	11,088	406	10,093
Switzerland	1,328	27,648	1,111	20,796
Russia	9,274	217,574	42,643	930,926
Other countries	13,923	267,368	65,667	1,049,023
Total in bars, blocks, etc.	**970,029**	**17,592,909**	**1,294,487**	**23,052,552**

Table 39.—World's Production of Aluminium, 1928, 1930, 1937 and 1938

(From the year book of the *American Bureau of Metal Statistics*)

Countries	1928	1930	1937	1938
		(Metric tons)		
United States	95,300	103,890	132,759	130,129
Canada	40,000	34,900	42,550	66,000
Total America	135,300	138,790	175,309	196,129
France	25,867	24,040	34,500	45,300
Switzerland (a)	19,900	20,500	25,000	20,500
Germany (a)	31,700	30,700	127,500	(c) 165,700
Austria (a)	4,000	3,000	4,100	(c)
Great Britain (a)	10,700	14,000	19,400	22,500
Norway	24,779	27,357	23,043	29,500
Italy	3,548	7,968	22,947	25,768
Spain	7	1,100	.....	800
Russia	.....	.....	45,000	48,000
Sweden	.....	.....	1,831	1,900
Hungary	.....	.....	1,200	1,500
Total Europe	120,501	129,265	304,521	367,468
Japan	.....	.....	10,000	(†) 20,000
Total World (b)	**255,801**	**268,055**	**489,830**	**583,597**

(a) From Metallgesellschaft.
(b) Omitted from this table is a small production in Yugoslavia.
(c) Austrian production for 1938 included with Germany.
(†) Conjectural.

Directory of Firms in the Aluminium Products Industry, 1938

Names of firms	Location of plants	Products reported 1938
QUEBEC—		
Aluminum Company of Canada Ltd.	Shawinigan Falls	Aluminium rods, bars, wire, cable and cable fittings.
Aluminium Moderne Enrg.	11245 Victoria St., Montreal East	Aluminium cooking utensils.
Brasloff, Jack	669 St. James St. W., Montreal	Metal hat blocks and dies.
ONTARIO—		
Aluminum Company of Canada Ltd.	158 Sterling Road, Toronto	Aluminium sheets, castings, foil, wire, rivets, seals, screw machine products, cable accessories, etc.
Aluminium Goods Limited	158 Sterling Road, Toronto	Aluminium cooking utensils, aluminium scrap, machine parts.
Aluminium Ware Mfg. Co. Ltd.	20 Dundas St., Oakville	Aluminium cooking utensils and stampings.
Canadian Die Casters	Beverly St., Galt	Aluminium and brass die castings.
Clark, Geo. C., Metal Last Co.	1889 Sandwich St., Windsor	Aluminium boot and shoe lasts.
Duro Aluminium Limited	80 Park St. N., Hamilton	Aluminium cooking utensils, aluminium scrap.
Hamilton Aluminium Ware Co.	13 Ferguson Ave. N., Hamilton	Aluminium cooking utensils.
Hudson Aluminum Ware	370 Dufferin St., Toronto	Aluminium spinnings and stampings.
Metal Stampings, Limited	435 Fleet St. W., Toronto	Aluminium cooking utensils, electric space heaters.
Metal and Thermit Corporation	15 Emily St., Toronto	Rail welding portions, forging thermit.
Oakville Machine Works	Randall St., Oakville	Aluminium and steel stampings.
Shaw, H. G.	24 Mercer St., Toronto	Aluminium hat dies and wood hat blocks.
Sterling Aluminum Co. Limited	2466 Dundas St. W., Toronto	Aluminium cooking utensils.
Super Health Aluminum Co. Ltd.	107 McGill St., Toronto	Aluminium cooking utensils, aluminium castings.
Toronto Hat Block & Die	380 King St. W., Toronto	Aluminium and plaster hat blocks and dies.
Wintrob, M., & Sons, Ltd.	30 Duncan St., Toronto	Aluminium hair curlers and waveclips, novelty jewellery.

CHAPTER THREE

THE BRASS AND COPPER PRODUCTS INDUSTRY

Data given in this chapter cover the operations of brass foundries and other plants in Canada engaged chiefly in the manufacture of commodities, other than electrical equipment, from brass, bronze or copper. Seventy-six foundries and fifty-one fabricating plants reported under this industry in 1938 and their production was valued at $27,727,637. In 1937 the corresponding total amounted to $34,453,160 and in 1936 to $24,947,467.

Products manufactured during 1938 by firms in this group included ingots, bars, rods, sheets, tubing, and castings of copper, brass, bronze and aluminium, and such further fabricated lines as railway car bearings and fittings, wire cloth of brass and bronze, valves of brass, bronze and iron, plumbing supplies, gas and water meters, fire extinguishers, lightning rods, metal fasteners, automobile hardware, etc. Copper wire and cable, lighting fixtures, switches and other such articles for electrical purposes have not been listed in this group but have been classified to the Electrical Apparatus and Supplies Industry which is dealt with in a separate report. The total Canadian production of valves, brass and copper wire and cable and lighting fixtures is recorded in Tables 52, 101 and 104.

A total of 127 plants was included in this group during 1938, of which 81 were located in Ontario, 29 in Quebec, 9 in British Columbia, 5 in Manitoba and 1 each in Nova Scotia, New Brunswick and Alberta. Ontario's factories accounted for 64·5 per cent of the total production and Quebec's plants for 29·9 per cent.

Capital employed in 1938 was reported at $22,991,460 of which $12,568,707 represented the value of lands, buildings and equipment, $5,542,211 the value of inventories, and $4,980,542 the total of operating capital.

The number of employees in 1938 was 5,030 compared with 5,094, and salaries and wages aggregated $6,155,367 as against $6,310,384 in 1937.

Materials used in manufacturing during the year under review cost $16,002,647 delivered at the works. Over 66 per cent of this expenditure was for copper ingots and bars, chiefly for rolling into wire rods for the manufacture of electrical wires and cables.

Table 40.—Principal Statistics, 1920-1938

Years	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works*	Cost of materials at works	Gross selling value of products at works	Net value of production
		$		$	$	$	$	$
1920	79	19,514,502	4,461	5,433,295	581,625	9,886,407	19,516,187	9,048,155
1921	81	18,122,034	3,134	3,844,055	300,548	4,184,574	10,477,206	5,991,984
1922	83	17,608,876	3,457	4,079,825	357,608	5,106,224	12,253,691	6,789,859
1923	81	20,322,808	4,097	4,773,528	536,789	7,548,598	16,793,595	8,707,908
1924	81	18,594,443	3,747	4,604,293	453,764	7,889,367	15,487,826	7,144,695
1925	91	20,508,838	4,032	4,985,645	517,887	10,147,373	19,155,309	8,490,049
1926	98	20,764,404	4,533	5,716,529	533,893	11,810,686	22,028,636	9,684,057
1927	99	22,425,179	4,832	6,065,671	583,132	12,546,718	24,054,657	10,924,807
1928	97	23,576,863	5,437	6,797,416	624,983	15,716,748	28,457,430	12,115,699
1929	102	27,431,520	6,232	7,800,591	619,946	21,118,038	36,115,581	14,377,597
1930	117	26,820,527	5,297	6,742,752	577,171	13,355,186	25,412,225	11,479,868
1931	127	24,351,059	4,437	5,627,486	485,717	7,200,608	16,052,756	8,366,431
1932	119	23,148,843	3,535	3,880,838	402,025	3,949,157	9,594,115	5,242,933
1933	123	22,167,121	3,395	3,416,823	459,901	7,409,636	13,150,559	5,281,022
1934	125	22,325,567	3,932	4,187,052	523,103	11,177,904	19,309,314	7,608,247
1935	124	21,993,841	4,246	4,649,912	544,147	10,584,600	19,187,022	8,058,275
1936	126	22,890,531	4,596	5,293,457	567,108	14,182,328	24,947,467	10,198,031
1937	125	23,686,294	5,094	6,310,384	625,961	21,498,095	34,453,100	12,329,104
1938	127	22,991,460	5,030	6,155,367	577,601	16,002,647	27,727,637	11,147,389

*Electricity not included 1920 to 1922.

Table 41.—Principal Statistics, by Sub-Groups, 1937 and 1938

—	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works	Net value of production
		$		$	$	$	$	$
1937								
Foundries making taps, valves, etc.	14	7,479,000	1,638	1,809,432	133,781	1,117,953	4,521,450	3,269,716
Other brass and bronze foundries	62	7,949,068	2,069	2,880,396	350,768	7,477,193	13,453,112	5,625,151
Fabricating plants (not foundries)	49	8,258,226	1,387	1,620,556	141,412	12,902,949	16,478,598	3,434,237
Total	**125**	**23,686,294**	**5,094**	**6,310,384**	**625,961**	**21,498,095**	**34,453,160**	**12,329,104**
1938								
Foundries making taps, valves, etc.	13	7,159,772	1,566	1,838,044	114,582	848,740	3,921,780	2,958,458
Other brass and bronze foundries	63	8,689,039	2,268	2,933,077	342,989	5,499,704	11,291,384	5,448,691
Fabricating plants (not foundries)	51	7,142,649	1,196	1,384,246	120,030	9,654,203	12,514,473	2,740,240
Total	**127**	**22,991,460**	**5,030**	**6,155,367**	**577,601**	**16,002,647**	**27,727,637**	**11,147,389**

Table 42.—Principal Statistics, by Provinces, 1937 and 1938

Provinces	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works
		$		$	$	$	$
1937							
Quebec	30	7,361,977	1,407	1,773,108	213,729	6,431,763	10,204,934
Ontario	78	14,632,058	3,159	3,981,848	350,210	14,099,139	22,170,620
British Columbia	9	130,196	52	62,150	4,673	61,363	170,227
Nova Scotia	1						
New Brunswick	1	1,562,063	476	493,278	57,349	905,830	1,907,379
Manitoba	5						
Alberta	1						
Canada	**125**	**23,686,294**	**5,094**	**6,310,384**	**625,961**	**21,498,095**	**34,453,160**
1938							
Quebec	29	7,406,370	1,421	1,757,966	195,384	5,016,788	8,287,418
Ontario	81	14,141,438	3,165	3,890,160	329,007	10,374,685	17,885,982
Manitoba	5	498,929	89	130,797	20,586	291,032	569,404
British Columbia	9	149,832	66	93,314	5,290	88,177	236,052
Nova Scotia	1						
New Brunswick	1	794,891	289	283,130	27,336	231,965	748,781
Alberta	1						
Canada	**127**	**22,991,460**	**5,030**	**6,155,367**	**577,601**	**16,002,647**	**27,727,637**

Table 43.—Size of Establishments, According to Production, Employees, and Capital, 1938

—	Number of plants	Capital employed	Number of employees	Gross selling value of products at works
		$		$
(a) Production				
Under $5,000	16	77,391	29	51,763
$5,000 to $10,000	18	142,133	67	139,535
$10,001 to $25,000	19	390,547	125	339,804
$25,001 to $50,000	28	1,257,184	413	1,371,450
$50,001 to $100,000	12	998,859	315	868,420
$100,001 to $250,000	16	3,033,708	796	2,752,986
$250,001 to $500,000	8	4,968,194	992	3,037,076
$500,001 to $1,000,000	6	6,052,221	1,092	3,822,559
Over $1,000,000	4	6,071,223	1,201	15,344,044
Total	**127**	**22,991,460**	**5,030**	**27,727,637**
(b) Number of Employees				
1 or 2	16	79,104	26	61,425
3 to 10	46	806,655	251	901,767
11 to 20	19	952,754	281	781,991
21 to 50	23	4,660,779	795	11,694,647
51 to 100	9	2,156,797	613	2,138,389
Over 100	14	14,335,371	3,064	12,149,418
Total	**127**	**22,991,460**	**5,030**	**27,727,637**
(c) Capital Employed				
Under $25,000	59	602,119	330	943,798
$25,000 to $100,000	30	1,380,816	492	1,346,773
$100,001 to $500,000	25	5,476,874	1,474	5,315,764
$500,001 to $1,000,000	8	5,973,525	1,088	11,866,030
Over $1,000,000	5	9,558,126	1,646	8,255,272
Total	**127**	**22,991,460**	**5,030**	**27,727,637**

Table 44.—Capital Employed, by Classes and by Provinces, 1937 and 1938

Provinces	Present value of lands, buildings, fixtures, machinery and tools	Inventory value of materials on hand, stocks in process, fuel, etc., and finished products on hand	Operating capital (cash, bills and accounts receivable and prepaid expenses, etc.)	**Total rapital employed**
	$	$	$	$
1937				
Quebec	4,841,960	1,289,381	1,230,636	**7,361,977**
Ontario	7,147,843	3,586,869	3,897,346	**14,632,058**
British Columbia	71,480	19,616	39,100	**130,196**
Other provinces	735,368	509,728	316,967	**1,562,063**
Canada	**12,796,651**	**5,405,594**	**5,484,049**	**23,686,294**
1938				
Quebec	4,668,197	1,466,284	1,271,889	**7,406,370**
Ontario	7,175,064	3,497,859	3,467,615	**14,141,438**
Manitoba	275,970	142,096	80,863	**498,929**
British Columbia	81,297	31,572	36,963	**149,832**
Other provinces	367,279	304,400	123,212	**794,891**
Canada	**12,568,707**	**5,442,211**	**4,980,542**	**22,991,460**

Table 45.—Employees, Salaries and Wages, by Provinces, 1937 and 1938

Provinces	Average number of employees					Salaries	Wages	Total salaries and wages
	On salaries		On wages		Total			
	Male	Female	Male	Female				
						$	$	$
1937								
Quebec	232	49	1,032	94	1,407	568,758	1,204,350	1,773,108
Ontario	500	143	2,338	178	3,159	1,150,073	2,822,775	3,981,848
British Columbia	9	2	41	.....	52	16,735	45,415	62,150
Other provinces	80	4	370	22	476	151,442	341,836	493,278
Canada	**821**	**198**	**3,781**	**294**	**5,094**	**1,896,008**	**4,414,376**	**6,310,384**
1938								
Quebec	250	56	1,048	67	1,421	610,208	1,147,758	1,757,966
Ontario	582	153	2,260	170	3,165	1,343,549	2,546,611	3,890,160
Manitoba	25	.....	64	.....	89	69,638	61,150	130,797
British Columbia	9	2	55	.....	66	22,581	70,733	93,314
Other provinces	57	4	215	13	289	94,509	188,621	283,130
Canada	**923**	**215**	**3,642**	**250**	**5,030**	**2,140,485**	**4,014,882**	**6,155,367**

Table 46.—Wage-Earners, by Months, 1937 and 1938 (on the last work-day of each month)

Months	1937			1938		
	Male	Female	Total	Male	Female	Total
January	3,515	272	3,787	3,638	233	3,871
February	3,725	282	4,007	3,620	236	3,856
March	3,807	296	4,103	3,634	245	3,879
April	3,943	302	4,245	3,579	252	3,831
May	3,929	305	4,234	3,667	244	3,911
June	3,920	303	4,223	3,655	247	3,902
July	3,853	295	4,148	3,635	238	3,873
August	3,915	299	4,214	3,645	262	3,907
September	3,895	290	4,185	3,608	277	3,885
October	3,797	277	4,074	3,660	267	3,927
November	3,764	267	4,031	3,740	264	4,004
December	3,622	266	3,888	3,632	246	3,878
Average	**3,781**	**294**	**4,075**	**3,642**	**259**	**3,892**

Table 47.—Hours Worked per Week, by Wage-Earners, 1938

Regular hours worked per week	Per cent of wage-earners	Regular hours worked per week	Per cent of wage-earners
30 hours or less	1·7	49-50 hours	12·0
31-43 hours	29·0	51-54 hours	1·8
44 hours	29·2	55 hours	2·1
45-47 hours	13·6	56-64 hours	1·2
48 hours	9·0	65 hours and over	0·4

Table 48.—Fuel and Electricity Used, 1937 and 1938

Kinds	Unit of measure	1937		1938	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal—Canadian	short ton	5,718	33,771	6,149	37,533
Imported	short ton	11,526	64,757	10,518	61,940
Anthracite coal	short ton	1,571	15,255	1,105	12,951
Coke	short ton	4,567	42,731	4,084	36,646
Gasoline	Imp. gal.	7,266	1,516	12,018	2,457
Kerosene	Imp. gal.	655	127	1,146	211
Fuel oil	Imp. gal.	1,709,252	133,205	1,486,139	113,805
Wood	cord	387	2,474	298	1,638
Gas—Manufactured	M cu. ft.	21,048	16,220	24,683	17,739
Natural	M cu. ft.	23,757	9,303	25,549	10,828
Other fuel	$	.....	9,484	.....	9,398
Electricity purchased	K.W.H.	30,179,276	297,118	25,089,836	272,455
Total	.....	.....	**625,961**	.....	**577,601**

Table 49.—Power Equipment, 1937 and 1938

—	Ordinarily in use		In reserve or idle	
	Number of units	Total rated horse-power	Number of units	Total rated horse-power
1937				
Steam engines and turbines	6	1,145	2	150
Gasoline, gas and oil engines	2	83	.....	.....
Hydraulic turbines or water wheels	1	25	.....	.....
Total primary equipment	9	1,253	2	150
Electric motors run by purchased power	1,566	24,387	18	209
Total	**1,575**	**25,640**	**20**	**359**
Electric motors run by primary power	27	358	.....	.....
Stationary boilers	33	3,054	2	100
1938				
Steam engines and turbines	6	1,145	2	150
Gasoline, gas and oil engines	1	75	.....	.....
Hydraulic turbines or water wheels	1	25	.....	.....
Total primary equipment	8	1,245	2	150
Electric motors run by purchased power	1,643	24,385	22	182
Total	**1,651**	**25,630**	**24**	**332**
Electric motors run by primary power	27	358	.....	.....
Stationary boilers	36	3,209	3	120

Table 50.—Materials Used, 1937 and 1938

Materials	Unit of measure	1937		1938	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Aluminium—					
Ingots	lb.	329,988	56,850	252,024	39,429
Scrap	lb.	1,908,754	277,758	1,683,413	211,566
Sheets	lb.	51,245	15,931	31,931	10,239
Castings	lb.	11,426	2,838	52,981	16,238
Other	lb.	121,602	41,430		
Brass—					
Ingots	lb.	1,675,016	181,513	2,145,196	190,689
Scrap	lb.	6,987,675	696,788	4,979,991	405,940
Bars and rods	lb.	807,812	130,739	703,624	121,546
Plates, sheets and strip	lb.	359,236	73,505	397,553	68,797
Pipe and tubing	lb.	433,366	98,216	460,634	99,529
Wire	lb.	824,810	196,354	523,139	133,777
Castings	lb.	203,312	49,758	189,018	45,141
Other	lb.	586,571	120,154	679,850	122,891
Bronze—					
Ingots	lb.	1,863,934	180,793	1,006,388	72,544
Scrap	lb.	13,554,153	1,562,553	10,852,696	869,088
Bars and rods	lb.	35,452	9,537	50,615	9,227
Plates, sheets and strip	lb.	57,372	10,538	53,259	15,950
Pipe and tubing	lb.	2,824	1,094	.....	.....
Wire	lb.	770,459	298,488	472,314	179,417
Castings	lb.	249,652	64,204	46,200	18,827
Other	lb.	30,697	5,728	26,437	7,533
Copper—					
Ingots, wire bars, cakes, slabs, etc.	lb.	110,573,509	14,070,781	101,588,470	10,646,817
Scrap	lb.	4,864,385	596,340	3,929,241	384,506
Pipe and tubing	lb.	98,254	39,385	87,904	18,642
Plates, sheets and strip	lb.	889,449	185,177	773,770	144,696
Wire	lb.	323,266	49,603	237,858	39,352
Castings	lb.	5,324	1,124	34,087	7,926
Other	lb.	110,107	23,073		
Lead—					
Pig	lb.	804,379	49,010	712,315	33,208
Scrap	lb.	286,019	14,919	442,719	17,107
Other	lb.	20,360	4,735	25,653	5,280
Nickel	lb.	222,737	67,182	220,437	73,957
Tin—					
Ingots	lb.	384,685	219,759	269,050	124,786
Scrap	lb.	7,540	3,126	11,736	3,879
Other	lb.	2,774	1,337	13,225	6,880
Zinc—					
Ingots and slabs	lb.	5,938,523	341,258	4,540,598	207,529
Scrap	lb.	71,137	4,083	47,632	2,004
Other	lb.	271,312	35,333	286,395	32,689
Other non-ferrous metals	lb.	1,781,576	210,554	1,314,640	145,410
Iron and steel—					
Pig iron	long ton	1,580	40,164	1,350	33,595
Castings, iron	short ton	351	36,811	261	34,665
Castings, steel	short ton	90	44,777	124	39,336
Bars and rods, steel	short ton	296	39,763	334	36,708
Wire, steel	short ton	440	73,440	421	68,171
Sheets, steel	short ton	416	44,680	247	46,690
Scrap iron and steel	short ton	1,750	23,331	1,425	17,422
Other iron and steel	short ton	471	79,701	375	56,797
Lumber	M bd. ft.	364	16,075	308	16,343
Foundry facings	lb.	254,631	8,599	215,841	6,567
Moulding sands	lb.	9,992,068	23,105	10,527,249	19,371
Plating and polishing supplies	$	.....	11,425	.....	.....
Containers and packing materials	$	.....	35,724	.....	45,461
All other materials	$	.....	1,028,952	.....	1,048,485
Total	$	.....	**21,498,095**	.....	**16,002,647**

Table 51.—Products Made, 1937 and 1938

NOTE.—Data in this table are for the Brass and Copper Products Industry only and represent only the production of firms classified to this group (see Directory). The figure (1) indicates that the production figures given in this table do not represent the total output for Canada as these articles were produced also in other industrial groups.

Products	Unit of measure	1937		1938	
		Quantity	Selling value at works	Quantity	Selling value at works
			$		$
Aluminium—					
Castings (1)	lb.	1,229,362	384,696	827,027	269,946
Other, including ingots, etc. (1)	lb.	.....	40,086	.....	11,755
Brass—					
Castings, not elsewhere specified (1)	lb.	3,103,355	723,344	2,430,676	540,434
Ingots (1)	lb.	2,318,468	263,613	1,402,638	120,814
Scrap (1)	lb.	317,937	36,889	268,981	22,258
Other, including bars, rods, sheets, plates and tubing, each of which was reported by only one or two concerns	lb.	17,873,597	3,636,151	12,326,555	2,162,905
Bronze—					
Castings, not elsewhere specified (1)	lb.	1,753,560	460,493	1,402,767	364,358
Scrap (1)	lb.	59,980	3,440	65,953	3,805
Other, including sheets, plates, ingots, bars, rods, tubing, each of which was reported by only one or two concerns	lb.	2,466,291	709,745	2,274,573	552,072
Copper—					
Castings (1)	lb.	71,765	18,780	30,726	9,240
Scrap (1)	lb.	1,673,126	198,040	993,363	129,827
Ingots, bars, wire rods, plates, sheets, pipe, tubing, etc.	lb.	94,795,892	13,759,526	91,246,567	11,230,598
Architectural work, brass and bronze (1)	$	.....	62,064	.....	84,849
Architectural work, iron (1)	$	.....	30,837	.....	51,791
Bells and gongs	$	.....	16,850	.....	13,293
Brass and copper hollowware and spinnings	$	.....	54,467	.....	78,390
Castings, iron (1)	lb.	4,242,463	192,599	2,198,519	148,711
Fire extinguishers (1)	$	.....	195,646	.....	207,186
Hardware, builders' (1)	$	.....	73,967	.....	83,877
Lighting fixtures (1)	$	.....	110,915	.....	85,971
Lightning rods and supplies	$	.....	77,331	.....	81,515
Meters, gas and water, and parts	$	.....	399,650	.....	416,754
Plumbers' brass fittings—					
Tub fillers and showers	$	.....	126,874	.....	150,719
Taps, drains and tubular fittings	$	.....	340,252	.....	270,897
Stops, and stops and drains	$	.....	147,785	.....	167,225
Sink faucets	$	.....	159,402	.....	176,084
Lavatory and bath faucets	$	.....	189,170	.....	178,541
Closet tank fittings	$	.....	61,357	.....	64,178
Any other plumbers' fittings	$	.....	630,139	.....	735,048
Steam boiler trimmings, including gauge cocks, and water gauge mountings	$	.....	66,983	.....	82,220
Railway car bearings and fittings	$	.....	3,094,461	.....	2,241,511
Valves, iron body (1)	No.	34,790	520,495	31,183	348,589
Valves, other, including radiator valves and traps (1)	$	.....	1,366,599	.....	1,138,571
Wire cloth, brass and bronze and monel	Sq. ft.	2,903,571	1,461,322	2,105,816	1,008,555
Received for custom work and repairs	$	.....	432,197	.....	364,268
All other products (x)	$	.....	4,396,995	.....	4,130,882
Total	$	.....	**34,453,160**	.....	**27,727,637**

(x) Includes products made by less than 3 firms in this group, such as, bronze and aluminium powders, stampings, furniture trimmings, nickel-silver plates and sheets, metal fasteners, pins, etc.

Table 52.—Total Production in Canada of Brass and Iron Valves, 1937 and 1938

(from all industries)

—	1937		1938	
	Number	Selling value at works	Number	Selling value at works
		$		$
Valves, iron and steel—Quantity given	124,094	836,030	135,072	827,960
Quantity not given	.....	3,256	.....	10,678
Total	.....	**839,286**	.....	**838,638**
Valves, all other, including radiator valves and traps—Quantity given	562,154	1,214,017	484,215	1,129,756
Quantity not given	.....	484,465	.....	212,647
Total	.....	**1,698,482**	.....	**1,342,403**

Table 53.—Imports into Canada and Exports of Brass and Copper and Their Products, 1937 and 1938

—		1937		1938	
		Quantity	Value	Quantity	Value
Brass and Its Products			$		$
Brass in blocks, ingots or pigs	cwt.	819	11,646	642	7,221
Brass, scrap	cwt.	1,403	14,448	574	5,332
Brass caps, adapted for use in the manufacture of electric batteries	$	.....	17,957	.....	16,833
Brass cups, being rough blanks, for the manufacture of paper shells or cartridges	$	.....	60,516	.....	45,661
Brass in bars and rods, in coils or otherwise, not less than 6 feet in length	cwt.	5,110	89,705	3,205	50,342
Brass in strips, sheets or plates, not polished, planished or coated	cwt.	3,123	76,967	2,335	51,221
Brass tubing, not polished, bent or otherwise manufactured in lengths not less than 6 feet	lb.	863,467	219,413	402,055	105,313
Carburetors of brass	$	.....	148	.....	.....
Coin locks	$	.....	644	.....	276
Pumps, hand, brass, n.o.p.	$	.....	3,167	.....	1,767
Valves, brass	$	.....	404,103	.....	286,083
Water meters and parts, n.o.p.	no.	912	16,632	577	14,953
Wire, brass, n.o.p.	lb.	357,177	99,174	138,224	37,794
Wire cloth, or woven wire of brass, n.o.p.	$	.....	32,985	.....	24,696
Manufactures of brass, n.o.p.	$	.....	2,388,963	.....	1,905,472
Total Brass and Its Products	$	.....	**3,436,468**	.....	**2,552,964**
Copper and Its Products					
Copper, precipitate of, crude	lb.	246	33	2,075	193
Copper, in blocks, pigs or ingots	cwt.	155	1,941	122	1,441
Copper, scrap; cathode plates of electrolytic copper for melting	cwt.	46	455	878	8,434
Copper in bars or rods, when imported by manufacturers of trolley, telegraph and telephone wires, electric wires and cables for use in the manufacture of such articles in their own factories, also copper bars and use only in the manufacture of rods to be used exclusively as electrical conductors	cwt.	10,562	159,353	11,165	147,438
Copper in bars or rods, in lengths of not less than 6 feet, unmanufactured	cwt.	3,335	61,180	2,006	31,666
Copper in strips, sheets or plates, not polished, planished or coated	cwt.	7,073	155,463	1,662	36,813
Copper tubing, in lengths of not less than 6 feet, and not polished, bent or otherwise manufactured	lb.	675,896	193,637	343,071	93,255
Copper rollers adapted for use in the printing of textile fabrics or wallpaper	$	.....	124,315	.....	65,525
Copper wire, n.o.p.	lb.	37,576	6,831	16,352	3,351
Copper wire or cloth or woven wire of copper	$	.....	7,523	.....	3,284
Copper, manufactures of, n.o.p.	$	.....	536,135	.....	402,293
Total Copper and Its Products	$	.....	**1,246,866**	.....	**793,693**
Exports—Copper and Its Products					
Copper, fine, contained in ore, matte, regulus, etc.	cwt.	738,676	7,409,381	1,098,061	7,637,581
Copper, blister	cwt.	108,843	1,333,073	305,273	3,056,241
Copper, old and scrap	cwt.	5,551,000	549,638	3,437,400	205,059
Copper in ingots, bars, cakes, slabs and billets	cwt.	2,961,413	38,705,380	3,635,287	35,858,006
Copper in rods, strips, sheets, plates, and tubing	cwt.	512,248	7,310,329	535,129	5,767,622
Copper wire and cable	.....	.....	436,834	.....	435,784
Copper manufactures, n.o.p.	.....	.....	410,647	.....	354,509
Total Copper and Its Products	$	.....	**56,155,282**	.....	**53,314,802**
Copper coin, foreign	$	.....	2,382	.....	6,693
Copper coin, Canadian	$	.....	113	.....	347
Brass and Its Products					
Brass scrap, dross and ashes	cwt.	118,650	913,931	80,528	443,113
Brass in bars, rods, strips, sheets and tubing	cwt.	4,906	87,030	6,000	102,340
Brass valves	$	.....	211,449	.....	205,010
Brass manufactures, n.o.p.	$	.....	402,453	.....	338,363
Total Brass and Its Products	$	.....	**1,614,953**	.....	**1,088,826**

Directory of Firms Included in the Brass and Copper Products Industry, 1938

NOTE.—This Directory carries only the names of the concerns which the Bureau has classified to the Brass and Copper Products Industry which includes only the works which were engaged CHIEFLY in making brass and bronze articles (other than wire or electrical equipment) from brass, bronze and copper. Manufacturers of copper wire and cable and of electrical equipment have been classified to the Electrical Apparatus Industry which is covered by a separate chapter.

Names of firms	Location of plants
(a) Firms engaged chiefly in making Brass Valves, Taps, Plumbers' Supplies, etc.	
NEW BRUNSWICK—	
McAvity & Sons, T., Ltd.	Rothesay Avenue, Saint John.
QUEBEC—	
Cuthbert, W. R., & Co.	55 Duke Street, Montreal.
Golden Gate Mfg. Co. Ltd.	361 Youville Street, Montreal.
Jenkins Bros. Ltd.	617 St. Remi Street, Montreal, and St. Joseph Street Lachine.
Robertson, James, Co. Ltd.	946 William Street, Montreal.
ONTARIO—	
Canadian Brass Co. Ltd.	415 Dundas Street, Galt.
Empire Brass Mfg. Co. Ltd.	Dundas Street East, London.
Galt Brass Co. Ltd.	471 Dundas Street, Galt.
Morrison, James, Brass Mfg. Co. Ltd.	276 King Street West, Toronto.
Mueller Ltd.	Clifford Street, Sarnia.
Penberthy Injector Co. Ltd.	159 Windsor Avenue, Windsor.
Wallaceburg Brass Ltd.	Wallaceburg.
Wolverine Limited	76 Nelson Street, Toronto.
(b) Firms engaged chiefly in operating Brass and Bronze Foundries (other than for valves, taps, etc.)	
NOVA SCOTIA—	
Collings, Wm., & Sons, Ltd.	711 Barrington Street, Halifax.
QUEBEC—	
Archambault Brass Foundry	8010 Henri Julien Street, Montreal.
Bouliane Brass Foundry	2020 Labreque Street, Montreal.
Canadian Bronze Powder Works, Ltd.	Valleyfield.
Clark, C. O., & Bro.	5010 St. Patrick Street, Montreal.
Eastern Brass Foundry, Limited	514 Harbour Street, Montreal.
Empire Brass Foundry Limited	127 Nazareth Street, Montreal.
Excel Brass & Aluminum Works	117 Nazareth Street, Montreal.
Hazel, James, & Son	130 Mgr. Gauvreau Street, Quebec.
Miller's Brass Foundry, Reg'd	791 Hertel Street, Three Rivers.
Mitchell, Robert, Co. Ltd.	750 Belair Avenue, Montreal and 102 Monkland Blvd., St Laurent.
Montreal Bronze Limited	999 Delorimier Avenue, Montreal.
Union Screen Plate Co. of Canada, Ltd.	72 Main Street, Lennoxville.
Vandevoorde Foundry	910 Cartier Street, Montreal.
ONTARIO—	
Aranda American Brass Limited	8th and Birmingham Streets, New Toronto.
Atkins & Hoyle	69 Portland Street, Toronto.
Balfour's Brass Foundry	65 Frederick Street, Toronto.
Barber Die Castings Ltd.	68 Sanford Avenue, Hamilton.
Canadian Bell Foundry	34 Lancaster Street, Kitchener.
Canadian Brass & Machine Works	20 Hamilton Avenue, Ottawa.
Chadwick-Carroll Brass & Fixtures Limited	365 Wilson Street, Hamilton.
Central Brass Foundry	48 Abell Street, Toronto.
Coulter Copper & Brass Co. Ltd.	115 Sumach Street, Toronto.
Dempsey, Chas W.	17 Division Street, Guelph.
Dominion Gas Meter Co. Ltd.	328 Wortley Road, London.
Elmira Aluminium Specialties	Elmira.
Fisher & Son	366 Wilson Street, Hamilton.
Kilby, Wm.	360 East Street, Orillia.
Kitchener Brass & Aluminium Foundry	983 King Street East, Kitchener.
Kondu Manufacturing Co. Ltd.	South Street, Preston.
Lawrence, T. C., & Son	512 Dundas Road, Galt.
May Foundry Co.	2018 Buchanan Avenue, Niagara Falls.
McKay Smelters	25 McKay Street, Ottawa.
National Brass & Aluminum Foundry	117 St. Patrick Street, Toronto.
Ottawa Car Mfg. Co. Ltd.	301 Slater Street, Ottawa.
Petrie Brass Company	163 Sterling Road, Toronto.
Precision Dies & Castings Limited	282 St. Helens Avenue, Toronto.
Quality Brass Foundry	10 Millstone Lane, Toronto.
Queen City Brass Foundry	28 Dalhousie Street, Toronto.
St. Catharines Brass Works, Ltd.	62 George Street, St. Catharines.
St. Thomas Bronze Co. Ltd.	First Avenue, St. Thomas.
Sherratt, W., & Son	6 Britain Street, Toronto.
Standard Brass Foundry	561 Catharine Street North, Hamilton.
Stratford Brass Co. Ltd.	342 Erie Street, Stratford.
Sully Brass Foundry Ltd.	11 Wabash Avenue, Toronto.
Tallman, A. H., Bronze Co. Ltd.	Cavell Avenue, Hamilton.
Toronto Brass Machine & Foundry Ltd.	78 Market Street, Toronto.
Wilson & Cousins Ltd.	35 McCaul Street, Toronto.
Windsor Brass Works Ltd.	408 Hanna Street East, Windsor.
Zenith Alloys Co.	Dundas Street, Brantford.

Directory of Firms Included in the Brass and Copper Products Industry, 1938—(conc.)

Names of firms	Location of plants
MANITOBA—	
Acme Brass Foundry	576 Minto Street, Winnipeg.
Northwestern Brass Ltd	13 Bury Street, Winnipeg.
Western Canada Bronze Co	595 Clifton Street, Winnipeg.
Winnipeg Brass Limited	600 Clifton Street, Winnipeg.
ALBERTA—	
Northwestern Brass Ltd	1609—24th Avenue East, Calgary.
BRITISH COLUMBIA—	
Hastings Brass Foundry	236 Clark Drive, Vancouver.
McPhail, Wm., & Sons (Canada) Ltd	251 Second Avenue East, Vancouver.
Ornamental Bronze Company, Ltd	1125 Vernon Drive, Vancouver.
Service Foundry	237 Industrial Avenue, Vancouver.
Smith Bros. Foundry Limited	632 Pembroke Street, Victoria.
Star Foundry Limited	194 West Third Avenue, Vancouver.
Sumner Brass Foundry Limited	619 Bidwell Street, Vancouver.
Wilson's Brass Foundry	22 Second Avenue East, Vancouver.

(c) Firms engaged chiefly in making Fabricated Articles (not Foundries)

QUEBEC—	
Blanchard Refrigeration Service	300 Youville Square, Montreal.
Booth-Coulter Coppersmithing Co. Ltd	997 Wellington Street, Montreal.
Brehn, Chas. G	756 St. Paul Street West, Montreal.
Brass & Bronze Mfg. Co. Ltd	269 Craig Street West, Montreal.
Canada Wire & Cable Co. Ltd	Montreal East.
Cassidy and Maillard Limited	1575 Craig Street East, Montreal.
Christie, George, (Canada) Ltd	2106 Bellefueille Street, Three Rivers.
Edwards, O. M., Co. of Canada, Ltd	5010 St. Patrick Street, Montreal.
Imperial Pin Co. Ltd	2210 Parthenais Street, Montreal.
Johnson Wire Works Ltd	4760 Dagenais Street, Montreal.
Metalcraft Mfg. Co	915 St. Alexander Street, Montreal.
Whitehouse, A. E	976 St. George Street, Montreal.
ONTARIO—	
Air Coils Ltd	Colborne Street, Oakville.
Alcor Co	220 King Street West, Toronto.
Booth, W. E., Co. Ltd	12 Mercer Street, Toronto.
Breen, S. V	20 Lennox Street, Toronto.
Brock Machinists & Welders	Brock Street, Brockville.
Bryden Brass Mfg. Co	35 Collier Street, Toronto.
Bunker, Geo	363 Parliament Street, Toronto.
Canadian Meter Co. Ltd	90 Caroline Street North, Hamilton.
Canadian Terrazzo Metal Strip Co. Ltd	292 Geary Avenue, Toronto.
Capital Wire Cloth & Mfg. Co. Ltd	Hinton Avenue, Ottawa.
Crown Brass & Spinning Co	117 St. Patrick St., Toronto.
De Long Hook & Eye Co. of Canada, Ltd	Water Street North, St. Mary's.
Dodd & Struthers	2043 Sandwich Street East, Walkerville.
Dominion Brass Products Ltd	65 Saulter Street, Toronto.
Dominion Lightning Rod Co	63 Main Street, Dundas.
Flash Fasteners of Canada Ltd	251 Spadina Avenue, Toronto.
Hahn Brass Co. Ltd	New Hamburg.
Jamieson Co. Ltd	9 Morrison Street, Toronto.
Jeune Canopy & Mfg. Co. Ltd	1260 Queen Street West, Toronto.
Johnston Copper & Brass	142 Davenport Road, Toronto.
Metal Textile Corp. of Canada, Ltd	126 Catharine Street North, Hamilton.
Monarch Brass Mfg. Co. Ltd	71 Browns Avenue, Toronto.
Neptune Meters Ltd	345 Sorauren Avenue, Toronto.
Niagara Wire Weaving Co. Ltd	Robinson Street, Niagara Falls.
Ottawa Brass Mfg. Co	542 Wellington Street, Ottawa.
Patterson & Heward	319 King Street West, Toronto.
Phillips, B., Co. Ltd	32 Osborne Avenue, Toronto.
Phillips Electrical Works Ltd	King Street West, Brockville.
Pyrene Mfg. Co. of Canada Ltd	94 Don Roadway, Toronto.
Riverdale Copper & Brass Co	160 Duchess Street, Toronto.
Standard Meter Co. Ltd	10 Morrow Avenue, Toronto.
Tools and Hardware Ltd	112 Peter Street South, Orillia.
Toronto Coppersmithing Co	26 Knox Avenue, Toronto.
Toronto Metal Spinning Co	32 Eastern Avenue, Toronto.
Toronto Wire Works Co	942 Queen Street East, Toronto.
Universal Lightning Rod Co	Tannery Street, Hespeler.
United-Carr Fastener Co. of Canada, Ltd	Gage Avenue and Beach Road, Hamilton.
MANITOBA—	
Prairie Industries Ltd	Wawanesa.
BRITISH COLUMBIA—	
Ellett Copper & Brass Co. Ltd	92 West 2nd Avenue, Vancouver.

Production of Brass and Bronze in Other Industries

In addition to the companies which operated brass foundries as their chief business, there was quite a number of iron foundries and white metal alloy foundries which made brass and bronze castings as minor products. The names and addresses of these latter companies are listed below in order to provide a complete directory of brass foundries in Canada. Their production of brass and bronze ingots, castings, valves, etc., in 1937 and 1938 was as follows:—

—	1937		1938	
	Pounds	Selling value at works	Pounds	Selling value at works
		$		$
In iron foundries—Brass castings	474,915	109,163	375,133	89,886
Bronze castings	409,912	106,581	210,041	59,660
Brass and bronze valves	.....	331,883	.....	203,832
Brass and bronze pipe fittings and plumbers' supplies	.....	494,210	.....	317,464
In white metal alloy foundries—Brass and bronze castings	1,445,580	194,314	318,678	83,116
Brass and bronze bars and ingots	3,490,953	454,526	2,902,272	204,305

List of Brass and Bronze Foundries in Other Industries, 1938

Names of Firms	Location of Plants
(a) Iron Foundry Industry	
PRINCE EDWARD ISLAND—	
Bruce Stewart & Co. Ltd	Charlottetown.
NOVA SCOTIA—	
Cook, H. S. & Co	Yarmouth.
Fleming Brothers	1595 Barrington Street, Halifax.
Lunenburg Foundry Co. Ltd	Lunenburg.
Matheson, L., & Co. Ltd	New Glasgow.
Sydney Foundry & Machine Works Ltd	Sydney.
Thompson Bros. Machinery Co. Ltd	Liverpool.
NEW BRUNSWICK—	
Courtenay Iron-Brass Foundry	Rothesay Avenue, Saint John.
Abram's, John, Sons Ltd	62 Foundry Street, Moncton.
McLennan Foundry & Machine Works Ltd	Campbellton.
Phoenix Foundry Co	126 Pond Street, Saint John.
Saint John Iron Works Ltd	Saint John.
Wallace Mfg. Co. Ltd	Winter Street, Sussex.
QUEBEC—	
Ateliers Mecaniques de Sorel Ltée	1405 Peel Street, Montreal.
Bergeron, J. E	La Tuque.
Crane Ltd	3800 St. Patrick Street, Montreal.
La Campagnie F. X. Drolet	206 rue du Pont, Quebec.
La Fonderie de Joliette Ltée	2 Alice Street, Joliette.
La Fonderie de Ste-Croix Ltée	Ste. Croix.
La Fonderie de Thetford Ltée	796 Notre Dame Street, Thetford Mines.
McOunt, T., & Son	Lachute Mills.
Montreal Foundry Ltd	1249 Conde Street, Montreal.
Quebec Brass & Iron Foundry Ltd	53 Commercial Street, Levis.
Shawinigan Foundries Ltd	Shawinigan Falls.
Walford, H., Ltd	Sorel.
ONTARIO—	
Algoma Steel Corporation Ltd	Sault Ste. Marie.
Beaver Foundry and Furnace Works	Harvey Street, Tillsonburg.
Bishop, T. G., Engineering Co	King and Queen Streets, Kingston.
Bowmanville Foundry Co. Ltd	Bowmanville.
Canada Valve and Hydrant Co. Ltd	Brantford.
Canadian Blower and Forge Co. Ltd	Woodside Avenue, Kitchener.
Callander Foundry & Mfg. Co. Ltd	54 Crimea Street, Guelph.
Cornwall Brass & Iron Foundries	Cornwall.
Cunningham & Son	Berryman Avenue, St. Catharines.
Eureka Planter Co. Ltd	Winnett Street, Woodstock.
Fruit Machinery Co. Ltd	368 Front Street, Belleville.
Galt Malleable Iron Co. Ltd	Galt.
Goderich Iron and Brass Foundry	Victoria Street, Goderich.
Hastings & Sons Foundry	Stratford.
Hepburn, John T., Ltd	18 Van Horne Street, Toronto.
Lawson, Thos., & Sons Ltd	376 Wellington Street, Ottawa.
McCrae, John, Machine & Foundry Co	83 William Street North, Lindsay.

List of Brass and Bronze Foundries in Other Industries, 1938—(concluded)

Names of Firms	Location of Plants
ONTARIO—(concluded)	
Muskoka Foundry Limited	Bracebridge.
Northern Foundry & Machine Co. Ltd	Sault Ste. Marie.
Ontario Malleable Iron Co. Ltd	Oshawa.
Port Hope Sanitary Mfg. Co. Ltd	Port Hope.
Standard Sanitaryware Mfg. Co. Ltd	1000 Lansdowne Avenue, Toronto.
Tweed Foundries Ltd	Tweed.
Victoria Foundry Co	44 Booth Street, Ottawa.
Wabi Iron Works	New Liskeard.
Warp Tension Governors Ltd	Cornwall.
Welland Iron & Brass Co	102 Niagara Street, Welland.
Wests Company	Simcoe.
Woodside Brothers	Port Arthur.
MANITOBA—	
Vulcan Iron Works Ltd	Pt. Douglas Avenue, Winnipeg.
Winnipeg Foundry Co. Ltd	115 Robinson Street, Winnipeg.
SASKATCHEWAN—	
Blanchard Foundry & Machine Ltd	104-22nd Street, Saskatoon.
East, John, Iron Works Ltd	121 Avenue C, North, Saskatoon.
Moose Jaw Foundry	6th and High Street West, Moose Jaw.
Prince Albert Foundry Co	17th Street and Central Avenue, Prince Albert.
Springstein & Davidson Machine Shop	6th Avenue and Lorne Street, Regina.
ALBERTA—	
Alberta Foundry & Machine Co. Ltd	Smelter Avenue, Medicine Hat.
Calgary Iron Works Ltd	410 Ninth Avenue East, Calgary.
Garvie Bolton & Co	10334-108th Street, Edmonton.
Nichols Bros. Ltd	10103-95th Street, Edmonton.
Norwood Foundry Co. Ltd	9111-111th Avenue, Edmonton.
Standard Iron Works Ltd	21st Street and 106th Avenue, Edmonton.
BRITISH COLUMBIA—	
A-1 Aluminium Foundry Ltd	36 West 3rd Avenue, Vancouver.
Letson & Burpee Ltd	172 Alexander Street, Vancouver.
Nanaimo Foundry	Comox Road, Nanaimo.
New Westminster Foundry Co. Ltd	Braid Street, New Westminster.
Ramsay & Adams Foundry Co. Ltd	435 Garbally Road, Victoria.
Progressive Mfg. Co	852 Hastings Street, Vancouver.
Victoria Machinery Depot Co. Ltd	343 Bay Street, Victoria.
Victoria Brass & Iron Works Ltd	620 Pioneer Street, Esquimalt.
Cook & Sons Foundry	266 East Second Avenue, Vancouver.

(b) White Metal Alloys Industry

Liberty Smelting Works	269 Prince Street, Montreal, P.Q.
Canada Metal Co. Ltd. and Hoyt Metal Co. of Canada	721 Eastern Avenue, Toronto, Ont.
Metals & Alloys Ltd	1 Wiltshire Avenue, Toronto, Ont.
Rahn Metals Ltd	North Bay, Ont.

CHAPTER FOUR

THE WHITE METAL ALLOYS INDUSTRY

Statistics given in this chapter cover the operations of firms in Canada which were occupied chiefly in (a) the manufacture of white metal alloys, such as babbitt, solders, type and type metal; (b) the refining of scrap to recover white metals, such as, lead, tin and zinc, etc.; and (c) the manufacture of such articles as lead sheet, lead pipe, antimonial lead, collapsible tubes, slide fasteners, metal foil, etc., in which the white metals or their alloys are the principal materials. In some establishments all three of these operations were carried on so it is not practical to make any subdivision of the industry.

Thirty-five factories were included in this group for 1938 and the value of products was reported at $7,660,254. Although this total was 15 per cent below the 1937 figure of $9,011,283, it was still higher than for any other year on record.

Of the total output, 71 per cent was from 20 plants in Ontario and 23 per cent from 11 plants in Quebec; the remaining 6 per cent being accounted for by 2 plants in Manitoba and 2 in British Columbia.

Capital employed by these concerns amounted to $7,197,855 of which 46 per cent or $3,296,360 represented the value of land, buildings, plant and equipment. The investment in Ontario plants was $5,496,595; in Quebec $1,325,669 and in Manitoba and British Columbia $375,591.

Employment was afforded to a monthly average of 1,252 people, including 253 on salaries and 999 on wages. Salaries for the year amounted to $468,656 and wages to $965,433, a total of $1,434,089. In the previous year 1,222 persons were employed and the expenditure for salaries and wages amounted to $1,360,216.

Materials used in manufacturing during 1938 cost $4,506,881 delivered at the works. Included in this total were 15,572 tons of scrap metal at $1,485,759; 1,378 tons of pig tin at $1,168,745; 5,937 tons of pig lead at $505,614; 1,128 tons of zinc spelter at $114,763 and 1,435 tons of other metals at $605,327.

Production included 2,516 tons of solders valued at $1,201,999; 1,115 tons of babbitt metal at $455,742; 3,822 tons of antimonial lead at $377,937; 1,817 tons of type and type metal at $355,636, and other articles, such as, metal foil, lead sheets, lead traps and fittings, bars and ingots of aluminium, brass, bronze and copper, and castings of aluminium, brass, lead, etc.

Table 54.—Principal Statistics, 1920-1938

Years	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works	Net value of production
		$		$	$	$	$	$
1920	18	3,337,039	506	651,460	66,596	2,901,174	4,574,165	1,606,395
1921	19	3,180,149	501	682,562	33,937	1,654,642	2,886,415	1,197,836
1922	19	3,213,867	534	728,502	46,157	2,048,431	3,118,445	1,023,857
1923	20	1,749,383	193	246,528	24,277	1,556,716	2,181,273	600,280
1924	20	3,220,833	481	557,476	78,214	2,404,827	3,353,910	870,869
1925	22	3,782,120	529	619,973	54,404	3,130,257	4,103,732	918,981
1926	25	4,241,731	609	806,849	64,631	3,766,648	5,184,096	1,352,817
1927	25	4,295,256	602	702,298	90,420	3,854,979	5,149,092	1,203,693
1928	25	4,673,882	644	759,603	60,055	4,105,167	5,493,360	1,328,138
1929	28	5,988,683	755	929,295	98,958	4,757,366	6,460,168	1,609,844
1930	23	4,612,408	614	734,650	78,147	3,813,569	5,178,583	1,286,867
1931	23	4,507,307	532	679,631	72,185	2,330,652	4,137,600	1,734,763
1932	24	4,434,722	532	621,480	62,970	1,935,507	3,498,049	1,499,572
1933	29	4,842,077	680	765,075	69,275	2,501,790	4,236,751	1,665,686
1934	31	4,847,914	790	840,698	78,141	3,138,319	5,227,047	2,010,587
1935	32	5,521,720	797	911,644	83,503	3,993,110	6,182,402	2,105,789
1936	35	5,882,190	894	1,017,732	99,860	4,356,439	6,905,041	2,448,742
1937	38	7,155,603	1,222	1,360,216	108,519	5,749,842	9,011,283	3,152,922
1938	35	7,197,855	1,252	1,434,089	109,787	4,506,881	7,660,254	3,043,586

Table 55.—Principal Statistics, by Provinces, 1937 and 1938

Years	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works
		$		$	$	$	$
1937							
Quebec	11	1,373,712	152	210,126	19,165	1,830,224	2,417,910
Ontario	23	5,364,946	1,036	1,100,956	81,886	3,554,168	6,058,767
Manitoba	2						
British Columbia	2	416,945	34	49,134	7,468	365,450	534,606
Canada	**38**	**7,155,603**	**1,222**	**1,360,216**	**108,519**	**5,749,842**	**9,011,283**
1938							
Quebec	11	1,325,669	157	202,631	18,307	1,321,261	1,780,964
Ontario	20	5,496,595	1,058	1,179,072	83,853	2,902,783	5,401,743
Manitoba	2						
British Columbia	2	375,591	37	52,386	7,627	282,837	477,547
Canada	**35**	**7,197,855**	**1,252**	**1,434,089**	**109,787**	**4,506,881**	**7,660,254**

Table 56.—Capital Employed, 1937 and 1938

Provinces	Present value of lands, buildings, machinery tools, etc.	Inventory value of materials and finished products on hand, stock in process, fuel and other supplies	Operating capital (cash, bills and accounts receivable)	Total capital employed
	$	$	$	$
1937				
Quebec	530,612	288,686	554,414	1,373,712
Ontario	2,562,466	981,191	1,821,289	5,364,946
Manitoba				
British Columbia	199,390	100,023	117,532	416,945
Canada	**3,292,468**	**1,369,900**	**2,493,235**	**7,155,603**
1938				
Quebec	591,909	294,176	439,584	1,325,669
Ontario	2,524,703	1,079,867	1,892,025	5,496,595
Manitoba				
British Columbia	179,748	99,818	96,025	375,591
Canada	**3,296,360**	**1,473,861**	**2,427,634**	**7,197,855**

Table 57.—Size of Establishments, According to Production, Employees and Capital, 1937 and 1938

—	1937				1938			
	Number of plants	Capital employed	Number of employees	Selling value of products at works	Number of plants	Capital employed	Number of employees	Selling value of products at works
(a) Production		$		$		$		$
Under $10,000	6	37,212	11	39,556	3	52,678	5	20,712
$ 10,000 to $ 25,000	6	266,194	30	87,897	6	224,830	30	93,554
$ 25,001 to $ 50,000	3	73,511	31	122,202	4	135,131	36	144,755
$ 50,001 to $100,000	5	282,565	77	351,422	7	440,661	57	522,612
$100,001 to $250,000	8	803,713	80	1,343,033	7	1,193,427	127	1,221,379
Over $250,000	10	5,692,408	993	7,067,173	8	5,151,128	997	5,657,242
Total	**38**	**7,155,603**	**1,222**	**9,011,283**	**35**	**7,197,855**	**1,252**	**7,660,254**
(b) Number of employees								
1 or 2	6	65,066	10	46,871	3	52,678	5	20,712
3 to 10	15	1,113,319	83	1,141,267	16	1,212,826	96	1,037,207
11 to 20	8	660,828	111	1,432,433	8	667,793	109	1,036,229
Over 20	9	5,316,390	1,018	6,390,712	8	5,264,558	1,042	5,566,106
Total	**38**	**7,155,603**	**1,222**	**9,011,283**	**35**	**7,197,855**	**1,252**	**7,660,254**
(c) Capital employed								
Under $25,000	11	129,471	43	152,614	9	139,425	43	181,124
$ 25,001 to $100,000	12	625,859	94	989,653	12	682,603	97	838,413
$100,001 to $500,000	11	2,299,611	437	3,365,893	10	1,981,447	386	2,608,422
Over $500,000	4	4,100,662	648	4,503,123	4	4,394,380	726	4,032,295
Total	**38**	**7,155,603**	**1,222**	**9,011,283**	**35**	**7,197,855**	**1,252**	**7,660,254**

Table 58.—Employees, Salaries and Wages, by Provinces, 1937 and 1938

Provinces	Average number of employees					Salaries	Wages	Total salaries and wages
	On salaries		On wages		Total			
	Male	Female	Male	Female				
						$	$	$
1937								
Quebec	41	10	99	2	152	116,769	93,357	210,126
Ontario	128	71	591	246	1,036	303,482	797,474	1,100,956
Manitoba, British Columbia	8	5	21	.....	34	25,031	24,103	49,134
Canada	**177**	**86**	**711**	**248**	**1,222**	**445,282**	**914,934**	**1,360,216**
1938								
Quebec	42	8	106	1	157	106,043	96,588	202,631
Ontario	116	72	615	255	1,058	336,587	842,485	1,179,072
Manitoba, British Columbia	9	6	22	.....	37	26,026	26,360	52,386
Canada	**167**	**86**	**743**	**256**	**1,252**	**468,656**	**965,433**	**1,434,089**

Table 59.—Wage-Earners, by Months, 1937 and 1938 (on the last work-day of each month)

Months	1937			1938		
	Male	Female	Total	Male	Female	Total
January	633	196	829	753	218	971
February	666	209	875	747	238	985
March	668	218	886	744	232	976
April	672	222	894	752	231	983
May	681	223	904	739	231	970
June	685	233	918	729	252	981
July	682	242	924	734	247	981
August	719	261	980	741	276	1,017
September	762	292	1,054	753	295	1,048
October	780	298	1,078	755	308	1,063
November	790	291	1,081	758	285	1,043
December	760	288	1,048	738	241	979
Average	**711**	**248**	**959**	**743**	**256**	**999**

Table 60.—Regular Hours Worked per Week, by Wage-Earners, 1938

Regular hours worked per week	Per cent of wage-earners	Regular hours worked per week	Per cent of wage-earners
30 hours or less	0·8	49-50 hours	29·9
41-43 hours	2·2	51-54 hours	2·8
44 hours	16·8	55 hours	12·0
45-47 hours	14·8	56-64 hours	11·7
48 hours	2·4	65 hours and over	6·6

Table 61.—Fuel and Electricity Used, 1937 and 1938

Kinds	Unit of measure	1937		1938	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal—Canadian	short ton	649	4,588	800	4,833
Imported	short ton	1,841	13,469	1,323	10,211
Anthracite coal	short ton	76	938	101	1,245
Coke	short ton	656	6,589	654	6,791
Gasoline	Imp. gal.	13,513	2,164	12,913	2,066
Kerosene	Imp. gal.	515	100	472	89
Fuel oil	Imp. gal.	251,841	20,653	244,152	19,682
Wood	Cord	4	48	36	253
Gas—Manufactured	M cu. ft.	29,300	8,877	24,859	9,028
Natural	M cu. ft.	11,684	6,239	11,556	6,638
Electricity purchased	K.W.H.	3,877,425	44,854	3,884,206	48,951
Total	.....	.....	**108,519**	.....	**109,787**

Table 62.—Power Equipment, 1937 and 1938

—	1937		1938	
	Number of units	Total rated horse-power	Number of units	Total rated horse-power
Electric motors operated by purchased power—In use	526	4,242	550	4,305
In reserve or idle	13	125	13	185
Total	**539**	**4,367**	**563**	**4,490**
Stationary Boilers—In use	1	18	2	78
In reserve or idle	1	65	1	65

Table 63.—Materials Used, 1937 and 1938

Materials	1937		1938	
	Quantity	Cost at works	Quantity	Cost at works
	Lb.	$	Lb.	$
Metals (other than scrap)—				
Aluminium	1,186,128	244,175	1,272,702	288,751
Antimony, regulus	573,575	79,936	514,027	68,962
Cadmium	65,796	84,993	46,305	38,333
Copper	51,253	7,091	51,017	6,203
Lead, pig	10,818,139	581,089	11,875,116	505,614
Nickel	318,661	92,354	228,938	66,292
Nickel-chrome sheets	43,000	30,846	52,000	39,270
Tin, pig	3,207,124	1,798,833	2,756,326	1,168,745
Zinc spelter	2,422,336	128,423	2,256,493	114,763
Other metals, except scrap	114,784	24,444	781,033	139,891
Antimony ore	263,462	12,496	145,440	7,575
Scrap metals—				
Aluminium	1,309,181	166,762	1,630,334	211,922
Brass, all kinds	2,783,969	198,972	2,226,789	143,889
Copper, all kinds	2,029,900	249,063	2,162,192	145,280
Lead, battery plates	9,385,401	305,955	9,459,490	239,602
Lead, all other kinds	2,696,653	137,567	2,771,454	108,514
Zinc, all kinds	951,995	32,606	627,551	15,304
Babbitt	2,225,769	241,040	1,371,027	169,481
Solder	62,468	5,876	63,993	7,388
Tin	Not available		57,867	21,106
Type metal	1,501,488	64,058	1,454,266	64,322
Drosses	4,566,581	166,577	4,953,143	133,708
Other scrap, including scrap unspecified by kind	6,913,006	500,170	4,369,911	225,243
Shipping containers	.....	36,430	.....	26,903
All other materials	.....	560,086	.....	549,820
Total	.....	**5,749,842**	.....	**4,506,881**

Table 64.—Products Made, 1937 and 1938

NOTE.—Data given in this table cover only the production by firms which have been classified to this particular industry (see directory), and do not necessarily represent the total output for Canada. The figure (1) indicates that the figures are incomplete and that production was also reported in other industries.

Products	1937		1938	
	Quantity	Selling value at works	Quantity	Selling value at works
	lb.	$	lb.	$
Babbitt metal	2,905,351	641,880	2,229,444	455,742
Bars and ingots (from scrap)—Aluminium (1)	1,046,626	169,743	1,086,030	187,985
Brass, bronze and copper (1)	3,490,953	454,526	5,026,667	384,567
Lead—Antimonial	7,920,364	461,496	7,644,802	377,937
Other	3,037,460	175,142	2,793,025	133,905
Tin	251,814	148,797	159,971	76,933
Zinc and zinc die casting alloy	2,745,916	134,524	2,382,531	104,516
Castings—Aluminium (1)	196,551	34,134	53,925	15,207
Brass and bronze (1)	1,445,580	194,314	318,678	83,116
Lead (1)	110,685	19,832	760,613	38,511
Zinc, including zinc base die castings (1)	1,364,894	355,163	1,703,657	370,280
Other, including nickel and cadmium anodes	973,278	294,483	725,890	185,620
Lead pipe	2,693,794	295,878	2,318,031	218,167
Lead sheets	1,876,259	181,951	2,521,575	200,848
Lead traps and fittings	606,130	126,387	610,018	115,192
Other lead products	.....	74,186	.....	53,129
Scrap sold	611,020	34,876	619,829	23,207
Solders	5,789,677	1,618,209	5,932,225	1,201,969
Type and type metal	4,166,091	407,819	3,635,344	355,636
Other products (x)	.....	3,186,943	.....	3,077,757
Total	.....	**9,611,283**	.....	**7,660,254**

(x) Includes data for foil, collapsible tubes, slide fasteners, dropped and moulded shot, chrome-nickel tubing, etc., which were reported by only one or two companies in this industry, and for which production figures cannot be shown separately.

Table 65.—Production of Babbitt, Solders, Type and Type Metal, 1924-1938

Years	Babbitt metal		Solders of all kinds		Type and type metal	
	Quantity	Selling value at works	Quantity	Selling value at works	Quantity	Selling value at works
	Pounds	$	Pounds	$	Pounds	$
1924	3,086,741	869,007	1,979,797	625,642	1,381,426	278,705
1925	4,366,973	1,063,940	2,139,116	700,040	2,242,259	246,794
1926	4,999,541	1,185,209	2,549,567	888,001	2,491,084	294,652
1927	5,186,021	1,063,391	2,853,399	941,020	2,693,905	309,176
1928	5,485,375	1,089,616	3,361,987	851,395	2,475,724	253,619
1929	5,247,142	730,358	3,336,576	824,101	4,094,203	407,046
1930	4,361,533	609,388	2,933,237	581,386	4,105,235	401,042
1931	2,011,315	432,506	2,235,221	398,378	3,065,283	274,483
1932	1,413,690	255,058	2,084,447	353,361	2,777,781	218,956
1933	1,485,915	320,472	2,244,210	408,362	2,999,017	230,576
1934	1,948,510	436,182	3,090,359	816,712	4,102,992	318,644
1935	2,418,522	558,991	3,944,727	1,011,679	4,346,228	385,991
1936	2,662,706	475,514	4,420,555	1,075,694	3,900,174	377,673
1937	2,905,351	641,880	5,789,677	1,618,209	4,166,091	407,819
1938	2,229,444	455,742	5,032,225	1,201,999	3,635,344	355,636

Table 66.—Imports into Canada and Exports of Lead, Tin, Zinc and Their Products, 1937 and 1938

Items	Unit of measure	1937		1938	
		Quantity	Value	Quantity	Value
			$		$
IMPORTS					
Lead, pig and block	lb.	65,577	5,174	56,416	3,235
Lead, old and scrap	lb.	13,750	974	.....	.....
Lead, bars and sheets	lb.	45,694	3,391	54,507	2,948
Lead pipe	lb.	9,061	1,488	28,333	1,671
Lead capsules for bottles	.....	.....	90,644	.....	65,029
Lead shot and bullets	lb.	3,327	350	9,023	634
Tea lead	lb.	1,000	85	.....	.....
Manufactures of lead, n.o.p	.....	.....	88,183	.....	67,228
Total lead and its products	.....	.....	**190,289**	.....	**140,745**
Tin in blocks, pigs and bars	cwt.	58,798	3,115,643	52,752	2,205,449
Tinfoil	lb.	63,683	26,148	19,092	6,593
Collapsible tubes	.....	.....	36,830	.....	45,484
Total tin and its products	.....	.....	**3,178,621**	.....	**2,257,526**
Zinc spelter	cwt.	20	199	27	201
Zinc in blocks, pigs, bars and rods and zinc plates, n.o.p	cwt.	194	2,805	59	643
Zinc strip and sheets, and zinc plates for marine boilers	cwt.	70,406	574,545	67,716	467,114
Zinc dust	cwt.	14,995	78,508	13,739	70,294
Zinc slugs or discs imported by manufacturers of electric storage batteries	.....	.....	.....	.....	20,582
Zinc manufactures, n.o.p	.....	.....	244,349	.....	206,948
Total zinc and its products	.....	.....	**900,406**	.....	**765,782**
Alloys, n.o.p.—					
Babbitt metal in blocks, bars, plates and sheets	cwt.	439	14,871	7,825	40,869
Britannia metal in blocks, pigs and bars	cwt.	81	2,855	63	2,192
Britannia metal, manufactures of, not plated	cwt.	.....	5,455	.....	4,761
Chromium metal and tungsten metal in lumps, powder, ingots, blocks and bars, and scrap of alloy metal containing chromium and tungsten, when imported by manufacturers for use exclusively for alloying purposes in their own factories	lb.	122,288	96,900	43,527	30,328
Metal alloy slugs, cast with diamonds or diamond chips embedded therein, of any size or shape, in condition as from the mould, and metal alloy strip containing not less than 33⅓ per cent by weight of nickel and 12 per cent by weight of chromium, when for use in Canadian manufactures, (from August 24, 1935)	.....	.....	71,480	.....	57,279
Phosphor tin and phosphor bronze, in blocks, bars, plates, sheets and wire	lb.	1,432,245	440,556	595,098	158,137
Yellow metal in bars, bolts and sheets, for use in the construction or repair of vessels	cwt.	140	2,726	105	1,581
Copper alloys containing boron, for use exclusively as a flux or deoxidizer (from February 26, 1937)	.....	.....	191	.....	159
Total of above alloys, n.o.p.	.....	.....	**635,634**	.....	**295,306**

Table 66.—Imports into Canada and Exports of Lead, Tin, Zinc and Their Products, 1937 and 1938—(concluded)

Items	Unit of measure	1937		1938	
		Quantity	Value	Quantity	Value
			$		$
IMPORTS—(concluded)					
Type metal in blocks, bars, plates and sheets	lb.	255	673	540,959	20,746
Type for printing, including chases, quoins, and slugs of all kinds			61,788		56,416
Total type and type metal			**62,461**		**77,162**
EXPORTS					
Lead, metallic, contained in ore	cwt.	165,296	862,850	71,623	345,394
Lead in pigs, refined lead, etc	tons	176,570	16,978,147	154,932	8,637,797
Total lead and its products			**17,840,997**		**8,983,191**
Zinc contained in ore	cwt.	656,958	2,618,641	458,410	1,154,812
Zinc spelter	tons	134,139	12,739,242	132,212	8,626,961
Zinc dross and ashes	cwt.	63,938	133,303	23,641	34,235
Total zinc and its products			**15,491,186**		**9,816,008**

Directory of Firms in the White Metal Alloys Industry, 1938

Names of firms	Location of Plants	Main Products, 1938
QUEBEC—		
Atlas Metal and Alloys Co. of Canada, Ltd	421 St. Henry St., Montreal	Solders; type and type metal.
Canada Metal Co. Ltd	6265 Notre Dame St. E., Montreal	Babbitt; solders; type and type metal; bars, ingots, castings, pipe, sheets, traps and fittings of lead; scrap.
Dominion Smelting and Refining Co.	Marien Ave., Pte. aux Trembles	Lead bars and ingots.
Eagle Smelting and Refining Works Ltd	400 Richmond St., Montreal	Babbitt; solders; type and type metal; zinc bars and ingots; bronze castings.
Liberty Smelting Works	269 Prince St., Montreal	Babbitt; solders; bars and ingots of brass, copper, tin and zinc; castings of copper, aluminium, brass and lead.
Magnolia Metal Co. of Canada Ltd	2028 Manufacturers St., Montreal	Babbitt; solders; type and type metal.
Mayer Sealing Devices Reg'd	2027 St. Timothee St., Montreal	Lead seals.
Mount Royal Metal Co. Ltd	1201 Mill St., Montreal	Babbitt; solders; type and type metal; bars and ingots of lead and tin; lead and tin pipe; lead sheets, traps and fittings; dross.
Ouellette, O. J., Co	270 Vitre E., Montreal	Type and type composition; lead headed nails.
Riverside Smelting and Refining	301 Nazareth St., Montreal	Babbitt; type metal; bars and ingots.
Steel Co. of Canada Ltd	2320 Notre Dame St. W., Montreal	Babbitt; dropped and moulded shot. (of lead).
ONTARIO—		
Addressograph-Multigraph of Canada Ltd	349 Carlaw Ave., Toronto	Plates and frames for addressographs and multigraphs.
Canada Foils Ltd	7 Fraser Ave., Toronto	Foils of lead, tin, aluminium, etc.
Canada Metal Co. Ltd. and Hoyt Metal Co. of Can. Ltd	721 Eastern Ave., Toronto	Babbitt; solders; type and type metal; bars and ingots of aluminium, brass, bronze, copper, lead and tin; castings of aluminium, brass, bronze and lead; lead pipe, sheets, traps and fittings; alloys of lead, tin and antimony; copper cames; soldering paste; block tin pipe.
Canadian Hanson and Van Winkle Co. Ltd	15 Morrow Ave., Toronto	Anodes of cadmium, nickel and copper, castings of bronze; bars and ingots of tin and zinc.
Canadian Metal Forming Corp. Ltd.	325 Devonshire Rd., Windsor	Chrome-nickel tubing.
Collapsible Tubes and Containers, Ltd	95 Sterling Road, Toronto	Collapsible tubes; small aluminium articles and caps.
Frankel Bros. Ltd. and National Metal Co. Ltd	Don Road and Eastern Ave., Toronto	Babbitt; solders; type and type metal; bars and ingots of lead and zinc.
General Smelting Co. of Canada Ltd.	Wilcox St., Hamilton	Bars and ingots of zinc and aluminium.

Directory of Firms in the White Metal Alloys Industry, 1938—(concluded)

Names of Firms	Location of Plants	Main Products, 1938
ONTARIO—(concluded)		
Hewitt Metals Corp. Ltd.	235 Hanna St. E., Windsor	Babbitt; solders; type and type metal; bars and ingots of lead and tin; drosses.
Holland Metal Co.	7 Boulton Ave., Toronto	Solders; type and type metal; bars and ingots of lead.
Kester Solder Co. of Canada Ltd.	51 Bruce St., Brantford	Solders.
Lightning Fastener Co. Ltd.	Niagara St., St. Catharines	Slide fasteners and component parts.
Metals and Alloys Ltd.	1 Wiltshire Ave., Toronto	Babbitt; solders; bars and ingots of aluminium, brass, tin and zinc.
Modern Machine Co. Ltd.	344 Queen St., Ottawa	Collapsible tubes; moulded tube and battle caps.
Monarch Type Foundry	80 Nelson St., Toronto	Type and type metal.
Moore Type Foundry	431 King St. W., Toronto	Type and type metal.
Pressure Castings of Canada Ltd.	67 Main St., Weston, Ont.	Zinc base die castings.
Rahn Metals, Ltd.	Regina St., North Bay	Babbitt; castings of brass and aluminium; solders.
Schultz Die Casting Co. of Canada Ltd.	Wallaceburg	Zinc base die castings.
Spooner Copperine Co. Ltd.	John St., Port Hope	Babbitt; solders.
MANITOBA—		
Canada Metal Co. Ltd.	301 Chambers St., Winnipeg	Babbitt; solders; type and type metal; bars and ingots of lead and tin; pipe and sheets of lead.
Union Metal Co. Ltd.	654 McGee St., Winnipeg	Babbitt; solders; type and type metal; bars and ingots of lead, tin and zinc; lead castings, drosses.
BRITISH COLUMBIA—		
Canada Metal Co. Ltd.	1428 Granville St., Vancouver	Babbitt; solders; type and type metal; bars and ingots of lead and tin; pipe and sheets of lead; miscellaneous lead products.
Great Western Smelting Co. Ltd.	310 Prior St., Vancouver	Babbitt; solders; type and type metal; bars of lead.

CHAPTER FIVE

THE JEWELLERY AND SILVERWARE INDUSTRY

Manufacturers of jewellery, silverware, etc., reported the value of their 1938 production at $13,374,183. This year's output, which was the sixth in succession to show an increase, was 2·1 per cent over the total of $13,093,546 reported for 1937.

In 1938 there were 118 plants engaged in this line of manufactures, including 68 in Ontario, 37 in Quebec, 7 in British Columbia, 2 in Manitoba, 2 in Alberta and 1 each in New Brunswick and Saskatchewan. Ninety-two works in the jewellery manufacturing division of this industry employed 1,822 people to make goods worth $5,063,245; fifteen silverware plants with 1,351 employees made products worth $4,782,956 and the remaining eleven plants which were occupied in recovering precious metals from scrap or in preparing gold and silver for use in the arts and industries employed 126 people and had a combined output of $3,527,982.

Altogether the 118 plants gave work to 3,299 people as against 3,316 persons working in 121 plants during 1937. Payments in salaries and wages advanced to $3,852,566 in 1938 from $3,801,230 in the previous year.

Capital employed in 1938 amounted to $9,687,335 of which $3,246,905 represented the value of lands, buildings and equipment, $3,625,129 the value of inventories and $2,815,301 the operating capital. In 1937 capital was reported at $9,794,908.

Materials used in the manufacturing processes, exclusive of fuel and electricity, cost $6,780,352 in 1938 as against $6,647,300 in the previous year. Among the principal materials were gold and gold alloys, silver and silver alloys, nickel-silver, precious and semi-precious stones, jewellers' findings, watch parts, etc.

Chief import items under jewellery and silverware in 1938 were: clock and watch parts and movements $1,441,349; electro-plated and gilt ware, n.o.p., $1,141,374; spectacle frames and metal parts, $441,681; clocks, $316,943; jewellery, n.o.p., $888,822; and manufactured articles consisting wholly or in part of sterling silver, $293,193, etc.

As reviewed in this bulletin the jewellery and silverware industry includes all plants in Canada which made the following classes of goods as their main products: (a) clocks, watches, rings and other jewellery; (b) sterling silver and silver-plated wares; and (c) dental supplies, gold leaf, gold and silver melted or rolled or otherwise prepared for the arts and industries, and precious metals recovered from old materials and jewellers' findings. Wholesalers, retailers, or shops engaged only in repair work have not been included.

Table 67.—Principal Statistics, 1920-1938

Years	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works	Net value of production
		$		$	$	$	$	$
1920	105	8,562,063	2,716	2,573,904	38,920	5,004,922	11,079,293	6,035,451
1921	118	10,371,208	3,021	3,781,626	64,854	4,206,957	9,941,635	5,669,824
1922	97	10,053,458	2,725	3,464,613	69,675	3,926,116	9,815,697	5,819,906
1923	97	9,760,071	2,648	3,572,255	88,911	3,950,186	10,072,672	6,033,575
1924	104	10,440,218	2,473	3,235,981	89,041	3,941,706	9,449,284	5,418,537
1925	108	10,130,772	2,556	3,346,867	87,973	3,991,106	9,581,773	5,502,694
1926	109	10,545,761	2,831	3,625,770	97,146	4,456,047	10,751,795	6,198,602
1927	109	11,238,475	2,806	3,717,989	95,672	4,700,566	11,344,618	6,548,380
1928	106	11,090,082	2,932	3,880,676	99,003	4,709,743	11,702,648	6,893,902
1929	98	10,781,963	2,931	3,998,851	100,912	4,913,604	11,933,593	6,919,077
1930	96	10,159,674	2,634	3,421,059	93,885	3,735,346	9,242,126	5,412,895
1931	95	8,511,317	2,435	2,949,467	87,090	2,892,228	7,449,754	4,470,436
1932	93	7,460,760	2,169	2,322,392	72,434	2,432,728	6,118,871	3,613,709
1933	103	7,550,158	2,207	2,181,152	84,295	2,693,288	6,267,898	3,490,315
1934	107	7,528,257	2,420	2,650,948	93,618	3,418,798	7,859,902	4,347,486
1935	112	7,953,330	2,770	3,032,350	99,594	4,519,732	9,592,659	4,973,333
1936	113	8,834,230	2,959	3,354,169	112,126	5,022,990	10,684,548	5,549,432
1937	121	9,794,908	3,316	3,801,230	112,616	6,647,300	13,093,546	6,633,630
1938	118	9,687,335	3,299	3,852,566	110,816	6,780,352	13,374,183	6,483,015

Table 68.—Principal Statistics, by Provinces, 1937 and 1938

Provinces	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials at works	Gross selling value of products at works
		$		$	$	$	$
1937							
Quebec	37	1,630,826	890	900,796	14,975	1,068,186	2,582,827
Ontario	69	8,018,041	2,351	2,818,530	94,742	5,481,995	10,317,950
British Columbia	7	95,874	51	64,046	1,539	78,770	141,443
Nova Scotia	1						
New Brunswick	1						
Saskatchewan	1	19,973	14	9,878	580	13,579	29,781
Alberta	2						
Manitoba	3	30,194	10	7,980	780	4,770	21,536
Canada	**121**	**9,794,908**	**3,316**	**3,801,230**	**112,616**	**6,647,300**	**13,093,546**
1938							
Quebec	37	1,640,400	890	914,087	14,518	948,481	2,320,692
Ontario	68	7,885,108	2,322	2,836,403	93,894	5,765,150	10,854,201
British Columbia	7	127,330	65	81,966	1,446	50,067	155,335
New Brunswick	1						
Manitoba	2						
Saskatchewan	1	34,497	22	19,510	958	16,654	43,055
Alberta	2						
Canada	**118**	**9,687,335**	**3,299**	**3,852,566**	**110,816**	**6,780,352**	**13,374,183**

Table 69.—Principal Statistics by Sub-Groups, 1937 and 1938

Groups	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of materials at works	Gross selling value of products at works
		$		$	$	$
1937						
Refined precious metals and dental supplies	11	1,490,960	114	159,029	2,823,580	3,115,781
Silver-plated ware	15	3,367,417	1,309	1,661,522	1,794,120	4,661,461
Jewellery, clocks and watches	95	4,936,531	1,893	1,980,679	2,029,591	5,316,304
Total	**121**	**9,794,908**	**3,316**	**3,801,230**	**6,647,300**	**13,093,546**
1938						
Refined precious metals and dental supplies	11	1,495,748	126	158,943	3,151,169	3,527,982
Silver-plated ware	15	3,497,159	1,351	1,705,905	1,757,986	4,782,956
Jewellery, clocks and watches	92	4,694,428	1,822	1,987,718	1,871,197	5,063,245
Total	**118**	**9,687,335**	**3,299**	**3,852,566**	**6,780,352**	**13,374,183**

Table 70.—Capital Employed, by Provinces, 1937 and 1938

Provinces	Present value of lands, buildings, fixtures, machinery, etc.	Inventory value of materials and finished products on hand, and stocks in process	Operating capital (cash, bills and accounts receivable, prepaid expenses, etc.)	**Total capital employed**
	$	$	$	$
1937				
Quebec	637,935	602,214	390,677	**1,630,826**
Ontario	2,905,705	2,906,734	2,205,602	**8,018,041**
British Columbia	32,496	39,261	24,117	**95,874**
Manitoba	21,081	5,283	3,830	**30,194**
Other provinces	12,317	2,221	5,435	**19,973**
Canada	**3,609,534**	**3,555,713**	**2,629,661**	**9,794,908**
1938				
Quebec	656,803	589,447	394,150	**1,640,400**
Ontario	2,536,393	2,975,080	2,373,635	**7,885,108**
British Columbia	29,632	54,020	43,678	**127,330**
Other provinces	24,077	6,582	3,838	**34,497**
Canada	**3,246,905**	**3,625,129**	**2,815,301**	**9,687,335**

Table 71.—Size of Establishments According to Production, Number of Employees and Capital Employed, 1937 and 1938

—	1937				1938			
	Number of plants	Capital employed	Number of employees	Gross selling value of products at works	Number of plants	Capital employed	Number of employees	Gross selling value of products at works
(a) Production		$		$		$		$
Under $5,000	19	84,128	35	63,112	18	80,498	40	57,008
$ 5,000 to $ 10,000	18	123,769	66	128,757	17	182,163	60	122,516
$ 10,001 to $ 25,000	24	382,296	192	424,743	20	327,903	164	364,045
$ 25,001 to $ 50,000	15	356,450	150	544,170	19	473,432	232	699,264
$ 50,001 to $100,000	16	1,068,395	344	1,160,192	15	994,772	342	1,161,688
$100,001 to $250,000	17	2,484,610	830	2,700,527	16	1,935,570	700	2,447,407
Over $250,000	12	5,295,260	1,699	8,072,045	13	5,692,997	1,761	8,522,255
Total	**121**	**9,794,908**	**3,316**	**13,093,546**	**118**	**9,687,335**	**3,299**	**13,374,183**
(b) Number of Employees								
1 or 2	21	86,672	27	103,010	17	79,430	25	68,167
3 to 10	51	1,456,806	317	3,059,436	49	1,320,332	305	2,834,478
11 to 20	16	675,307	228	737,447	18	758,176	254	918,046
21 to 50	19	2,253,669	630	2,658,508	20	2,246,265	638	3,208,838
51 to 100	4	869,940	340	872,285	5	750,543	414	908,235
101 to 500	10	4,452,514	1,774	5,662,860	9	4,532,589	1,663	5,436,419
Total	**121**	**9,794,908**	**3,316**	**13,093,546**	**118**	**9,687,335**	**3,299**	**13,374,183**
(c) Capital Employed								
Under $25	71	686,912	386	1,081,602	66	696,196	392	1,080,381
$ 25,000 to $ 100,000	25	1,334,059	601	1,960,566	28	1,478,972	649	2,140,398
$100,001 to $ 500,000	22	5,290,220	1,605	7,381,467	19	3,830,654	1,267	5,900,022
$500,001 to $1,500,000	3	2,483,717	724	2,669,911	5	3,681,513	991	4,253,382
Total	**121**	**9,794,908**	**3,316**	**13,093,546**	**118**	**9,687,335**	**3,299**	**13,374,183**

Table 72.—Employees Salaries and Wages, 1937 and 1938

Provinces	Average number of employees					Salaries	Wages	Total salaries and wages
	On salaries		On wages		Total			
	Male	Female	Male	Female				
1937						$	$	$
Quebec	101	46	527	216	**890**	293,007	607,789	**900,796**
Ontario	300	157	1,451	443	**2,351**	863,050	1,955,480	**2,818,530**
British Columbia	11	1	39	.....	**51**	19,603	44,443	**64,046**
Manitoba	6	1	3	.....	**10**	5,946	2,034	**7,980**
Other provinces	7	2	5	.....	**14**	5,435	4,443	**9,878**
Canada	**425**	**207**	**2,025**	**659**	**3,316**	**1,187,041**	**2,614,189**	**3,801,230**
1938								
Quebec	114	45	522	209	**890**	315,430	599,257	**914,687**
Ontario	296	150	1,428	448	**2,322**	845,290	1,991,113	**2,836,403**
British Columbia	10	1	54	.....	**65**	19,050	62,916	**81,966**
Other provinces	12	2	8	.....	**22**	13,843	5,667	**19,510**
Canada	**432**	**198**	**2,012**	**657**	**3,299**	**1,193,613**	**2,658,953**	**3,852,566**

Table 73.—Wage-Earners, by Months, 1937 and 1938 (on the last work day of each month)

Month	1937			1938		
	Male	Female	**Total**	Male	Female	**Total**
January	1,894	587	**2,481**	1,992	668	**2,660**
February	1,936	596	**2,532**	2,018	667	**2,685**
March	1,955	605	**2,560**	2,016	674	**2,690**
April	1,975	636	**2,611**	2,003	681	**2,684**
May	1,972	640	**2,612**	1,947	611	**2,558**
June	2,004	634	**2,638**	1,934	611	**2,545**
July	1,984	650	**2,634**	1,907	619	**2,526**
August	2,037	680	**2,717**	1,973	641	**2,614**
September	2,115	730	**2,845**	2,057	677	**2,734**
October	2,182	736	**2,918**	2,088	680	**2,768**
November	2,167	718	**2,885**	2,133	688	**2,821**
December	2,101	693	**2,794**	2,092	655	**2,747**
Average	**2,025**	**659**	**2,684**	**2,012**	**657**	**2,669**

Table 74.—Regular Hours Worked per Week, 1938

Regular hours worked per week	Per cent of wage-earners	Regular hours worked per week	Per cent of wage-earners
30 hours or less	1·0	49-50 hours	3·0
31-43 hours	5·5	51-54 hours	4·8
44 hours	47·0	55 hours	0·3
45-47 hours	23·1	56-64 hours	0·3
48 hours	15·0	65 hours and over	0·0

Table 75.—Fuel and Electricity Used, 1937 and 1938

Kinds	Unit of measure	1937		1938	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal—Canadian	short ton	848	5,643	349	2,150
Imported	short ton	4,912	31,862	4,982	32,267
Anthracite coal	short ton	268	2,781	220	2,280
Coke	short ton	35	359	45	404
Gasoline	Imp. gal.	3,881	735	2,576	458
Kerosene	Imp. gal.	470	77	127	19
Fuel oil	Imp. gal.	35,351	2,911	39,203	3,242
Wood	cord	52	413	60	441
Gas—Manufactured	M cu. ft.	18,943	16,082	20,800	19,017
Natural	M cu. ft.	536	532	606	624
Other fuel	xxx	.....	104	.....	95
Electricity purchased	K.W.H.	3,808,844	51,117	3,725,384	49,819
Total	xxx	.....	**112,616**	.....	**110,816**

Table 76.—Power Equipment, 1937 and 1938

—	1937		1938	
	Number of units	Total rated horse power	Number of units	Total rated horse power
Primary equipment	.....	.....	.....	.....
Electric motors run by purchased power—In use	1,060	3,489	1,091	3,523
Idle	43	244	50	206
Total	**1,103**	**3,733**	**1,141**	**3,729**
Stationary boilers—In use	18	1,010	14	865
Idle	.....	.....	1	210

Table 77.—Materials Used, 1937 and 1938

Materials	Cost at works	
	1937	1938
	$	$
Precious metals—		
Fine gold	955,362	930,836
Gold alloys	78,773	494,965
Fine silver	480,215	505,038
Silver alloys	414,474	361,555
Platinum	112,295	85,503
Old gold for refining	1,489,474	1,426,243
Jewellers' findings, waste and scrap for refining	388,146	283,703
Gold-filled wire and stock	137,964	94,301
Base metals and alloys—		
Britannia metal, including blanks for plating	80,165	92,119
Nickel-silver, including blanks for plating	411,796	428,555
Cutlery steel	158,042	151,111
Brass sheets, etc	85,508	115,965
Copper sheets, etc	125,653	158,582
Tin ingots	77,444	67,123
Other base metals and alloys	124,910	116,143
Other materials—		
Precious and semi-precious stones	540,972	455,056
Crystals for watches and clocks	18,948	20,241
Clock and watch springs	28,906	28,531
Watch cases	48,169	75,437
Other watch parts, including complete movements	197,827	208,626
Celluloid	27,065	19,612
Semi-porcelain or china	8,151	2,063
Glass liners	96,880	108,374
Flatware (butter knives, salad servers, etc.)	3,951	4,046
Rouge and other polishes	47,310	42,556
Containers, boxes, labels, etc	169,549	161,478
All other materials	339,351	342,590
Total	**6,647,300**	**6,780,352**

Table 78.—Products, 1937 and 1938

Products	Selling value at works	
	1937	1938
	$	$
Gold—		
Fine gold recovered from old gold, sweepings, etc	1,530,228	1,402,375
Fine gold (new) melted and rolled, etc., for use in arts and industries	66,224	184,033
Gold alloys	570,086	997,559
Gold leaf, gold-filled wire and other gold-filled stock	169,815	151,484
Silver—		
Fine silver recovered from sweepings, etc	92,976	96,575
Fine silver (new) melted or rolled, etc., for use in arts and industries	170,992	200,036
Sterling silver made, melted or rolled, etc	} 410,728	313,853
Other silver alloys made, melted or rolled, etc		28,620
Platinum recovered from sweepings, etc., and platinum crucibles, electrodes, etc	18,772	29,898
Clocks (x)	873,718	835,680
Watches ... No.	612,668	601,777
$	570,841	572,816
Watch cases ... No		636,063
$	292,966	174,056
Jewellery	3,353,037	3,301,364
Hollow-ware, electro-plated on Britannia metal	439,889	447,439
Hollow-ware, electro-plated on nickel-silver	269,523	250,393
Hollow-ware, electro-plated on brass and copper	836,137	865,346
Hollow-ware, sterling silver	166,078	164,101
Flatware, electro-plated on nickel-silver	1,290,119	1,511,648
Flatware, sterling silver	274,230	183,404
Toiletware and dresserware, sterling silver	144,483	183,263
Cutlery	429,927	436,193
Blanks for plating	137,678	127,937
Received for custom or repair work	204,671	196,227
Other products (xx)	780,428	719,883
Total	**13,093,546**	**13,374,183**

(x) Does not include clocks valued at $14,539 in 1938 and $35,289 in 1937 made by firms in the Electrical Apparatus Industry (See Table 79).

(xx) Includes data for spectacle frames and cases, dental alloys and supplies, stationery, decorated glassware, etc.

Table 79.—Production of Jewellery, Clocks and Watches, and Watch Cases, 1925-1938

Years	Jewellery	Clocks and watches	Watch cases
	$	$	$
1925	3,321,598	635,542	438,544
1926	3,109,911	856,741	476,884
1927	3,405,108	800,711	424,806
1928	3,630,403	894,436	408,611
1929	3,471,867	958,483	379,824
1930	2,570,019	783,136	252,920
1931	1,983,102	799,550	189,604
1932	1,613,417	727,079	144,640
1933	1,601,942	589,514	161,291
1934	2,111,750	905,950	202,630
1935	2,473,763	1,018,916	240,333
1936	2,775,237	1,309,428	231,412
1937	3,353,037	1,479,848	292,966
1938	3,301,364	1,423,035	174,056

Table 80.—Production of Silverware, 1925-1938

Years	Hollow-ware, electro-plated			Flatware, electro-plated	Sterling silver, hollow-ware and flatware	Cutlery	Sterling silver toiletware and dresserware
	On Britannia metal	On nickel-silver	On other metals				
	$	$	$	$	$	$	$
1925	769,880	305,184	.....	1,152,325	410,984	544,120	.....
1926	700,063	444,480	48,532	1,463,307	622,855	612,138	.....
1927	655,888	574,328	66,985	1,423,904	635,102	644,433	.....
1928	614,619	674,122	89,495	1,518,199	661,933	594,916	.....
1929	776,710	674,659	75,555	1,540,409	531,903	618,916	.....
1930	834,083	420,702	130,027	1,308,034	484,356	431,361	.....
1931	659,254	275,660	173,788	918,992	532,368	263,045	.....
1932	424,905	333,770	110,514	543,008	390,846	137,442	.....
1933	346,522	366,390	246,865	736,400	331,422	257,359	139,071
1934	355,447	391,330	399,457	904,607	309,080	372,948	145,402
1935	494,167	231,997	754,908	1,069,429	295,933	424,481	161,127
1936	414,617	169,195	915,710	1,081,481	351,468	411,282	155,173
1937	439,889	269,523	836,137	1,290,119	440,308	429,927	144,483
1938	447,439	250,393	865,346	1,511,648	347,505	436,193	183,203

Table 81.—Imports into Canada, Exports and Re-Exports of Jewellery, Silverware, Clocks and Watches, etc., 1937 and 1938

—	1937	1938
	$	$
Imports		
Clocks	370,908	316,943
Clock movements, clock cases and clockwork mechanisms	74,004	66,352
Time recorders and parts	26,727	42,639
Watches	162,010	188,523
Watch cases and parts thereof, finished or unfinished	274,516	262,722
Watch actions and movements, finished or unfinished	999,508	1,045,372
Parts of watch movements, finished or unfinished, not including plates	176,321	186,217
Parts of clock movements or of clockwork mechanisms, finished or unfinished, not including plates	178,915	143,408
Gold, silver and Dutch or schlag metal leaf	68,027	61,269
Gold and silver sweepings	34	104
Gold, manufactures of, not otherwise provided for	39,297	28,606
Gold, unmanufactured, for commercial purposes	137,669	71,402
Electro-plated ware and gilt ware, not otherwise provided for	1,379,171	1,141,374
Medals of gold, silver or copper and other metallic articles actually bestowed as trophies or prizes	140,548	62,833
Silver, manufactures of, and articles consisting wholly or in part of sterling or other silverware	362,439	293,193
Jewellery, not otherwise provided for	759,293	888,822
Regalia and badges	33,153	33,237
Spectacle and eye-glass frames—metal parts, unfinished, for the manufacture of such frames	134,808	99,230
Spectacle and eye-glass frames and metal parts thereof, not otherwise provided for	380,893	342,451
Exports and Re-Exports		
Jewellers' sweepings	1,338,358	1,211,204
Clocks, watches and parts	465,063	520,266
Plated ware, not otherwise provided for	36,116	45,270
Jewellery of all kinds	137,794	158,783

Directory of Firms in the Jewellery and Silverware Industry, 1938

Names of firm	Location of plant
(a) Refined precious metals chiefly (secondary refiners)	
NEW BRUNSWICK—	
Maritime Dental Laboratory	117 Union St., Saint John.
QUEBEC—	
Canadian Refining Co. Ltd	1426 Clarke St., Montreal.
Montreal Dental Supply & Mfg. Co. Ltd	408 Birks Bldg., Montreal.
ONTARIO—	
Baker Platinum of Canada Ltd	512 King St. E., Toronto.
Goldsmith Bros., S. & R., Co. Ltd	21 Dundas Square, Toronto.
Handy & Harman of Canada Ltd	141 John St., Toronto.
Imperial Refining & Smelting Works	34 Beverley St., Toronto.
Johnson Matthey & Co. (Canada) Ltd	198 Clinton St., Toronto.
National Refining Co. Ltd	34 Ross St., Toronto.
Progress Smelting & Refining Co	42 Mill St., Toronto.
Williams Gold Refining Co. of Canada Ltd	Courtwright St., Fort Erie North.
(b) Silver-plated ware chiefly	
QUEBEC—	
Birks, Henry, & Sons, Ltd	Phillips Square, Montreal.
Camirand, Ltd	123 St. Paul St. West, Montreal.
ONTARIO—	
Benedict-Proctor Mfg. Co. Ltd	Ontario St., Trenton.
Canadian Silversmiths Ltd	110 Adelaide St. W., Toronto.
Canadian Wm. A. Rogers, Ltd	570 King St. W., Toronto.
Empire Silversmiths	39 Lombard St., Toronto.
International Silver Co. of Canada, Ltd. (2 plants)	164 Wellington St. N., Hamilton.
	303 River Road, Niagara Falls.
Lipman Bros	251 Mutual St., Toronto.
McGlashan, Clarke Co., Ltd	Palmer Ave., Niagara Falls.
Oneida Ltd	Ferry St., Niagara Falls.
Roden Bros., Ltd	345 Carlaw Ave., Toronto.
Silverware Products of Canada	98 Munro St., Toronto.
Silverware and Platers Limited	313 Church St., Toronto.
BRITISH COLUMBIA—	
Carmichael, W. M	1023 Fort St., Victoria.
(c) Jewellery, clocks and watches chiefly	
QUEBEC—	
Adler, B	1260 University St., Montreal.
Bick, H. B., Ltd	759 Victoria Square, Montreal.
Bick & Ostor Co., Ltd	759 Victoria Square, Montreal.
Bourassa, J. A	332 St. Catherine St. E., Montreal.
Brooks, John J., Reg'd	761 St. Catherine St. W., Montreal.
Canadian Sturdy Chain Co	16 George St., Sherbrooke.
Coffey, J. G	1405 St. Alexander St., Montreal.
Consolidated Optical Co. Ltd	Nicolet.
Cosmo Ornament Co. Ltd	1193 Phillips Square, Montreal.
European Novelty Co., Ltd	223 Notre Dame St., Hull.
Germain, J. W	4204 Garnier St., Montreal.
Hutt, Robert E	630 Dorchester St. W., Montreal.
Imperial Jewellery Mfg. Co	913 St. George St., Montreal.
Ingersoll-Waterbury Co	209 St. Catherine St. E., Montreal.
Joystone Ornaments	460 St. Catherine St. W., Montreal.
Lamond, C., & Fils Limitée	929 Bleury St., Montreal.
Lasker, Moses	1070 Bleury St., Montreal.
Lemaitre, Paul, Limitée	1405 Iberville St., Montreal.
Liberty Watch Case Co. Ltd	940 Inspector St., Montreal.
Lucas, G. L	704 University Tower Bldg., Montreal.
Mallin, M	1449 St. Alexander St., Montreal.
Marion, Aly	360 Craig St. W., Montreal.
Modern Jewellery Mfg. Co. Reg'd	350 Notre Dame St. E., Montreal.
Pacquet, Gédéon, Enrg	74 St. Joseph St., Quebec.
Picard, J. E	401 Blvd. Charest, Quebec.
Roughton & Skelton, Ltd	1456 McGill College Ave., Montreal.
Shechtman, G. A	460 St. Catherine St. W., Montreal.
Shurack, H	529 St. Catherine St. W., Montreal.
Simon, A. L., Reg'd	3993 St. Lawrence Blvd., Montreal.
Sloves, N., & Co	455 Craig St. W., Montreal.
Soltanoff, Isaac	1485 Bleury St., Montreal.
Smith-Nemo, Ltd	105 Montcalm St., Hull.
Stephenson-Hutt Co. Ltd	630 Dorchester St. W., Montreal.
Vermette, O	4324 Delaroche St., Montreal.

Directory of Firms in the Jewellery and Silverware Industry, 1938—(concluded)

(c) Jewellery, clocks and watches—Concluded

Names of firm	Location of plant
ONTARIO—	
A. & S. Platinum Co.	102 Richmond St. W., Toronto.
Albert Products Co. Ltd.	251 Spadina Ave., Toronto.
Amell, Robert, & Co.	1 Temulay St., Toronto.
Anthony Bros. Ltd.	39 Lombard St., Toronto.
Baker, T. H. & Co. Ltd.	115 Carling St., London.
Bassett, W. F., Co.	85 Yonge St. Arcade, Toronto.
Berlin & Racycle Mfg. Co. Ltd.	53 Frederick St., Kitchener.
Breadner Co. Ltd.	1002 Somerset St. W., Ottawa.
Burkhardt, Michael	82 Chestnut St., Toronto.
Cope, C. H.	51 Richmond St. E., Toronto.
Cohn & Rosenberger of Canada Ltd.	172 Berkeley St., Toronto.
Cowdrill & Co.	39 Lombard St., Toronto.
Dominion Jewellery Mfg. Co.	430 Bay St., Toronto.
Eaton, T., Co. Ltd.	190 Yonge St., Toronto.
Electric Chain Co. of Canada Ltd.	171 John St., Toronto.
Elliott-Bishop Co. Ltd.	71 Lombard St., Toronto.
Excellent Jewellery Co.	74 Yonge St. Arcade, Toronto.
Excelsior Jewellery Mfg. Co.	36 Lombard St., Toronto.
Fashion Jewellery Co.	39 Lombard St., Toronto.
Feeney, J. J.	12 Market Lane, London.
Fremes, S., & Co. Ltd.	333 Adelaide St. W., Toronto.
Friedman & Hurwitz	12 Queen St. E., Toronto.
Gardner & Green	51 Richmond St. E., Toronto.
Gray, Alfred	45 Richmond St. E., Toronto.
Hitchin, T., & Co.	80 Yonge Street Arcade, Toronto.
Jackson, How Brooks & Co., Ltd.	9 Temperance St., Toronto.
Johnson, W. R., Co.	36 Dundas St. E., Toronto.
Lackie Mfg. Co.	106 Lombard St., Toronto.
Lees, Geo. H., & Co. Ltd.	47 Main St. E., Hamilton.
Levy Bros. Co. Ltd.	60 King St. E., Hamilton.
Libman & Shaw	23 Adelaide St. W., Toronto.
Lorie, Ltd.	200 Adelaide St. W., Toronto.
Nolan, Jas. J.	39 Lombard St., Toronto.
Parkinson, F. A.	67½ Richmond St. E., Toronto.
Pugh, Wm. A., Co.	82 Chestnut St., Toronto.
Rendle & Sklar	39 Lombard St., Toronto.
Robertson & Turner	120 King St. E., Hamilton.
Royal Jewellery Mfg. Co.	203 Yonge St. Arcade, Toronto.
Thiel Canadian Watch Co.	411 Clendenan Ave., Toronto.
Traub Mfg. Co. of Canada, Ltd.	1922 Wyandotte St. E., Walkerville.
Vallier & Millard	1 Duchess St., Toronto.
Walker Brothers	229 Yonge St., Toronto.
Walker, J. & M.	76 Yonge St. Arcade, Toronto.
Wellings Mfg. Co.	67 Richmond St. E., Toronto.
Western Clock Co. Ltd.	Hunter St. E., Peterborough.
Whitcomb, A. W.	133 Sparks St., Ottawa.
White, T., & Son	45 Richmond St. E., Toronto.
Wright, Walter W. & Co.	82 Yonge St. Arcade, Toronto.
MANITOBA—	
Lewis, R.	490 Main St., Winnipeg.
McKenzie, Clay & Co.	62 Albert St., Winnipeg.
SASKATCHEWAN—	
Harrington, E. & J.	1759 Scarth St., Regina.
ALBERTA—	
Baker, Bert	127 Eighth Ave. E., Calgary.
Calgary Dental Laboratory	607 Twelfth Ave. E., Calgary.
BRITISH COLUMBIA—	
Birkett & Cobold	434 W. Pender St., Vancouver.
Flewwelling, E. R.	18 Hastings St. W., Vancouver.
Jacoby Brothers, Ltd.	423 Hamilton St., Vancouver.
Pettigrew, J. D.	197B Bernard Ave., Kelowna.
Trayling, E. J.	535 Granville St., Vancouver.
Trayling & Waters	144 Hastings St. W., Vancouver.

CHAPTER SIX

THE ELECTRICAL APPARATUS AND SUPPLIES INDUSTRY

This industrial group includes most of the concerns in Canada which manufacture equipment for use in the generation, transmission and utilization of electricity. However, it is not possible to include all such producers in this industry as the system of classification which is used for the annual Census of Industry provides for the grouping of concerns according to the chief component material of the major product made, and, under this system, some important manufacturers of electrical supplies must be allotted to other industries. For example, since clay is the chief material used in making porcelain insulators, the producers of these goods have been classified to the Clay Products Industry under the main group which embraces all manufactures of non-metallic minerals; similarly, the makers of electric washing machines have been included in the Machinery Industry of the iron and steel group. Again, some electrical supplies were made as minor products of plants which were primarily engaged in other lines of business and, therefore, were included in other industries. The output of electrical apparatus in these other industries, including electrical accessories for automobile and household use but excluding office and industrial machinery, amounted in value to about $16,426,000 in 1938. The items which go to make up this outside production are shown in Table 94 in as much detail as it is possible without violating the secrecy clause of the Statistics Act, which provides that the Bureau may not publish information pertaining to individual companies.

Statistics given in Tables 82 to 93 cover only the concerns in the Electrical Apparatus and Supplies Industry. Table 94 shows the output of certain electrical apparatus by firms in other industries. Tables 95 to 113 give the total Canadian output (regardless of the industries in which they were produced) of motors, generators, transformers, batteries, washing machines, vacuum cleaners, lighting fixtures, wire and cable, electric refrigerators, stoves, water heaters, radio tubes, conduit, radios, ironers, oil burners, and incandescent lamps.

Production by firms in the Electrical Apparatus and Supplies Industry was valued at $90,129,119 in 1938, a decline of 8·8 per cent from 1937 total of $98,841,992. The 188 firms in this group in 1938 were distributed as follows: 136 in Ontario, 27 in Quebec, 11 in British Columbia, 10 in Manitoba and 4 in Alberta. These plants, employing fixed and working capital amounting to $97,122,970, gave employment to a monthly average of 20,353 people who were paid $24,978,077 in salaries and wages. Materials worth $35,916,344 were purchased during the years for use in manufacturing and an additional $1,199,103 was spent for fuel and electricity.

Imports into Canada under the heading of electrical apparatus were valued at $13,053,526 in 1938 against $15,506,144 in the previous year. Exports of Canadian goods of this class were appraised at $4,114,160 and re-exports of foreign goods at $310,477. Corresponding totals for 1937 showed exports at $4,309,975 and re-exports at $218,034.

Table 82.—Principal Statistics, 1920-1938

Years	No. of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works	Net value of production
		$		$	$	$	$	$
1920	99	69,000,008	14,115	16,587,044	773,469	27,220,861	55,965,896	27,971,566
1921	100	63,609,530	10,040	13,555,712	637,749	19,438,688	45,093,591	25,017,154
1922	101	62,436,282	10,630	12,162,607	626,334	17,546,839	41,208,368	23,035,195
1923	108	65,077,942	13,268	14,991,550	954,987	26,257,361	51,360,400	24,148,052
1924	109	72,301,204	13,670	16,089,492	884,808	24,370,996	56,490,465	31,234,661
1925	122	75,375,623	14,112	16,472,357	953,478	25,434,836	60,158,837	33,770,523
1926	132	80,323,534	15,246	18,626,500	1,065,421	30,195,945	69,767,308	38,505,952
1927	130	80,475,999	16,813	20,613,592	897,154	32,734,875	78,557,730	44,925,701
1928	137	87,952,674	18,193	22,756,209	959,237	38,784,421	93,672,452	53,928,794
1929	139	101,767,108	20,871	26,725,215	1,098,506	49,623,322	113,796,002	63,074,174
1930	149	102,979,896	20,568	26,260,004	1,082,700	43,111,629	104,577,790	60,383,461
1931	163	100,057,945	18,207	22,474,319	950,975	32,385,342	81,578,595	48,242,278
1932	169	82,458,754	14,305	16,262,368	976,453	20,414,844	53,264,918	31,873,621
1933	174	80,844,131	11,767	12,428,430	851,575	14,504,269	37,012,509	21,656,665
1934	174	77,980,366	13,657	15,220,022	986,528	21,308,006	50,234,811	27,940,277
1935	182	75,499,255	15,549	17,594,759	1,070,801	25,409,806	61,152,834	34,672,227
1936	186	79,794,524	17,037	19,501,882	1,187,942	30,484,468	72,288,548	40,616,138
1937	191	97,187,905	21,706	26,291,436	1,331,249	41,695,446	98,841,992	55,815,297
1938	188	97,122,970	20,353	24,978,077	1,199,103	35,916,344	90,129,199	53,013,672

Table 83.—Principal Statistics, by Sub-Groups, 1936-1938

Groups	Years	No. of plants	Capital employed	Average number of employees	Salaries and wages	Cost of materials at works	Gross selling value of products at works
			$		$	$	$
Motors, generators and transformers, chiefly	1936	13	29,978,850	5,846	6,610,410	7,216,954	19,513,644
	1937	19	43,583,399	9,012	11,389,851	13,274,983	35,202,530
	1938	22	43,476,813	8,743	10,934,820	10,584,446	33,606,873
Batteries, chiefly	1936	26	7,382,437	1,092	1,367,646	3,423,511	7,091,456
	1937	27	7,228,584	1,143	1,524,744	4,074,846	7,925,917
	1938	27	8,725,816	1,157	1,593,680	4,235,364	8,230,633
Radios and parts, chiefly	1936	23	8,277,402	2,817	2,656,103	5,087,668	12,628,297
	1937	24	9,907,812	3,108	3,141,528	6,464,038	13,406,418
	1938	21	8,946,284	2,801	2,802,952	5,404,617	10,853,672
Appliances, chiefly (vacuum cleaners, refrigerators, stoves, etc.)	1936	31	6,319,018	1,382	1,524,161	3,575,645	7,685,160
	1937	35	5,917,333	1,285	1,436,880	3,217,467	7,757,469
	1938	36	6,123,304	1,269	1,544,742	4,146,804	8,734,908
Cables and conduits, chiefly	1936	12	20,187,638	3,394	4,564,697	6,354,867	14,559,182
	1937	13	22,923,257	4,760	6,039,529	10,601,180	24,370,967
	1938	11	22,874,459	4,440	5,829,339	8,066,397	20,276,661
Lighting fixtures, chiefly	1936	20	1,088,338	448	436,536	644,583	1,476,924
	1937	21	1,800,787	714	754,994	1,079,025	2,518,128
	1938	18	1,200,034	485	513,883	681,969	1,784,374
Switchgear, panel boards, and wiring devices, chiefly	1936	22	2,656,396	822	862,717	1,304,646	2,888,605
	1937	23	2,754,173	825	870,078	1,510,572	3,545,954
	1938	28	3,855,654	1,036	1,198,626	2,132,883	4,542,788
Other electrical equipment, chiefly	1936	39	3,904,445	1,236	1,479,612	1,976,594	6,445,280
	1937	29	3,072,560	859	1,133,832	1,473,335	4,114,609
	1938	25	1,920,606	422	560,035	663,864	2,099,210
Total	**1936**	**186**	**79,794,524**	**17,037**	**19,501,882**	**30,484,468**	**72,288,548**
	1937	**191**	**97,187,905**	**21,706**	**26,291,436**	**41,695,446**	**98,811,992**
	1938	**188**	**97,122,970**	**20,353**	**24,978,077**	**35,916,344**	**90,129,119**

Table 84.—Principal Statistics, by Provinces, 1937 and 1938

Provinces	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works
1937		$		$	$	$	$
Nova Scotia	1	23,538,041	5,591	6,610,587	342,717	10,221,152	23,457,042
Quebec	30						
Ontario	136	72,979,088	15,884	19,416,686	967,261	31,080,611	74,510,006
Manitoba	9	382,564	126	137,416	13,950	220,739	500,802
Alberta	4	88,406	22	21,129	2,216	26,882	47,431
British Columbia	11	199,806	83	105,618	5,105	146,062	326,711
Canada	**191**	**97,187,905**	**21,706**	**26,291,436**	**1,331,249**	**41,695,446**	**98,811,992**
1938							
Quebec	27	22,905,949	5,215	6,449,159	304,978	8,407,807	20,937,284
Ontario	136	73,524,692	14,908	18,247,713	872,121	27,106,345	68,249,332
Manitoba	10	387,428	123	150,348	14,501	236,785	543,149
Alberta	4	80,692	26	22,131	1,862	28,184	67,050
British Columbia	11	224,209	81	108,726	5,641	137,223	332,304
Canada	**188**	**97,122,970**	**20,353**	**24,978,077**	**1,199,103**	**35,916,344**	**90,129,119**

Table 85.—Capital Employed, by Provinces, 1937 and 1938

Provinces	Present value of lands, buildings, fixtures, machinery and tools	Inventory value of materials and finished products on hand, and stocks in process	Operating capital (cash, trading and operating accounts and bills receivable)	**Total capital employed**
	$	$	$	$
1937				
Nova Scotia and Quebec	11,980,664	6,443,727	5,113,650	**23,538,041**
Ontario	21,466,487	23,085,345	28,427,256	**72,979,088**
Manitoba	161,096	146,344	75,124	**382,564**
Alberta	52,188	26,055	10,163	**88,406**
British Columbia	72,649	69,368	57,789	**199,806**
Canada	**33,733,084**	**29,770,839**	**33,683,982**	**97,187,905**
1938				
Quebec	12,030,477	5,396,385	5,479,087	**22,905,949**
Ontario	28,803,180	19,820,898	24,900,614	**73,524,692**
Manitoba	162,552	128,111	96,765	**387,428**
Alberta	35,345	24,452	20,895	**80,692**
British Columbia	102,001	71,642	50,566	**224,209**
Canada	**41,133,555**	**25,441,488**	**30,547,927**	**97,122,970**

Table 86.—Size of Establishments According to Production, Employees and Capital, 1938

—	Number of plants	Capital employed	Average number of employees	Gross selling value of products at works
		$		$
(a) Production				
Under $5,000	19	103,766	53	62,172
$5,000 to $25,000	35	556,149	172	454,916
$25,001 to $50,000	18	714,352	235	672,678
$50,001 to $100,000	25	1,213,436	505	1,832,243
$100,001 to $250,000	33	4,355,774	1,147	5,265,944
$250,001 to $500,000	18	6,188,967	1,562	6,942,553
$500,001 to $1,000,000	21	11,910,013	2,569	14,161,836
Over $1,000,000	19	72,080,513	14,110	60,736,777
Total	**188**	**97,122,970**	**20,353**	**90,129,119**
(b) Number of employees				
1 or 2	16	107,851	26	87,752
3 to 10	47	833,840	267	979,069
11 to 20	30	1,620,374	443	2,345,007
21 to 50	33	3,998,833	1,047	4,807,507
51 to 100	27	10,666,790	1,940	13,048,074
101 to 500	26	23,947,532	5,105	24,630,479
Over 500	9	55,947,750	11,525	44,231,231
Total	**188**	**97,122,970**	**20,353**	**90,129,119**
(c) Capital employed				
Under $25,000	54	528,739	264	721,642
$25,000 to $100,000	59	3,014,564	1,130	4,706,458
$100,001 to $500,000	41	10,732,680	2,840	14,147,947
$500,001 to $1,000,000	18	12,908,396	2,643	14,785,347
Over $1,000,000	16	69,938,591	13,476	55,767,725
Total	**188**	**97,122,970**	**20,353**	**90,129,119**

Table 87.—Employees, Salaries and Wages, by Provinces, 1937 and 1938

Provinces	Average number of employees					Salaries	Wages	Total salaries and wages
	On salaries		On wages		Total			
	Male	Female	Male	Female				
						$	$	$
1937								
Nova Scotia and Quebec	1,087	392	2,923	1,189	5,591	2,688,570	3,922,017	6,610,587
Ontario	2,892	1,044	9,182	2,766	15,884	7,313,550	12,103,136	19,416,686
Manitoba	31	8	85	2	126	77,766	59,650	137,416
Alberta	5	2	14	1	22	8,264	12,865	21,129
British Columbia	23	3	56	1	83	50,951	54,667	105,618
Canada	**4,038**	**1,449**	**12,260**	**3,959**	**21,706**	**10,139,101**	**16,152,335**	**26,291,436**
1938								
Quebec	1,131	375	2,707	1,002	5,215	2,922,535	3,526,624	6,449,159
Ontario	3,043	1,062	8,539	2,264	14,908	7,588,559	10,659,154	18,247,713
Manitoba	35	6	80	2	123	87,867	62,481	150,348
Alberta	6	2	18	.....	26	8,047	14,084	22,131
British Columbia	24	4	53	.....	81	52,474	56,252	108,726
Canada	**4,239**	**1,449**	**11,397**	**3,268**	**20,353**	**10,659,482**	**14,318,595**	**24,978,077**

Table 88.—Wage-Earners, by Months, 1937 and 1938. (On the last work day of each month)

Months	1937			1938		
	Male	Female	Total	Male	Female	Total
January	10,249	3,321	13,570	11,789	3,330	15,119
February	10,625	3,335	13,960	11,480	3,148	14,628
March	11,294	3,465	14,759	11,565	3,211	14,776
April	11,872	3,670	15,542	11,436	3,177	14,613
May	12,210	3,929	16,139	11,569	3,230	14,799
June	12,692	4,221	16,913	11,564	3,423	14,987
July	12,799	4,202	17,001	11,826	3,443	15,269
August	13,051	4,378	17,429	11,813	3,599	15,412
September	13,429	4,438	17,867	11,360	3,558	14,918
October	13,311	4,463	17,774	11,421	3,481	14,902
November	13,189	4,268	17,457	10,754	3,047	13,801
December	12,502	3,788	16,290	10,237	2,724	12,961
Average	**12,260**	**3,959**	**16,219**	**11,397**	**3,268**	**14,665**

Table 89.—Regular Hours Worked per Week by Wage-Earners, 1938. (Overtime not included)

Regular hours worked per week	Per cent of wage-earners	Regular hours worked per week	Per cent of wage-earners
30 hours or less	2·9	51-54 hours	1·2
31-43 hours	22·2	55 hours	1·2
44 hours	28·5	56-64 hours	1·2
45-47 hours	32·1	65 hours or over	0·4
48 hours	5·1		
49-50 hours	5·2		

Table 90.—Fuel and Electricity Used, 1937 and 1938

Kinds	Unit of measure	1937		1938	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal—Canadian	short ton	26,833	154,940	21,730	127,124
Imported	short ton	40,437	234,510	41,423	239,978
Anthracite coal	short ton	3,342	25,559	3,435	26,599
Coke	short ton	1,939	21,729	1,025	11,195
Gasoline	Imp. gal.	10,467	2,479	8,145	2,447
Kerosene	Imp. gal.	5,371	850	4,306	694
Fuel oil	Imp. gal.	1,478,423	103,293	1,374,401	96,723
Wood	cord	246	936	212	856
Gas—Manufactured	M cu. ft.	137,375	103,645	133,068	91,312
Natural	M cu. ft.	29,676	13,480	18,700	13,050
Other fuel	$	.....	253	.....	482
Electricity purchased	K.W.H.	72,826,211	669,575	58,239,784	588,643
Total	$	.....	**1,331,249**	.....	**1,199,103**
Electricity generated for own use	K.W.H.	11,275,180	.....	10,040,300	.....

Table 91.—Power Equipment, 1937 and 1938

—	Ordinarily in use		In reserve or idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
1937				
Steam engines and turbines	14	3,270	2	4,000
Diesel engines	1	25	.....	.....
Gasoline, gas and oil engines	1	15	2	247
Hydraulic turbines or water wheels	8	4,407	.....	.....
Total Primary Equipment	24	7,717	4	4,247
Electric motors run by purchased power	10,113	66,812	323	2,341
Total	**10,137**	**74,529**	**327**	**6,588**
Electric motors run by power generated by above primary units	1,021	5,329	.....	.....
Stationary boilers	95	11,077	10	1,850
1938				
Steam engines and turbines	13	3,245	3	4,300
Diesel engines	1	30	.....	.....
Gasoline, gas and oil engines	1	15	.....	.....
Hydraulic turbines or water wheels	7	4,400	.....	.....
Total Primary Equipment	22	7,690	3	4,300
Electric motors run by purchased power	10,137	67,557	350	2,011
Total	**11,159**	**75,247**	**353**	**6,311**
Electric motors run by power generated by above primary units	1,041	5,566	.....	.....
Stationary boilers	83	10,594	8	1,554

Table 92.—Materials Used in Manufacturing, 1937 and 1938

Materials	Unit of measure	1937		1938	
		Quantity	Cost at Works	Quantity	Cost at works
			$		$
Aluminium—					
Castings	lb.	448,207	367,625	345,987	151,653
Ingots and scrap	lb.	89,175	19,343	71,125	14,254
Punchings and spinnings	lb.	54,974	34,521	81,102	44,224
Rods and bars	lb.	655,861	134,559	569,219	118,274
Sheets	lb.	210,751	70,188	193,174	63,859
Other	lb.	274,565	117,482	200,156	80,037
Ammonium chloride (sal ammoniac)	lb.	1,135,702	35,466	1,182,147	35,436
Antimony	lb.	186,275	25,996	76,149	10,997
Argon	cu. ft.	149,541	64,146	119,292	49,738
Asbestos—					
Board	lb.	232,034	34,226	178,401	32,477
Yarn	lb.	119,140	37,323	71,851	27,424
Tape	lb.	.....	16,730	14,945	13,602
Bakelite in all forms	$	.....	255,794	.....	274,853
Battery boxes	no.	750,088	374,942	668,309	381,867
Brass and bronze—					
Castings	lb.	1,472,543	466,926	886,512	273,363
Rods and bars	lb.	1,576,381	274,532	1,237,443	205,760
Tubing and pipe	lb.	149,398	44,365	88,369	27,425
Lamp bases	$	.....	217,228	.....	237,681
Sheets	lb.	1,133,191	267,509	751,633	164,893
Screws	$	.....	93,702	.....	69,371
Other	$	.....	149,982	.....	47,033
Carbon brushes, brush stock and plates	$	.....	113,292	.....	91,074
Carbon electrodes	$	.....	81,391	.....	85,302
Copper—					
Castings	lb.	165,963	41,339	89,121	27,861
Ingots, slabs, wire bars, etc.	lb.	866,281	184,180	669,615	135,642
Rods, including wire rods	lb.	34,367,135	4,564,040	24,152,604	3,045,196
Scrap	lb.	170,463	14,659	42,751	5,239
Tubing and pipe	lb.	427,010	127,373	322,969	94,466
Sheets and plates	lb.	570,893	125,187	353,806	75,329
Wire, bare	lb.	5,357,119	904,796	4,955,851	751,885
Wire, enamelled	$	.....	546,076	.....	395,887
Wire, other insulated	$	.....	954,553	.....	821,389
Cotton and linen yarns	$	.....	794,913	.....	662,865
Cotton sheets, tapes and webbing	$	.....	131,987	.....	89,003
Cork sheet, etc.	$	.....	20,122	.....	18,679
Fibre rod, sheet, tubing, etc.	$	.....	167,001	.....	110,929
Frit for enamelling	lb.	638,278	52,689	578,014	48,315
Glass bulbs, tubing and cane	$	.....	614,335	.....	470,111
Insulating varnishes, japans, lacquers, etc.	$	.....	160,076	.....	96,866
Insulating waxes	$	.....	126,344	.....	97,962
Insulators, porcelain	$	.....	461,946	.....	347,934
Iron and steel—					
Pig iron	long ton	2,507	61,640	1,393	34,511
Iron castings	$	.....	936,004	.....	778,215
Steel castings	short ton	804	99,755	315	68,264
Steel forgings	short ton	1,471	194,109	225	35,668
Steel bars	short ton	1,638	155,945	2,627	250,846
Steel rods	short ton	1,482	257,719	1,097	203,310
Iron and steel pipe	short ton	.....	735,819	.....	686,055
Steel sheets	$	.....	1,980,710	.....	1,297,804
Steel wire	$	.....	257,834	.....	164,585
Structural steel	short ton	3,359	200,153	2,467	145,780
Steel strip	short ton	2,529	357,759	3,521	386,985
Stampings	$	.....	297,893	.....	379,260
Bolts, nuts and screws	$	.....	346,081	.....	298,964
Other iron and steel	$	.....	225,745	.....	368,134
Lead—					
Pig	lb.	21,054,881	1,093,836	21,467,082	975,748
Scrap	lb.	129,400	5,830	154,125	6,718
Other	lb.	808,603	50,431	874,760	46,160
Lead oxide (litharge and red lead)	lb.	4,620,202	334,607	1,764,571	123,903
Lumber	M bd. ft.	.....	242,716	5,533	238,828
Manganese dioxide	lb.	4,207,634	75,970	4,187,176	84,368
Mica	lb.	.....	87,829	.....	66,877
Mineral wool	lb.	385,588	8,194	404,535	9,423
Nickel-silver tubing	ft.	94,019	6,436	70,542	4,410
Nitrogen	cu. ft.	498,074	5,992	435,413	5,363
Oil—					
Transformer	Imp. gal.	623,820	147,333	760,672	173,176
Switch	Imp. gal.	59,230	14,558	25,363	6,131
Paint	$	.....	190,647	.....	256,951
Paper	$	.....	304,504	.....	302,372
Pressboard	$	.....	105,288	.....	77,736
Radio cabinets	no.	.....	1,430,301	.....	1,024,044
Radio parts for assembling	$	.....	2,911,622	.....	2,605,550
Radio tubes purchased and used to equip radio receiving sets manufactured	no.	1,614,417	1,026,564	1,337,846	755,270
Refrigerator cabinets	$	.....	80,000	.....	63,908
Refrigerator parts	$	.....	84,778	.....	991,897
Resistance wire	$	.....	94,094	.....	90,707
Rubber, crude	lb.	1,382,803	102,382	844,370	108,963

Table 92.—Materials Used in Manufacturing, 1937 and 1938—(concluded)

Materials	Unit of measure	1937		1938	
		Quantity	Cost at Works	Quantity	Cost at works
			$		$
Rubber, other	lb.	1,231,553	253,998	1,055,578	143,631
Silk, artificial	lb.	22,116	28,919	22,637	26,580
Steel tanks	no.	12,682	115,235	.....	104,201
Sulphuric acid, 66° Bé	lb.	4,446,397	65,288	4,123,474	60,279
Talc	lb.	418,932	5,256	298,362	3,853
Thermometers	no.	35,627	88,045	.....	44,114
Tungsten wire	$	.....	52,768	.....	50,594
Wood battery separators	$	.....	181,335	.....	180,180
Zinc—					
Ingot and bar	lb.	880,619	56,889	1,117,940	75,009
Sheets	lb.	2,712,989	242,631	2,319,830	186,622
Zinc chloride	lb.	423,498	24,385	436,562	21,909
Electric motors purchased	$	.....	392,457	.....	423,435
All other materials	$	.....	11,481,398	.....	10,926,828
Containers and packing material	$	.....	897,880	.....	756,070
Total	$	.....	**41,695,446**	.....	**35,916,344**

Table 93.—Products Made in the Electrical Apparatus and Supplies Industry, 1937 and 1938

NOTE.—In the Census of Industry the reporting firms are classified to certain industries in accordance with the nature of the main products which they manufacture. Data in this table represent only the output of concerns classified to the Electrical Apparatus and Supplies Industry (see Directory). The figures for the individual items do not necessarily represent the total output in Canada as these articles may have been produced as minor products by companies which have been classified to other industrial groups. The asterisk (*) indicates that the article was made also in other industries. For the total Canadian output of certain major items, see Table 95 to 113.

Products	Unit of measure	1937		1938	
		Quantity	Gross selling value at works	Quantity	Gross selling value at works
			$		$
Appliances, motor driven, and parts, including vacuum cleaners*, fans, washing machines*, electric clocks*, electric shavers*, furnace blowers*), air conditioners*, floor polishers*, clippers, etc. (See Tables 99, 100, 102 and 110)	$	.....	3,142,271	.....	3,552,479
Batteries and parts (See Table 103)	$	.....	6,608,914	.....	6,209,421
Conduit and fittings* (See Table 96)	$	.....	1,576,022	.....	1,132,898
Converter equipment—					
Motor generator sets, A.C. to D.C.	No.	99	375,320	66	386,580
Motor generator sets, A.C. to A.C.	No.	1	1,024	.....	.....
Other converter equipment and parts	$	.....	177,988	.....	47,338
Cooking and heating apparatus, electric—					
Stoves, grills, etc.* (See Table 106)	$	.....	1,151,797	.....	985,793
Heating elements (sold separately)	$	.....	49,519	.....	134,772
Heaters, air and space*	No.	12,047	47,628	11,528	34,298
Heaters, water, domestic* (See Table 108)	No.	21,279	126,835	17,478	100,685
Heating pads, electric	No.	16,645	40,800	11,018	29,613
Toasters—					
Commercial	No.	53,952	53,614	35,959	42,946
Domestic—					
Sandwich	No.	26,479	57,998	26,683	61,349
Other	No.	84,598	147,119	76,669	147,846
Percolators and coffee urns, electric	No.	8,399	34,722	1,228	5,614
Glass coffee makers, electric	No.	14,812	53,981	21,196	83,509
Irons, flat, electric—					
Automatic	No.	183,147	321,302	36,178	150,433
Non-automatic				140,164	220,405
Waffle irons, electric	No.	6,365	21,416	2,704	9,443
All other cooking and heating apparatus	$	.....	56,373	.....	95,734
Cutouts and fuses—					
Primary cutouts, all types	$	.....	226,523	.....	165,085
Cutouts for cartridge and plug fuses	$	.....	46,109	.....	112,672
Cartridge and other fuses and renewals	$	.....	352,785	.....	312,069
Generators, A.C. and D.C. and parts (See Table 97)	No.	.....	1,314,403	218	1,610,504
Industrial electrical heating equipment—					
Furnaces, resistance, induction and arc types	No.	57	133,589	50	90,233
Industrial ovens and commercial coking ovens	No.	21	26,120	.....	12,917
Other industrial heating equipment	$	.....	123,881	.....	125,437

Table 93.—Products Made in the Electrical Apparatus and Supplies Industry, 1937 and 1938—(concluded)

Products	Unit of measure	1937		1938	
		Quantity	Gross selling value at works	Quantity	Gross selling value at works
			$		$
Instruments and meters (except ammeters for autos)—					
Demand meters	No.	6,897	108,952	5,106	93,748
Watthour meters	No.	136,726	1,237,010	167,864	1,404,313
Electrical indicating and graphic instruments	No.	1,541	71,527	1,404	64,671
Other electrical instruments and meters	No.	1,709	76,844	.....	65,733
Meter and instrument parts	$	.....	166,337	.....	133,384
Lamps, incandescent—					
Standard size	No.	25,689,598	4,477,267	20,634,204	3,409,585
Miniature size	No.	12,362,115	744,011	11,087,021	597,196
Lighting fixtures* (See Table 104)	$	.....	1,973,584	.....	1,899,845
Line material (excluding wire and insulators)	$	.....	503,333	.....	540,784
Motors, A.C. and D.C. and parts* (See Table 98)	$	.....	7,672,278	.....	6,161,573
Panel boards and cabinets	$	.....	395,633	.....	332,480
Radio apparatus and parts (*) (except tubes and transformers) (See Table 105)	$	.....	13,224,740	.....	10,534,260
Rectifiers, for storage battery charging, and parts	No.	.....	27,672	1,212	41,357
Refrigerators, electric* (See table 107)	$	.....	6,661,764	.....	7,775,974
Switch gear and protective equipment (except telephone switchboards) (see Table 112)	$	.....	3,213,886	.....	3,523,459
Telephone material (telephones, switchboards, etc)	$	.....	6,199,096	.....	5,623,676
Time switches	$	.....	17,098	.....	38,490
Traffic signals and controls	$	.....	44,023	.....	167,614
Transformers and parts (See Table 95)	$	.....	5,024,512	.....	5,787,177
Therapeutic lamps and other electric-therapeutic apparatus	$	.....	34,232	.....	114,413
Vacuum tubes—					
Radio receiving tubes (See Table 109)	No.	3,320,687	1,760,109	1,969,598	1,108,40
Other vacuum tubes, including X-ray tubes	No.	.....	67,225	.....	92,137
Welding apparatus	$	.....	276,000	.....	166,379
Wiring devices (except auto starting switches and time switches) (See table 113)	$	.....	3,470,345	.....	2,715,187
Wires* and cables, except aluminium (See Table 101)	$	.....	15,091,629	.....	13,185,137
Receipts from customs and repair work		.....	821,054	.....	940,190
Any electrical apparatus not elsewhere reported, including articles reported by only 1 or 2 firms	$	.....	5,570,209	.....	6,542,741
All other products	$	.....	3,043,569	.....	1,209,135
Total	$	.....	**98,841,992**	.....	**90,129,119**

Table 94.—Production of Certain Electrical Apparatus by Firms Classified to Industries other than the Electrical Apparatus and Supplies Industry, 1936-1938

NOTE.—Data given in this table represent the output of electrical appliances or equipment reported as minor products by concerns which have been classified to industries other than the Electrical Apparatus and Supplies Industry. (See supplement to Directory). These figures should be added to those given in Table 93 to arrive at the total Canadian output for these items. (See Tables 95 to 113).

Products	Gross selling value at works		
	1936	1937	1938
	$	$	$
Washing machines, electric	4,164,992	5,091,846	3,967,808
Stoves, rangettes, hot plates, etc., electric	1,488,391	1,756,364	1,895,093
Electrodes, furnace	2,318,488	3,217,621	2,806,659
Ignition coils, automobile	249,437	322,618	290,972
Generators and starters, automobile	1,568,192	2,032,018	1,366,693
Oil burners	288,192	237,685	131,448
Signs, electric, including neon signs	1,134,411	1,323,748	1,472,881
Lighting fixtures	95,370	116,915	87,062
Blowers for domestic furnaces	58,321	69,779	58,931
Water tank heaters, electric	17,434	18,020	17,528
Air and space heaters	4,000	4,500	4,680
Spark plugs, electric ironers, electric motors, vacuum cleaners, copper wire, electric refrigerators, porcelain insulators, etc	4,625,339	5,568,769	4,326,967
Total	**16,012,567**	**19,759,883**	**16,426,722**

Table 95.—Production of Transformers in Canada, by Types, 1937 and 1938

Type	1937			1938		
	Number	Total rating	Selling value at works	Number	Total rating	Selling value at works
		K.V.A.	$		K.V.A.	$
Distribution transformers, 200 k.v.a. and under, and 15,000 volts and below	16,016	186,374	2,157,947	17,226	159,642	2,179,979
Power transformers, 200 k.v.a. to 7,500 k.v.a. inclusive, over 15,000 volts to and including 132,000 volts	414	445,812	1,974,035	292	311,597	1,457,707
Power transformers, over 7,500 k.v.a. or over 132,000 volts	33	291,863	609,702	27	492,250	1,299,277
Current and potential transformers	...	...	211,712	4,057	...	184,543
Constant current transformers	14	167	4,725	50	...	15,913
Series lamp transformers	347	...	7,611	864	...	31,063
Luminous tube transformers	18,117	...	132,707	7,136	...	64,949
Ignition transformers				2,053	...	14,779
Radio transformers	...	...	248,178	...	...	160,263
All other transformers	...	...	111,079	...	...	161,216
Parts and supplies	...	...	166,816	...	...	217,488
Total	...	...	**5,624,512**	...	...	**5,787,177**

Table 96.—Production of Conduit for Electric Wiring, 1937 and 1938

Items		1937		1938	
		Quantity	Selling value at works	Quantity	Selling value at works
			$		$
Rigid iron conduit	lb.	13,749,409	1,201,439	11,700,092	945,502
Flexible conduit (steel and non-metallic)	ft.	5,268,069	88,826	3,760,619	65,898
Conduit fittings	$	...	285,757	...	182,528
Total	$	...	**1,576,022**	...	**1,193,928**

Table 97.—Production in Canada of Electric Generators and Parts, 1937 and 1938

—	1937			1938		
	Number	Total rating	Selling value at works	Number	Total rating	Selling value at works
			$			$
Alternating current	64	85,497 K.V.A.	900,123	80	179,228 K.V.A.	1,296,354
Direct current and including exciters	44	3,289 K.W.	55,071	48	10,375 K.W.	176,149
Accessories and parts for generators	...	...	339,112	...	...	99,925
Total	...	...	**1,294,306**	...	...	**1,572,428**

Table 98.—Production in Canada of Electric Motors and Parts, 1937 and 1938

(From all industries)

—	Number	Total rating	Selling value at works
1937			$
½ h.p. and under	256,215	57,720 H.P.	2,270,038
Over ½ to 5 h.p.—Single phase, A.C.	10,351	11,913 H.P.	479,496
Over ½ to 5 h.p.—Induction	8,778	18,481 H.P.	654,018
Over ½ to 5 h.p.—D.C.	195	194 H.P.	12,664
Over 5 to 200 h.p.—Induction	4,276	117,512 H.P.	1,479,036
Over 5 to 200 h.p.—D.C.	67	2,324 H.P.	80,083
201 h.p. and over—Induction	47	20,275 H.P.	223,060
201 h.p. and over—D.C.	5	5,700 H.P.	100,804
Railway and vehicle motors—A.C. and D.C.	205	105 H.P.	15,791
Synchronous condensers and motors	156	85,010 K.V.A.	891,631
Starting and control equipment for electric railway and vehicle motors	.....	.....	283,930
Starting and control equipment for other motors	.....	.....	1,202,492
Accessories and parts for electric motors	.....	.....	237,011
Total	.....	.....	**7,936,054**
1938			
½ h.p. and under—single phase, A.C.	199,359	51,827 H.P.	1,870,206
½ h.p. and ¾ h.p.—single phase, A.C.	3,737	2,197 H.P.	119,278
1 h.p. to 5 h.p., inclusive—single phase, A.C.	2,510	4,048 H.P.	159,677
½ h.p. and under—polyphase, A.C.	430	142 H.P.	8,994
½ h.p. and ¾ h.p.—polyphase, A.C.	1,165	743 H.P.	50,217
1 h.p. to 5 h.p., inclusive—polyphase, A.C.	6,012	15,951 H.P.	477,114
½ h.p. and under—D.C.	3,478	949 H.P.	58,949
½ h.p. and ¾ h.p.—D.C.	127	77 H.P.	3,178
1 h.p. to 5 h.p., inclusive—D.C.	83	138 H.P.	3,478
Over 5 to 200 h.p.—Induction	2,083	63,699 H.P.	892,909
Over 5 to 200 h.p.—D.C.	17	509 H.P.	21,710
201 h.p. and over—Induction	50	19,975 H.P.	209,300
201 h.p. and over—D.C.	4	10,300 H.P.	230,769
Railway and vehicle motors, A.C. and D.C.	889	31,847 H.P.	453,411
Synchronous condensers and motors	73	27,494 K.V.A.	228,469
Starting and control equipment for electric railway and vehicle motors	.....	.....	369,097
Starting and control equipment for other motors	.....	.....	1,079,881
Accessories and parts for electric motors	.....	.....	187,276
Total	.....	.....	**6,420,973**

Table 99.—Production of Domestic Washing Machines in Canada, 1927-1937

(From all industries)

Year	Hand		Electric		Other Power		**Total**	
	Number	Selling value at works	Number	Selling value at works	Number	Selling value at works	**Number**	**Selling value at works**
		$		$		$		$
1927	21,841	356,409	38,309	4,606,631	1,986	133,452	**62,136**	**5,996,492**
1928	22,118	374,491	60,871	7,724,740	3,408	212,028	**86,397**	**8,311,259**
1929	25,586	487,516	70,261	9,109,794	4,377	479,135	**100,224**	**10,076,445**
1930	16,038	339,917	67,577	8,807,068	2,443	244,726	**86,058**	**9,391,711**
1931	16,189	331,732	59,443	6,490,378	1,061	96,348	**76,693**	**6,918,458**
1932	10,416	122,695	47,440	3,158,122	630	36,520	**58,486**	**3,317,337**
1933	7,852	84,941	50,597	2,723,847	482	35,243	**58,931**	**2,844,031**
1934	9,325	116,998	73,657	3,607,088	1,097	96,912	**84,079**	**3,820,998**
1935	7,445	79,033	75,121	3,600,904	2,110	169,256	**84,676**	**3,849,193**
1936	11,557	142,474	89,334	4,331,912	1,747	126,244	**102,638**	**4,600,630**
1937	12,248	139,899	115,385	5,414,315	5,842	401,390	**133,475**	**5,955,604**
1938	8,967	105,856	91,159	4,553,465	5,724	399,425	**105,850**	**5,058,746**

Table 100.—Production of Domestic Electric Ironers (*) in Canada, 1935-1938

(From all industries)

Year	Number	Selling value at works
		$
1935	9,028	364,626
1936—Operated by own motor	5,435	309,309
Attached to washing machine	3,391	62,769
Total—1936	**8,826**	**372,078**
1937—Operated by own motor	3,622	224,369
Attached to washing machine	1,101	30,608
Total—1937	**4,723**	**254,977**
1938—Operated by own motor	2,812	177,849
Attached to washing machine	856	23,761
Total—1938	**3,668**	**201,610**

* Includes some gas-heated ironers.

Table 101.—Production (*) of Electric Wires and Cables, 1936-1938

(From all industries)

—	Selling value at works		
	1936	1937	1938
	$	$	$
Copper, bare	2,559,224	3,431,638	2,147,729
Weatherproof	1,042,714	1,582,890	1,416,084
Rubber insulated, braided	2,475,155	2,815,097	2,351,706
Cambric insulated, braided	70,547	143,696	105,895
Rubber insulated, leaded	188,189	348,877	300,687
Cambric insulated, leaded	243,150	465,064	118,011
Paper insulated, leaded	157,536	535,461	615,593
Armoured cable	647,011	793,217	721,643
Rubber insulated telephone wires	765,379	1,027,827	282,713
Paper insulated telephone cable			1,025,250
Flexible cords, except telephone and switchboard cords	646,692	1,073,069	900,195
Signal and control cable	1,359,729	2,957,667	28,687
Magnet wire—enamelled			731,694
all other			425,590
Non-metallic sheathed cable			334,759
All other wires and cables			1,112,650
Total	**10,155,326**	**15,174,413**	**12,678,886**

(*) Except aluminium wire and cable.

Table 102.—Production of Electric Vacuum Cleaners and Parts, 1935-1938

(From all industries)

—		1935	1936	1937	1938
Electric floor models	No.	38,728	40,621	44,721	40,897
	$	1,510,401	1,473,656	1,701,307	1,517,631
Electric hand models	No.	11,723	7,058	4,017	5,521
	$	180,683	109,214	41,743	62,675
Attachments and parts for above	$	657,339	347,276	293,270	216,724
Total	**$**	**2,348,423**	**1,930,146**	**2,036,320**	**1,797,030**

Table 103.—Production of Electric Batteries, by Types, 1937 and 1938

Kinds	1937		1938	
	Number	Selling value at works	Number	Selling value at works
		$		$
Storage—				
For internal combustion engine starting and ignition	662,100	2,821,072	643,840	2,682,248
For farm lighting plants (cells)	.....	119,229	21,446	114,125
For railway service (cells)	5,718	120,924	4,401	84,763
For telephone switchboards	2,341	58,640	1,675	36,736
For motorcycle starting	2,548	7,738	2,685	8,187
For all other purposes	.....	448,036	.....	415,622
Total Storage	.....	3,575,639	.....	3,341,681
Dry cell—				
6 inch cells (cells)	1,382,526	376,223	1,127,008	309,133
B and C for radio (cells)	24,274,227	1,388,023	23,550,787	1,347,703
Flashlight (cells)	11,242,463	664,007	10,584,108	627,887
Other dry cells (cells)	108,114	7,627	216,857	14,045
Total Dry Cells	.....	2,435,880	.....	2,298,768
Parts and supplies, including all other dry cells and primary wet cells	.....	597,395	.....	568,972
Total	.....	**6,608,914**	.....	**6,209,421**

Table 104.—Production in Canada of Electric Lighting Fixtures, 1936-1938

(From all industries)

—	Selling value at works		
	1936	1937	1938
	$	$	$
Interior lighting fixtures, residential	909,237	1,120,958	680,465
Interior lighting fixtures, metal reflectors	120,673	190,774	129,327
Interior store and office lighting fixtures	182,625	285,520	135,905
All other interior lighting fixtures			163,403
Exterior lighting fixtures	227,114	106,452	142,008
Exterior lighting control devices	15,929	2,034	2,171
Searchlights and floodlights	17,606	30,399	68,900
All other lighting equipment	377,011	348,262	377,250
Total lighting fixtures	**1,850,195**	**2,084,399**	**1,699,429**

Table 105.—Production of Complete Radio Receiving Sets in Canada, 1925-1938

Year	Number of sets	Selling value at works*	Year	Number of sets	Selling value at works*
		$			$
1925	48,531	2,278,292	1932	121,468	6,808,877
1926	42,430	2,253,098	1933	112,273	4,401,313
1927	47,500	3,748,622	1934	188,710	8,196,248
1928	81,032	7,486,127	1935	191,293	9,493,399
1929	150,050	15,604,145	1936	253,896	11,388,173
1930	170,082	19,196,936	1937	289,247	11,696,717
1931	291,711	18,555,710	1938	242,721	8,801,981

*Not list prices.

Table 106.—Number and Factory Selling Value of Stoves Made in Canada, 1936-1938

Kind		1936	1937	1938
Coal and wood cooking stoves and ranges, all styles	No.	96,500	102,306	85,066
	$	4,059,481	4,811,531	3,947,666
Coal and wood heating stoves (including all heaters, circulators, Quebec, box, Oak, Franklyn, Globe or laundry	No.	108,647	120,635	77,540
	$	1,068,602	1,118,159	799,624
Combination for gas and coal	No.	9,246	11,015	8,954
	$	569,202	661,570	607,429
Combination for gas and electric	No.	525	.....	.....
	$	31,500	.....	.....
Combination for coal and electric	No.	3,063	2,886	2,041
	$	280,320	251,342	181,062
Gas cooking stoves and ranges, not combinations, including all styles with ovens	No.	26,727	27,900	23,395
	$	1,017,146	1,154,213	938,892
Electric cooking stoves and ranges over 35 amperes, all styles with ovens	No.	29,354	35,205	32,513
	$	2,096,348	2,540,456	2,312,034
Electric rangettes, including cord attachment and oven as one unit	No.	11,195	11,741	11,884
	$	194,792	193,879	200,381
Electric cooking plates and grills	No.	56,913	65,328	69,704
	$	130,538	149,472	157,679
Gas cooking plates	No.	4,894	4,088	2,757
	$	13,642	14,425	8,698
Gas heating stoves	No.	3,264	2,483	2,893
	$	49,310	38,020	43,999
Oil and gasoline stoves	No.	14,550	20,927	33,306
	$	112,477	184,466	243,153
Total	$	**9,623,268**	**11,117,533**	**9,440,617**

Table 107.—Production of Electric Refrigerators in Canada, 1929-1938

—	Number	Selling value at works
		$
1929	4,687	1,608,304
1930	6,302	1,607,784
1931—Individual domestic type	9,879	1,708,327
All other types	4,314	1,088,590
Total for 1931	.....	**2,796,917**
1932—Individual domestic type	19,454	2,218,798
All other types	.....	914,455
Total for 1932	.....	**3,133,253**
1933—Individual domestic type	15,059	1,896,033
Individual commercial type for use in stores, etc	574	107,855
All other types (compressors only, ice cream cabinets, etc.)	1,016	197,833
Total for 1933	.....	**2,201,721**
1934—Individual domestic type	27,897	3,502,089
Individual commercial type	1,119	284,654
All other types (compressors only, ice cream cabinets, etc.)	1,241	146,279
Total for 1934	.....	**3,933,022**
1935—Individual domestic type, complete, all sizes	22,452	2,835,079
Commercial (ice cream cabinets, room coolers, etc.) complete and remote	2,271	359,752
Condensing units only	2,344	249,720
Total for 1935	.....	**3,444,551**
1936—Individual domestic type, complete, all sizes	40,688	5,054,553
Individual commercial type (ice cream cabinets, room coolers, etc.) complete and remote	3,975	687,028
Condensing units only	1,662	193,381
Total for 1936	.....	**5,934,962**
1937—Individual domestic type, complete, all sizes	52,068	5,793,926
Individual commercial type (ice cream cabinets, room coolers, etc.) complete and remote	4,042	665,987
Condensing units only	8,908	671,123
Total for 1937	.....	**7,131,036**
1938—Individual domestic type, complete all sizes	52,934	6,341,496
Individual commercial type (ice cream cabinets, room coolers, etc.) complete and remote	6,582	925,939
Condensing units only	4,389	638,168
Total for 1938	.....	**7,905,603**

Table 108.—Production of Domestic Water Tank Heaters, 1937 and 1938

—	1937		1938	
	Number	Selling value at works	Number	Selling value at works
		$		$
Cast iron for coal, wood or oil	4,169	38,876	5,029	50,981
Gas, automatic	5,108	234,063	3,920	218,124
Gas, not automatic	11,187	73,866	8,170	63,172
Electric, circulating type	3,761	52,663	3,666	67,160
Electric, immersion type	17,816	56,330	14,388	45,814
Electric, storage tank type	2,586	35,862	2,615	17,951
Total	**44,627**	**491,660**	**37,788**	**463,202**

Table 109.—Production in Canada and Imports of Radio Receiving Tubes, 1929-1938

Year	Production		Imports	
	Number	Selling value at works	Number	Selling value at works
		$		$
1929	2,924,270	3,100,148	.....	524,872
1930	3,116,096	3,181,276	.....	327,728
1931	3,297,007	2,298,098	.....	113,760
1932	2,747,456	1,610,850	55,762	60,157
1933	1,731,569	1,023,364	119,367	84,027
1934	2,367,674	1,389,815	266,283	155,271
1935	2,183,529	1,181,239	460,749	258,149
1936	2,952,415	1,545,823	565,873	289,659
1937	3,320,687	1,760,109	484,227	290,698
1938	1,969,598	1,108,408	440,294	213,433

Table 110.—Production of Oil Burners in Canada, 1936-1938

(From All industries)

Type		1936	1937	1938
Oil burners—Atmospheric gravity feed	No.	5,218	2,133	1,936
	$	79,303	58,971	49,808
Power, for domestic and commercial uses	No.	1,136	1,483	1,366
	$	208,889	174,514	168,691

Table 111.—Production of Incandescent Electric Lamps in Canada, 1931-1938

Year	Standard size		Miniature size	
	Number	Selling value at works	Number	Selling value at works
		$		$
1931	18,205,951	4,044,243	7,255,194	655,015
1932	17,102,308	3,597,173	6,244,103	526,835
1933	15,176,002	3,230,911	5,763,149	485,166
1934	20,622,906	4,035,361	7,282,187	496,574
1935	23,026,982	4,155,803	9,832,118	633,769
1936	24,364,181	4,117,871	11,246,797	662,628
1937	25,689,598	4,477,267	12,362,115	744,011
1938	20,634,204	3,409,585	11,087,021	597,196

Table 112.—Production of Electrical Switchgear and Protective Equipment (except telephone switchboards), 1937 and 1938

—	Selling value at works	
	1937	1938
	$	$
Switchboard panels and equipment	1,434,807	1,438,628
Lightning arresters, other than radio, 15,000 volts and below	164,983	149,907
Lightning arresters, above 15,000 volts	109,781	138,475
Oil circuit breakers	698,578	797,013
Air circuit breakers	306,352	277,561
Disconnecting switches—up to and including 15,000 volts	244,967	243,324
Disconnecting switches—over 15,000 volts		130,655
Generator voltage regulators and accessories	7,403	16,285
Parts and supplies	247,015	331,611
Total	**3,213,886**	**3,523,459**

Table 113.—Production of Wiring Devices (except automobile starting switches and time switches), 1937 and 1938

—	Selling value at works	
	1937	1938
	$	$
Sockets (lamp holders), brass shell	170,801	227,462
Sockets (lamp holders), porcelain and moulded	121,829	130,071
Switches, surface and flush types	232,547	211,512
Switches, enclosed safety type	445,778	398,019
Switches, canopy	44,339	32,982
Switches, all other	283,668	252,636
Receptacles (convenience outlets), single and duplex	189,755	141,631
Wall plates for switches and outlets		47,410
Cord sets, all types	418,009	235,124
Attachment plugs, caps and cord connectors		73,693
Plug devices, caps and heater plugs		82,375
Other wiring devices	1,563,619	882,272
Total	**3,470,345**	**2,715,187**

Table 114.—Imports into Canada of Electrical Apparatus, 1937 and 1938

—	1937		1938	
	Quantity	Value	Quantity	Value
		$		$
Batteries, primary, electric and galvanic, n.o.p., and complete parts (To Mar. 31, 1938)		213,865		39,133
Batteries, primary (B and C), for radio (From April 1, 1938)				1,721
Batteries, electric and galvanic, primary, n.o.p. and complete parts (From April 1, 1938)				118,719
Batteries, electric, storage, and complete parts, n.o.p., including separator walls of wood, cut to size or not		180,367		91,191
Heating apparatus, n.o.p.		71,211		46,351
Electric dynamos and generators, n.o.p., and complete parts		774,228		585,458
Fuses, fuse plugs and cutouts, electric, and complete parts, n.o.p.		115,490		68,746
Lamps, electric, arc		6,424		14,710
Lamps, electric, incandescent, carbon filament ... No.	805,563	21,103	73,412	4,401
Lamps, electric, incandescent, metal filament ... No.	9,690,269	251,095	10,182,669	242,257
Lights—Electric head, side and tail lights, n.o.p.; electric torches or flashlights and parts		454,078		421,739
Electric light fixtures and appliances, n.o.p., and complete parts		815,966		779,964
Lightning arresters, choke coils, reactors and other protective devices, and complete parts, n.o.p		50,956		55,273
Electrical instruments or apparatus of precision, of a class or kind not made in Canada (From Feb. 26, 1937)		59,533		98,443
Meters, electric, and complete parts		239,919		182,146
Motors, electric, n.o.p., and complete parts		2,308,069		1,880,553
Motors for electric fans, n.o.p. ... No.	19,826	60,196	17,712	53,026
Rheostats, controllers and other starting and controlling devices, and complete parts		769,228		580,298
Sad irons, electric, and complete parts		64,972		65,208
Self-contained lighting outfits and complete parts, n.o.p.		5,880		3,486
Sockets, outlets and receptacles and complete parts		39,199		24,690
Spark plugs, magnetos, n.o.p., and other ignition apparatus and complete parts		21,139		11,624
Magnetos and complete parts thereof, when imported by the manufacturers of internal combustion engines, for use exclusively in the manufacture of such engines in their own factories		10,316		6,875
Switchgear, flame proof, electric, for use underground in coal mines, and complete parts		10,863		48,331
Electric dry shaving machines of a class or kind not made in Canada, for use in removing human hair, and complete parts thereof		353,339		496,300
Steam turbo-generator sets, electric, 700 h.p. and greater, of a class or kind not made in Canada, and complete parts thereof ... No.	20	694,521	3	325,447
Switches, switchboards, circuit breakers and complete parts, n.o.p.		855,134		751,178
Telegraph apparatus, electric, and complete parts		213,443		121,800
Telephone apparatus, electric, and complete parts		971,730		799,832
Transformers and complete parts		256,540		409,265
Radio tubes ... No.	484,227	290,698	440,294	213,433
Radio and wireless apparatus, electric, n.o.p. (To Mar. 31, 1937)		592,717		
Radio receiving sets (From April 1, 1937) ... No.	5,151	136,783	8,290	184,109
Radio and wireless apparatus, electric, n.o.p. (From April 1, 1937)		2,128,635		2,114,846
Electric welding apparatus, not including motors (From Feb. 26, 1937)		134,075		116,474
Electric apparatus, n.o.p., and complete parts		2,333,832		2,096,499
Total		**15,506,144**		**13,053,526**

Table 115.—Exports from Canada of Electrical Apparatus, 1937 and 1938

Items	1937	1938
(a) EXPORTS	$	$
Batteries, storage	212,844	214,161
Batteries, n.o.p.	96,616	89,612
Telegraph, telephone and radio apparatus, n.o.p.	191,181	322,865
Radio and wireless apparatus (except batteries)	199,211	193,414
Dynamos, generators and motors	490,943	506,072
Electric stoves and parts ... No.	22,256	15,254
$	1,503,146	1,044,707
Electrical cooking and heating devices, domestic, n.o.p.	23,302	30,755
Spark plugs, magnetos and other ignition apparatus	747,240	625,926
Electric apparatus, n.o.p.	845,492	1,086,648
Total	**4,309,975**	**4,114,160**
(b) RE-EXPORTS		
Telegraph, telephone and radio apparatus (except batteries)	66,287	85,365
Dynamos, generators and motors	45,583	37,229
Spark plugs, magnetos, and other ignition apparatus	3,756	3,078
Electric apparatus, n.o.p.	102,408	184,805
Total	**218,034**	**310,477**

Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1938

NOTE.—This Directory is not intended to be a complete list of the manufacturers of electrical equipment. It is merely a list of the concerns which the Bureau has classified to the Electrical Apparatus and Supplies Industry, which includes all works engaged CHIEFLY in making electrical equipment using non-ferrous metals as their main materials. Some concerns make electrical equipment from iron, steel, clay, etc., but such producers have been classified to other industries, according to the constituent materials used. Other manufacturers make electrical supplies as minor products and have also been allotted to other groups. (See appendix to directory).

Names of firms	Location of plants
NOVA SCOTIA—	
Amherst Battery Manufacturing Plant	108 Victoria St., Amherst.
QUEBEC—	
Cables, Conduits & Fittings Limited	63 Richelieu St., St. Johns.
Canadian Laco Lamps Limited	745 Guy St., Montreal.
Canadian Marconi Company Ltd	2442 Trenton Ave., Montreal.
Conduits National Co. Ltd	3081-C Ontario St. E., Montreal.
Devoe Electric Switch Co.	863 St. Maurice St., Montreal.
Economy Fuse & Mfg. Co. of Canada, Limited	1030 St. Alexander St., Montreal.
Electric Fixtures & Portable Lamp Mfg.	690 Notre Dame St. W., Montreal.
Electrical Manufacturing Co. Ltd.	Montmagny.
Electrolier Mfg. Co. Limited	5849 Boyer St., Montreal.
Electrolux (Canada) Limited	1725 Basin St., Montreal.
Elpeco of Canada, Limited	6259 Notre Dame St. E., Montreal.
Flex-I-Con Manufacturing Co. Ltd	6155 Lafontaine St., Montreal.
Hale Brothers Limited	6230 Chambord St., Montreal
Haliburton & White Limited	686 Notre Dame St. W., Montreal.
Hart Battery Co. Limited	170 St. Georges St., St. Johns.
Hughes, Benjamin, Electric Co	205 Vitre St. W., Montreal.
Lighting Appliance Co. of Canada, Ltd	647 Vitre St. W., Montreal.
Medical Equipment Mfg. Inc	1396 St. Catherine St. W., Montreal.
National Electric Refrigerator Ltd	Montmagny.
New Era Battery Co.	2240 Bellechasse St. E., Montreal.
Northern Electric Co. Limited	1261 Shearer St., Montreal.
Nu-Way Battery & Ignition Service	1200 Demontigny St. E., Montreal.
Phillips Electrical Works Ltd.	5795 De Gaspé Ave., Montreal.
Pyle-National Co. of Canada, Limited	4857 Acorn Ave., St. Henri, Montreal.
RCA Victor Co. Ltd.	976 Lacasse St., Montreal.
Schick Shaver Limited	St. Johns.
Silex Company Ltd.	201 St. Louis St., St. Johns.
Solex Company Limited	4060 St. Lawrence Blvd., Montreal.
Tempco Electric Mfg. Co.	480 Lagauchelière St. W., Montreal.
White, I. N., & Sons Ltd.	476 St. Henri St., Montreal.
ONTARIO—	
Aerovox Canada Ltd.	35 Catharine St. S., Hamilton.
Amalgamated Electric Corporation, Limited	384 Pape Ave., Toronto.
Arrow-Hart & Hegeman (Canada) Limited	310 Spadina Ave., Toronto.
Backer, C. B., Co. Ltd.	25 Aberdeen St., Ottawa
Baden Fenne Co.	Baden.
Baird, Wm., & Son	568 Dundas St., Woodstock.
Baldwin-International Limited	620 King St. W., Toronto.
Boston Insulated Wire & Cable Co. Ltd.	118 Shaw St., Hamilton.

Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1938—(continued)

Names of firms	Location of plants
ONTARIO—*Concluded*	
Branston, Chas. A., Limited	58 Stewart St., Toronto.
Braun & Bonnick Limited	22 Orillia St., Toronto.
Brock Snyder Mfg. Co.	21 John St., Grimsby.
Burger Lighting Equipment Co.	11 Duncan St., Toronto.
Burgess Battery Company	399 Buttrey St., Niagara Falls.
Campbell, W. J., Co. Ltd.	137 Clarence St., Brantford.
Canada Batteries Limited	927 Dufferin St., Toronto.
Canada Wire & Cable Co. Ltd.	Leaside.
Canadian Astatic Ltd	1736 Kingston Road, Toronto.
Canadian Curtis Refrigeration Co. Ltd.	20 George St., Hamilton.
Canadian Electric Box Co.	1402 Queen St. E., Toronto.
Canadian Fitzgerald Limited	468 Wellington St. W., Toronto.
Canadian Flexible Conduit	1874 Davenport Road, Toronto.
Canadian General Electric Co. Ltd.	224 Wallace Ave., Toronto.
Canadian General Electric Co. Ltd.	107 Park St., Peterborough.
Canadian General Electric Co. Ltd.	1025 Lansdowne Ave., Toronto.
Canadian General Electric Co. Ltd. (Vacuum Tube Division)	189 Dufferin St., Toronto.
Canadian General Electric Co. Ltd. (Edison Lamp Works)	221 Dufferin St., Toronto.
Canadian Jefferson Electric Co. Ltd.	535 College St., Toronto.
Canadian Line Materials Limited	St. Clair Ave. E., Scarboro Junction, Toronto.
Canadian National Carbon Co. Ltd.	805 Davenport Road, Toronto.
Canadian Transformer Co.	293 Queen St. S., Kitchener.
Canadian Triangle Conduit Co. Ltd.	2382 Dundas St. W., Toronto.
Canadian Westinghouse Co. Ltd.	Sanford Ave. and Myler St., Hamilton.
Cansfield Electrical Works Ltd.	260 Geary Ave., Toronto.
Commercial Fixture Co. Ltd.	75 Sherbourne St., Toronto.
Commonwealth Electric Corp. Ltd.	130 Dennistoun St. S., Welland.
Conduits National Co. Ltd.	33 Labatt Ave., Toronto.
Continental Carbon of Canada, Ltd.	54 Sumach St., Toronto.
Continental Electric Co. Ltd.	310 Spadina Ave., Toronto.
Conroy Manufacturing Co. Ltd.	55 Catherine St., St. Catharines.
Crouse-Hinds Co. of Canada, Ltd.	7 Labatt Ave., Toronto.
Crown Electrical Manufacturing Co. Ltd.	31 Sydenham St., Brantford.
Curtis Lighting of Canada, Ltd.	260 Richmond St. W., Toronto.
Dominion Carbon Brush Co. Ltd.	250 Richmond St. W., Toronto.
Dominion Cutout Co. Ltd.	250 Richmond St. W., Toronto.
Dominion Electric Mfg. Co. Ltd.	60 Sumach St., Toronto.
Dominion Electrobome Industries Ltd.	480 Victoria St., Kitchener.
Dominion Refrigeration Co. Ltd.	457 King St. W., Toronto.
Durable Electric Appliance Co.	81 Jarvis St., Toronto.
Eastern Power Devices, Ltd.	1244 Dufferin St., Toronto.
Electrical Apparatus Ltd.	77 York St., Toronto.
Electric Auto-Lite Limited	Christina St. N., Sarnia.
Electric Magnetic Blanket Co.	310 Spadina Ave., Toronto.
Electric Products Co. of Canada	349 Carlaw St., Toronto.
Elgin Electric Co.	170 Portland St., Toronto.
English Electric Co. of Canada, Ltd.	George St., St. Catharines.
Exide Batteries of Canada, Ltd.	153 Dufferin St., Toronto.
Falls Electric Resistors Limited	Courtwright St., Fort Erie North.
Federal Wire & Cable Co. Ltd.	265 Suffolk St., Guelph.
Ferranti Electric Ltd.	Industrial St., Mount Dennis, Toronto.
Fergusson, J. R.	Dundas.
Flexible Shaft Co. Ltd.	321 Weston Rd. S., Toronto.
Forge Electric Products	Church and Guelph Sts., Acton.
Frigidaire Corporation	Commercial St., Leaside.
Garfinkel, Louis, & Co., Rosejoli Co. of Canada	48 Elm St., Toronto.
General Dry Batteries of Canada, Ltd.	228 St. Helens Ave., Toronto.
Groh's Cooler Ltd.	Laurel and Duke Sts., Preston.
Hammond Mfg. Co.	38 Wellington St. W., Guelph.
Hart Manufacturing (Canada) Ltd.	512 King St. E., Toronto.
Hoover Company Limited	Gage Ave. and Barton St., Hamilton.
Hygrade Company Limited	151 Beverley St., Toronto.
Igloo Refrigeration Co. Ltd.	103 Bathurst St., Toronto.
International Resistance Co. Ltd.	187 Duchess St., Toronto.
Ireland Mfg. Co.	93 Cannon St. W., Hamilton.
Jones & Moore Electric Co., Ltd.	296 Adelaide St. W., Toronto.
Justus Electric Co.	Winchester.
Kearney, J. R., Corp. of Canada, Ltd.	660 King St. W., Toronto.
Kelvinator of Canada, Ltd.	1152 Dundas St. E., London.
La Salle Lead Products Co.	680 Wyandotte St. E., Windsor.
Leff Electric Co.	261 Dundas St., London.
Leland Electric Canada Ltd.	9 Duke St., Toronto.
Lincoln Electric Co. of Canada, Ltd.	65 Bellwoods Ave, Toronto.
Line & Cable Accessories Limited	347 Sorauren Ave., Toronto.
Markel Electric Products Ltd.	23 Lewis St., Fort Erie North.
Marr Machine & Mfg. Co.	62 Wallace Ave., Toronto.
Martin Electric Ltd.	624 King St. W., Toronto.
Meredith, C. C., & Co. Ltd.	Queen St. N., Streetsville.
Metal Industries Limited	112 York St., Hamilton.
Minneapolis-Honeywell Regulator Co. Ltd.	117 Peter St., Toronto.
Mohawk Radio Ltd.	263 Seventh St., New Toronto.
Moloney Electric Co. of Canada, Ltd.	213 Sterling Road, Toronto.
Monarch Battery Mfg. Co. Ltd.	Montreal and Joseph Sts., Kingston.

Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1938—(concluded)

Names of firms	Location of plants
ONTARIO—*Continued*	
National Batteries Ltd.	12 Church St., Toronto.
National Electric Mfg. Co.	510 King St. W., Toronto.
Noma Electric Co. of Canada, Ltd	179 John St., Toronto.
Opal Mfg. Co.	48 Abell St., Toronto.
Osborne Electric Co. Ltd.	1536 Dundas St. W., Toronto.
Packard Electric Company, Ltd.	13 Race St., St. Catharines.
P. & E. Division of Powerlite Devices Ltd.	171 John St., Toronto.
Phileo Products Ltd.	1244 Dufferin St., Toronto.
Phillips Electrical Works Ltd.	Brockville.
Pierce Fuse Corp. Ltd.	24 Klauck St., Fort Erie North.
Plate Lock Battery Mfg. Co. Ltd.	15 Bond St. W., Oshawa.
Pole-Line Equipment Ltd	2299 Dundas St. W., Toronto.
Premier Vacuum Cleaner Co. Ltd.	18 Breadalbane St., Toronto.
Prest-O-Lite Storage Battery Co. Ltd	1352 Dufferin St., Toronto.
Radiant Aluminum Co.	575 Adelaide St. W., Toronto.
Radio Condenser Co. Ltd	1010 Dufferin St., Toronto.
Radio Valve Company of Canada, Ltd.	189 Dufferin St., Toronto.
Railway & Power Engineering Corp. Ltd.	171 Eastern Ave., Toronto.
Redi-Heat Electrical Appliance Co.	Mill St., Deseronto.
Reed-Cameron	579 Richmond St. W., Toronto.
Renco Therapeutic Co.	55 York St., Toronto.
Renfrew Electric & Refrigerator Co. Ltd.	Elizabeth St., Renfrew.
Robbins & Myers Co. of Canada, Ltd.	40 Morrell St., Brantford.
Rogers-Majestic Corporation, Ltd.	622 Fleet St. W., Toronto.
Rogers Radio Tubes, Ltd	100 Sterling Road, Toronto.
Samson-United of Canada, Ltd.	69 Sherbourne St., Toronto.
Sangamo Co. Ltd	183 George St., Toronto.
Service Lamp Co. Ltd.	197 King St., London.
Service Station Equipment Co. Ltd.	101 Hanson St., Toronto.
Shonbeck Clock Co	29 Mary St., Hamilton.
Smith & Stone Limited	Georgetown.
Sparton of Canada, Ltd.	Elm and Pine Sts., London.
Square D Co. of Canada, Ltd.	672 Dupont St., Toronto.
Standard Bronze Co. Ltd.	4 Trafalgar Ave., Toronto.
Star Electric Fixtures Ltd.	107 Church St., Toronto.
Sterne Equipment Co.	Brampton.
Stewart-Warner Alemite Corp. of Canada Ltd.	Macdonald Ave., Belleville.
Stromberg-Carlson Telephone Mfg. Co. of Canada, Ltd.	211 Geary Ave., Toronto.
Superior Electrics Ltd.	Pembroke.
Taylor Electric Mfg. Co. Ltd.	526 Adelaide St., London.
Universal Cooler Co. of Canada, Ltd.	Brant St., Brantford.
Virden, J. C., Ltd.	35 Front St. E., Toronto.
Volta Manufacturing Co. Ltd.	Alexander St., Welland.
Vulcan Electric Products	3160 Dundas St. W., Toronto.
Walker Metal Products Ltd.	1500 Kildare Rd., Walkerville.
Wheeler Reflector Co. of Canada, Ltd	44 York St., Toronto.
White Radio Ltd.	41 West Ave. N., Hamilton.
Willard Storage Battery Co. of Canada, Ltd.	269 Campbell Ave., Toronto.
Wilson Battery Products	21 Church St., Oshawa.
Wynston, A. L., Jr., Ltd.	590 King St. W., Toronto.
MANITOBA—	
Canadian Electric & Brass Ltd.	120 Lombard St., Winnipeg.
Electric Heating & Mfg. Co. Ltd.	902 Home St., Winnipeg.
Ex-Cel Battery Mfg. Co.	189 Market St. E., Winnipeg.
Frip Ignition Co.	324 Good St., Winnipeg.
Globelite Batteries Ltd.	147 Pacific Ave., Winnipeg.
Ideal Electric Mfg.	372 Selkirk Ave., Winnipeg.
Langley Electric Mfg. Co. Ltd.	677 Notre Dame Ave., Winnipeg.
Leeders' Limited	1375 Portage Ave., Winnipeg.
L. & S. Electric Mfg. Ltd.	157 Portage Ave., Winnipeg.
Wahl Mfg. Co. of Canada	62 Albert St., Winnipeg.
ALBERTA—	
Alberta Battery Co. Ltd	420 Ninth Ave. E., Calgary.
Blais Brothers Battery Co. Ltd.	10519-105th Ave., Edmonton.
Calgary Battery Co.	117A-11th Ave. W., Calgary.
Langley Electric Co. Ltd.	1301-11th Ave. E., Calgary.
Smith Batteries Ltd	1012-9th Ave. W., Calgary.
BRITISH COLUMBIA—	
Canadian Petersine Electric Incubator Ltd.	2701 Douglas Rd., New Westminster.
Cemco Electrical Mfg. Co. Ltd.	165 W. Fourth Ave., Vancouver.
Continental Batteries Ltd.	1130 Richards St., Vancouver.
Cope & Son Ltd.	550 Cambie St., Vancouver.
Coyle Batteries Ltd.	1481 Venables St., Vancouver.
Cruickshank Brothers Ltd.	540 East Hastings St., Vancouver.
Electric Panel Mfg. Ltd	1250 Richards St., Vancouver.
Field, N. M., Mfg. Co.	582 Richards St., Vancouver.
Francis Battery & Tire Service Ltd.	1412 Quadra St., Victoria.
Giant Battery Co	1249 Granville St., Vancouver.
Jones Brothers Batteries	866 Yates St., Victoria.
Langley Manufacturing Co. Ltd.	Granville Island, Vancouver.
Treleaven, J. M.	346 River Road, Eburne.

Appendix to Directory

List of Firms making certain Electrical Apparatus or Supplies in 1938 but which have been Classified to Other Industries (See Table 94)

Names of Firms	Location of Plants
Acme Fan and Blower Co. Ltd	868 Arlington St., Winnipeg, Man.
Alcar Company	220 King St. W., Toronto, Ont.
Alpha Manufacturing Co. Ltd	797 Notre Dame Ave., Winnipeg, Man.
Aluminum Co. of Canada, Ltd	Arvida, Ave.
Atlas Boiler and Ship Repairs	Box 494, Prince Rupert, B.C.
Automatic Electric Sales & Service	104 Jarvis St., Toronto, Ont.
Babcock-Wilcox & Goldie-McCulloch Ltd	Grand Ave. S., Galt, Ont.
Beach Foundry Co. Ltd	Hinton Ave., Ottawa, Ont.
Bearings & Auto Parts Regd	667 Lagauchetière St., Montreal, Que.
Beatty Bros. Ltd	Fergus, Ont.
Belanger, A., Ltée	Montmagny, Que.
Bendix Eclipse Co. of Canada, Ltd	1473 Argyle Road, Walkerville, Ont.
Brantford Washing Machine Co. of Canada, Ltd	Brantford, Ont.
Bruleur Desro Star Engr	300 rue St. Georges, Three Rivers, Que.
Burnside, Harry	442 King St. W., Toronto, Ont.
Canada Motor Products Ltd	66 Wellington St. W., Toronto, Ont.
Canada Vulcanizer & Equipment Co. Ltd	1109 York St., London, Ont.
Canadian Ironing Machine Co. Ltd	1151 Queen St., W., Toronto, Ont.
Canadian Ohio Brass Co. Ltd	Niagara Falls, Ont.
Canadian Porcelain Co. Ltd	Paradise Road, Hamilton, Ont.
Canadian Radiator Mfg. Co	439 Wellington St., W., Toronto, Ont.
Canadian Sumner Iron Works Ltd	1214 E. Pender St., Vancouver, B.C.
Chadwick Carroll Brass & Fixtures Ltd	305 Wilson Ave., Hamilton, Ont.
Champion Spark Plug Co. of Canada, Ltd	1624 Howard Ave., Windsor, Ont.
Clare Bros. & Co	Preston, Ont.
Coffield Washer Co., Ltd	77 Niagara St., Hamilton, Ont.
Connor, J. H., & Son Ltd	10 Lloyd St., Ottawa, Ont.
Dominion Chain Co. Ltd	800 Bender Ave., Niagara Falls, Ont.
Dowswell Lees & Co. Ltd	193 Elgin St., Hamilton, Ont.
Draft King Blowers	1960 Yonge St., Toronto, Ont.
Easy Washing Machine Co. Ltd	Miranda & Schell Ave., Toronto, Ont.
Electro Metallurgical Co. of Canada, Ltd	Welland, Ont.
Ellinghausen, S. F	Walkerton, Ont.
Enamel & Heating Products Ltd	Sackville, N.B.
Engineering Products of Canada, Ltd	6259 Notre Dame St. S., Montreal, Que.
Essex Wire Corp. Ltd	1635 McDougall Ave., Windsor, Ont.
Fairbanks, E. T., & Co. Ltd	Sherbrooke, Que.
Fairgrieve & Son., Ltd	50 Dovercourt Road, Toronto, Ont.
Finlays Limited	Carleton Place, Ont.
General Steel Wares Ltd	London, Ont.
Gilbert & Barker Mfg. Co. Ltd	207 Geary Ave., Toronto, Ont.
Gilson Mfg. Co. Ltd	York Road, Guelph, Ont.
Greey, Wm. & J. G., Ltd	58 Esplanade St., Toronto, Ont.
Guelph Stove Co. Ltd	Guelph, Ont.
Gurney Foundry Co. Ltd	96 Principal St., St. Laurent de Montreal, Que.
Hamilton Potteries Ltd	100 Locke St., Hamilton, Ont.
Hastings Foundry	10 Pine St., Stratford, Ont.
Knight Rilbound Controllers Ltd	16 Sanford Ave., Hamilton, Ont.
Kondu Mfg. Co. Ltd	South St., Preston, Ont.
Krilos, W. A., Co. Ltd	Guelph Ave., Hespeler, Ont.
La Fonderie de Joliette	Joliette, Ave.
La Fonderie de L'Islet Ltée	L'Islet Station, Que.
MacDonald Metal Products Co. Ltd	Waterloo, Que.
Maxwells Ltd	73 Parks Ave., St. Marys' Ont.
McOuat & Son	9 Princess St., Lachute Mills, Que.
Mitchell, Robert Co., Ltd	750 Belair Ave., Montreal, Que.
Moffats Ltd	Weston, Ont.
Monarch Oil Burners Co	701 St. Clair Ave. W., Toronto, Ont.
Morris, Hubert, Crane & Hoist Co. Ltd	Stanley St., Niagara Falls, Ont.
McKinnon Industries Ltd	Ontario St., St. Catharines, Ont.
New Idea Furnace Ltd	100 Charles St. E., Ingersoll, Ont.
Northern Crane & Hoist Works Ltd	Argle Road & Essex Terminal, Walkerville, Ont.
Norwood Foundry Co. Ltd	Edmonton, Alta.
Orme's Ltd	175 Sparks St., Ottawa, Ont.
Phillips Toronto Ltd	260 Carlow Ave., Toronto, Ont.
Premier Automatic Coal Burners	1020 Bloor St. W., Toronto, Ont.
Renfrew Machinery Co., Ltd	Renfrew, Ont.
Shaver Heating Specialties Ltd	331 Laurier Ave. W., Ottawa, Ont.
Shelton, W. G., Co. of Canada, Ltd	428 Cannon St. E., Hamilton, Ont.
Singer Mfg. Co	165 St. Paul St., St. Johns, Que.
Standard Brass Foundry	501 Catharine St. N., Hamilton, Ont.
Thor Canadian Co., Ltd	Fleet & Bathurst Sts., Toronto, Ont.
Timken Silent Automatic of Canada, Ltd	Walker Road, Walkerville, Ont.
Trico Products Corp	40 Courtwright St., Fort Erie, N., Ont.
Tudhope Metal Specialties Ltd	Orillia, Ont.
Underwood, G. W., & Co	1791 William St., Montreal, Que.
Woods, W. C., Co. Ltd	2480 Dundas St. W., Toronto, Ont.

CHAPTER SEVEN

THE NON-FERROUS SMELTING AND REFINING INDUSTRY

The Non-Ferrous Smelting and Refining Industry comprises those firms engaged primarily in the smelting of non-ferrous ores or concentrates and the refining of metals recovered therefrom.

The value added by the industry in the processing of crude or semi-crude material during 1938 totalled $87,091,374 compared with the all-time high record of $101,807,865 in the preceding year. Refined products included gold, silver, copper, lead, zinc, aluminium, cobalt, cadmium, selenium, tellurium, radium salts, uranium compounds and sulphur; other end products of individual plants or companies were copper-nickel matte, cobalt salts, nickel salts, nickel and cobalt oxides, arsenious oxide, sulphuric acid, platinum metals residues, silver sulphide, silver-lead-bismuth bullion, zinc dust, zinc oxide, blister and anode copper and copper matte.

The cost of ores, concentrates and other material treated during 1938 was estimated at $173,070,377 as against a corresponding value of $191,303,251 in 1937; fuels and purchased electricity consumed totalled $15,233,547 and the value of chemicals and various other process supplies used amounted to $11,900,435.

Capital employed by the industry in 1938 was reported at $184,337,126, which figure includes the value of land, plant, materials on hand and in process, finished products and operating funds. Employees totalled 12,788 and salaries and wages paid aggregated $19,549,963 compared with 11,570 and $17,990,947, respectively, in 1937.

Primary commodity price indexes showed considerable recessions compared with manufactured goods indexes during 1938. The average annual Canadian prices for the major non-ferrous metals copper, lead and zinc were all considerably lower than in the preceding year. However, the improved industrial situation combined with heavy rearmament orders had an especially stimulating effect on base metals during the latter months of the year. The average price of silver in 1938 showed relatively little change from 1937 while the average price of gold in Canadian funds realized an increase of 18·5 cents per fine ounce.

In 1938 the capacity of Canadian Copper Refiners Ltd., at Montreal East, Quebec, was increased by 6,000 tons of copper to a total of 81,000 tons per annum and plans were in course of preparation to provide for a total refining capacity of approximately 100,000 tons of copper a year.

During 1938 the Noranda Smelter, located at Noranda, Quebec, treated 1,291,692 tons of ore, concentrate and refinery slag and produced 99,139,734 pounds of anodes; the estimated production of new metals was 96,966,169 pounds of fine copper, 337,024 ounces of gold and 975,623 ounces of silver; these figures include the production from 221,498 tons of customs ore and concentrate; the estimated recovery from Horne mine ores being 76,358,442 pounds of fine copper, 299,033 ounces of gold and 607,447 ounces of silver.

The International Nickel Company's Smelter at Copper Cliff, Ontario, produced 182,904 tons of bessemer matte and 158,912 tons of converter copper in 1938. The Coniston Smelter of the same company was operated continuously, processing 823,906 tons of ore and producing 48,608 tons of bessemer matte; the Port Colborne nickel refinery of the company produced 124,233,682 pounds of refined nickel. The Copper Cliff refinery of the Ontario Refining Co. Ltd. received 158,793 tons of converter copper, transferred in a molten state from the Copper Cliff Smelter and produced 145,141 tons of refined copper. At Deloro, Ontario, the Deloro Smelting and Refining Co. Ltd. treated silver-cobalt ores from Northern Ontario, while at Port Hope, Ontario, the Eldorada Gold Mines Limited recovered radium, uranium and silver from argentiferous pitchblende ores mined in the Northwest Territories.

The ore dressing plant, mill and smelter of Falconbridge Nickel Mines Limited operated at full capacity throughout the year. Ore treated totalled 490,938 tons and 14,779·1 short tons of matte was produced, containing 8,012·7 short tons of nickel and 4,108·5 short tons of copper.

In Manitoba the Flin Flon Smelter of the Hudson Bay Mining and Smelting Company Limited smelted a total of 335,834 tons of Flin Flon mine concentrates and ore and 58,003 tons of custom concentrates and ore; there were shipped 42,527 tons of blister copper containing gold, 132,340 ounces; silver, 2,061,163 ounces; copper, 84,095,070 pounds; selenium, 101,686 pounds and tellurium, 11,658 pounds. There was treated in the Flin Flon Zinc Plant a total of 109,166 tons of zinc concentrates from which were produced for sale 76,827,172 pounds of slab zinc; metallic cadmium production for the year amounted to 188,796 pounds.

Once again in 1938 new all-time records were made in ore extracted from the Sullivan Mine of the Consolidated Mining and Smelting Company of Canada Limited. Production of the Company at Trail, British Columbia, in 1938 was as follows: lead, 201,574 tons; zinc, 149,071 tons; copper, 850 tons; gold, 56,951 ounces; silver, 9,815,434 ounces; cadmium, 255 tons; sulphuric acid, 134,469 tons; and sulphur and fertilizer, 170,108 tons.

Table 116.—Principal Statistics, 1925-1938

Years	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Estimated cost of ores, etc., treated at works	Gross selling value of products at works	Net value of production
		$		$	$	$	$	$
1925	6	61,691,928	5,104	8,568,997	5,280,674	27,329,409	56,633,793	24,023,710
1926	9	81,779,240	6,226	9,584,938	6,076,627	39,237,657	72,853,566	27,539,282
1927	10	85,366,662	7,671	12,120,240	6,380,127	32,516,687	77,995,265	39,099,451
1928	10	120,035,742	7,526	12,228,738	5,180,770	33,260,255	94,341,702	55,900,677
1929	10	146,699,085	8,119	13,772,393	6,208,733	41,416,446	109,854,468	62,229,289
1930	13	175,010,686	8,626	13,796,124	6,465,897	45,310,472	100,946,136	49,169,767
1931	14	175,669,195	7,860	13,245,327	6,053,398	48,336,301	98,565,755	44,176,056
1932	13	149,708,860	5,343	8,778,970	4,435,394	37,719,947	76,442,076	34,286,735
1933	14	146,085,284	6,360	8,403,181	2,792,322*	43,242,563	100,561,297	54,526,412
1934	14	146,047,422	8,298	11,059,206	3,564,712*	78,325,552	149,936,239	68,015,975
1935	14	145,686,299	8,944	12,687,356	3,776,381*	123,027,694	186,245,658	59,441,583
1936	14	143,858,717	10,015	14,346,050	3,855,490*	154,604,285	229,737,420	71,276,645
1937	13	162,696,595	10,567	17,990,947	14,607,421	201,862,965	318,278,251	101,807,865
1938	13	184,337,126	11,724	19,549,963	15,233,547	184,970,812	287,295,733	87,091,374

*Does not include coal, oil, etc., for metallurgical purposes. See table 123.

Table 117.—Number of Wage-Earners, by Months, 1937 and 1938

Months	1937	1938
January	9,814	11,677
February	9,842	11,707
March	9,966	11,830
April	10,153	12,089
May	10,458	12,052
June	10,814	11,934
July	11,047	11,814
August	11,172	11,744
September	11,031	11,594
October	10,895	11,625
November	10,868	11,377
December	10,749	11,250
Average	**10,567**	**11,725**

Table 118.—Regular Hours Worked per Week, by Wage-Earners, 1938
(Overtime not included)

Regular hours worked per week	Per cent of wage-earners	Regular hours worked per week	Per cent of wage-earners
	1938		1938
30 hours or less	1	51-54 hours	214
31-43 hours	3,425	55 hours	2
44 hours	567	56-64 hours	441
45-47 hours	702	65 hours and over	3
48 hours	6,985		
49-50 hours	2		

Table 119.—Fuel and Electricity Used in 1937 and 1938

Kinds	Unit of measure	For light and power		For metallurgical purposes	
		Quantity	Cost	Quantity	Cost
			$		$
1937					
Bituminous coal—Canadian	short ton	7,947	39,846	551,908	3,375,925
Imported	short ton	26,210	160,840	75,508	445,617
Anthracite coal—United States	short ton	19	286	...	...
Other	short ton	33	521	...	...
Coke	short ton	345	3,500	331,776	3,320,298
Gasoline	Imp. gal.	95,682	18,306	14,009	3,645
Fuel oil and diesel oil	Imp. gal.	171,222	17,334	20,308,735	1,092,436
Kerosene or coal oil	Imp. gal.	2,490	503	4,278	904
Wood (cords of 128 cubic feet)	cord	...	...	16,930	78,648
Gas—Manufactured	M cu. ft.	...	...	29,949	4,489
Natural	M cu. ft.	...	...	119	96
Other fuel	$	...	...	...	5,076
Electricity purchased	K.W.H.	1,105,813,182	3,534,091	1,259,810,494	2,505,060
Total	$	...	**3,775,227**	...	**10,832,194**
Electricity generated for own use	K.W.H.	28,806,400	...	210,455,752	...
1938					
Bituminous coal—Canadian	short ton	12,381	57,618	492,575	3,070,329
Imported	short ton	30,005	187,559	154,579	901,511
Anthracite coal—United States	short ton	...	...	...	...
Other	short ton	51	821	...	...
Coke	short ton	318	3,281	290,999	2,740,630
Gasoline	Imp. gal.	90,721	16,583	13,534	3,301
Fuel oil and diesel oil	Imp. gal.	177,521	17,828	20,399,780	1,066,141
Kerosene or coal oil	Imp. gal.	6,018	1,195	1,430	329
Wood (cords of 128 cubic feet)	cord	...	...	13,731	70,143
Gas—Manufactured	M cu. ft.	...	...	3,986	5,085
Natural	M cu. ft.	...	...	300	297
Other fuel	$	...	...	...	2,327
Electricity purchased	K.W.H.	1,056,888,725	3,686,404	1,827,992,887	3,402,165
Total	$	...	**3,971,289**	...	**11,262,258**
Electricity generated for own use	K.W.H.	30,545,374	...	234,906,198	...

Table 120.—Power Equipment, 1937 and 1938, Showing 'Ordinarily in Use' Separately from 'In Reserve or Idle'

—	Ordinarily in use		In reserve or idle	
	Number of units	Total rated horse-power	Number of units	Total rated horse-power
1937				
Steam engines and steam turbines	24	9,151	3	1,134
Diesel engines	...	...	...	...
Gasoline, gas and oil engines (except diesel)	10	455	...	...
Hydraulic turbines or water wheels	11	51,125	...	...
Total primary equipment	45	60,731	3	1,134
Electric motors run by purchased power	5,512	264,824	613	23,216
Total	**5,557**	**325,555**	**616**	**24,350**
Electric motors run by above primary units	585	7,950	51	621
Stationary boilers	32	18,943	4	1,907
1938				
Steam engines and steam turbines	25	9,421	3	1,134
Diesel engines	...	...	...	...
Gasoline, gas and oil engines (except diesel)	10	437	...	...
Hydraulic turbines or water wheels	11	51,125	...	...
Total primary equipment	46	60,983	3	1,134
Electric motors operated by purchased power	6,319	315,574	713	34,930
Total	**6,365**	**376,557**	**716**	**36,064**
Electric motors operated by company's power	430	5,750	36	408
Stationary boilers	31	19,108	6	2,067

Table 121.—Metal Prices, 1934-1938

Metals	Market	Unit of measure	1934	1935	1936	1937	1938
			$	$	$	$	$
Arsenic (AS_2O_3)	New York	Pound	0·04	0·035	0·035	0·03	0·03
Copper	New York	Pound	0·08428	0·08649	0·09474	0·13167	0·1000
Copper	London	Pound	0·074193*	0·07795*	0·09477*	0·13078*	0·09972
Lead	London	Pound	0·024364*	0·03133*	0·03913*	0·05110*	0·03344*
Silver	New York	Ounce	0·474609*	0·64790*	0·45126*	0·44881*	0·43477*
Zinc	London	Pound	0·030436*	0·03099*	0·03315*	0·04902*	0·03073*
Gold	World	Fine Ounce	34·50*	35·19*	35·03*	34·99*	35·175*

* Canadian funds.

Table 122.—Capacities of Canadian Copper Smelting and Refining Works, 1938 (a)

(From the American Bureau of Metal Statistics)

Companies	Blast furnaces		Reverberatories		Converters	
	Number	Annual capacity (tons of ore and concentrates)	Number	Annual capacity (tons of ore and concentrates)	Number	Annual capacity (tons of ore and concentrates)
(a) Smelters						
Consolidated Mining & Smelting Co. of Canada Ltd (*)	.....	.....	1	75,000	2	16,000
Falconbridge Nickel Mines Ltd	1	275,000	.....	.....	3	25,000
Hudson Bay Mining and Smelting Co. Ltd.	.....	.....	1	420,000	2	.....
Noranda Mines Ltd	.....	.....	2	1,060,000	4	230,000
International Nickel Co. of Canada, Ltd	4	800,000	7	2,800,000	24	.....
(b) Electrolytic refineries	Annual capacity—short tons refined metal					
Canadian Copper Refiners Ltd	81,000					
Ontario Refining Company, Ltd	120,000					

(*) Idle.

Table 123.—Production (†) of New Copper in Canada, from All Sources, 1927-1938

Years	Pounds	$	Years	Pounds	$
1927	140,147,440	17,195,487	1933	299,982,448	21,634,853
1928	202,696,046	28,598,249	1934	364,761,062	26,671,438
1929	248,120,760	43,415,251	1935	418,997,700	32,311,960
1930	303,478,356	37,948,359	1936	421,027,732	39,514,101
1931	292,304,390	24,114,065	1937	530,028,615	68,917,219
1932	247,679,070	15,294,058	1938	571,249,064	56,554,034

(†) Including copper in ores and matte exported and in blister and anode copper made in Canada.

Table 124.—Copper Production in Canada, by Provinces and by Sources, 1937 and 1938

—	1937		1938	
	Pounds	Value	Pounds	Value
		$		$
(a) By Provinces—				
Nova Scotia	180,609	23,620	.....	.....
Quebec	94,653,132	12,378,737	112,645,797	11,233,039
Ontario	322,039,208	41,736,364	309,030,106	30,405,500
Manitoba	44,920,835	5,874,747	65,582,772	6,539,914
Saskatchewan	22,436,843	2,934,290	18,156,157	1,810,532
British Columbia	45,797,988	5,989,461	65,759,265	6,557,514
Northwest Territories	.....	.....	75,567	7,535
Total	**530,028,615**	**68,917,219**	**571,249,664**	**56,554,034**
(b) By Sources—				
In blister and anode copper produced	463,025,584	60,554,486	475,611,107	47,427,940
In ores, concentrates and copper matte exported (a)	54,010,039	7,063,434	81,810,070	8,158,100
In nickel-copper matte exported	12,992,992	1,299,299	13,828,487	967,994
Total	**530,028,615**	**68,917,219**	**571,249,664**	**56,554,034**

Table 125.—Production of Primary Refined Copper in Canada, 1931-1938

Years	Short tons
1931	92,183
1932	90,077
1933	112,245
1934	149,261
1935	173,290
1936	191,818
1937	215,080
1938	227,240

Table 126.—Copper Production of the World on Smeltery Basis (a)

(From the Year Book of the American Bureau of Metal Statistics)

Countries	1929	1932	1937	1938
	(Tons of 2,000 pounds)			
United States	1,179,269	309,160	996,996	683,722
Whereof from scrap	47,628	18,183	89,292	55,620
Whereof from foreign ore	105,293	35,468	72,872	74,672
Mexico	63,795	37,440	49,115	40,870
Canada	79,186	106,050	227,332	238,052
Chile	333,296	107,242	437,000	372,046
Peru	59,527	22,910	37,547	39,230
Austria	4,293	1,703	2,283	2,315*
Finland	.....	.....	11,464	13,034
Germany	59,083	56,107	72,201	73,854
Great Britain	14,440	8,267	4,409	4,409
Norway	2,633	5,937	9,402	11,572
Russia	28,443	33,816	101,963	108,025
Spain	22,215	9,998	10,200	10,100
Sweden	5,271	7,016	9,966	11,759
Yugoslavia	22,790	33,244	43,442	46,288
Other Europe	10,498	5,658	8,500	11,000
Japan	83,189	79,230	96,561	111,332
India	1,976	4,976	7,650	6,000
Other Asia	2,000	1,000	4,500	7,000*
Australasia	13,907	16,472	18,308	19,105
Africa	159,250	145,931	411,511	380,042
Whereof, Belgian Congo	.....	59,522	165,993	136,685
Whereof, Rhodesia	.....	75,403	234,405	237,362
Totals	2,145,061	992,247	2,560,350	2,195,755
Deduct, U.S. scrap	47,628	18,183	89,292	55,620
Total new copper	**2,097,433**	**974,064**	**2,471,058**	**2,140,135**

(a) The above table gives only the copper that is smelted, including direct production by electrolysis, and does not break down to origin back of the place of beneficiation; every effort has been made to eliminate secondary copper so far as possible.

*Conjectural.

Table 127.—Lead Production in Canada, by Provinces, 1937 and 1938

Provinces	1937		1938	
	Pounds	Value	Pounds	Value
		$		$
Nova Scotia	418,086	21,364	.....	.....
Quebec	1,521,182	77,732	.....	.....
Ontario	29,849	1,525	22,363	748
Manitoba	.....	.....	.....	.....
British Columbia	403,589,913	20,623,445	413,706,307	13,834,339
Yukon	6,440,454	329,107	5,198,990	173,854
Total	**411,999,484**	**21,053,173**	**418,927,660**	**14,008,941**

Table 128.—Lead Smelting Capacity of Canada, 1938

Company	Situation of plant	Number of blast furnaces	Annual capacity (tons of charge)
Consolidated Mining and Smelting Co. of Canada, Ltd	Trail, B.C.	5	700,000

Table 129.—Production of Refined Lead * in Canada, 1931-1938

Years	Short tons
1931	139,224
1932	126,568
1933	127,283
1934	157,229
1935	163,758
1936	181,725
1937	199,697
1938	200,382

*Primary lead only.

Table 130.—World Production of Lead (a)

(From the Year Book of The American Bureau of Metal Statistics)

(short tons)

Origin	1922	1929	1935	1936	1937	1938
North America	649,022	1,121,394	744,843	828,551	932,466	853,804
South America	6,547	34,038	9,658	24,300	44,200	50,500
Total Europe	314,647	458,279	449,503	447,198	522,365	571,349
Total Asia	53,441	100,743	92,579	96,469	107,040	117,828
Australia	118,064	195,403	243,046	221,121	258,415	259,771
Africa	37,419	22,663	27,987	23,696	30,405	26,208
Grand Total	**1,179,140**	**1,932,520**	**1,567,616**	**1,641,335**	**1,895,491**	**1,879,460**

(a) The world's production of lead as tabulated by the American Bureau of Metal Statistics is primarily on the basis of reports by smelters in respect of their production of base bullion, computing the lead content thereof, and of refined lead.

Of the output recorded for North America in 1938, Canada contributed 204,646 short tons, excluding lead in ores exported. As a world producer of lead, Canada ranked fourth in 1938.

Table 131.—Capacity and Production of Electrolytic Zinc Plants in Canada, 1936-1938

Companies	Maximum h.p. used	Estimated annual capacity for cathode zinc (short tons)	Actual production as ingot size (short tons)		
			1936	1937	1938
	(a)	(b)			
Consolidated Mining & Smelting Co. of Canada, Ltd	72,000	146,000	119,478	124,157	133,242
Hudson Bay Mining & Smelting Co. Ltd	21,750	43,000	32,219	34,486	38,414

NOTE.—This statement supplied by the American Bureau of Metal Statistics.
(a) Expressed as power in terms of direct current after transforming the alternating current in sub-station at the works.
(b) Capacity for ingot zinc may be reckoned at 95% capacity for cathode deposition.

The American Bureau of Metal Statistics estimates the capacity of American zinc metallurgical works at the end of 1938 as being nominally for the production of about 600,000 short tons of spelter per annum by distilling, including the capacity in continuously operating vertical retorts, and about 210,000 tons by electrolysis, a total of about 810,000 tons, but the first-class effective capacity is probably something less than that. The effective capacity outside the United States at the end of 1938 is estimated at about 1,200,000 metric tons whereof about 280,000 tons was in Australia, Canada and Mexico, and about 920,000 tons elsewhere. The estimate of 1,200,000 tons for foreign plants is exclusive of plants in Russia.

Table 132.—Production of New Zinc in Canada, by Provinces, 1937 and 1938

Provinces	1937		1938	
	Pounds	Value	Pounds	Value
		$		$
Nova Scotia	5,485,550	268,902	.....	.....
Quebec	8,566,927	419,951	5,315,852	163,356
Ontario	120,011	5,883	.....	.....
Manitoba	36,221,314	1,775,569	46,864,575	1,440,148
Saskatchewan	32,750,910	1,605,449	29,962,597	920,751
British Columbia	287,192,877	14,078,195	299,363,564	9,199,443
Total	**370,337,589**	**18,153,949**	**381,506,588**	**11,723,698**

Table 133.—Refined New Zinc Produced in Canada

Years	Short tons
1931	118,622
1932	86,141
1933	91,946
1934	134,917
1935	149,523
1936	151,103
1937	158,542
1938	171,932

Table 134.—World's Production of Zinc (a)

(From the Year Book of the American Bureau of Metal Statistics)

(In short tons—2,000 lb.)

Countries	1930	1936	1937	1938
United States	504,463	523,166	595,319	465,537
Mexico	41,066	35,506	40,364	41,338
Canada	121,467	151,697	158,643	171,656
Belgium	194,258	215,301	248,656	231,464
Czechoslovakia	13,904	8,667	7,956	9,784
France	100,030	59,084	66,611	68,532
Germany	107,254	150,354	180,006	212,173
Great Britain	54,427	68,086	69,597	61,938
Italy	21,235	29,790	41,868	37,550
Netherlands	25,634	17,006	27,166	27,888
Norway	38,152	49,631	45,492	51,257
Poland	192,598	103,921	120,512	122,119
Russia	4,772	71,650	77,161	88,184
Spain	11,790	8,601	5,819	8,435
Sweden	4,548	.....	.....	.....
Yugoslavia	8,361	3,967	4,695	4,361
Australia	61,397	77,778	78,120	78,198
Japan	27,193	39,683	50,155	55,115
French Indo-China	4,253	4,528	4,633	4,900
Rhodesia	20,055	23,218	15,714	11,441
Totals, ex. U.S.A.	1,052,394	1,118,468	1,243,168	1,286,333
Grand Totals	**1,556,857**	**1,641,634**	**1,838,487**	**1,751,870**

(a) The data as recorded in the table by the American Bureau of Metal Statistics are the summaries of production as made by the metallurgical works of the world whose principal business is the reduction of ore. In so far as they produce slab zinc from secondary material, such is included. The production of zinc dust is excluded. The production figure for the United States includes a relatively small quantity of spelter derived from foreign ore. Excluded from above accounting is spelter produced by redistillers who treat nothing but old material.

Table 135.—World Production of Nickel Ore, 1932-1938 (a)

(From the Year Book of the American Bureau of Metal Statistics)

(in terms of metal)

(short tons)

Countries	1935	1936	1937	1938
		(short tons)		
Canada (a)	69,258	84,870	112,453	(e) 105,337
New Caledonia (b)	5,800	5,400	6,600	7,500
Greece (d)	1,200	1,380	1,160	(f)
Burma (c)	1,640	1,447	1,345	1,030
Norway	1,677	1,400	968	(f)
Russia	2,016	(f)	(f)	(f)

(a) Production in all forms from Canadian ores.
(b) Estimated content of ore and matte exported.
(c) Nickel content of speiss obtained as a by-product.
(d) Nickel and cobalt content beginning 1934.
(e) Not including production in British Columbia.
(f) Not yet reported.

Table 136.—World Production* of Aluminium

(From the Year Book of the American Bureau of Metal Statistics)

(in metric tons)

Countries	1922	1929	1932	1936	1937	1938
United States	33,600	102,100	47,600	102,028	132,759	130,129
Canada	10,000	42,000	18,000	26,900	42,550	66,000
Europe (a)	48,200	137,198	87,769	233,081	304,521	367,468
Japan	.....	.....	.....	6,664	10,000	20,000*
Total for world	**91,800**	**281,298**	**153,369**	**368,673**	**489,830**	**583,597**

NOTE.—Omitted from this table is a small production in Yugoslavia.
(a) German output in 1938 (including Austria) was 165,600 metric tons.
*Conjectural.

Table 137.—Production of Gold, by Provinces, 1937 and 1938

Provinces	1937		1938	
	Fine ounces	Value in Canadian funds	Fine ounces	Value in Canadian funds
		$		$
Nova Scotia	19,918	696,931	26,560	934,248
Quebec	711,480	24,894,085	881,263	30,998,426
Ontario	2,587,095	90,522,454	2,896,477	101,883,578
Manitoba	157,949	5,526,636	185,706	6,532,209
Saskatchewan	65,886	2,305,351	50,021	1,759,489
Alberta	46	1,610	305	10,728
British Columbia	505,857	17,699,936	605,617	21,302,578
Yukon	47,982	1,678,890	72,368	2,545,544
Northwest Territories	.....	.....	6,800	239,190
Canada	**4,096,213**	**143,326,493**	**4,725,117**	**166,205,990**

Table 138.—Sources of Canadian Fine Gold Production, by Percentages, 1932, 1933, 1936-1938

Sources	1932	1933	1936	1937	1938
	%	%	%	%	%
In alluvial gold	1·8	2·0	2·27	2·20	2·50
In crude gold bullion (*)	79·3	79·8	77·37	80·20	80·80
In base bullion (from silver-lead ores, etc.)	1·0	0·7	1·60	0·90	0·92
In blister and anode copper	15·1	14·2	13·80	11·70	11·24
In ores, matte, slags, etc., exported	2·8	3·3	4·96	5·00	4·54
	100·0	**100·0**	**100·0**	**100·0**	**100·0**

(*) Includes a relatively small quantity of gold contained in interprovincial shipments of gold ores to smelters.

Table 139.—Production of Silver, by Provinces, 1937 and 1938

Provinces	1937		1938	
	Fine ounces	$	Fine ounces	$
Nova Scotia	26,990	12,113	988	430
Quebec	908,590	407,784	1,189,495	517,157
Ontario	4,693,047	2,106,286	4,318,837	1,877,701
Manitoba	905,179	406,253	1,198,315	520,991
Saskatchewan	821,818	368,840	898,413	390,603
Alberta	4	2	23	10
British Columbia	11,530,177	5,174,859	11,186,563	4,863,582
Yukon and Northwest Territories	4,091,946	1,836,507	3,426,561	1,489,765
Canada	**22,977,751**	**10,312,644**	**22,219,195**	**9,660,239**

Table 140.—Other Non-Ferrous Products Produced in Canadian Smelters and Refineries, 1937 and 1938

Metals	Unit	1937		1938	
		Quantity	$	Quantity	$
Arsenic (As_2O_3)	lb.	1,389,426	41,032	2,175,646	56,538
Bismuth	lb.	5,711	5,654	9,516	9,754
Cadmium	lb.	745,207	1,222,140	699,138	561,799
Cobalt (a)	lb.	507,064	848,145	459,226	790,913
Palladium, rhodium, iridium, etc. (b)	oz.	119,829	3,179,782	130,893	3,677,342
Platinum (b)	oz.	139,355	6,751,750	161,326	5,196,794
Radium, uranium		(Data not published)			
Selenium	lb.	397,227	687,203	358,929	622,742
Tellurium	lb.	41,490	71,777	48,237	82,967
Sulphur (c)	ton	130,913	1,154,992	112,305	1,044,817

(a) Includes metal in ores exported, salts manufactured, and metal produced in Canada.
(b) Final refining conducted in Europe.
(c) Sulphur recovered from smelter gases as elemental sulphur and in sulphuric acid made, and ammonium sulphate. Also includes sulphur in iron pyrites exported.

Directory of Firms in the Non-Ferrous Smelting and Refining Industry, 1938

Names of companies	Head office address	Canadian plant location
Canadian Copper Smelting Companies		
Noranda Mines Ltd.	2 King St. E., Toronto, Ont.	Noranda, P.Q.
(a) International Nickel Co. of Canada, Ltd.	67 Wall St., New York City, U.S.A.	Copper Cliff, Port Colborne and Coniston, Ont.
(a) Falconbridge Nickel Mines Ltd.	25 King St. W., Toronto, Ont.	Falconbridge, Ont.
Hudson Bay Mining & Smelting Co., Ltd.	14 Finkle St., Woodstock, Ont.	Flin Flon, Man.
(a) Smelt nickel-copper ores.		
Canadian Electrolytic Copper Refining Companies		
Canadian Copper Refiners Ltd. (c)	2 King St. E., Toronto, Ont.	Montreal East, P.Q.
Ontario Refining Co. Ltd (c)	Copper Cliff, Ont.	Copper Cliff, Ont.
(c) Produce refined copper, silver, gold, tellurium and selenium.		
Canadian Lead Smelting and Refining Companies		
Consolidated Mining & Smelting Co. of Canada Ltd. (†)	215 St. James St. W., Montreal, P.Q.	Trail, B.C.
(†) Produce bismuth or bismuth-bearing bullion as by-products, also gold, silver, antimony and sulphur.		
Canadian Electrolytic Zinc Refining Companies (*)		
Consolidated Mining & Smelting Co. of Canada Ltd.	215 St. James St. W., Montreal, P.Q.	Trail, B.C.
Hudson Bay Mining & Smelting Co. Ltd.	Woodstock, Ont.	Flin Flon, Man.
(*) Also produce cadmium.		
Canadian Smelters and Refiners of Cobalt-Arsenic Ores		
Deloro Smelting & Refining Co. Ltd. (†)	Deloro, Ont.	Deloro, Ont.
(†) Produce silver, cobalt, arsenic, bismuth, nickel oxide and cobalt oxide and salts.		
Canadian Refiners of Uranium-Radium Ores		
Eldorado Gold Mines Ltd.	Star Building, Toronto, Ont.	Port Hope, Ont.
Canadian Producers of Primary Aluminium		
Aluminum Company of Canada, Ltd.	Canada Life Building, Toronto, Ont.	Arvida and Shawinigan Falls, P.Q.

NOTE.—In addition to the companies listed above, the Chromium Mining & Smelting Corp. Ltd., treated foreign chromite ores at Sault Ste. Marie, Ont.

CHAPTER EIGHT

THE MISCELLANEOUS NON-FERROUS METAL PRODUCTS INDUSTRY

The industry for which statistics are presented in this chapter covers the operations of a miscellaneous group of concerns which cannot properly be classified to any of the other industries included in the manufactures of the non-ferrous metals group.

In 1938 only 20 plants were included in this group, 15 being located in Ontario, 3 in Quebec and 2 in Manitoba. Production from these factories was valued at $1,588,662, the number of employees was 346, payments for salaries and wages totalled $421,552 and the cost of materials for use in manufacturing processes was $369,763.

Production included gasoline lamps, lanterns, camp stoves and irons; weatherstrip, sash, cigarette lighters, atomizers and perfume sprays, railway and marine lamps and lanterns, window screens, lamp and lantern burners, name plates, etc. Output of weatherstrip amounted to $59,950 in 1938 compared with $59,958 in 1937. Figures for the other commodities cannot be published as there were only one or two producers in each case.

Table 141.—Principal Statistics, 1920-1938

Years	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Gross selling value of products at works	Net value of production
		$		$	$	$	$	$
1920	16	394,096	246	274,270	4,887	260,299	708,780	443,594
1921	18	665,481	162	219,659	1,894	250,596	557,420	304,930
1922	16	663,070	169	198,218	4,821	236,797	607,567	365,949
1923	16	739,457	196	251,856	6,495	269,557	773,556	497,504
1924	16	853,248	202	268,823	5,302	322,001	741,066	413,673
1925	17	919,733	233	313,145	6,378	346,518	999,277	646,381
1926	18	918,420	222	286,537	9,417	344,196	998,512	644,899
1927	16	965,937	234	309,236	9,557	281,940	947,765	656,208
1928	17	943,914	227	269,807	9,169	304,387	1,106,639	793,083
1929	17	788,359	236	345,245	11,326	317,130	1,116,053	787,597
1930	16	805,293	209	289,243	9,219	227,551	758,425	521,655
1931	19	758,326	150	211,595	9,142	130,806	480,188	340,240
1932	20	927,306	159	210,655	9,542	106,855	490,076	373,679
1933	19	1,123,131	226	233,098	12,029	180,618	658,316	465,669
1934	20	999,053	291	312,863	14,623	229,589	920,924	676,712
1935	21	1,179,766	309	349,969	14,730	337,338	1,170,035	817,967
1936	18	1,177,641	333	382,902	14,671	333,438	1,163,555	1,015,446
1937	19	1,370,847	361	433,403	14,265	552,909	1,606,087	1,038,913
1938	20	1,327,993	346	421,552	14,897	369,763	1,588,662	1,204,002

Table 142.—Principal Statistics, by Provinces, 1937 and 1938

Provinces	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity	Cost of materials at works	Gross selling value of products at works
		$		$	$	$	$
1937							
Quebec	3	104,335	46	56,422	2,844	39,638	127,478
Manitoba	1						
Ontario	15	1,266,512	315	376,981	11,421	513,271	1,478,609
Canada	**19**	**1,370,847**	**361**	**433,403**	**14,265**	**552,909**	**1,606,087**
1938							
Quebec	3	98,207	42	43,757	2,644	34,817	91,060
Manitoba	2						
Ontario	15	1,229,726	304	377,795	12,253	334,946	1,497,602
Canada	**20**	**1,327,933**	**346**	**421,552**	**14,897**	**369,763**	**1,588,662**

Table 143.—Establishments Grouped According to Production, Employees and Capital, 1938

—	Number of plants	Capital employed	Number of employees	Gross selling value of products at works
		$		$
(a) Production				
Under $10,000	5	22,483	12	17,385
$10,000 to $25,000	8	147,952	54	139,598
Over $25,000	7	1,157,498	280	1,431,679
Total	**20**	**1,327,933**	**346**	**1,588,662**
(b) Number of Employees				
1 or 2	4	12,471	5	14,242
3 to 10	10	172,037	70	168,504
Over 10	6	1,143,425	271	1,405,916
Total	**20**	**1,327,933**	**346**	**1,588,662**
(c) Capital employed				
Under $25,000	13	124,133	81	179,044
$25,000 and over	7	1,203,800	265	1,409,618
Total	**20**	**1,327,933**	**346**	**1,588,662**

Table 144.—Capital Employed, by Provinces, 1937 and 1938

Provinces	Present value of lands, buildings, machinery, tools and other equipment	Inventory value of materials, fuel and finished products on hand, and stocks in process	Operating capital (cash, bills and accounts receivable, prepaid expenses, etc.)	**Total capital employed**
	$	$	$	$
1937				
Ontario	53,042	28,344	22,949	104,335
Other provinces	402,704	491,858	371,950	1,266,512
Canada	**455,746**	**520,202**	**394,899**	**1,370,847**
1938				
Ontario	405,994	386,569	437,163	1,229,726
Other provinces	57,716	25,540	14,951	98,207
Canada	**463,710**	**412,109**	**452,114**	**1,327,933**

Table 145.—Employees, Salaries and Wages, by Provinces, 1937 and 1938

Provinces	Average number of employees					Salaries	Wages	Total salaries and wages
	On salaries		On wages		**Total**			
	Male	Female	Male	Female				
						$	$	$
1937								
Ontario	70	31	160	54	**315**	182,425	194,556	376,981
Other provinces	9	4	25	8	**46**	34,079	22,343	56,422
Canada	**79**	**35**	**185**	**62**	**361**	**216,504**	**216,899**	**433,403**
1938								
Ontario	85	39	139	41	**304**	203,165	174,630	**377,795**
Other provinces	7	3	26	6	**42**	21,236	22,521	**43,757**
Canada	**92**	**42**	**165**	**47**	**346**	**224,401**	**197,151**	**421,552**

Table 146.—Wage-Earners, by Months, 1937 and 1938 (on the last work-day of each month)

Months	1937			1938		
	Male	Female	Total	Male	Female	Total
January	146	56	202	161	54	215
February	156	57	213	157	51	208
March	152	59	211	159	51	210
April	156	57	213	141	47	188
May	173	60	233	155	48	203
June	190	60	250	164	48	212
July	199	61	260	167	46	213
August	190	61	251	165	46	211
September	190	60	250	167	46	213
October	190	61	251	175	48	223
November	189	63	252	181	49	230
December	186	57	243	164	47	211
Average	**185**	**62**	**247**	**165**	**47**	**212**

Table 148.—Fuel and Electricity Used, 1937 and 1938

Kinds	Unit of measure	1937		1938	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal	short ton	611	3,810	657	4,246
Anthracite coal	short ton	73	807	70	775
Coke	short ton	4	27	4	27
Gasoline	imp. gal.	3,278	535	5,072	923
Fuel oil	imp. gal.	4,200	420	.....	.....
Gas—					
Manufactured	M cu ft.	2,661	2,408	2,709	2,504
Natural	M cu. ft.	424	202	148	117
Other fuel	.....	.....	.....	.....	8
Electricity purchased	K.W.H.	360,747	6,056	305,535	6,297
Total	.....	.....	**14,265**	.....	**14,897**

Table 149.—Power Equipment, 1937 and 1938

Kinds	1937		1938	
	Number of units	Total rated horse power	Number of units	Total rated horse power
Electric motors run by purchased power—All in use	62	345	83	354
Total	**62**	**345**	**83**	**354**
Stationary boilers—All in use	2	175	2	100

Table 150.—Materials Used in Manufacturing, 1937 and 1938

Materials	Unit of measure	1937		1938	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Iron castings	.....	.....	17,498	.....	12,210
Aluminium sheets	lb.	17,242	5,421	13,630	4,498
Brass	lb.	510,079	101,729	308,126	58,544
Bronze	lb.	.....	8,420	.....	4,459
Zinc	lb.	.....	11,733	.....	11,967
Containers (boxes, etc.)	.....	.....	28,659	.....	31,883
All other materials	.....	.....	379,449	.....	246,202
Total	.....	.....	**552,909**	.....	**369,763**

Table 151.—Products Made, 1937 and 1938

Products	Gross selling value at works	
	1937	1938
	$	$
Weatherstrip	59,958	59,950
Screens for windows, and screen doors	17,044	38,642
All other products (*)	1,529,085	1,490,070
Total	**1,606,087**	**1,588,662**

*Includes gasoline vapour appliances, such as, lamps, lanterns, heaters, etc.; incandescent mantles for lamps; cigarette lighters and parts; etched name plates, etc.

Directory of Firms in the Miscellaneous Non-Ferrous Metal Products Industry, 1938

Names of Firms	Location of Plants	Main Products in 1938
QUEBEC—		
Modern Lite Mfg. Co	710 Notre Dame St. W., Montreal	Lamp stands and shades, smoking sets.
Piper, Hiram L., Co. Ltd	555 St. Remi St., Montreal	Railway and marine lamps and lanterns
Safety Car Heating & Lighting	620 Versailles St., Montreal	Incandescent gas mantles.
ONTARIO—		
Best Weather Strip Co. Ltd	28 James St. S., Hamilton	Metal weatherstrip and bindings.
Chamberlin Metal Weather Strip Co. Ltd	Lansdowne Ave., Kingsville	Metal weatherstrip and brass sills.
Coleman Lamp & Stove Co. Ltd	9 Davies Ave., Toronto	Gasoline vapour appliances such as lamps, lanterns, stoves, heaters, etc.; incandescent gas mantles.
De Vilbiss Mfg. Co. Ltd	673 Wellington Ave., Windsor	Atomizers and perfume sprays; spray painting equipment.
Dominion Art Metal Works Ltd	317 Adelaide St., Toronto	Lighters and parts.
Dominion Weatherstrip & Screen Co	718 Pape Ave., Toronto	Sash and doors, screens, weatherstrip.
Etched Name Plate Co	2202 Gerrard St. E., Toronto	Name plates and radio dials.
Fords Golden Weatherstrip Co	111 Prospect St., Hamilton	Metal weatherstrip.
Higgin Manufacturing Co	33 McCaul St., Toronto	Metal screens; sash and metal weatherstrip.
Ideal Metal Weatherstrip Co	1107 Broadview Ave., Toronto	Metal weatherstrip; screens and sash.
Metal Specialties	467 Wellington St. W., Toronto	Metal spinnings and stampings.
Schultz Manufacturing Co. Ltd	154 York St., Hamilton	Brass lamp burners.
Thermos Bottle Co. Ltd	1239 Queen St. W., Toronto	Vacuum bottles.
Toronto Weatherstrip & Screen	245 Browning Ave., Toronto	Metal weatherstrip and screens.
Westwood Bros	214 Bathurst St., Toronto	Gas lighters, stove thermometers and fish ranges.
Winston, A. E	2 Gibson Ave., Toronto	Metal weatherstrip and screens.
MANITOBA		
Peace Weatherstrip	284 Stradbrook Ave., Winnipeg	Metal weatherstrip.
Swan Mfg. Weatherstrip	579 Ellice Ave., Winnipeg	Weatherstrip.

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