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CANADA—DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
MINING, METALLURGICAL AND CHEMICAL BRANCH

Manufactures of the NON-FERROUS METALS IN CANADA

1935 and 1936

Published by Authority of the Hon. W. D. Euler, M.P.,
Minister of Trade and Commerce

OTTAWA
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PREPARED IN THE

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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 there 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 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; Miscellaneous Non-Metallic Mineral Products, including (a) Artificial Graphite and Electrodes, (b) Gypsum Products, (c) Mica Products, (d) Miscellaneous Non-Metallic Mineral Products, n.e.s.

(8) **Chemicals and Allied Products,** including—Coal Tar Distillation; Acids, Alkalies and Salts; Compressed Gases; Explosives, Ammunition and Fireworks; 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) Disinfectants, (f) Matches, (g) 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 15th of each month or on the nearest representative date. 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 above. 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. Any coal or coke charged directly to melting furnaces or used as a 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 book.

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 Production.—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. The value of such commodities is the actual cost of such goods.

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 1936 the 511 plants employed 36,935 workers and produced goods worth $351,164,860.

Statistics given herein are for the years 1935 and 1936, 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 22) and of products (Table 23) 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.

R. H. COATS,
Dominion Statistician.

DOMINION BUREAU OF STATISTICS,
OTTAWA, September 28, 1938.

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, 1932-1936	9
Principal Statistics, by Provinces, 1932-1936	10
Principal Statistics, by Provinces and by Industries, 1935 and 1936	11
Capital Employed, 1935 and 1936	13
Employees, Salaries and Wages, 1935 and 1936	15
Power Equipment, 1935-1936	18
Fuel and Electricity Used, 1935-1936	20
Size of Establishments, 1935 and 1936	24
List of Materials, 1935-1936	24
List of Products, 1935-1936	27
Imports and Exports, 1935-1936	31

Chapter Two—The Aluminium Products Industry

Principal Statistics	34
Capital employed	35
Employees, Salaries and Wages	35
Fuel and Power	36
Materials Used	37
Products Made	37
Production of Aluminium Kitchen Utensils	37
Imports and Exports	38
Directory of Firms	39

Chapter Three—The Brass and Copper Products Industry

Principal Statistics	40
Capital Employed	42
Employees, Salaries and Wages	43
Fuel and Power	44
Materials Used	45
Products Made	46
Production of Brass and Copper Wire and Cable	46
Production of Electric Lighting Fixtures	47
Production of Brass and Iron Valves	47
Imports	47
Directory of Firms	48

Chapter Four—The White Metals Alloys Industry

Principal Statistics	52
Capital Employed	53
Employees, Salaries and Wages	54
Fuel and Power	54
Materials Used	55
Products Made	55
Production of Babbitt, Solders, Type and Type Metal	56
Imports and Exports	56
Directory of Firms	57

Chapter Five—The Jewellery and Silverware Industry

Principal Statistics	59
Capital Employed	60
Employees, Salaries and Wages	61
Fuel and Power	62
Materials Used	63
Products Made	63
Production of Jewellery, Clocks and Watches, and Watch Cases	64
Production of Silverware	64
Imports and Exports	64
Directory of Firms	65

Chapter Six—The Electrical Apparatus and Supplies Industry

Principal Statistics	67
Capital Employed	69
Employees, Salaries and Wages	70
Fuel and Power	71
Materials Used	72
Products Made	73
Production of Transformers	75
Production of Electrical Conduit	75
Production of Motors and Generators	75
Production of Washing Machines	76
Production of Electric Ironers	76
Production of Electrical Wires and Cables	76
Production of Vacuum Cleaners and Parts	76
Production of Electric Batteries	77
Production of Electric Lighting Fixtures	77
Production of Stoves	77
Production of Electric Refrigerators	78
Production of Domestic Water Heaters	78
Production of Radio Tubes	78
Production of Radio Sets	79
Production of Oil Burners	82
Production of Incandescent Lamps	82
Imports and Exports	82
Directory of Firms	83

Chapter Seven—The Non-Ferrous Metal Smelting and Refining Industry

Principal Statistics	88
Capital Employed	91
Employees, Salaries and Wages	91
Fuel and Power	92
Capacity Copper Smelters and Refineries	93
Metal Prices	93
World Production of Copper	95
Capacity Lead Smelting	95
World Production of Lead	96
Capacity of Electrolytic Zinc Plants	97
World Production of Zinc	98
World Production of Aluminium	98
World Production of Nickel Ore	98
Production of Gold	99
Production of Silver	99
Directory of Firms	100

Chapter Eight—The Miscellaneous Non-Ferrous Metal Products Industry

Principal Statistics	101
Capital Employed	102
Employees, Salaries and Wages	102
Fuel and Power	103
Materials Used and Products Made	103
Directory of Firms	104

DOMINION BUREAU OF STATISTICS

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MANUFACTURES OF THE NON-FERROUS METALS IN CANADA, 1936

CHAPTER ONE

GENERAL REVIEW

Final statistics for 1936 show that the total value of the manufactures of primary non-ferrous metals and non-ferrous metal products was $351,164,860, compared with $288,523,250 in the preceding year. This was a gain of 21 per cent, and the greatest for any year on record.

There were 511 plants in operation in this group in 1936, against 504 in 1935. Capital employed rose $5 millions to $266,322,074; the number of persons employed increased to 36,935 from 33,613, and salaries and wages advanced to $45,091,191 from $40,315,477. The cost of materials used was $212,783,636, an increase of 21 per cent.

For purposes of the annual Census of Manufactures, the production of non-ferrous metal products has been classified into 7 main industrial groups, depending on the nature of their principal products. All but the miscellaneous group reported gains, in value of production, over 1935. Non-ferrous smelting and refining rose $44 millions to $229,737,420; electrical apparatus rose $11 millions to $72,288,548; brass and copper products had an increase of 30 per cent at $24,947,467; white metal alloys rose to $6,905,041 from $6,182,402 in 1935; aluminium products totalled $5,438,281, a gain of $445,000; jewellery and silverware rose $1 million to $10,684,548, and the miscellaneous group was about six thousand dollars less than in 1935 at $1,163,555.

Most of the factories were located in Ontario and Quebec. In 1936, Ontario had 334 establishments or 61 per cent of the total for the entire group and their output valued at $227,615,259 accounted for 65 per cent of the total for Canada. Quebec had 114 manufacturing plants and an output valued at $82,417,242; British Columbia had 32 works and a production of $27,800,388, and Manitoba had 19 plants with an output at $8,049,669. There were also 7 factories in Alberta, and 2 each in Nova Scotia, New Brunswick and Saskatchewan. Compared with 1935, the value of production advanced $47 millions in Ontario, $3 millions in Quebec, $1·6 millions in British Columbia, $0·1 millions in Nova Scotia and New Brunswick, and $2·7 millions in Saskatchewan and Alberta.

Capital employed in 1936 totalled $266,322,074 of which $160,515,825 was given as the value of land, buildings, machinery and tools, $54,880,171 as the inventory value of materials, finished products, and other supplies on hand and stocks in process, and $50,926,078 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 84 per cent of the total investment, the former showing a total of $143,858,717 and the latter, $79,794,524; brass and copper products came next at $22,890,531; jewellery and silverware, $8,834,230; white metal alloys, $5,882,190; aluminium products, $3,884,241; and the miscellaneous group, $1,177,641.

Factories in Ontario employed capital amounting to $170,527,387 and the works in Quebec reported a total of $59,689,009. For the other provinces the totals were: British Columbia, $28,134,790; Manitoba, $5,042,353; Nova Scotia and New Brunswick, $652,021; Saskatchewan and Alberta, $2,276,514.

The number of employees in the non-ferrous metal fabricating plants was 36,935 in 1936 compared with 33,613 in 1935. Salaried workers included 5,494 males and 1,773 females, a total of 7,267. who were paid $13,561,682 during the year. Wage-earners averaged 29,668 in number, including 25,230 males and 4,438 females and payments for wages during the year amounted to $31,529,509.

Concerns in Ontario employed 24,818 workers; in Quebec, 8,077; in British Columbia, 3,318; in Manitoba, 332; in New Brunswick and Nova Scotia, 284; in Saskatchewan and Alberta, 106.

The electrical industry employed the largest number of workers with an average pay-roll of 17,037 hands; smelting and refining was next at 10,015; brass and copper products, 4,596; jewellery and silverware, 2,959; aluminium products, 1,101; white metal alloys, 894; and the miscellaneous group, 333.

In 1936 the average number of wage-earners was 29,668. In January the pay-rolls carried 27,312 names from which there was a steady gain to 31,848 in October. A slight decline occurred in the closing months of the year. In 1935 the average was 26,819.

Expenditures for fuel and power totalled $5,957,517 in 1936 compared with $5,717,809 in 1935. Electric power alone cost $2,625,088 in 1936 and $2,157,312 in 1935, the quantities being 864,571,532 k.w.h. and 576,875,919 k.w.h. respectively.

Plants in Ontario used fuel worth $974,258 and electric power worth $1,398,559 while concerns in Quebec paid out $270,906 for fuel and $546,285 for electricity.

Consumption of bituminous coal in 1936 was reported at 136,981 tons and anthracite coal at 5,823 tons. Coke, exclusive of that used in blast furnaces, amounted to 10,385 tons; fuel oil, 3,265,365 gallons; manufactured gas, 203,861 M cubic feet; natural gas 49,220 M cubic feet; gasoline, 116,283 gallons; kerosene, 13,047 gallons; wood, 601 cords; and other fuel, $3,275.

Power installations included 72 steam engines rated at 23,429 h.p., 40 internal combustion engines at 2,708 h.p., 19 hydraulic turbines at 55,550 h.p., 18,090 electric motors at 379,442 h.p. run by purchased power and 1,626 electric motors at 13,910 h.p. run by power generated in the producing plants. The number of boilers in use was 230 and the total rating of these installations was given at 47,070 h.p.

Imports of non-ferrous metals and their products into Canada during 1936 were valued at $35,040,115 as against $33,614,022 in 1935. Of this total $24,276,519 or 69 per cent came from the United States and $5,572,488 or 16 per cent came from the United Kingdom.

Exports, not including re-exports, during 1936 were appraised at $211,817,242, of which $73,321,479 went to the United Kingdom and $106,245,792 to the United States. In 1935 exports totalled $215,979,728 in value. Re-exports of foreign-made goods, mostly silver bullion, amounted to $1,958,767 in 1936 and $5,063,096 in 1935.

Table 1.—Principal Statistics of the Manufactures of the Non-Ferrous Metals in Canada, by Industries, 1932-1936

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
		$		$	$	$	$	$
Aluminium Products								
1932	14	3,906,196	661	678,400	66,628	1,375,902	2,703,[illegible]	1,[illegible]
1933	15	3,654,541	638	671,267	77,615	1,458,444	2,778,[illegible]	1,242,[illegible]
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,[illegible]
1936	19	3,884,241	1,101	1,194,999	119,320	3,799,088	5,438,281	1,519,[illegible]
Brass and Copper Products								
1932	119	23,148,843	3,535	3,880,838	402,025	3,949,157	9,594,115	5,242,[illegible]
1933	123	22,167,121	3,395	3,416,823	459,901	7,409,036	13,150,559	5,281,[illegible]
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
White Metal Alloys								
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
Jewellery and Silverware								
1932	93	7,460,760	2,169	2,322,392	72,434	2,432,728	6,118,871	3,613,[illegible]
1933	103	7,550,158	2,207	2,181,152	84,295	2,693,288	6,367,898	3,590,315
1934	107	7,528,257	2,420	2,650,948	93,018	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
Electrical Apparatus and Supplies								
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
Miscellaneous Non-Ferrous Metal Products								
1932	20	927,306	159	210,655	9,542	106,855	490,076	373,679
1933	19	1,123,131	226	233,008	12,029	180,618	658,310	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	815,446
Total for All Industries Listed Above								
1932	**439**	**122,336,581**	**21,361**	**23,976,133**	**1,590,052**	**30,214,993**	**75,669,241**	**43,861,196**
1933	**463**	**120,181,159**	**18,913**	**19,695,845**	**1,551,690**	**28,748,045**	**64,201,307**	**33,901,572**
1934	**473**	**117,441,057**	**21,879**	**24,038,780**	**1,800,428**	**41,387,776**	**87,297,131**	**41,109,527**
1935	**490**	**115,939,468**	**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**	**58,179,354**	**121,427,440**	**61,147,063**
Non-Ferrous Metal Smelting and Refining								
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	43,242,503	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	68,045,975
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	3,856,490	154,604,285	229,737,420	71,276,645
GRAND TOTAL								
1932	**452**	**272,045,441**	**26,704**	**32,755,103**	**6,025,446**	**67,934,940**	**152,111,317**	**78,150,931**
1933	**477**	**266,266,443**	**25,273**	**28,099,026**	**4,347,012**	**71,990,608**	**164,765,604**	**88,427,984**
1934	**487**	**263,488,479**	**30,177**	**35,097,986**	**5,364,840**	**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**	**114,674,851**
1936	**511**	**266,322,074**	**36,935**	**45,091,191**	**5,957,517**	**212,783,634**	**351,164,860**	**132,423,707**

Table 2.—Principal Statistics of the Manufactures of the Non-Ferrous Metals in Canada, by Provinces, 1932-1936

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
		$		$	$	$	$	$
Nova Scotia and New Brunswick*								
1932	5	840,952	223	159,102	18,697	52,184	268,575	197,694
1933	5	829,077	168	164,738	18,509	50,230	242,800	174,061
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
Quebec								
1932	92	64,276,923	6,598	8,312,237	2,018,329	27,093,942	52,642,669	23,530,398
1933	107	60,674,602	5,736	6,974,525	944,760	26,632,312	50,422,332	22,845,260
1934	110	56,795,895	6,566	7,869,398	1,032,162	32,322,584	57,108,642	23,753,896
1935	109	54,837,793	7,426	8,878,421	1,074,246	44,648,218	69,505,463	23,782,999
1936	114	50,[illegible]	8,277	9,814,710	817,191	53,183,872	82,417,242	28,416,179
Ontario								
1932	303	159,915,537	15,950	19,301,667	1,899,921	32,157,861	77,913,135	43,855,353
1933	312	159,329,946	16,055	17,173,992	1,745,620	35,260,861	90,304,137	53,297,656
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
Manitoba								
1932	19	4,944,730	541	735,570	102,119	2,671,379	7,182,665	4,409,167
1933	20	3,761,631	356	455,802	72,632	2,481,682	7,206,575	4,652,261
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
Saskatchewan† and Alberta								
1932	8	355,271	44	56,984	6,274	126,067	255,466	123,125
1933	8	1,248,814	79	119,455	20,878	332,886	915,991	562,227
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
British Columbia								
1932	26	41,712,028	2,348	4,189,543	1,980,106	5,833,507	13,848,807	6,035,194
1933	26	40,422,373	2,879	3,210,514	1,544,613	7,232,637	15,673,769	6,896,519
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
Canada								
1932	452	272,045,441	26,704	32,755,103	6,025,446	67,931,910	152,111,317	78,150,931
1933	477	266,266,443	25,273	28,099,026	4,317,012	71,990,608	164,765,601	88,427,981
1934	487	263,188,479	30,177	35,097,986	5,364,840	119,713,328	237,233,670	112,155,502
1935	504	261,625,967	33,613	40,315,477	5,717,809	171,130,590	288,523,250	111,674,851
1936	511	266,322,074	36,935	45,091,491	5,957,547	212,783,636	351,164,860	132,423,707

*Includes 2 firms in New Brunswick in each year.

†Includes 2 firms in Saskatchewan in each year. Data for the Flin Flon smelter, on the Manitoba-Saskatchewan boundary is divided between these two provinces, but is counted as only one plant in the grand totals.

Table 3.—Principal Statistics of the Manufactures of the Non-Ferrous Metals in Canada, by Industries and by Provinces, 1935

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
	No.	$	No.	$	$	$	$	$
NOVA SCOTIA AND NEW BRUNSWICK:—								
Brass and copper products	2	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	2	.....	.....	.....	.....	.....	.....	.....
Electrical apparatus and supplies	1	.....	.....	.....	.....	.....	.....	.....
Total	**5**	**695,924**	**281**	**234,886**	**24,833**	**81,516**	**428,007**	**321,658**
QUEBEC:—								
Aluminium products	4	748,554	96	100,275	23,993	862,907	851,110	−35,790
Brass and copper products	26	7,653,114	1,162	1,237,568	176,172	3,929,071	5,960,998	1,855,755
White metal alloys	11	1,124,751	144	189,872	15,359	1,299,352	1,764,161	449,450
Jewellery and silverware	37	1,687,339	837	777,493	12,707	1,009,039	2,223,391	1,201,645
Electrical apparatus and supplies	24	19,434,818	3,905	4,807,431	276,557	5,467,744	13,046,493	7,032,192
Miscellaneous non-ferrous metal products	4	148,061	44	42,798	2,390	34,840	93,466	56,236
Non-ferrous metal smelting and refining	3	23,571,156	1,238	1,722,984	567,068	32,045,265	45,565,844	12,953,511
Total	**109**	**54,367,793**	**7,426**	**8,878,421**	**1,074,246**	**44,648,218**	**69,505,463**	**23,782,999**
ONTARIO:—								
Aluminium products	15	3,043,202	902	989,212	104,660	2,395,403	4,141,530	1,641,467
Brass and copper products	80	12,813,879	2,650	2,974,627	315,548	6,199,438	11,954,358	5,439,372
White metal alloys	17	3,943,198	611	668,673	60,270	2,422,345	4,055,290	1,572,675
Jewellery and silverware	61	6,150,419	1,862	2,182,578	84,708	3,450,456	7,201,087	3,665,923
Electrical apparatus and supplies	134	55,448,550	11,454	12,595,146	776,576	19,681,797	47,503,325	27,044,952
Miscellaneous non-ferrous metal products	15	1,020,655	263	305,671	12,182	301,590	1,055,139	741,367
Non-ferrous metal smelting and refining	8	75,623,641	4,209	6,294,014	912,519	63,297,952	105,035,029	40,824,558
Total	**330**	**158,043,544**	**21,951**	**26,009,921**	**2,266,463**	**97,748,981**	**180,945,758**	**80,930,314**
MANITOBA:—								
Brass and copper products	5	462,906	78	111,342	18,568	243,668	503,435	241,199
White metal alloys	2	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	1	.....	.....	.....	.....	.....	.....	.....
Electrical apparatus and supplies	8	362,574	103	105,503	10,048	164,921	378,172	203,203
Miscellaneous non-ferrous metal products	2	.....	.....	.....	.....	.....	.....	.....
Non-ferrous metal smelting and refining	1	.....	.....	.....	.....	.....	.....	.....
Total	**19**	**5,622,261**	**327**	**452,207**	**51,618**	**8,511,858**	**9,383,623**	**820,147**
SASKATCHEWAN AND ALBERTA:—								
Brass and copper products	1	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	3	7,804	4	6,157	162	12,579	24,638	10,897
Electrical apparatus and supplies	4	67,055	16	18,209	2,113	17,065	44,111	24,933
Non-ferrous metal smelting and refining	1	.....	.....	.....	.....	.....	.....	.....
Total	**9**	**1,493,749**	**79**	**110,977**	**11,189**	**1,836,802**	**2,003,169**	**155,178**
BRITISH COLUMBIA:—								
Brass and copper products	10	121,460	56	64,601	5,141	41,707	157,961	111,113
White metal alloys	2	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	8	81,346	51	55,457	1,233	43,228	124,808	80,347
Electrical apparatus and supplies	11	176,158	70	67,920	5,348	77,395	179,410	96,667
Non-ferrous metal smelting and refining	2	.....	.....	.....	.....	.....	.....	.....
Total	**33**	**41,402,696**	**3,549**	**4,629,065**	**2,289,460**	**18,303,215**	**26,257,230**	**5,664,555**
Canada, 1935:—								
Aluminium products	**19**	**3,791,756**	**998**	**1,089,487**	**128,653**	**3,258,310**	**4,992,640**	**1,605,677**
Brass and copper products	**124**	**21,993,841**	**4,246**	**4,649,912**	**544,147**	**10,584,600**	**19,187,022**	**8,058,275**
White metal alloys	**32**	**5,521,720**	**797**	**911,611**	**83,503**	**3,993,110**	**6,182,402**	**2,105,789**
Jewellery and silverware	**112**	**7,953,330**	**2,770**	**3,032,350**	**99,594**	**4,519,732**	**9,592,659**	**4,973,333**
Electrical apparatus and supplies	**182**	**75,489,255**	**15,540**	**17,594,759**	**1,070,801**	**25,409,806**	**61,152,834**	**34,672,227**
Miscellaneous non-ferrous metal products	**21**	**1,179,766**	**309**	**349,969**	**14,730**	**337,338**	**1,170,035**	**817,967**
Non-ferrous metal smelting and refining	**14**	**145,686,299**	**8,944**	**12,687,356**	**3,776,381**	**123,027,694**	**186,245,658**	**59,141,583**
Total	**504**	**261,625,967**	**33,613**	**40,315,477**	**5,717,809**	**171,130,590**	**288,523,250**	**111,674,851**

Table 4.—Principal Statistics of the Manufactures of the Non-Ferrous Metals in Canada, by Industries and by Provinces, 1936

(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	.....	.....	.....	.....	.....	.....	.....
Electrical apparatus and supplies	1	.....	.....	.....	.....	.....	.....	.....
Total	**4**	**652,021**	**284**	**229,360**	**23,541**	**104,868**	**550,781**	**422,372**
QUEBEC:—								
Aluminium products	4	765,827	165	152,390	10,916	1,410,634	1,241,761	−179,789
Brass and copper products	30	7,410,962	1,282	1,494,746	185,092	3,987,905	7,012,020	2,839,023
White metal alloys	11	1,212,462	154	198,251	23,861	1,336,367	1,862,234	502,006
Jewellery and silverware	33	1,476,259	781	766,003	13,541	912,673	2,183,908	1,257,694
Electrical apparatus and supplies	29	20,753,954	4,200	5,131,330	294,882	6,638,899	15,701,098	8,767,317
Miscellaneous non-ferrous metal products	3	152,083	43	42,958	2,573	35,552	119,585	81,460
Non-ferrous metal smelting and refining	4	27,917,462	1,452	2,029,032	286,326	38,861,842	54,296,636	15,148,468
Total	**114**	**59,689,009**	**8,077**	**9,814,710**	**817,191**	**53,183,872**	**82,417,242**	**28,416,179**
ONTARIO:—								
Aluminium products	15	3,118,414	936	1,042,609	108,404	2,389,054	4,196,520	1,699,062
Brass and copper products	79	13,903,586	2,835	3,309,717	325,037	9,542,984	16,278,402	6,410,381
White metal alloys	19	4,231,475	700	771,174	67,651	2,704,641	4,628,092	1,855,800
Jewellery and silverware	65	7,239,343	2,107	2,512,395	96,206	4,048,609	8,324,071	4,179,256
Electrical apparatus and supplies	134	58,400,322	12,629	14,132,231	873,637	23,501,825	55,800,685	31,425,223
Miscellaneous non-ferrous metal products	14	1,019,558	238	338,962	12,086	297,438	1,042,597	733,073
Non-ferrous metal smelting and refining	8	82,614,689	5,323	7,722,117	889,796	87,646,185	137,344,892	48,808,911
Total	**334**	**170,527,387**	**24,818**	**29,829,205**	**2,372,817**	**130,130,736**	**227,615,259**	**95,111,706**
MANITOBA:—								
Brass and copper products	4	523,330	89	131,854	22,186	349,059	641,694	270,449
White metal alloys	2	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	3	30,794	10	6,647	837	3,962	15,280	10,481
Electrical apparatus and supplies	8	343,489	111	119,971	11,891	209,190	462,642	241,561
Miscellaneous non-ferrous metal products	1	.....	.....	.....	.....	.....	.....	.....
Non-ferrous metal smelting and refining	1	.....	.....	.....	.....	.....	.....	.....
Total	**19**	**5,042,353**	**332**	**466,636**	**46,217**	**6,154,527**	**8,049,669**	**1,848,925**
SASKATCHEWAN AND ALBERTA:—								
Brass and copper products	1	.....	.....	.....	.....	.....	.....	.....
Jewellery and silverware	3	8,766	4	4,966	142	10,485	21,697	11,070
Electrical apparatus and supplies	4	97,018	21	21,917	2,274	21,795	58,796	34,727
Non-ferrous metal smelting and refining	1	.....	.....	.....	.....	.....	.....	.....
Total	**9**	**2,276,514**	**106**	**157,029**	**9,904**	**3,141,249**	**4,731,521**	**1,580,368**
BRITISH COLUMBIA:—								
Brass and copper products	10	191,258	79	89,416	7,024	59,557	203,918	137,337
White metal alloys	3	259,325	19	22,895	3,255	152,460	199,635	43,920
Jewellery and silverware	8	78,167	54	62,454	1,341	46,071	136,226	88,814
Electrical apparatus and supplies	10	189,641	75	95,883	5,110	111,769	2263,851	146,972
Non-ferrous metal smelting and refining	1	.....	.....	.....	.....	.....	.....	.....
Total	**32**	**28,134,790**	**3,318**	**4,594,251**	**2,687,847**	**20,068,384**	**27,800,388**	**5,044,157**
Canada, 1936:—								
Aluminium products	**19**	**3,884,241**	**1,101**	**1,194,999**	**119,320**	**3,799,688**	**5,438,281**	**1,519,273**
Brass and copper products	**126**	**22,890,531**	**4,596**	**5,293,457**	**567,108**	**14,182,328**	**24,947,467**	**10,198,031**
White metal alloys	**35**	**5,882,190**	**894**	**1,017,732**	**99,860**	**4,356,439**	**6,905,041**	**2,448,742**
Jewellery and silverware	**113**	**8,834,230**	**2,959**	**3,354,169**	**112,126**	**5,022,990**	**10,684,548**	**5,549,432**
Electrical apparatus and supplies	**186**	**79,794,524**	**17,037**	**19,501,882**	**1,187,942**	**30,484,468**	**72,288,548**	**40,616,138**
Miscellaneous non-ferrous metal products	**18**	**1,177,641**	**333**	**382,902**	**14,671**	**333,438**	**1,163,555**	**815,446**
Non-ferrous metal smelting and refining	**14**	**143,858,717**	**10,015**	**14,346,050**	**3,856,490**	**154,604,285**	**229,737,420**	**71,276,645**
Total	**511**	**266,322,074**	**36,935**	**45,091,191**	**5,957,517**	**212,783,636**	**351,164,860**	**132,423,707**

Table 5.—Capital Employed in the Manufactures of the Non-Ferrous Metals in Canada, by Industries and by Provinces, 1935

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*	359,898	199,270	136,756	695,924
QUEBEC:—				
Aluminium products	525,310	103,602	119,642	748,554
Brass and copper products	5,346,086	1,224,050	1,082,978	7,653,414
White metal alloys	451,707	235,631	437,413	1,124,751
Jewellery and silverware	668,885	636,621	381,833	1,687,339
Electrical apparatus	11,386,453	4,416,980	3,631,385	19,434,818
Miscellaneous non-ferrous metal products	81,049	24,730	42,282	148,061
Non-ferrous metal smelting and refining	18,697,058	1,835,395	3,038,703	23,571,156
Total	37,156,548	8,477,009	8,734,236	54,367,793
ONTARIO:—				
Aluminium products	1,711,972	707,120	624,110	3,043,202
Brass and copper products	7,150,918	2,855,239	2,807,722	12,813,879
White metal alloys	2,220,773	841,905	880,520	3,943,198
Jewellery and silverware	2,451,450	2,057,480	1,641,489	6,150,419
Electrical apparatus	24,835,734	12,319,630	18,293,186	55,448,550
Miscellaneous non-ferrous metal products	370,167	284,791	365,697	1,020,655
Non-ferrous metal smelting and refining	60,243,822	12,555,775	2,824,044	75,623,641
Total	98,984,836	31,621,940	27,436,768	158,043,544
MANITOBA:—				
Brass and copper products	271,524	66,315	125,067	462,906
Electrical apparatus	180,696	104,090	77,788	362,574
Total*	3,335,641	1,271,989	1,014,631	5,622,261
ALBERTA AND SASKATCHEWAN:—				
Electrical apparatus	31,996	24,581	10,478	67,055
Total*	861,648	359,963	272,138	1,493,749
BRITISH COLUMBIA:—				
Brass and copper products	70,547	20,945	29,968	121,460
Jewellery and silverware	35,882	23,544	21,920	81,346
Electrical apparatus	94,609	52,650	28,899	176,158
Total*	20,725,697	11,694,603	8,982,396	41,402,696
Canada:—				
Aluminium products	2,237,282	810,722	743,752	3,791,756
Brass and copper products	13,321,881	4,434,391	4,237,566	21,993,841
White metal alloys	2,894,343	1,214,255	1,413,123	5,521,720
Jewellery and silverware	3,180,470	2,719,857	2,053,003	7,953,330
Electrical apparatus	36,531,388	16,917,931	22,046,836	75,499,255
Miscellaneous non-ferrous metal products	460,716	310,421	408,629	1,179,766
Non-ferrous metal smelting and refining	102,795,189	27,217,194	15,673,916	145,686,299
Total	161,424,268	53,624,774	46,576,925	261,625,967

*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, 1936

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*	**303,774**	**226,573**	**121,674**	**652,021**
QUEBEC:—				
Aluminium products	484,880	111,175	169,772	765,827
Brass and copper products	5,064,493	1,248,890	1,097,579	7,410,962
White metal alloys	428,449	273,973	510,040	1,212,462
Jewellery and silverware	590,474	585,442	300,343	1,476,259
Electrical apparatus	11,877,928	4,506,322	4,369,704	20,753,954
Miscellaneous non-ferrous metal products	78,249	29,797	44,037	152,083
Non-ferrous metal smelting and refining	22,116,060	2,275,909	3,525,493	27,917,462
Total	**40,640,533**	**9,031,508**	**10,016,968**	**59,689,009**
ONTARIO:—				
Aluminium products	1,758,754	720,125	639,535	3,118,414
Brass and copper products	7,239,893	3,277,515	3,386,178	13,903,586
White metal alloys	2,237,720	822,953	1,170,802	4,231,475
Jewellery and silverware	2,788,649	2,410,681	2,040,013	7,239,343
Electrical apparatus	24,525,076	15,663,620	18,211,626	58,400,322
Miscellaneous non-ferrous metal products	354,572	346,612	318,374	1,019,558
Non-ferrous metal smelting and refining	69,566,421	11,038,044	2,010,224	82,614,689
Total	**108,471,085**	**34,279,550**	**27,776,752**	**170,527,387**
MANITOBA:—				
Brass and copper products	276,187	106,598	140,545	523,330
Electrical apparatus	165,652	104,448	73,389	343,489
Total*	**2,763,805**	**1,221,169**	**1,057,379**	**5,042,353**
ALBERTA AND SASKATCHEWAN:—				
Electrical apparatus	58,922	26,637	11,459	97,018
Total*	**1,269,231**	**520,631**	**486,662**	**2,276,514**
BRITISH COLUMBIA:—				
Brass and copper products	97,110	25,150	68,998	191,258
Jewellery and silverware	25,788	27,217	25,162	78,167
Electrical apparatus	88,511	54,712	46,418	189,641
Total*	**7,967,407**	**9,600,740**	**11,466,643**	**28,134,790**
Canada:—				
Aluminium products	**2,243,634**	**831,300**	**809,307**	**3,884,241**
Brass and copper products	**13,103,886**	**4,901,785**	**4,884,860**	**22,890,531**
White metal alloys	**2,893,071**	**1,195,232**	**1,793,887**	**5,882,190**
Jewellery and silverware	**3,428,038**	**3,030,487**	**2,375,705**	**8,831,230**
Electrical apparatus	**36,720,989**	**20,355,739**	**22,717,796**	**79,794,524**
Miscellaneous non-ferrous metal products	**438,821**	**376,409**	**362,411**	**1,177,641**
Non-ferrous metal smelting and refining	**101,687,386**	**24,189,219**	**17,982,112**	**143,858,717**
Total	**160,515,825**	**54,880,171**	**50,926,078**	**266,322,074**

*Total includes also 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, 1935

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*	**59**	**13**	**195**	**14**	**281**	**97,056**	**137,830**	**234,886**
QUEBEC:—								
Aluminium products	12	2	81	1	96	37,789	62,486	100,275
Brass and copper products	200	43	830	89	1,162	388,094	849,474	1,237,568
White metal alloys	39	6	95	4	144	96,304	93,568	189,872
Jewellery and silverware	97	45	502	193	837	256,071	521,422	777,493
Electrical apparatus and supplies	935	319	1,962	689	3,905	2,374,756	2,432,675	4,807,431
Miscellaneous non-ferrous metal products	12	3	20	9	44	23,864	18,934	42,798
Non-ferrous metal smelting and refining	138	10	1,090	.....	1,238	298,381	1,424,603	1,722,984
Total	**1,433**	**428**	**4,580**	**985**	**7,426**	**3,475,259**	**5,403,162**	**8,878,421**
ONTARIO:—								
Aluminium products	119	35	671	77	902	268,410	720,802	989,212
Brass and copper products	421	115	1,970	144	2,650	972,539	2,002,088	2,974,627
White metal alloys	76	40	343	152	611	215,628	453,045	668,673
Jewellery and silverware	243	123	1,157	339	1,862	661,327	1,521,251	2,182,578
Electrical apparatus and supplies	1,941	752	6,477	2,284	11,454	4,069,864	7,925,282	12,595,146
Miscellaneous non-ferrous metal products	54	22	147	40	263	133,746	171,925	305,671
Non-ferrous metal smelting and refining	254	48	3,907	.....	4,209	928,348	5,365,666	6,294,014
Total	**3,108**	**1,135**	**14,672**	**3,036**	**21,951**	**7,849,862**	**18,160,059**	**26,009,921**
MANITOBA:—								
Brass and copper products	20	.....	58	.....	78	56,434	54,908	111,342
Electrical apparatus and supplies	26	6	70	1	103	61,474	44,029	105,503
Total*	**64**	**9**	**252**	**2**	**327**	**153,264**	**298,943**	**452,207**
ALBERTA AND SASKATCHEWAN:—								
Electrical apparatus and supplies	5	1	10	.....	16	7,147	11,062	18,209
Total*	**15**	**1**	**63**	.....	**79**	**35,088**	**75,889**	**110,977**
BRITISH COLUMBIA:—								
Brass and copper products	9	3	44	.....	56	19,830	44,771	64,601
Jewellery and silverware	10	.....	41	.....	51	10,766	44,691	55,457
Electrical apparatus and supplies	20	4	45	1	70	31,000	36,920	67,920
Total*	**458**	**71**	**3,019**	**1**	**3,549**	**879,589**	**3,749,476**	**4,629,065**
Canada, 1935:—								
Aluminium products	**131**	**37**	**752**	**78**	**998**	**306,199**	**782,288**	**1,089,487**
Brass and copper products	**712**	**172**	**3,115**	**247**	**4,246**	**1,548,322**	**3,101,590**	**4,649,912**
White metal alloys	**123**	**52**	**466**	**156**	**797**	**336,919**	**574,725**	**911,644**
Jewellery and silverware	**359**	**171**	**1,707**	**533**	**2,770**	**939,633**	**2,092,717**	**3,032,350**
Electrical apparatus and supplies	**2,927**	**1,082**	**8,565**	**2,975**	**15,549**	**7,144,241**	**10,450,518**	**17,594,759**
Miscellaneous non-ferrous metal products	**68**	**25**	**167**	**49**	**309**	**159,110**	**190,859**	**349,969**
Non-ferrous metal smelting and refining	**817**	**118**	**8,009**	.....	**8,944**	**2,055,694**	**10,631,662**	**12,687,356**
Total	**5,137**	**1,657**	**22,781**	**4,038**	**33,613**	**12,490,118**	**27,825,359**	**40,315,477**

*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, 1936

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*	**38**	**4**	**224**	**18**	**284**	**58,314**	**171,046**	**229,360**
QUEBEC:—								
Aluminium products	20	4	141	.....	165	38,934	113,456	152,390
Brass and copper products	234	45	919	84	1,282	481,916	1,012,830	1,494,746
White metal alloys	41	9	101	3	154	103,132	95,119	198,251
Jewellery and silverware	85	42	472	182	781	246,990	519,013	766,003
Electrical apparatus and supplies	967	345	2,109	779	4,200	2,398,051	2,733,279	5,131,330
Miscellaneous non-ferrous metal products	8	4	23	8	43	21,823	21,135	42,958
Non-ferrous metal smelting and refining	170	20	1,262	.....	1,452	363,355	1,665,677	2,029,032
Total	**1,525**	**469**	**5,027**	**1,056**	**8,077**	**3,654,201**	**6,160,509**	**9,814,710**
ONTARIO:—								
Aluminium products	130	38	671	97	936	308,810	733,799	1,042,609
Brass and copper products	479	131	2,073	152	2,835	1,021,823	2,287,894	3,309,717
White metal alloys	82	42	403	173	700	231,334	539,840	771,174
Jewellery and silverware	281	137	1,292	397	2,107	756,304	1,756,091	2,512,395
Electrical apparatus and supplies	2,186	814	7,130	2,499	12,629	5,283,867	8,848,364	14,132,231
Miscellaneous non-ferrous metal products	72	27	146	43	288	162,409	176,553	338,962
Non-ferrous metal smelting and refining	301	52	4,970	.....	5,323	1,044,494	6,677,623	7,722,117
Total	**3,531**	**1,241**	**16,685**	**3,361**	**24,818**	**8,809,041**	**21,920,164**	**29,829,205**
MANITOBA:—								
Brass and copper products	24	.....	65	.....	89	68,986	62,868	131,854
Electrical apparatus and supplies	28	7	74	2	111	70,267	49,704	119,971
Total*	**73**	**10**	**247**	**2**	**332**	**178,050**	**288,586**	**466,636**
ALBERTA AND SASKATCHEWAN:—								
Electrical apparatus and supplies	7	1	13	.....	21	9,397	12,520	21,917
Total*	**21**	**1**	**84**	.....	**106**	**45,423**	**111,606**	**157,029**
BRITISH COLUMBIA:—								
Brass and copper products	8	3	67	1	79	17,322	72,094	89,416
Jewellery and silverware	10	.....	44	.....	54	11,071	51,383	62,454
Electrical apparatus and supplies	17	4	54	.....	75	42,372	53,511	95,883
Total*	**306**	**48**	**2,963**	**1**	**3,318**	**816,653**	**3,777,598**	**4,594,251**
Canada, 1936:—								
Aluminium products	**150**	**42**	**812**	**97**	**1,101**	**347,744**	**847,255**	**1,194,999**
Brass and copper products	**789**	**183**	**3,369**	**255**	**4,596**	**1,669,668**	**3,623,789**	**5,293,457**
White metal alloys	**133**	**55**	**530**	**176**	**894**	**356,933**	**660,799**	**1,017,732**
Jewellery and silverware	**385**	**189**	**1,815**	**579**	**2,959**	**1,923,041**	**2,331,128**	**3,354,169**
Electrical apparatus and supplies	**3,205**	**1,171**	**9,381**	**3,280**	**17,037**	**7,803,954**	**11,697,928**	**19,501,882**
Miscellaneous non-ferrous metal products	**80**	**31**	**171**	**51**	**333**	**184,232**	**198,679**	**382,902**
Non-ferrous metal smelting and refining	**752**	**111**	**9,152**	.....	**10,015**	**2,176,110**	**12,169,940**	**14,346,050**
Total	**5,494**	**1,773**	**25,230**	**4,438**	**36,935**	**13,561,682**	**31,529,509**	**45,091,191**

*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, 1935

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	700	3,108	573	2,145	10,340	171	7,280	24,317
February	764	3,179	580	2,074	10,568	185	7,407	24,757
March	802	3,267	589	2,089	10,370	211	7,452	24,780
April	832	3,326	611	2,114	10,339	216	7,636	25,074
May	838	3,337	602	2,153	10,351	214	7,945	25,440
June	855	3,341	604	2,153	10,746	224	7,982	25,905
July	838	3,303	575	2,157	11,261	214	8,201	26,549
August	807	3,270	607	2,228	12,172	211	8,495	27,790
September	825	3,470	631	2,326	12,997	215	8,231	28,695
October	917	3,574	702	2,423	13,563	241	8,365	29,785
November	918	3,637	717	2,463	13,496	249	8,587	30,067
December	858	3,515	647	2,381	12,290	248	8,529	28,468
Average	**830**	**3,362**	**622**	**2,240**	**11,540**	**216**	**8,009**	**26,819**

Table 10.—Wage-Earners Employed in the Manufactures of the Non-Ferrous Metals in Canada, by Months and by Provinces, 1935

Months	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan and Alberta	British Columbia	Canada
	No.	No.	No.	No.	No.	No.	No.	No.
January	15	149	4,933	15,874	252	61	3,033	24,317
February	20	135	5,067	16,229	244	63	2,999	24,757
March	17	127	5,113	16,222	251	69	2,981	24,780
April	23	136	5,093	16,449	253	65	3,055	25,074
May	14	152	5,184	16,641	259	63	3,127	25,440
June	12	190	5,374	16,885	247	63	3,134	25,905
July	17	207	5,497	17,362	252	63	3,151	26,549
August	15	229	5,650	18,398	267	65	3,166	27,790
September	13	231	6,043	19,196	259	62	2,891	28,695
October	12	255	6,292	20,007	259	62	2,898	29,785
November	12	248	6,553	20,014	255	62	2,923	30,067
December	16	259	5,845	19,156	248	60	2,884	28,468
Average	**16**	**193**	**5,565**	**17,798**	**254**	**63**	**3,020**	**26,819**

Table 11.—Wage-Earners Employed in the Manufactures of the Non-Ferrous Metals in Canada, by Months and by Industries, 1936

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	829	3,363	595	2,210	11,455	200	8,660	27,312
February	807	3,489	627	2,232	11,405	202	8,544	27,306
March	785	3,579	640	2,258	11,487	235	8,665	27,649
April	818	3,627	655	2,278	11,493	210	8,694	27,775
May	844	3,680	662	2,351	12,162	218	8,858	28,775
June	961	3,731	667	2,330	12,859	222	8,912	29,682
July	1,023	3,640	694	2,312	13,215	220	9,406	30,510
August	958	3,500	701	2,408	13,367	223	9,606	30,763
September	933	3,641	760	2,546	13,843	227	9,626	31,576
October	929	3,640	805	2,609	14,003	239	9,623	31,848
November	1,020	3,726	824	2,654	13,731	240	9,542	31,737
December	986	3,806	813	2,588	13,289	207	9,669	31,358
Average	**909**	**3,624**	**706**	**2,384**	**12,661**	**222**	**9,152**	**29,668**

Table 12.—Wage-Earners Employed in the Manufactures of the Non-Ferrous Metals in Canada, by Months and by Provinces, 1936

Months	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan and Alberta	British Columbia	Canada
	No.	No.	No.	No.	No.	No.	No.	No.
January	14	245	5,448	18,501	218	79	2,807	27,312
February	14	250	5,296	18,651	241	81	2,773	27,306
March	14	269	5,287	18,939	244	82	2,814	27,619
April	18	267	5,400	18,888	247	81	2,874	27,775
May	16	257	5,954	19,320	245	83	2,900	28,775
June	15	248	6,227	19,915	244	83	2,950	29,682
July	16	207	6,462	20,484	244	87	3,010	30,510
August	15	197	6,279	20,846	258	85	3,088	30,763
September	14	179	6,723	21,167	264	87	3,142	31,576
October	16	187	6,721	21,436	276	89	3,123	31,848
November	13	178	6,652	21,485	276	89	3,044	31,737
December	21	230	6,540	21,188	269	90	3,020	31,358
Average	**16**	**226**	**6,083**	**20,046**	**249**	**84**	**2,964**	**29,668**

Table 13.—Power Equipment in Plants Engaged in the Manufacture of the Non-Ferrous Metals in Canada, by Kinds and by Industries, 1935

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*	Boilers
Aluminium products	No.	1			*1*	299	300		*299*	6
	H.P.	10			*10*	5,625	5,635		*5,625*	653
Brass and copper products	No.	13	3	1	*17*	1,426	1,443	15	*1,441*	34
	H.P.	1,530	18	25	*1,573*	23,601	25,174	340	*23,941*	3,354
White metal alloys	No.					357	357		*357*	3
	H.P.					3,598	3,598		*3,598*	130
Jewellery and silverware	No.					846	846		*846*	16
	H.P.					3,025	3,025		*3,025*	1,005
Electrical apparatus and supplies	No.	15	2	7	*24*	8,673	8,697	843	*9,516*	96
	H.P.	7,425	247	4,400	*12,072*	84,188	96,260	4,978	*89,166*	12,370
Miscellaneous non-ferrous metal products	No.					69	69		*69*	2
	H.P.					388	388		*388*	175
Non-ferrous metal smelting and refining	No.	39	39	10	*88*	4,985	5,073	879	*5,864*	60
	H.P.	19,831	2,283	14,035	*36,149*	246,698	282,847	17,149	*263,847*	27,826
Total	**No.**	**68**	**44**	**18**	*130*	**16,655**	**16,785**	**1,737**	*18,392*	**217**
	H.P.	**28,796**	**2,548**	**18,460**	*49,804*	**367,123**	**416,927**	**22,467**	*389,590*	**45,513**

Table 14.—Power Equipment in Plants Engaged in the Manufacture of the Non-Ferrous Metals in Canada, by Kinds and by Provinces, 1935

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*	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*	518	1,068		*518*	500
Quebec	No.	21	1	1	*23*	4,741	4,764	5	*4,746*	46
	H.P.	5,015	65	25	*5,105*	45,513	50,618	90	*45,603*	10,353
Ontario	No.	37	9	7	*53*	9,284	9,337	1,391	*10,675*	141
	H.P.	12,006	455	4,400	*16,861*	189,156	206,017	12,387	*201,543*	22,824
Manitoba	No.	5	19		*24*	223	247		*223*	6
	H.P.	2,580	1,392		*3,972*	4,671	8,643		*4,671*	2,300
Saskatchewan and Alberta	No.	1	5		*6*	62	68		*62*	1
	H.P.	645	348		*993*	1,190	2,183		*1,190*	200
British Columbia	No.	2	10	10	*22*	2,305	2,327	341	*2,646*	20
	H.P.	8,000	288	14,035	*22,323*	126,047	148,370	9,990	*136,037*	9,336
Total	**No.**	**68**	**44**	**18**	*130*	**16,655**	**16,785**	**1,737**	*18,392*	**217**
	H.P.	**28,796**	**2,548**	**18,460**	*49,804*	**367,123**	**416,927**	**22,467**	*389,590*	**45,513**

Table 15.—Power Equipment in Plants Engaged in the Manufacture of the Non-Ferrous Metals in Canada, by Kinds and by Industries, 1936

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*	Boilers
Aluminium products	No.	1	.....	.....	*1*	355	**356**	.....	*355*	5
	H.P.	10	.....	.....	*10*	6,434	**6,444**	.....	*6,434*	650
Brass and copper products	No.	13	2	1	*16*	1,469	**1,485**	23	*1,492*	35
	H.P.	1,530	83	25	*1,638*	24,022	**25,660**	320	*24,342*	3,284
White metal alloys	No.	.....	.....	.....	.....	434	**434**	.....	*434*	2
	H.P.	.....	.....	.....	.....	4,074	**4,074**	.....	*4,074*	83
Jewellery and silverware	No.	.....	.....	.....	.....	961	**961**	.....	*961*	18
	H.P.	.....	.....	.....	.....	3,408	**3,408**	.....	*3,408*	1,045
Electrical apparatus and supplies	No.	22	2	7	*31*	9,116	**9,147**	986	*10,102*	106
	H.P.	7,279	272	4,400	*11,951*	60,160	**72,111**	5,134	*65,294*	13,442
Miscellaneous non-ferrous metal products	No.	.....	.....	.....	.....	70	**70**	.....	*70*	2
	H.P.	.....	.....	.....	.....	394	**394**	.....	*394*	175
Non-ferrous metal smelting and refining	No.	36	36	11	*83*	5,685	**5,768**	617	*6,302*	62
	H.P.	14,610	2,353	51,125	*68,088*	280,950	**349,038**	8,456	*289,406*	28,391
Total	**No.**	**72**	**40**	**19**	*131*	**18,090**	**18,221**	**1,626**	*19,716*	**230**
	H.P.	**23,429**	**2,708**	**55,550**	*81,687*	**379,442**	**461,129**	**13,910**	*393,352*	**47,070**

Table 16.—Power Equipment in Plants Engaged in the Manufacture of the Non-Ferrous Metals in Canada, by Kinds and by Provinces, 1936

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*	Boilers
Nova Scotia	No.	.....	.....	.....	.....	4	**4**	.....	*4*	.....
	H.P.	.....	.....	.....	.....	23	**23**	.....	*23*	.....
New Brunswick	No.	2	.....	.....	*2*	35	**37**	.....	*35*	3
	H.P.	550	.....	.....	*550*	511	**1,061**	.....	*511*	500
Quebec	No.	22	1	12	*35*	5,237	**5,272**	43	*5,280*	47
	H.P.	8,515	65	51,150	*59,730*	52,316	**112,046**	602	*52,918*	13,600
Ontario	No.	42	6	7	*55*	10,084	**10,139**	1,583	*11,667*	155
	H.P.	11,139	513	4,400	*16,052*	191,873	**207,925**	13,308	*205,181*	24,155
Manitoba	No.	4	16	.....	*20*	210	**230**	.....	*210*	5
	H.P.	2,161	1,165	.....	*3,326*	4,031	**7,357**	.....	*4,031*	1,440
Saskatchewan and Alberta	No.	2	8	.....	*10*	59	**69**	.....	*59*	3
	H.P.	1,064	575	.....	*1,639*	1,847	**3,486**	.....	*1,847*	1,080
British Columbia	No.	.....	9	.....	*9*	2,461	**2,470**	.....	*2,461*	17
	H.P.	.....	390	.....	*390*	128,841	**129,231**	.....	*128,841*	6,295
Total	**No.**	**72**	**40**	**19**	*131*	**18,090**	**18,221**	**1,626**	*19,716*	**230**
	H.P.	**23,429**	**2,708**	**55,550**	*81,687*	**379,442**	**461,129**	**13,910**	*393,352*	**47,070**

Table 17.—Fuel and Electricity used in the Manufactures 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	.....	50	2,245	2,246	148,775
Value $	.....	455	13,558	19,891	12,167
Brass and copper products—					
Quantity	961	5,615	12,912	4,296	1,494,8[illegible]
Value $	9,797	29,814	69,409	37,211	111,2[illegible]
White metal alloys—					
Quantity	288	253	1,998	770	198,3[illegible]
Value $	2,175	1,777	14,063	6,272	14,7[illegible]
Jewellery and silverware—					
Quantity	180	813	4,863	72	23,405
Value $	2,017	5,496	31,444	495	1,970
Electrical apparatus and supplies—					
Quantity	2,943	20,927	40,107	1,046	1,103,498
Value $	23,562	115,816	222,228	10,913	82,735
Miscellaneous non-ferrous metal products—					
Quantity	73	.....	679	12	.....
Value $	691	.....	4,266	141	.....
Non-ferrous metal smelting and refining—*					
Quantity	70	8,226	23,165	2,167	3,241,265
Value $	1,148	40,146	143,050	22,782	130,583
Total—					
Quantity	**4,515**	**35,884**	**85,969**	**10,609**	**6,210,169**
Value $	**39,390**	**193,504**	**498,018**	**97,705**	**353,422**

*Coke and coal charged to non-ferrous smelting furnaces have not been included under fuel. For details of these charges see Table 123.

Table 18.—Fuel and Electricity used in the Manufactures 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	15	37	.....	.....	350
Value $	255	367	.....	.....	38
New Brunswick—					
Quantity	.....	1,953	.....	169	102,153
Value $	.....	7,731	.....	2,234	8,172
Quebec—					
Quantity	1,997	14,403	5,336	4,225	2,117,531
Value $	17,296	79,829	30,623	36,032	108,820
Ontario—					
Quantity	2,503	11,057	80,348	5,498	2,009,625
Value $	21,839	64,251	464,210	50,124	155,279
Manitoba—					
Quantity	.....	681	285	190	80,925
Value $	.....	4,056	3,185	2,440	8,440
Saskatchewan—					
Quantity	.....	39	.....	.....	.....
Value $	.....	298	.....	.....	.....
Alberta—					
Quantity	.....	2	.....	.....	.....
Value $	.....	9	.....	.....	.....
British Columbia—					
Quantity	.....	7,712	.....	527	1,899,585
Value $	.....	36,963	.....	6,875	72,673
Total—					
Quantity	**4,515**	**35,884**	**85,969**	**10,609**	**6,210,169**
Value $	**39,390**	**193,504**	**498,018**	**97,705**	**353,422**

See note to Table 17.

Non-Ferrous Metals in Canada, by Kinds and by Industries, 1935

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.
1,092	1,507	10,102	.....	4	.....	14,284,138	.....	.....
300	286	7,476	.....	40	.....	74,480	128,653	.....
5,558	1,121	19,691	16,646	473	.....	22,659,466	.....	.....
1,214	200	15,475	5,380	2,301	338	261,772	544,147	.....
6,600	451	23,751	3,118	34	.....	2,443,020	.....	.....
1,022	78	6,677	1,811	204	.....	34,693	83,503	.....
3,312	1,337	15,587	76	29	.....	3,248,802	.....	.....
526	220	13,532	56	161	60	43,517	99,594	.....
21,912	2,994	106,474	12,720	128	.....	51,141,266	.....	10,873,000
5,361	527	83,440	8,087	629	446	517,057	1,070,801	.....
5,439	.....	2,193	259	1	.....	393,027	.....	.....
1,212	.....	1,892	195	7	.....	6,326	14,730	.....
61,556	5,728	61,674	131	204	.....	1,054,483,030	.....	18,600,918
11,501	1,247	8,180	107	1,482	7,694	3,408,455	3,776,381	.....
105,469	**13,138**	**239,472**	**32,950**	**873**	.....	**1,148,652,749**	.....	**29,473,918**
21,236	**2,558**	**136,678**	**15,636**	**4,824**	**8,538**	**4,346,300**	**5,717,809**	.....

Non-Ferrous Metals in Canada, by Kinds and by Provinces, 1935

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.
10	.....	.....	.....	.....	.....	14,945	.....	.....
3	.....	.....	.....	.....	181	679	1,523	.....
.....	.....	22	.....	.....	.....	345,530	.....	.....
.....	.....	48	.....	.....	.....	5,125	23,310	.....
31,362	5,158	37,547	.....	124	.....	207,318,951	.....	.....
8,091	977	35,853	.....	817	217	755,691	1,074,246	.....
73,775	7,356	136,832	17,079	276	.....	329,784,857	.....	22,416,510
13,045	1,413	88,978	11,288	1,228	2,504	1,392,304	2,266,463	.....
192	.....	2,276	.....	354	.....	27,521,553	.....	.....
54	.....	2,343	.....	2,115	50	28,935	51,618	.....
.....	.....	53	.....	22	.....	6,704,100	.....	.....
.....	.....	53	.....	220	.....	4,130	4,701	.....
20	.....	.....	15,871	.....	.....	86,894	.....	.....
7	.....	.....	4,348	.....	.....	2,124	6,488	.....
110	624	63,742	.....	97	.....	576,875,919	.....	7,057,408
36	168	9,403	.....	444	5,586	2,157,312	2,289,460	.....
105,469	**13,138**	**239,472**	**32,950**	**873**	.....	**1,148,652,749**	.....	**29,473,918**
21,236	**2,558**	**136,678**	**15,636**	**4,824**	**8,538**	**4,346,300**	**5,717,809**	.....

Table 19.—Fuel and Electricity used in the Manufactures 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	1	83	2,230	2,717	113,446
Value $	7	724	13,219	20,682	9,263
Brass and copper products—					
Quantity	1,398	5,306	12,493	4,536	1,524,698
Value $	15,140	30,722	67,665	36,733	115,559
White metal alloys—					
Quantity	56	737	2,625	645	190,768
Value $	665	5,090	18,993	5,771	14,777
Jewellery and silverware—					
Quantity	253	1,031	4,797	17	36,705
Value $	2,719	7,057	30,819	173	4,725
Electrical apparatus and supplies—					
Quantity	3,974	23,692	43,804	1,316	1,319,548
Value $	28,002	133,260	250,729	13,801	90,676
Miscellaneous non-ferrous metal products—					
Quantity	89	.....	607	12	4,140
Value $	799	.....	3,673	97	414
Non-ferrous metal smelting and refining—*					
Quantity	52	12,256	27,320	1,142	76,060
Value $	737	61,194	161,631	12,616	5,334
Total—					
Quantity	**5,823**	**43,105**	**93,876**	**10,385**	**3,265,365**
Value $	**48,069**	**238,047**	**546,729**	**89,873**	**240,748**

*Coke and coal charged to non-ferrous smelting furnaces have not been included under fuel. For details of these charges see Table 123.

Table 20.—Fuel and Electricity used in the Manufactures 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	40	24	.....	.....	350
Value $	600	240	.....	.....	38
New Brunswick—					
Quantity	.....	1,604	.....	.....	97,306
Value $	.....	7,378	.....	.....	7,851
Quebec—					
Quantity	2,721	14,905	5,855	3,142	899,327
Value $	23,323	84,466	37,160	23,359	58,772
Ontario—					
Quantity	3,062	14,429	87,612	6,894	2,130,095
Value $	24,146	85,859	505,065	61,912	161,486
Manitoba—					
Quantity	.....	853	409	166	98,060
Value $	.....	4,421	4,504	2,245	10,149
Saskatchewan—					
Quantity	.....	.....	.....	.....	.....
Value $	.....	.....	.....	.....	.....
Alberta—					
Quantity	.....	.....	.....	6	.....
Value $	.....	.....	.....	69	.....
British Columbia—					
Quantity	.....	11,290	.....	177	40,227
Value $	.....	55,683	.....	2,288	2,452
Total—					
Quantity	**5,823**	**43,105**	**93,876**	**10,385**	**3,265,365**
Value $	**48,069**	**238,047**	**546,729**	**89,873**	**240,748**

See note to Table 19.

Non-Ferrous Metals in Canada, by Kinds and by Industries, 1936

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.
653	1,869	8,734	872	6	.....	11,083,653	.....	.....
199	354	7,421	506	53	12	66,880	119,320	.....
2,263	1,233	18,296	18,115	387	.....	25,195,446	.....	118,600
473	238	13,223	6,762	2,185	1,821	276,587	567,108	.....
10,925	447	31,980	5,484	37	.....	3,103,750	.....	.....
4,623	76	9,229	3,355	240	.....	40,041	99,860	.....
4,313	718	18,291	396	27	.....	3,489,817	.....	.....
833	104	14,948	362	122	92	50,172	112,126	.....
11,516	5,909	123,263	23,546	135	.....	56,566,091	.....	9,772,453
2,265	988	84,972	14,486	681	468	567,614	1,187,942	.....
4,056	.....	2,644	437	.....	.....	405,447	.....	.....
872	.....	2,320	218	.....	.....	6,278	14,671	.....
82,557	2,871	653	370	9	.....	1,240,494,288	.....	29,851,136
16,274	645	1,325	260	28	882	3,595,564	3,856,490	.....
116,283	**13,047**	**203,861**	**49,220**	**601**	.....	**1,310,338,492**	.....	**39,742,189**
22,539	**2,405**	**133,438**	**25,949**	**3,309**	**3,275**	**4,603,136**	**5,957,517**	.....

Non-Ferrous Metals in Canada, by Kinds and by Provinces, 1936

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.
.....	15	.....	.....	.....	.....	14,000	.....	.....
.....	4	.....	.....	.....	200	660	1,742	.....
.....	.....	22	.....	.....	.....	448,410	.....	.....
.....	.....	45	.....	.....	.....	6,525	21,799	.....
19,618	6,242	45,117	.....	121	.....	87,165,252	.....	16,297,889
4,927	1,229	36,382	.....	761	527	546,285	817,191	.....
95,631	6,790	153,251	32,376	184	.....	357,479,003	.....	23,444,300
17,332	1,172	92,579	21,364	985	2,358	1,398,559	2,372,817	.....
136	.....	2,656	.....	246	.....	20,748,345	.....	.....
40	.....	2,494	.....	1,366	.....	20,998	46,217	.....
.....	.....	39	.....	.....	.....	9,819,490	.....	.....
.....	.....	39	.....	.....	.....	3,093	3,132	.....
.....	.....	.....	16,844	.....	.....	92,460	.....	.....
.....	.....	.....	4,585	.....	190	1,928	6,772	.....
898	.....	2,776	.....	50	.....	864,571,532	.....	.....
240	.....	1,899	.....	197	.....	2,625,088	2,687,847	.....
116,283	**13,047**	**203,861**	**49,220**	**601**	.....	**1,310,338,492**	.....	**39,742,189**
22,539	**2,405**	**133,438**	**25,949**	**3,309**	**3,275**	**4,603,136**	**5,957,517**	.....

Table 21.—Size of Establishments according to Production, Number of Employees and Capital Employed, 1935 and 1936

—	1935				1936			
	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 $5,000	68	481,196	143	211,138	52	313,859	115	140,991
$ 5,000-$ 10,000	54	647,832	202	388,957	63	542,204	164	449,158
$ 10,001-$ 25,000	87	1,709,797	619	1,486,534	88	1,886,270	635	1,501,051
$ 25,001-$ 50,000	76	2,990,060	887	2,676,658	61	2,782,184	699	2,157,254
$ 50,001-$ 100,000	53	4,162,440	1,117	3,763,719	68	4,531,892	1,458	4,681,862
$100,001-$ 250,000	63	11,220,816	2,795	10,112,232	66	10,258,288	2,351	10,482,073
$250,001-$ 500,000	46	17,090,582	4,146	16,613,601	45	15,464,321	3,887	15,677,880
$500,001-$1,000,000	26	19,882,120	3,573	17,398,502	34	22,374,326	4,636	23,063,370
Over $1,000,000	31	203,441,124	20,131	235,871,909	34	208,168,730	22,990	293,011,221
Total	**504**	**261,625,967**	**33,613**	**288,523,250**	**511**	**266,322,074**	**36,935**	**351,164,860**
(b) Number of Employees								
1 or 2	70	572,228	107	313,573	64	407,961	101	290,095
3- 10	179	4,244,719	1,049	4,817,935	179	4,541,825	1,071	5,059,277
11- 20	77	4,544,616	1,166	4,827,681	73	4,744,681	1,075	4,926,812
21- 50	75	12,566,409	2,528	15,821,255	82	13,684,042	2,639	20,960,017
51-100	42	15,767,731	3,327	17,920,745	46	18,523,653	3,353	26,224,687
101-200	29	26,145,767	3,797	23,830,902	34	24,480,063	4,673	21,023,163
201-500	19	44,214,395	5,399	57,334,614	20	39,904,653	5,807	66,681,007
Over 500	13	153,570,102	16,240	163,656,545	13	160,035,190	18,216	205,999,802
Total	**504**	**261,625,967**	**33,613**	**288,523,250**	**511**	**266,322,074**	**36,935**	**351,164,860**
(c) Capital Employed								
Under $25,000	220	2,275,509	1,177	3,242,701	207	2,101,007	1,097	2,965,546
$ 25,000-$ 100,000	116	5,689,214	1,786	6,309,492	128	5,988,544	2,129	7,475,413
$ 100,001-$ 500,000	108	24,233,672	6,707	28,942,970	111	24,628,720	6,856	31,247,986
$ 500,001-$1,000,000	26	18,073,313	3,305	17,361,497	31	21,055,854	3,816	26,201,067
$1,000,001-$5,000,000	22	42,842,698	5,954	63,686,200	23	45,999,684	6,849	73,110,039
Over $5,000,000	12	168,511,561	14,684	168,980,390	11	166,548,265	16,188	210,164,809
Total	**504**	**261,625,967**	**33,613**	**288,523,250**	**511**	**266,322,074**	**36,935**	**351,164,860**

Table 22.—Alphabetical List of Materials Used in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1935 and 1936

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 30)	Unit of measure	1935		1936	
			Quantity	Cost at works	Quantity	Cost at works
				$		$
Acid, sulphuric	5	lb.	3,540,443	58,714	3,677,518	60,391
Aluminium—						
Castings	1-2-5	lb.	579,330	292,073	484,918	249,118
Ingots	1-2-5	lb.	14,798,006	2,667,466	17,084,740	3,075,378
Punchings	5	lb.	50,960	29,719	42,306	27,218
Rods and bars	5	lb.	318,424	42,821	508,417	91,758
Scrap	2-3	lb.	1,341,175	179,125	2,439,564	348,855
Sheets and circles for making aluminium ware	1	lb.	1,448,746	427,055	1,399,079	374,271
Sheets	2-3-5-6	lb.	1,030,253	245,128	1,457,647	325,763
Other and unclassified	1-2-5	lb.	91,769	29,997	534,043	190,512
Ammonium chloride (sal ammoniac)	5	lb.	968,571	30,584	1,046,121	33,078
Antimony	3-5	lb.	726,113	88,315	697,795	82,047
Argon	5	cu. ft.	114,958	51,685	121,955	53,006
Asbestos—						
Board	5	lb.	122,111	20,175	147,311	21,651
Yarn	5	lb.	61,018	18,040	87,693	26,626
Tape	5	lb.	8,481	5,738	14,922	10,829

Table 22.—Alphabetical List of Materials Used in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1935 and 1936—(continued)

Materials	Industry number (see list on page 30)	Unit of measure	1935		1936	
			Quantity	Cost at works	Quantity	Cost at works
				$		$
Babbitt	3	lb.	2,207,199	454,439	2,193,573	198,991
Bakelite, all forms	3-5	...	...	148,439	...	207,021
Battery boxes	5	No.	630,262	329,031	685,206	340,404
Battery separators, wood	5	...	...	154,273	...	157,828
Brass—						
Bars and rods	2-5	lb.	1,202,469	183,112	1,675,177	264,085
Castings	2-5	lb.	1,062,656	272,798	1,170,456	325,140
Ingots	2	lb.	884,686	65,792	1,100,029	87,853
Plates and sheets	2-4-5	lb.	...	193,628	907,495	241,467
Pipe and tubing	2-5	lb.	395,595	76,446	476,557	103,320
Scrap	2-3	lb.	8,538,439	533,516	8,488,907	585,837
Wire	2	lb.	578,879	146,271	683,930	174,184
Lamp bases	5	...	...	152,753	...	249,589
Screws	5	...	...	40,935	...	60,746
Other and unclassified	2-5-6	lb.	...	200,616	1,034,636	215,044
Britannia metal, including blanks for plating	1-4	...	...	66,676	...	76,776
Bronze—						
Ingots	2	lb.	586,248	46,234	920,154	61,549
Scrap	2	lb.	11,503,058	698,468	12,193,208	917,363
Bars and rods	2-5	lb.	273,194	46,749	342,926	54,834
Plates and sheets	2-5	lb.	236,897	75,174	183,499	57,299
Pipe and tubing	2-5	lb.	4,015	926	15,747	1,496
Wire	2	lb.	542,280	216,848	693,127	267,086
Castings	2-5	lb.	138,470	30,988	307,210	74,571
Other and unclassified	2	lb.	...	18,309	131,400	26,107
Carbon plates, blanks and brushes	5	...	...	93,316	...	86,331
Carbon electrodes	5	...	...	58,952	...	71,688
Celluloid	4	...	...	14,551	...	13,095
Copper—						
Castings	2-5	lb.	64,275	16,163	103,816	25,405
Ingots, billets, slabs, etc	2	lb.	75,018,643	6,250,464	99,560,824	8,892,855
Rods and bars	2-5	lb.	22,889,523	1,923,109	25,745,231	2,505,608
Tubing and pipe	2-5	lb.	479,308	62,741	694,990	147,825
Scrap	2-3-5	lb.	4,890,524	377,938	5,626,576	482,125
Sheets and plates	1-2-3-4-5	lb.	1,349,312	241,384	1,482,708	278,812
Wire, bare	2-5	lb.	3,924,805	497,797	4,153,349	588,823
Wire, enamelled	5	...	...	285,760	...	369,796
Wire, other, insulated	5	...	...	422,431	...	637,391
Other and unclassified	2-3-6	lb.	...	7,326	1,902,305	158,031
Cork sheet	5	...	...	9,036	...	17,846
Cotton and linen yarns	5	...	...	511,954	...	572,996
Cotton sheets, tapes and webbings	5	...	...	86,366	...	88,051
Dental sundries	4	...	...	4,661	...	5,312
Drosses	3	lb.	3,700,594	83,289	5,434,670	177,556
Electrical apparatus purchased	5	...	...	1,470,668	...	1,553,255
Fibre rod, sheet, tubing	5	...	...	87,748	...	107,654
Foundry facings	2	lb.	219,176	6,670	196,349	6,188
Flatware (butter knives, salad servers, etc.)	4	...	...	1,910	...	3,072
Frit for enamelling	5	lb.	293,494	24,707	462,022	38,384
Glass bulbs, tubing and cane	5	...	...	576,403	...	585,611
Glass liners	4	...	...	88,115	...	95,839
Gold, fine	4	...	...	820,453	...	774,385
Gold, old and scrap, for refining	4	...	...	844,902	...	1,047,715
Gold alloys	4	...	...	27,231	...	49,062
Gold-filled wire and stock	4	...	...	132,174	...	121,517
Insulating varnishes, japans, lacquers	5	...	...	207,262	...	120,668
Insulating waxes	5	...	...	82,907	...	106,786
Insulators, porcelain	5	...	...	253,362	...	317,804
Iron and steel—						
Pig iron	2-5	long ton	3,419	67,410	2,518	62,865
Scrap iron and steel	2-5	short ton	1,990	20,262	2,058	23,740
Iron castings	2-5	short ton	4,078	515,857	4,994	595,440
Steel castings	2-5	short ton	505	87,484	230	50,134
Steel forgings	5	short ton	587	69,279	396	44,578
Steel rods and bars	2-5-6	short ton	2,631	285,405	2,879	318,837
Iron and steel pipe	5	short ton	4,285	434,253	5,488	548,883
Steel sheets and strips	1-2-5-6	short ton	14,528	1,235,625	...	1,573,800
Steel wire	1-2-5-6	...	...	224,620	...	293,158
Structural steel	5	long ton	1,453	99,377	2,100	128,814
Bolts, nuts and screws	5	...	...	154,793	...	214,669
Steel stampings	5	...	...	...	...	182,878
Other iron and steel	1-2-5-6	...	...	238,616	...	237,679
Jewellers' findings, waste and scrap	4	...	...	265,656	...	422,837

Table 22.—Alphabetical List of Materials Used in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1935 and 1936—(concluded)

Materials	Industry number (see list on page 30)	Unit of measure	1935		1936	
			Quantity	Cost at works	Quantity	Cost at works
				$		$
Lead—						
Pig	2-3-5	lb.	26,074,201	956,378	28,989,521	1,248,920
Scrap, battery plates	3	lb.	9,114,254	171,097	9,111,992	211,815
Scrap, other	2-3-5	lb.	3,072,794	101,860	2,831,450	107,895
Sheets	5	lb.	9,926	754	18,614	1,714
Other	2-5	lb.	777,317	34,900	815,983	42,843
Lead oxide (litharge and red lead)	5	lb.	3,781,853	196,480	3,937,252	229,168
Lumber	2-5	M bd. ft.	7,002	211,027	4,697	188,722
Manganese dioxide	5	lb.	3,484,351	60,333	3,875,978	69,884
Metals, other non-ferrous (details not given)	2-3-4-6	.....	.....	329,876	.....	279,011
Mica	5	lb.	73,621	58,016	109,003	77,335
Mineral wool	5	lb.	256,411	6,102	311,962	18,563
Nickel	2-3	lb.	101,385	30,416	376,944	113,739
Nickel-silver, including blanks for plating	3-4	.....	.....	302,065	.....	343,980
Nickel-silver scrap	2	lb.	720,558	116,601	457,500	57,331
Nickel-silver tubing	5	ft.	59,958	8,484	26,372	3,877
Nitrogen	5	cu. ft.	434,705	5,868	679,760	8,934
Oil, switch	5	imp. gal.	59,297	13,665	36,969	8,862
Oil, transformer	5	imp. gal.	246,727	60,002	352,858	84,979
Ores, concentrates and residues for smelting and refining	7	.....	.....	123,027,694	.....	154,604,285
Paint	5	.....	.....	61,731	.....	152,079
Paper	3-5	.....	.....	183,262	.....	437,183
Plating and polishing supplies	2	.....	.....	18,006	.....	4,737
Platinum	4	.....	.....	45,627	.....	101,129
Precious and semi-precious stones	4	.....	.....	392,211	.....	435,161
Pressboard	5	.....	.....	67,660	.....	73,815
Radio cabinets	5	no.	131,279	1,087,846	177,555	1,282,180
Radio parts for assembling	5	.....	.....	2,763,749	.....	2,872,970
Radio tubes purchased	5	.....	963,514	781,719	1,292,407	919,106
Refrigerator cabinets, condensing units, etc.	5	.....	.....	289,390	.....	745,480
Rouge and other polishes	4	.....	.....	48,464	.....	45,929
Rubber	5	lb.	1,283,271	168,131	1,568,774	193,593
Sands, moulding	2	lb.	6,276,771	16,156	5,978,961	17,886
Scrap, kind unclassified	3	lb.	7,433,025	343,653	9,119,687	354,279
Silk, artificial	5	lb.	20,771	28,108	22,902	28,400
Silver, fine	4	.....	.....	290,270	.....	296,222
Silver alloys	4	.....	.....	73,457	.....	47,175
Solder	2-3-4-6	.....	.....	35,386	.....	13,438
Springs, clock and watch	4	.....	.....	24,118	.....	26,964
Steel, cutlery	4	.....	.....	161,252	.....	151,585
Talc	5	lb.	332,908	4,297	382,493	4,946
Tanks, steel	5	no.	1,975	31,639	4,153	53,401
Thermometers and thermostats	5	no.	13,408	40,558	20,763	55,964
Tin—						
Ingots	2-4	.....	.....	212,437	.....	210,207
Scrap	2	lb.	26,954	12,932	12,290	5,096
Pig	3	lb.	2,898,077	1,286,870	2,940,320	1,420,744
Other	2-5-6	.....	.....	39,378	.....	31,286
Trimmings, handles, etc., for aluminium ware	1	.....	.....	27,207	.....	74,419
Tungsten wire	5	.....	.....	52,192	.....	47,856
Type metal, scrap	3	lb.	1,075,032	51,236	801,056	49,291
Watch cases	4	.....	.....	34,160	.....	37,898
Watch and clock crystals	4	.....	.....	17,532	.....	26,688
Watch parts, other, including complete movements	4	.....	.....	118,309	.....	147,546
Wire, resistance	5	.....	.....	91,203	.....	85,563
Zinc—						
Slabs and bars	2-3-5	lb.	6,328,909	318,110	7,737,481	384,051
Sheets	5	lb.	2,193,970	147,673	2,452,853	177,833
Scrap	2-3	lb.	756,203	25,051	748,878	29,931
Other	2-5-6	lb.	395,228	37,243	453,885	48,495
Zinc chloride	5	lb.	348,756	18,695	356,105	20,429
Containers	.....	.....	.....	900,103	.....	1,043,879
All other materials	1-2-3-4-5-6-7	.....	.....	7,481,908	.....	8,393,065
Total	.....	.....	.....	**171,130,590**	.....	**212,783,636**

Table 23.—Alphabetical List of Products Made in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1935 and 1936

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 30)	Unit of measure	1935 Quantity	1935 Selling value at works	1936 Quantity	1936 Selling value at works
				$		$
Air conditioning equipment	2-5	.....	.....	11,217	.....	68,246
Aluminium—						
Castings (1)	1-2-3	lb.	.....	343,060	2,966,780	818,414
Other (except kitchenware)	1-3-5	.....	.....	3,586,400	.....	3,975,970
Ammeters, switches, coils, distributors, condensers, etc., for automobiles	5	.....	.....	18,762	.....	14,731
Antifreeze (1)	5	.....	*	*	*	*
Appliances, motor-driven, not elsewhere specified (1)	5	.....	.....	25,759	.....	148,974
Automobile parts (1)	2-5	.....	.....	168,650	.....	157,250
Babbitt metal	2-3	lb.	2,426,019	562,260	2,668,791	477,917
Batteries—						
Storage—						
For automobile and internal combustion engine starting and ignition	5	no.	561,710	2,378,414	608,025	2,542,313
For farm lighting plants	5	no. of cells	14,728	78,311	17,743	93,328
For railway service	5	no. of cells	3,853	82,903	6,260	145,573
For telephone switchboards	5	no.	1,599	30,585	1,160	35,567
For all other purposes	5	no.	.....	314,582	.....	458,588
Primary dry cell—						
6-inch cells	5	no. of cells	1,472,858	402,303	1,537,289	418,877
"B" and "C" for radio	5	no. of cells	19,800,253	1,136,764	22,517,403	1,323,406
Flashlight	5	no. of cells	10,044,403	598,443	9,386,366	560,893
Parts, supplies and other batteries	5	.....	.....	347,781	.....	350,411
Bells and gongs	2	.....	.....	13,134	.....	15,902
Blanks, nickel-silver, for plating	4	.....	*	*	*	*
Boilers, electric steam (1)	5	.....	.....	.....	*	*
Brass—						
Ingots	2-3	lb.	3,090,435	240,208	3,620,568	229,107
Castings, not elsewhere specified (1)	2-3	lb.	4,444,014	659,565	5,189,275	790,465
Scrap	2	lb.	277,693	17,558	281,908	21,862
Other, including bars and rods, plates, sheets, strips, tubing, wire, etc.	2	.....	.....	1,907,952	.....	2,238,133
Bronze—						
Ingots	2-3	lb.	33,319	5,806	50,445	4,530
Castings, not elsewhere specified (1)	2-3	lb.	1,630,162	348,537	1,522,395	383,147
Other, including bars and rods, sheets, plates, strips, tubing, wire, etc.	2	.....	1,099,651	262,758	1,920,254	481,021
Bronze and aluminium powders	2	.....	*	*	*	*
Brushes, carbon, for generators and motors	5	.....	.....	147,434	.....	174,696
Carbons, illuminating	5	.....	*	*	*	*
Capacitors (static condenser) for power factor correction	5	.....	*	*	*	*
Castings, iron (1)	2	short ton	1,858	183,743	2,513	191,987
Castings, other non-ferrous, chiefly zinc, cadmium and nickel	1-3	.....	.....	266,307	.....	399,764
Cigarette lighters and cases	6	.....	*	*	*	*
Clippers, vibrators, shavers and parts, electric	5	.....	.....	22,118	.....	294,023
Clocks and watches	4-5	.....	.....	1,018,916	.....	1,309,428
Cooking and heating apparatus, not elsewhere specified (1)	5	.....	.....	248,269	.....	306,913
Conduit, electrical—						
Flexible (steel and non-metallic)	5	ft.	4,430,314	59,052	4,951,922	79,978
Rigid iron	5	lb.	8,628,515	657,369	10,251,308	778,540
Conduit fittings (1)	5	.....	.....	137,310	.....	186,190
Converter equipment—						
Motor generator sets, A.C. to D.C.	5	no.	69	106,123	104	112,844
Other converter equipment	5	.....	.....	496,192	.....	480,905
Copper—						
Ingots	2	lb.	1,275	357	1,755	178
Refined (from scrap)	3	lb.	1,538,997	116,124	2,226,508	179,901
Castings, not elsewhere specified (1)	2	lb.	131,058	28,347	21,213	6,140
Bars and rods (except wire rods)	2	lb.	352,821	56,933	416,903	77,461
Wire rods	2	lb.	55,871,613	4,652,562	76,256,307	7,082,577
Scrap	2	lb.	985,699	72,991	1,577,206	135,746
Other, including plates, sheets, pipe, tubing, etc.	2-3	.....	.....	1,853,913	.....	2,264,111
Cutlery, silverplated and other (1)	4	.....	.....	424,481	.....	411,282
Cutouts and fuses—						
Primary cutouts, all types	5	.....	.....	175,384	.....	182,858
Cutouts for cartridge and plug fuses	5	.....	*	*	*	*
Cartridge and other fuses and renewals	5	.....	.....	264,778	.....	330,621

Table 23.—Alphabetical List of Products Made in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1935 and 1936—(continued)

Products	Industry number (See list on page 30)	Unit of measure	1935		1936	
			Quantity	Selling value at works	Quantity	Selling value at works
				$		$
Dental supplies (gases, bridges, etc.)	4	.....	*	*	*	*
Dies and blocks, hat, aluminium	1	.....	.....	65,632	.....	46,128
Doors, revolving	2	.....	.....	.....	*	*
Electrical apparatus, not elsewhere specified	5	.....	.....	965,399	.....	607,498
Flashlights	5	.....	*	*	*	*
Fans, portable type	5	no.	.....	13,012	434	8,506
Fasteners, metal (except zippers)	2	.....	.....	167,301	.....	332,507
Fasteners, zipper and parts	2-3	.....	.....	461,133	.....	568,992
Feeder regulators, induction voltage	5	.....	*	*	*	*
Fire extinguishers (1)	2	.....	.....	248,882	.....	269,309
Flatware, electroplated on nickel-silver	4	.....	.....	1,069,429	.....	1,081,481
Flatware, sterling silver	4	.....	.....	171,269	.....	213,428
Floor polishers, electric (1)	5	.....	*	*	*	*
Foil (tin, lead, etc.)	3	.....	*	*	*	*
Furnaces, resistance and arc types and industrial ovens	5	no.	66	103,415	57	94,799
Furniture trimmings, metal	2	.....	.....	196,260	.....	240,967
Gauges	2	.....	*	*	*	*
Generators, electric—						
Alternating current	5	no.	52	1,397,138	37	569,147
Direct current, including exciters	5	no.	77	43,011	49	58,667
Steam turbo-generator sets	5	no.	70	7,789	206	19,791
Parts for generators	5	.....	.....	37,774	.....	259,924
Glassware (1)	4	.....	.....	52,078	.....	59,152
Gold leaf and gold filled wire	4	.....	.....	128,925	.....	156,347
Gold, fine, including dental gold (from scrap, sweepings, etc.), and gold alloys	4	.....	.....	1,336,987	.....	1,675,629
Hair dryers, electric	5	.....	.....	81,850	.....	84,255
Hairpins (1)	2	.....	*	*	*	*
Hardware, automobile (1)	2	.....	.....	135,000	.....	140,000
Hardware, builders' (1)	2	.....	.....	50,554	.....	59,907
Hardware, other	2-5	.....	.....	22,082	.....	141,450
Heaters, air and space, electric	1-5	.....	.....	46,700	.....	39,514
Heaters, automobile and automobile engine (1)	5	.....	*	*	*	*
Heaters, water, domestic (1)	5	no.	18,612	97,372	18,495	102,048
Hollow-ware—						
Pewter	4	.....	.....	.....	*	*
Electro-plated on Britannia metal	4	.....	.....	494,164	.....	414,617
Electro-plated on nickel-silver	4	.....	.....	231,997	.....	169,195
Electro-plated on brass and copper	4	.....	.....	754,908	.....	915,170
Sterling silver	4	.....	.....	124,664	.....	138,040
Hollow-ware and spinnings, brass and copper	2	.....	.....	224,291	.....	31,850
Hooks and eyes	2	.....	*	*	*	*
Industrial heating equipment, not elsewhere specified	5	.....	.....	46,575	.....	127,851
Instruments and meters (except ammeters for automobiles)—						
Demand meters	5	no.	6,080	87,810	3,999	92,784
Watthour meters	5	no.	73,808	665,494	106,681	877,133
Electrical indicating and graphic instruments	5	no.	759	46,769	956	46,048
Other electrical instruments and meters	5	no.	.....	81,348	1,124	42,397
Meter and instrument parts	5	.....	.....	99,039	.....	123,222
Ironers, electric (1)	2	.....	*	*	*	*
Irons, flat, electric	5	no.	173,287	279,855	168,114	270,586
Irons, gasoline	6	.....	*	*	*	*
Jewellery of all kinds	1-4	.....	.....	2,479,405	.....	2,775,237
Kitchenware, aluminium (1)	1-2	.....	.....	1,190,604	.....	1,156,641
Lamps, n.e.s.	2-4-5-6	.....	.....	62,999	.....	170,575
Lamps, incandescent—						
Standard size, all types	5	no.	23,026,982	4,155,803	24,364,181	4,117,871
Miniature size, all types	5	no.	9,832,118	633,769	11,246,707	662,628
Lamps and lanterns, railway and marine	6	.....	*	*	*	*
Lamps and lanterns, gasoline	6	.....	*	*	*	*
Lamp and lantern burners	6	.....	*	*	*	*
Laste, boot and shoe, aluminium	1	.....	*	*	*	*
Lead—						
Bars and ingots (except antimonial lead)	3	lb.	1,749,941	77,925	2,199,907	110,396
Castings	3	lb.	97,911	13,951	114,251	21,541
Pipe	3	lb.	2,374,497	173,097	2,555,031	242,003
Refined (from scrap)	3	lb.	1,461,982	52,396	2,326,452	83,271
Sheet	3	lb.	1,696,143	128,614	2,042,382	171,464
Traps and fittings	3	lb.	525,404	114,253	1,110,341	118,250
Antimonial lead	3	lb.	8,253,530	340,231	8,265,311	396,430
Miscellaneous	3	.....	.....	81,550	.....	29,236

Table 23.—Alphabetical List of Products Made in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1935 and 1936—(continued)

Products	Industry number (See list on page)	Unit of measure	1935		1936	
			Quantity	Selling value at works	Quantity	Selling value at works
				$		$
Lighting fixtures—						
Interior, residential	2–5	...	...	888,829	...	909,237
Interior, metal reflectors	5	...	...	143,888	...	120,673
Other interior	5	...	...	185,547	...	182,625
Exterior lighting standards	5	...	...	4,002	...	27,085
Exterior lighting fixtures	2–5	...	...	83,460	...	227,114
Exterior lighting control devices	5	...	...	2,964	...	15,929
Searchlights and floodlights	5	...	...	8,447	...	17,606
Other lighting equipment	2–5	...	...	103,587	...	349,926
Lightning rods and supplies	2	...	...	37,896	...	69,304
Line material, light and power, excluding wire and insulators	5	...	...	266,855	...	289,019
Machinery, n.e.s. (1)	2	...	...	...	...	127,210
Mantles, lamp, incandescent	6	...	*	*	*	*
Meters, water and gas and parts	2	...	...	272,730	...	372,502
Mixers, domestic, electric	5	...	*	*	*	*
Motors, electric, A.C. and D.C. (except starting motors)—						
¼ h.p. and under (1)	5	no.	133,488	1,180,852	150,960	1,244,166
Over ¼ to 5 h.p., single phase, A.C.	5	no.	6,794	358,707	8,140	377,647
Over ¼ to 5 h.p., induction	5	no.	5,651	493,405	6,147	441,742
Over ¼ to 5 h.p., D.C.	5	no.	67	9,814	185	6,866
Over 5 to 200 h.p., induction	5	no.	1,918	509,821	2,602	815,083
Over 5 to 200 h.p., D.C.	5	no.	45	47,488	21	27,600
201 h.p. and over, induction	5	no.	23	66,705	32	112,796
201 h.p. and over, D.C.	5	no.	3	19,677	1	28,101
Railway and vehicle motors, A.C. and D.C.	5	no.	...	...	96	242,533
Synchronous condensers and motors	5	no.	43	74,522	...	...
Starting and control equipment	5	...	...	648,894	...	842,119
Accessories and parts	5	...	...	133,112	...	244,185
Nickel-silver plates, sheets, etc.	2	...	*	*	*	*
Nickel alloys (1)	3	...	*	*	*	*
Ornamental and architectural work, brass and bronze (1)	2	...	...	104,590	...	105,300
Ornamental and architectural work iron (1)	2	...	...	122,780	...	146,000
Panel boards and cabinets	5	...	...	226,278	...	284,007
Percolators, electric	5	no.	8,131	40,788	8,703	65,953
Pins, safety	2	...	*	*	*	*
Photo engravers' supplies (1)	2	...	...	39,693	...	88,985
Platinum from sweepings etc., and platinum alloys	4	...	...	17,285	...	67,747
Plumbers' supplies, n.e.s. (1)	2	...	...	714,917	...	1,125,101
Radio apparatus and supplies (1)	2–5	...	...	10,965,910	...	11,985,383
Railway car and locomotive bearings and fittings, brass and bronze	2	short tons	6,367	1,523,058	6,454	1,751,440
Refined metals (from scrap), n.e.s.	3	lb.	810,612	66,359	770,317	29,507
Rectifiers for storage battery charging, and parts	5	...	*	*	*	*
Refrigerators, electric (1)	5	no.	...	3,207,795	41,882	5,463,471
Refrigerator parts (1)	2–5	...	...	102,493	...	175,022
Scrap, kind not specified	3	...	...	49,967	...	65,319
Screens, window, and screen doors (1)	6	...	...	32,841	...	32,822
Shot, dropped and moulded	3	...	*	*	*	*
Signs, electric (1)	5	...	*	*	*	*
Silver, from scrap, sweepings, etc., and silver alloys	4	...	...	82,113	...	87,755
Smelter and refinery products	7	...	...	186,245,658	...	229,737,420
Solders of all kinds	2–3	lb.	3,962,796	1,017,720	4,432,360	1,080,184
Spray painting equipment (1)	6	...	*	*	*	*
Sprays and atomizers for perfume, etc.	6	...	*	*	*	*
Spectacle frames, parts and cases	4	...	*	*	*	*
Stoves, rangettes, cooking plates, etc., electric (1)	5	...	...	887,500	...	967,152
Stoves, camp, gasoline	6	...	*	*	*	*
Switch gear and protective equipment (except telephone switchboards)—						
Switchboard panels and equipment	5	...	...	901,456	...	1,001,344
Lightning arresters	5	...	...	144,824	...	177,390
Oil circuit breakers	5	...	...	240,754	...	404,740
Air circuit breakers	5	...	...	108,802	...	127,365
Disconnecting switches	5	...	...	185,496	...	134,763
Other equipment, including parts and supplies	5	...	...	136,526	...	148,388
Switches, time	5	...	*	*	*	*
Switch boxes (1)	2–5	...	...	19,000	*	*
Tanks, brass and copper	2	...	...	79,350	...	77,010
Taps, brass and bronze	2	...	...	216,854	...	123,183
Telephone material (telephones, switchboards, etc.)	5	...	...	2,551,925	...	2,979,534

Table 23.—Alphabetical List of Products Made in All Industries Classified under the Manufactures of the Non-Ferrous Metals, 1935 and 1936—(concluded)

Products	Industry number (See list below)	Unit of measure	1935		1936	
			Quantity	Selling value at works	Quantity	Selling value at works
				$		$
Therapeutic lamps, etc., electric	5			15,049		25,407
Thermit for forging	1			1,846		1,555
Thermostats and controls	5			173,394		175,318
Toasters, electric	5	no.	123,207	208,671	140,806	230,814
Toiletware and dresserware, sterling silver	4			161,128		155,[illegible]
Tin (from scrap) and tin pipe	3	lb.	184,421	119,042	259,757	138,[illegible]
Transformers—						
Distribution transformers, 200 k.v.a. and under and 15,000 volts and below	5	no.	6,446	783,921	8,357	1,116,[illegible]
Power transformers, 200 k.v.a. to 7,500 k.v.a. inclusive, over 15,000 volts to 132,000 volts	5	no.	142	505,639	242	924,825
Power transformers, over 7,500 k.v.a. or over 132,000 volts	5	no.	12	288,697	8	269,724
Current and potential transformers	5			102,775	4,316	114,411
Constant current transformers	5	no.	36	5,344	*	*
Series lamp transformers	5	no.	427	10,895	539	14,526
Radio transformers	5			123,100	205,244	187,355
Luminous tube and ignition transformers	5	no.	10,317	76,170	12,199	89,080
All other transformers	5			44,971	16,898	60,255
Parts and supplies	5			211,106		95,970
Tubes, collapsible	3		*	*	*	*
Type and type metal	3	lb.	4,487,063	396,503	3,906,174	377,673
Vacuum cleaners and parts (1)	2-5			2,279,999		1,876,596
Vacuum tubes—						
Radio receiving tubes	5	no.	2,183,529	1,181,239	2,952,415	1,545,823
Other vacuum tubes, including X-Ray	5	no.	14,075	93,878	20,066	84,457
Valves, brass and bronze (1)	2	no.	341,534	739,178	476,836	955,201
Valves, iron and steel (1)	2	no.	12,852	268,405	16,624	342,011
Valves, etc., n.e.s.	5					289,516
Washing machines and parts, electric (1)	2-5	no.	5,581	262,385	4,881	235,290
Watch cases	4			240,333		231,412
Water and steam fittings, not elsewhere specified (1)	2			210,958		36,073
Weatherstrip, metal	6			88,455		70,528
Welding apparatus	5			217,478		308,245
Welding portions, rail	1		*	*	*	*
Wires and cables, electrical (except aluminium)-						
Copper, bare (1)	5			1,856,944		2,531,884
Weatherproof	5			744,901		1,042,714
Rubber, insulated, braided	5			1,866,450		2,475,155
Cambric, insulated, braided	5			69,937		70,547
Rubber, cambric and paper insulated	5			477,597		588,875
Telephone cable of all kinds	5			569,645		765,379
Armoured cable	5			515,142		647,011
Cord, heater, lamp, fixture, all rubber, etc.				548,621		646,692
All other wires and cables	5			1,508,652		1,359,729
Wire cloth, brass and bronze	2	sq. ft.	2,331,017	1,088,552	2,743,249	1,280,614
Wire rope, steel (1)	5		*	*	*	*
Wiring devices (except auto starting switches and time switches)—						
Sockets, brass shell	5			205,897		164,057
Sockets, porcelain	5			90,028		110,263
Switches, surface and flush types	5			177,633		191,038
Switches, enclosed safety type	5			303,663		350,701
Switches, canopy	5			31,121		34,580
Switches, all other	5			167,265		171,839
Receptacles, single and duplex, flush	5			80,760		105,670
Cord sets	5			104,888		168,111
Other writing devices	5			798,757		1,005,229
Zinc (recovered from scrap)	3	lb.	1,799,494	67,569	2,687,067	108,593
Amount received for custom and repair work	1-2-4-5-6			1,120,974		1,474,588
Products reported by only 1 or 2 firms as indicated by asterisks (*) above	1-2-3-4-5-6			4,306,978		5,928,863
All other products, kind not specified	1-2-3-4-5-6			3,365,865		3,593,473
Total				**288,523,250**		**351,164,860**

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 24.—Imports of Non-Ferrous Metals and Their Products into Canada, Fiscal Years ended March 31, 1935-1937

NOTE.—More detailed information on imports and exports according to countries of origin and destination is published in the Bureau's annual report on the trade of Canada.

Classification	Total Imports for Consumption (Merchandise)			Imports from United Kingdom		Imports from United States	
	1935	1936	1937	1936	1937	1936	1937
NON-FERROUS METALS—							
Aluminium—							
Bauxite (ore) ... Cwt.	1,851,761	2,573,662	3,589,686	337,318	189,280	1,742,648	1,871,751
$	2,514,465	2,860,747	2,764,396	859,898	380,621	1,882,914	2,024,656
Cryolite ... Cwt.	3,153	2,997	59,432	1	.....	1,624	1,664
$	25,394	24,155	256,189	4	.....	13,328	13,919
Pigs, ingots, etc. ... Cwt.	882	1,340	469	1,294	465	46	3
$	20,835	28,664	10,378	27,705	10,182	959	139
Bars, rods and wire ... Cwt.	2,545	3,612	2,343	549	1,312	3,063	1,031
$	79,783	113,613	75,195	14,083	41,061	99,530	34,134
Plates, sheets and strips ... Cwt.	10,807	13,194	15,173	12,554	14,241	640	926
$	303,210	380,092	459,843	351,100	418,497	28,992	40,927
Leaf or foil ... $	45,203	72,873	109,525	26,098	38,690	15,922	20,349
Kitchen, etc., hollow-ware ... $	92,639	80,747	68,564	2,629	4,036	76,366	60,430
Other aluminium ... $	573,673	663,825	1,007,729	106,979	228,284	528,855	750,365
Total Aluminium ... $	3,655,202	4,224,716	4,751,819	1,389,096	1,121,371	2,646,866	2,944,919
Brass—							
Scrap ... Cwt.	829	1,623	5,314	61	25	1,497	5,064
$	5,722	12,964	36,863	93	50	12,551	36,095
Cups for mfr. of shells ... $	41,856	37,812	37,277	33,739	35,715	4,073	1,562
Bars and rods ... Cwt.	2,906	3,391	4,789	2,898	3,815	493	974
$	37,592	43,549	65,658	31,850	43,331	11,699	22,327
Strips, sheets, plates ... Cwt.	2,885	2,904	2,884	913	1,091	1,988	1,792
$	53,895	61,912	60,931	15,922	20,373	45,931	40,527
Tubing ... Lb.	308,930	429,626	514,841	292,422	190,574	137,204	324,267
$	65,636	93,726	121,800	55,324	39,758	38,402	82,042
Valves ... $	246,517	270,462	350,866	4,686	2,277	264,166	348,425
Wire, plain ... Lb.	278,722	440,989	323,940	202,880	80,718	236,966	209,062
$	55,902	95,012	80,003	43,384	15,694	51,356	55,153
Wire cloth ... $	36,426	29,059	34,880	20,622	27,286	5,991	6,098
Other ... $	1,539,091	1,724,804	2,067,103	155,618	152,304	1,456,908	1,799,461
Total Brass ... $	2,082,637	2,369,300	2,855,381	361,238	336,788	1,891,077	2,391,690
Copper—							
Blocks, pigs, ingots ... Cwt.	434	191	2,026	1	14	190	2,012
$	4,440	1,950	21,501	7	339	1,943	21,162
Scrap ... Cwt.	147	181	37	.....	3	141	12
$	577	1,443	268	.....	26	1,343	125
Bars and rods ... Cwt.	7,414	6,802	9,982	130	177	6,672	9,805
$	88,437	86,830	139,741	1,887	3,589	84,943	136,152
Strips, sheets, plates ... Cwt.	2,357	3,433	4,977	1,380	1,552	2,053	3,413
$	40,053	63,958	99,041	23,425	26,895	40,533	71,966
Tubing ... Lb.	334,437	399,545	507,475	128,033	68,427	271,512	439,048
$	76,430	90,632	132,536	25,906	15,889	64,726	116,647
Other ... $	365,085	471,930	513,001	105,354	92,749	337,317	377,973
Total Copper ... $	575,028	716,743	906,088	156,579	139,487	530,805	724,025
Lead and its products ... $	115,876	135,443	163,974	63,070	65,749	66,660	66,139
Nickel—							
Bars, rods, sheets, etc. ... Lb.	466,448	476,155	770,608	.....	140	476,155	770,468
$	190,273	202,134	301,276	.....	53	202,134	301,276
Nickel-chromium ... Lb.	44,259	46,359	54,076	.....	.....	46,359	54,076
$	41,937	44,098	53,008	.....	.....	44,098	53,008
German silver mfrs. ... $	145,088	159,233	150,712	30,173	28,247	127,426	121,010
Nickel-plated ware ... $	792,811	768,177	715,551	78,889	75,256	523,357	480,650
Other ... $	10,130	2,673	1,520	586	232	2,070	2,508
Precious Metals—							
Electro-plated ware ... $	393,208	558,753	1,183,407	259,583	279,446	280,888	855,142
Silver in bars, blocks, etc. ... $	3,426,228	4,937,115	1,872,743	893,711	661,554	3,454,885	1,211,189
Other ... $	380,699	448,099	635,264	201,804	422,152	213,032	174,294
Tin—							
Blocks, bars, pigs ... Cwt.	42,283	45,757	51,876	18,015	23,245	8,423	3,436
$	2,153,515	2,236,476	2,408,521	878,869	1,099,787	418,638	156,629
Foil ... Lb.	33,743	50,630	66,757	18,746	3,185	31,884	63,552
$	17,407	19,344	28,038	2,618	2,117	16,726	25,909
Other (collapsible tubes) $	35,140	51,715	60,262	13,475	11,382	38,237	48,847

Table 24.—Imports of Non-Ferrous Metals and Their Products into Canada, Fiscal Years ended March 31, 1935-1937—(concluded)

Classification	Total Imports for Consumption (Merchandise)			Imports from United Kingdom		Imports from United States	
	1935	1936	1937	1936	1937	1936	1937
Zinc—							
Spelter.....Cwt.	31	1,153	2	.....	.....	33	2
$	200	4,254	14	.....	.....	210	14
Sheets and plates.....Cwt.	46,677	56,750	58,480	372	533	44,669	39,668
$	295,216	368,649	410,184	1,640	3,688	319,828	310,5[illegible]
Other..... $	177,798	193,123	248,408	6,537	5,442	145,957	182,8[illegible]
Phosphor-tin and bronze..Lb.	806,390	887,802	1,066,550	267,658	252,263	175,926	240,4[illegible]
$	225,124	229,021	284,599	60,570	55,060	41,371	62,11[illegible]
Other alloys, n.o.p..... $	35,072	54,218	132,374	23,374	72,828	23,051	53,0[illegible]
Clocks and watches..... $	1,390,852	1,743,170	2,037,278	48,526	39,725	589,213	725,104
Electrical apparatus—							
Batteries, primary..... $	93,239	132,140	149,540	17,448	10,087	114,487	137,2[illegible]
Batteries, storage..... $	156,770	134,556	152,254	48,119	95,298	86,346	56,4[illegible]
Electric heating apparatus..... $	74,734	52,317	106,394	3,754	150	46,833	102,674
Dynamos, generators.... $	247,896	284,058	544,312	65,689	157,356	209,956	348,075
Incandescent lamps—							
Carbon filament.....No.	359,206	243,461	424,584	376	132	67,895	50,614
$	32,628	21,120	15,238	53	54	15,509	6,878
Metal filament.....No	1,515,356	2,256,336	5,369,212	2,398	232,463	1,691,524	2,660,534
$	123,369	134,434	237,453	1,419	37,500	111,826	146,756
Head, side, tail and flashlights..... $	503,555	543,544	439,692	6,122	5,070	521,268	386,839
Electric light fixtures.... $	232,519	251,484	664,586	9,823	12,360	219,788	622,371
Meters..... $	95,757	130,069	181,124	37,114	41,125	89,153	136,013
Motors..... $	1,136,353	1,202,449	1,650,394	239,981	243,268	943,767	1,353,530
Spark plugs, etc..... $	316,888	220,937	58,679	4,376	1,619	213,948	55,830
Switches, etc..... $	452,986	555,917	656,054	47,828	67,537	503,300	574,122
Telegraph instruments... $	122,023	33,566	121,991	9,007	6,106	24,534	115,885
Telephone instruments... $	411,960	417,668	736,367	84,091	46,875	332,297	689,348
Transformers..... $	94,166	81,401	142,442	15,786	24,922	65,084	110,495
Radio tubes.....No	261,983	502,947	649,928	728	1,632	502,219	648,296
$	154,977	277,039	335,813	12,228	24,061	264,811	311,752
Wireless and radio apparatus, n.o.p..... $	1,603,330	1,729,158	2,514,195	77,742	131,350	1,649,208	2,381,553
Other..... $	2,090,489	2,555,980	3,284,510	342,384	374,804	2,185,487	2,825,471
Total Electrical Apparatus, n.o.p..... $	7,943,639	8,757,837	11,991,038	1,022,964	1,279,542	7,597,602	10,361,262
Gas apparatus..... $	115,433	125,465	143,540	3,586	5,398	118,502	129,245
Printing materials (except machinery)—							
Stereotypes.....Sq. in.	19,271,149	19,358,605	16,858,944	57,868	144,404	19,271,393	16,684,152
$	394,005	336,777	286,703	2,534	4,456	334,054	281,833
Other..... $	341,752	327,483	312,886	18,366	18,338	305,540	289,715
Manganese oxide.....Cwt.	619,709	737,754	1,285,095	72	254	36,633	39,841
$	235,453	357,866	683,945	199	598	82,892	82,957
Ores, n.o.p.....Cwt.	273,689	254,382	220,892	5,390	.....	126,285	132,934
$	256,287	433,780	434,731	5,998	12	182,404	272,999
Mercury.....Lb.	202,085	131,773	148,768	18,859	11,350	41,386	58,394
$	152,555	109,064	129,246	15,307	10,121	41,458	55,284
Antimony, not ground....Lb	620,460	999,027	1,332,709	4,480	18,006	643,433	719,455
$	54,091	114,198	120,741	756	2,073	73,223	57,009
Buckles, clasps, fasteners.. $	285,302	224,637	248,067	26,833	29,888	186,012	203,674
Lamps and lanterns..... $	55,009	81,674	68,988	4,365	5,452	50,367	27,540
Articles for shipbuilding... $	387,859	330,456	375,707	115,053	106,808	200,509	230,438
Other non-ferrous metals.. $	2,115,803	3,020,228	3,041,941	153,126	179,589	2,556,297	2,517,545
Total Non-Ferrous Metals..... $	**28,496,629**	**33,685,919**	**37,037,954**	**5,829,425**	**6,062,639**	**23,305,389**	**25,400,426**

Table 25.—Exports from Canada of Non-Ferrous Metals and Their Products, Fiscal Years ended March 31, 1935-1937

Classification	Total Exports of Canadian Produce (Mdse.)			Exports to United Kingdom		Exports to United States	
	1935	1936	1937	1936	1937	1936	1937
Aluminium—							
Scrap.....Cwt.	21,152	26,881	19,656	12,287	6,168	2,778	7,132
$	272,095	361,413	242,366	162,689	89,106	24,491	49,343
Bars, blocks, etc.....Cwt.	457,653	558,859	680,357	330,608	417,592	41,989	85,039
$	7,788,189	9,358,074	12,522,047	5,745,538	8,081,088	622,700	1,305,224
Manufactures..... $	495,609	358,610	546,020	104,160	119,074	27,736	50,832
Brass—							
Old and scrap.....Cwt.	55,225	110,616	108,549	20,055	20,133	45,053	60,917
$	259,939	516,027	614,225	84,339	114,832	178,409	312,455
Valves..... $	134,734	156,201	171,947	104,849	127,789	380	1,146
Other..... $	525,892	312,095	355,476	174,251	216,941	16,189	5,260
Copper—							
Fine, in ore, matte, regulus.....Cwt	331,611	378,973	521,729	10,884	8,098	255,178	368,831
$	1,454,256	2,024,180	3,963,652	58,277	63,141	1,364,610	2,800,339
Blister.....Cwt.	454,657	544,845	.....	.....	.....	544,845	.....
$	3,499,641	4,174,227	.....	.....	.....	4,174,227	.....
Old and scrap.....Cwt.	38,774	70,390	86,721	1,547	5,447	22,185	40,075
$	223,955	409,080	657,922	10,003	40,010	93,787	284,964
Sheets, rods, strips, etc.... $	4,505,840	3,146,933	5,244,800	2,175,907	3,756,927	587	239
Ingots, bars, slabs, etc..... $	14,244,756	20,550,859	29,628,345	13,926,270	21,478,729	.....	2,000
Wire, insulated..... $	360,747	455,441	452,218	1,554	7,826	252	432
Other..... $	250,554	270,691	274,289	209,392	240,475	.....	1,437
Lead—							
In ore.....Cwt.	219,939	79,502	103,132	29	.....	1,146	28,086
$	459,703	231,624	340,609	104	.....	4,581	123,913
Pig.....Cwt.	2,897,087	2,860,854	3,439,935	1,877,370	2,069,348	21	10
$	5,089,045	8,055,158	13,438,592	5,234,242	8,024,985	111	63
Nickel—							
In matte or speiss.....Cwt.	598,277	661,947	601,905	400,898	301,646	96,484	111,378
$	10,766,952	11,907,860	10,835,789	7,218,434	5,429,863	1,737,027	2,004,725
Nickel oxide.....Cwt.	34,111	38,660	57,315	2,644	2,858	10,251	28,410
$	1,280,516	1,297,270	1,632,653	84,605	96,801	203,377	578,930
Fine.....Cwt.	562,677	908,645	1,131,141	204,364	179,533	615,251	842,984
$	16,375,391	28,439,250	33,413,742	9,064,223	7,717,814	15,433,539	21,067,972
Precious Metals—							
Gold-bearing quartz, dust, etc..... $	3,725,211	4,802,029	6,497,281	696	8,394	4,767,713	6,326,990
Platinum, in ore..... $	5,523,018	5,286,260	8,185,250	5,174,200	8,052,314	600	.....
Jewellers' sweepings..... $	551,430	782,439	926,892	390,098	310,324	392,128	616,568
Platinum, scrap.....Oz.	299	856	240	241	.....	615	240
$	9,216	33,837	11,461	6,539	.....	27,298	11,461
Silver in ore, concentrates, etc.....Oz.	1,453,079	1,732,037	3,387,273	61,558	3,359	1,226,111	2,833,246
$	628,071	1,053,213	1,496,431	32,504	1,525	771,664	1,263,770
Silver bullion.....Oz.	9,553,163	18,458,481	12,800,319	1,552,802	2,428,324	16,871,081	10,145,504
$	4,729,586	11,420,747	5,747,319	1,035,669	1,099,263	10,361,830	4,538,264
Gold bullion.....Oz.	2,790,752	2,383,472	2,188,199	73,924	52,921	2,309,548	2,135,278
$	96,725,931	84,414,854	76,667,269	2,599,500	1,876,500	80,815,354	74,790,769
Zinc—							
In ore.....Cwt.	353,632	160,468	436,781	10,580	.....	8	3
$	602,928	288,665	945,303	17,500	.....	30	13
Spelter.....Cwt.	2,516,290	2,633,771	2,659,489	2,185,952	2,061,828	11,766	75,029
$	6,900,018	8,056,628	8,842,991	6,690,035	6,756,236	36,205	303,636
Scrap, dross and ashes..Cwt.	37,377	70,373	53,814	7,086	4,951	2,369	1,498
$	42,847	72,906	75,643	16,625	10,361	3,118	1,026
Miscellaneous—							
Clocks and watches..... $	285,874	377,725	416,885	60,589	70,651	1,425	3,287
Electric apparatus..... $	2,306,266	2,941,248	3,611,393	620,339	951,395	45,067	28,120
Cobalt in ore.....Cwt.	2,658	4,477	4,551	3	72	340	1,207
$	96,145	140,155	196,821	94	4,827	17,306	72,702
Cobalt, metallic.....Lb.	600	2,379	3,000	2,379	3,000	.....	.....
$	750	2,973	3,750	2,973	3,750	.....	.....
Ores, n.o.p.....Ton	312	794	425	.....	33	794	392
$	17,575	13,261	29,304	.....	2,060	13,261	27,244
Other non-ferrous metals.. $	1,213,706	1,835,389	2,163,629	815,243	1,066,786	648,547	695,173
Total Non-Ferrous Metals..... $	**191,345,386**	**212,547,372**	**230,152,314**	**61,821,441**	**75,819,787**	**121,783,549**	**117,328,297**

CHAPTER TWO

THE ALUMINIUM PRODUCTS INDUSTRY

As reviewed in this chapter the Aluminium Products Industry covers the operation 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. For the years 1920 to 1925 the aluminium smelter at Shawinigan Falls was included in this group but since the latter date the two smelters, one at Shawinigan Falls, Que., and one at Arvida, Que., have been classified to the Non-ferrous Smelting and Refining Industry which is reviewed separately in Chapter Seven of this report. From 1926 to 1934 inclusive the rolling mill at Shawinigan Falls was included in the smelter report but for the past two years separate details have been received and included in the aluminium products industry.

Nineteen factories were classified to this industry in 1936, including 2 rolling mills, 9 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, 1 in making miscellaneous stampings and 1 in making aluminium curlers and wave-clips. Capital employed by these concerns amounted to $3,884,241, employees numbered 1,101, salaries and wages totalled $1,194,999, materials for manufacturing cost $3,799,688 and production was valued at $5,438,281.

Output of aluminium cooking utensils in this industry was valued at $1,143,692 in 1936, but in addition, concerns in other industries made aluminiumware worth $183,449, bringing the total for Canada to $1,327,141, compared with $1,328,527 in 1935 and $1,173,877 in 1934.

Table 26.—Principal Statistics, 1920-1936

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	625,069	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	2,703,212	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

†Electricity not included in 1920, 1921 and 1922.

Table 27.—Size of Establishments, According to Production, Employees and Capital, 1935 and 1936

—	1935				1936			
	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	5	120,876	23	54,162	8	133,386	45	118,236
$25,001 to $100,000	8	252,054	162	441,165	5	278,718	123	325,252
Over $100,000	6	3,418,826	813	4,497,313	6	3,472,137	933	4,994,793
Total	**19**	**3,791,756**	**998**	**4,992,640**	**19**	**3,884,241**	**1,101**	**5,438,281**
(b) Number of employees								
Under 10	6	123,541	25	88,969	9	150,359	53	149,076
10 and over	13	3,668,215	973	4,903,671	10	3,733,882	1,048	5,289,205
Total	**19**	**3,791,756**	**998**	**4,992,640**	**19**	**3,884,241**	**1,101**	**5,438,281**
(c) Capital employed								
Under $25,000	6	67,024	33	117,643	8	105,578	53	153,803
$25,001 to $100,000	7	305,906	152	377,684	4	148,843	85	214,259
Over $100,000	6	3,418,826	813	4,497,313	7	3,629,820	963	5,070,219
Total	**19**	**3,791,756**	**998**	**4,992,640**	**19**	**3,884,241**	**1,101**	**5,438,281**

Table 28.—Capital Employed, 1935 and 1936

Capital employed as represented by:	1935	1936
	$	$
Present value of lands, buildings, machinery and other equipment	2,237,282	2,243,634
Inventory value of materials, finished products, fuel and other supplies on hand, and stocks in process	810,722	831,300
Operating capital (cash, bills and accounts receivable, prepaid expenses, etc.)	743,752	809,307
Total	**3,791,756**	**3,884,241**

Table 29.—Employees, Salaries and Wages, 1935 and 1936

—	1935	1936
Salaried Employees—		
Male	131	150
Female	37	42
Total	168	192
Wage-Earners—		
Male	752	812
Female	78	97
Total	830	909
Total employees	**998**	**1,101**
Salaries $	306,199	347,744
Wages $	783,288	847,255
Total Salaries and Wages $	**1,089,487**	**1,194,999**

Table 30.—Wage-Earners, by Months, 1935 and 1936 (On the 15th of each month)

Months	1935			1936		
	Male	Female	Total	Male	Female	Total
	No.	No.	No.	No.	No.	No.
January	631	69	700	749	80	829
February	700	64	764	720	87	807
March	738	64	802	693	92	785
April	754	78	832	723	95	818
May	754	84	838	751	93	844
June	776	79	855	868	93	961
July	752	86	838	930	93	1,023
August	727	80	807	854	104	958
September	743	82	825	825	108	933
October	833	84	917	821	108	929
November	828	90	918	913	107	1,020
December	774	84	858	890	96	986
Average	752	78	830	812	97	909

Table 31.—Regular Hours Worked per Week by Wage-Earners, 1935 and 1936

(Overtime not included)

Regular hours worked per week	Percent of wage-earners		Regular hours worked per week	Percent of wage-earners	
	1935	1936		1935	1936
40 hours or less	2·4	7·8	51-53 hours	0·4	.....
41-43 hours	.....	1·0	54 hours	3·2	0·2
44 hours	22·3	19·3	55 hours	.....	2·9
45-47 hours	1·5	6·5	56-59 hours	0·2	0·3
48 hours	55·0	56·0	60 hours and over	0·6	0·5
49-50 hours	14·4	5·5			

Table 32.—Fuel and Electricity Used, 1935 and 1936

Kinds	Unit of measure	1935		1936	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal—Canadian	short ton	50	455	83	724
Imported	short ton	2,245	13,558	2,230	13,219
Anthracite coal	short ton	.....	.....	1	7
Coke	short ton	2,246	19,891	2,717	20,682
Gasoline	Imp. gal.	1,092	300	653	199
Kerosene	Imp. gal.	1,507	286	1,869	354
Fuel oil	Imp. gal.	148,775	12,167	113,446	9,263
Gas—Manufactured	M cu. ft.	10,102	7,476	8,734	7,421
Natural	M cu. ft.	.....	.....	872	506
Wood	Cord	4	40	6	53
Other fuel	xxx	.....	.....	.....	12
Electricity	K.W.H.	14,284,138	74,480	11,083,653	66,880
Total	xxx	.....	**128,653**	.....	**119,320**

Table 33.—Power Equipment, 1935 and 1936

—	Ordinarily in use		In reserve or idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
1935				
Steam engines and steam turbines	1	10	.....	.....
Electric motors operated by purchased power	298	5,605	1	20
Total	**299**	**5,615**	**1**	**20**
Boilers	5	528	1	125
1936				
Steam engines and steam turbines	1	10	.....	.....
Electric motors operated by purchased power	354	6,414	1	20
Total	**355**	**6,424**	**1**	**20**
Boilers	4	525	1	125

Table 34.—Materials Used in Manufacturing, 1935 and 1936

Materials	1935		1936	
	Short tons	Cost at works	Short tons	Cost at works
		$		$
Aluminium ingots, sheets, circles, etc	8,048	3,066,938	9,343	3,559,403
Handles, trimmings, etc	.....	27,207	.....	74,419
All other materials	.....	164,165	.....	165,866
Total	.....	**3,258,310**	.....	**3,799,688**

Table 35.—Products Made, 1934-1936

Products	1934	1935	1936
	$	$	$
Aluminium cooking utensils (a)	995,135	1,146,808	1,143,692
All other products (b)	2,750,298	3,845,832	4,294,589
Total	**3,745,433**	**4,992,640**	**5,438,281**

(a) In addition to the above output, aluminium cooking utensils valued at $183,449 in 1936, $181,719 in 1935 and $178,742 in 1934 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. In each case there were only one or two producers in this industry.

Table 36.—Total Production in Canada of Aluminium Hollow-ware and Kitchenware, 1935 and 1936

(From all industries)

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

Table 37.—Imports into Canada, and Exports of Aluminium and Its Products, 1935 and 1936

—	1935		1936	
	Quantity	Value	Quantity	Value
		$		$
Imports				
Alumina ... cwt.	1,645	16,457	1,547	17,006
Bauxite ore ... cwt.	2,546,136	2,883,330	3,428,348	2,663,184
Cryolite or kryolite ... cwt.	3,436	27,387	59,463	256,360
Aluminium in pigs, ingots, blocks, notch bars, slabs, billets and blooms ... cwt.	1,694	36,954	547	11,951
Aluminium scrap ... cwt.	5,361	70,045	6,882	120,099
Aluminium angles, channels, beams, and other rolled or drawn sections or shapes ... cwt.	200	7,381	260	9,903
Aluminium in bars, rods and wire ... cwt.	1,947	60,331	3,906	124,850
Aluminium leaf, n.o.p., or foil, less than ·005 in thickness, plain or embossed, with or without backing	...	62,908	...	87,597
Aluminium leaf, less than ·005 millimetres in thickness	...	3,133	...	8,378
Aluminium pipes and tubes ... cwt.	638	31,521	513	27,299
Aluminium in plates, sheets and strips, including circles ... cwt.	12,344	356,760	14,275	422,638
Aluminium powder ... lb.	67,419	30,025	109,777	39,372
Aluminium wire and cable, twisted or stranded, reinforced with steel or not ... cwt.	3	216	12	746
Aluminium kitchen or household hollowware, n.o.p.	...	84,179	...	67,129
Aluminium, manufactures of, n.o.p.	...	468,901	...	669,715
Total	...	**4,139,528**	...	**4,526,227**
Exports				
Aluminium scrap ... cwt.	26,130	348,623	20,461	273,866
Aluminium in bars, blocks, ingots, sheets, etc. ... cwt.	599,582	10,021,338	576,102	10,840,627
Aluminium kitchen and hollow-ware	...	13,219	...	20,228
Aluminium, manufactures of, n.o.p.	...	377,512	...	363,761
Total	...	**10,760,692**	...	**11,498,482**
Re-exports				
Aluminium, and manufactures of	...	42,345	...	34,305

Table 38.—Exports from Canada of Manufactures of Aluminium, by Countries of Destination, 1935 and 1936

Country of Destination	1935		1936	
	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	...	7,113	...	5,001
Australia	...	31,579	67	30,083
Bolivia	...	4,229	...	31,542
Brazil	...	5,595	440	1,243
British India	...	3,678	...	36,277
Chile	...	11,924	...	29,852
China	...	10,809	...	3,149
Cuba	...	16,563	...	8,509
Mexico	...	26,755	...	3,058
New Zealand	228	14,704	145	16,218
Peru	4,043	2,171	9,909	926
Portugal	...	95	...	14,382
Spain	...	58,448	...	174
United Kingdom	6,681	91,781	5,889	98,017
United States	20	28,833	38	37,301
Venezuela	...	31,464	...	28,719
Other countries	2,247	31,771	3,740	19,250
Total	**13,219**	**377,512**	**20,228**	**363,761**

NOTE.—The letters "n.o.p." mean "Not otherwise provided for" in the trade classification. This item does not include ingots, bars, blocks, scrap, etc., which are listed separately in the trade report.

Directory of Firms Included in the Aluminium Products Industry in Canada, 1936

Name of firms	Location of Plants	Products reported, 1936
QUEBEC—		
Aluminum Company of Canada Limited.	Shawinigan Falls	Aluminium wire, rods, bars, and cable.
Aluminium Moderne Enrg	11245 Victoria St., Montreal	Aluminium cooking utensils.
Brasloff, Jack	669 St. James St. W., Montreal	Metal hat blocks and stamper dies.
Maple Leaf Hat Block Company	916 St. George St., Montreal	Aluminium hat dies; plaster hat blocks.
ONTARIO—		
Aluminium Company of Canada, Ltd.	158 Sterling Rd., Toronto	Aluminium sheets, castings, foil, rivets, seals, screw machine products, cable accessories, etc.; aluminium scrap.
Aluminium Goods Limited	158 Sterling Rd., Toronto	Aluminium cooking utensils; aluminium scrap.
Aluminium Ware Mfg. Co. Ltd	20 Dundas St., Oakville	Aluminium cooking utensils.
Canadian Die Casters	Beverly St., Galt	Zinc and aluminium 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 Mfg. Co	13 Ferguson Ave., N., Hamilton	Aluminium cooking utensils.
Hudson Aluminium Ware	370 Dufferin St., Toronto	Aluminium cooking utensils.
Metal Stampings, Limited	435 Fleet St., Toronto	Aluminium cooking utensils; electric space heaters.
Metal and Thermit Corporation	15 Emily St., Toronto	Rail welding portions, forging thermit.
Oakville Machine Works	Oakville	Aluminium stampings; steel stampings.
Shaw, H. G	24 Mercer St., Toronto	Aluminium hat dies and wood hat blocks.
Sterling Aluminium Co. Limited	2466 Dundas St., W., Toronto	Aluminium cooking utensils.
Super Health Aluminium Co. Ltd	107 McGill St., Toronto	Aluminium cooking utensils; aluminium castings.
Wintrob, M. & Sons, Ltd	20 Duncan St., Toronto	Aluminium and steel curlers and wave-clips; rhinestone jewellery.

CHAPTER THREE

THE BRASS AND COPPER PRODUCTS INDUSTRY

Data given in this chapter cover the operations of brass foundries and other factories in Canada engaged chiefly in the manufacture of commodities (other than electrical supplies) from brass, bronze and copper. Eighty foundries and 46 fabricating plants reported under this industry in 1936 and production was valued at $24,947,467, at factory prices compared with outputs worth $19,187,022 in 1935 and $19,309,314 in 1934. The record output value for the industry was $36,115,581, attained in 1929.

Products manufactured in this industry during 1936 included copper wire rods, $7,082,577; copper sheets, plates and tubing, $2,216,252; brass bars, rods, sheets, and tubing, $2,223,133; railway car and locomotive bearings and fittings, $1,933,341; brass and bronze wire cloth, $1,280,614; brass valves, $955,201; iron valves, $339,614; brass taps, $123,183; other water and steam fittings, $341,665; other plumbers' supplies, $1,125,101; brass castings, $586,927; bronze castings, $382,721; bronze rods, plates, etc., $481,021, and many other commodities of less importance. Copper wire and cable, lighting fixtures, switches and other such articles for electrical purposes have not been listed under this industry as the concerns which were engaged chiefly in making these products have been classified to the Electrical Apparatus and Supplies Industry which is reviewed in a separate chapter. The total Canadian production of brass and copper wire and cable, lighting fixtures and commercial castings of brass, bronze and copper is recorded in Tables 52 to 54.

Of the 126 factories included in this group in 1936, 79 were located in Ontario, 30 in Quebec, 10 in British Columbia, 4 in Manitoba, and 1 in each of Nova Scotia, New Brunswick and Alberta. The works in Ontario accounted for 65 per cent of the production, and the concerns in Quebec for 28 per cent.

Capital employed in 1936 was reported at $22,890,531, of which $13,103,886 represented the value of lands, buildings and equipment, $4,901,785 the value of inventories and $4,884,860 the total of operating capital. About 61 per cent of this investment was in Ontario and 32 per cent in Quebec.

The number of employees in 1936 was 4,596 compared with 4,246 in 1935. Salaries and wages aggregated $5,293,457 in 1936 against $4,649,912 in 1935.

Materials used for manufacturing during 1936 cost $14,182,328 delivered at the works. About 65 per cent of this expenditure was for copper ingots, slabs, wire bars, etc., chiefly for rolling into wire rods for the manufacture of electrical wires and cables.

Table 39.—Principal Statistics, 1920-1936

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	4,184,674	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	7,548,898	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	6,065,071	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	4,187,652	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

Table 40.—Principal Statistics, by Sub-Groups, 1935 and 1936

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
		$		$	$	$	$	$
1935								
Foundries making taps, valves, etc.	13	6,090,632	1,163	1,175,307	106,454	464,323	2,367,221	1,796,444
Other brass and bronze foundries	66	9,301,145	2,178	2,448,233	337,825	4,471,910	9,165,656	4,355,921
Fabricating plants (not foundries)	45	6,602,064	905	1,026,372	99,868	5,648,367	7,654,145	1,905,910
Total	**124**	**21,993,841**	**4,246**	**4,649,912**	**544,147**	**10,584,600**	**19,187,022**	**8,058,275**
1936								
Foundries making taps, valves, etc.	12	6,651,392	1,246	1,303,145	111,873	642,201	3,119,232	2,365,158
Other brass and bronze foundries	68	8,911,577	2,244	2,718,708	350,064	5,481,428	10,976,980	5,145,488
Fabricating plants (not foundries)	46	7,327,562	1,106	1,271,604	105,171	8,058,699	10,851,255	2,687,385
Total	**126**	**22,890,531**	**4,596**	**5,293,457**	**567,108**	**14,182,328**	**24,947,467**	**10,198,031**

Table 41.—Principal Statistics, by Provinces, 1935 and 1936

Provinces	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
		$		$	$	$	$	$
1935								
Quebec	26	7,653,114	1,162	1,237,568	176,172	3,929,071	5,960,998	1,855,755
Ontario	80	12,813,879	2,650	2,974,627	315,548	6,199,438	11,954,358	5,439,372
British Columbia	10	121,460	56	64,601	5,141	41,707	157,961	111,113
Nova Scotia, New Brunswick, Manitoba, Alberta	8	1,405,388	378	373,116	47,286	414,384	1,113,705	652,035
Canada	**124**	**21,993,841**	**4,246**	**4,649,912**	**544,147**	**10,584,600**	**19,187,022**	**8,058,275**
1936								
Quebec	30	7,410,962	1,282	1,494,746	185,092	3,987,905	7,012,020	2,839,023
Ontario	79	13,903,586	2,835	3,309,717	325,037	9,542,984	16,278,402	6,410,381
British Columbia	10	191,258	79	89,416	7,024	59,557	203,918	137,337
Nova Scotia, New Brunswick, Manitoba, Alberta	7	1,384,725	400	399,578	49,955	591,882	1,453,127	811,290
Canada	**126**	**22,890,531**	**4,596**	**5,293,457**	**567,108**	**14,182,328**	**24,947,467**	**10,198,031**

Table 42.—Size of Establishments, according to Production, Employees and Capital 1935 and 1936

—	1935				1936			
	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	21	163,586	46	70,946	16	107,603	40	52,458
$5,000 to $10,000	18	176,591	54	127,838	21	146,578	21	155,210
$10,001 to $25,000	27	529,283	201	489,261	25	542,240	177	471,167
$25,001 to $50,000	16	890,474	185	527,733	17	743,438	192	604,565
$50,001 to $100,000	8	1,080,358	205	530,643	12	1,345,973	333	801,314
$100,001 to $250,000	18	3,837,646	945	2,874,511	15	2,612,367	695	2,414,171
$250,001 to $500,000	9	4,705,743	1,157	3,140,134	11	5,179,871	1,212	3,923,075
$500,001 to $1,000,000	4	5,773,831	747	2,532,983	6	7,078,326	1,070	4,220,773
Over $1,000,000	3	4,836,329	706	8,892,973	3	5,134,135	856	12,304,734
Total	**124**	**21,993,841**	**4,246**	**19,187,022**	**126**	**22,890,531**	**4,596**	**24,947,467**
(b) Number of Employees								
1 or 2	21	222,846	29	101,135	16	114,168	26	71,142
3 to 10	51	856,001	296	843,464	48	731,512	253	719,419
11 to 20	14	860,326	212	661,818	19	989,398	260	936,799
21 to 50	17	3,694,693	586	4,315,583	19	3,747,057	628	6,605,349
51 to 100	9	3,492,467	679	4,471,031	12	3,559,642	838	5,718,285
Over 100	12	12,867,508	2,444	8,793,991	12	13,748,754	2,591	10,896,473
Total	**124**	**21,993,841**	**4,246**	**19,187,022**	**126**	**22,890,531**	**4,596**	**24,947,467**
(c) Capital Employed								
Under $25,000	63	623,094	298	801,221	60	559,767	291	766,990
$25,000 to $100,000	21	981,172	245	717,586	27	1,320,459	383	1,156,450
$100,001 to $500,000	29	6,190,414	1,630	4,908,425	27	5,882,367	1,515	5,418,969
$500,001 to $1,000,000	5	3,193,963	601	3,680,350	7	5,206,992	914	9,784,376
Over $1,000,000	6	11,005,198	1,472	9,079,440	5	9,920,946	1,493	7,820,682
Total	**124**	**21,993,841**	**4,246**	**19,187,022**	**126**	**22,890,531**	**4,596**	**24,947,467**

Table 43.—Capital Employed, by Classes and by Provinces, 1935 and 1936

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)	**Total capital employed**
	$	$	$	$
1935				
Quebec	5,346,086	1,224,050	1,082,978	**7,653,114**
Ontario	7,150,918	2,855,239	2,807,722	**12,813,879**
British Columbia	70,547	20,945	29,968	**121,460**
Other provinces	754,330	334,160	316,898	**1,405,388**
Canada	**13,321,881**	**4,434,394**	**4,237,566**	**21,993,841**
1936				
Quebec	5,064,493	1,248,890	1,097,579	**7,410,962**
Ontario	7,239,893	3,277,515	3,386,178	**13,903,586**
British Columbia	97,110	25,150	68,998	**191,258**
Other provinces	702,390	350,230	332,105	**1,384,725**
Canada	**13,103,886**	**4,901,785**	**4,884,860**	**22,890,53**

Table 44.—Employees, Salaries and Wages, by Provinces, 1935 and 1936

Provinces	Average number of employees					Salaries	Wages	Total salaries and wages
	On salaries		On wages		Total			
	Male	Female	Male	Feamle				
						$	$	$
1935								
Quebec	200	43	830	89	**1,162**	388,094	849,474	1,237,568
Ontario	421	115	1,970	144	**2,650**	972,539	2,002,088	2,974,627
British Columbia	9	3	44	.....	**56**	19,830	44,771	64,601
Other provinces	82	11	271	14	**378**	167,859	205,257	373,116
Canada	**712**	**172**	**3,115**	**247**	**4,248**	**1,548,322**	**3,101,590**	**4,649,912**
1936								
Quebec	234	45	919	84	**1,282**	481,916	1,012,830	1,494,746
Ontario	479	131	2,073	152	**2,835**	1,021,823	2,287,894	3,309,717
British Columbia	8	3	67	1	**79**	17,322	72,094	89,416
Other provinces	68	4	310	18	**400**	148,607	250,971	399,578
Canada	**789**	**183**	**3,369**	**255**	**4,596**	**1,669,668**	**3,623,789**	**5,293,457**

Table 45.—Wage-Earners, by Months, 1935 and 1936. (On the 15th of each month)

Months	1935			1936		
	Male	Female	Total	Male	Female	Total
January	2,873	235	**3,108**	3,119	244	3,363
February	2,941	238	**3,179**	3,239	250	3,489
March	3,025	242	**3,267**	3,323	256	3,579
April	3,081	245	**3,326**	3,375	252	3,627
May	3,092	245	**3,337**	3,435	245	3,680
June	3,095	246	**3,341**	3,471	260	3,731
July	3,066	237	**3,303**	3,391	249	3,640
August	3,025	245	**3,270**	3,250	250	3,500
September	3,223	247	**3,470**	3,388	253	3,641
October	3,319	255	**3,574**	3,371	269	3,640
November	3,376	261	**3,637**	3,456	270	3,726
December	3,263	252	**3,515**	3,534	272	3,806
Average	**3,115**	**247**	**3,362**	**3,369**	**255**	**3,624**

Table 46.—Regular Hours Worked per Week, by Wage-Earners, 1935 and 1936

(Overtime not included)

Regular hours worked per week	Per cent of wage-earners		Regular hours worked per week	Per cent of wage earners	
	1935	1936		1935	1936
40 hours or less	31·1	26·8	51-53 hours	3·7	3·3
41-43 hours	1·3	0·6	54 hours	0·7	1·5
44 hours	23·8	19·2	55 hours	0·7	4·0
45-47 hours	12·4	6·4	56-59 hours	1·9	2·3
48 hours	7·8	9·6	60 hours and over	3·4	7·7
49-50 hours	13·2	18·6			

Table 47.—Fuel and Electricity Used, 1935 and 1936

Kinds	Unit of measure	1935		1936	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal—Canadian	short ton	5,615	29,814	5,306	30,722
Imported	short ton	12,912	69,409	12,493	67,665
Anthracite coal	short ton	961	9,797	1,398	15,140
Coke	short ton	4,296	37,211	4,536	36,733
Gasoline	Imp. gal.	5,558	1,214	2,263	473
Kerosene	Imp. gal.	1,121	200	1,233	238
Fuel oil	Imp. gal.	1,494,830	111,236	1,524,698	115,559
Wood	cord	473	2,301	387	2,185
Gas—Manufactured	M cu. ft.	19,691	15,475	18,296	13,223
Natural	M cu. ft.	16,646	5,380	18,115	6,762
Other fuel	$	.....	338	.....	1,821
Electricity purchased	K.W.H.	22,659,466	261,772	25,195,446	276,587
Total	.....	.....	**544,147**	.....	**567,108**
Electricity generated for own use	K.W.H.	.....	.....	118,600	.....

Table 48.—Power Equipment, 1935 and 1936

Kinds	1935		1936	
	Number of units	Total rated horse-power	Number of units	Total rated horse-power
Steam engines and turbines	13	1,530	13	1,530
Gasoline, gas and oil engines	3	18	2	83
Hydraulic turbines or water wheels	1	25	1	25
Total Primary Equipment	17	1,573	16	1,638
Electric motors run by purchased power	1,426	23,601	1,469	24,022
Total	**1,443**	**25,174**	**1,485**	**25,660**
Electric motors run by power generated by above primary units	15	340	23	320
Total Electric Motors	1,441	23,941	1,492	24,342
Boilers	34	3,364	35	3,284

Table 49.—Power Equipment, Showing Ordinarily in Use Separately from in Reserve or Idle, 1936

Kinds	Ordinarily in use		In reserve or idle	
	Number of units	Total rated horse-power	Number of units	Total rated horse-power
Steam engines and turbines	11	1,380	2	150
Gasoline, gas and oil engines	2	83	.....	.....
Hydraulic turbines or water wheels	1	25	.....	.....
Total Primary Equipment	14	1,488	2	150
Electric motors run by purchased power	1,456	23,832	13	190
Total	**1,470**	**25,320**	**15**	**340**
Electric motors run by primary power	23	320	.....	.....
Total Electric Motors	1,479	24,152	13	190
Boilers	33	3,184	2	100

Table 50.—Materials Used, 1935 and 1936

Materials	Unit of measure	1935		1936	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Aluminium—					
Ingots	lb.	112,830	20,098	183,414	28,403
Scrap	lb.	1,341,175	179,125	1,713,620	250,886
Sheets	lb.	57,955	14,439	24,839	7,357
Castings	lb.	16,785	2,332	10,465	3,653
Other	lb.	12,175	3,390	21,658	8,352
Brass—					
Ingots	lb.	884,686	65,792	1,100,029	87,853
Scrap	lb.	6,210,480	390,922	6,849,876	496,478
Bars and rods	lb.	535,520	82,829	711,677	118,699
Plates and sheets	lb.	244,939	34,814	262,978	47,357
Pipe and tubing	lb.	288,054	56,026	376,513	76,418
Wire	lb.	578,879	146,271	683,930	174,184
Castings	lb.	255,733	51,469	196,615	41,736
Other	lb.	517,165	81,737	572,721	98,256
Bronze—					
Ingots	lb.	586,248	46,234	920,154	61,549
Scrap	lb.	11,503,058	698,468	12,193,208	917,363
Bars and rods	lb.	55,464	12,479	18,310	4,117
Plates and sheets	lb.	52,334	13,188	82,822	22,377
Pipe and tubing	lb.	3,006	652	3,923	989
Wire	lb.	542,290	216,848	693,127	267,086
Castings	lb.	42,286	8,747	198,397	52,589
Other	lb.	52,513	8,764	98,450	12,028
Copper—					
Ingots, wire bars, cakes, slabs, etc	lb.	75,018,643	6,250,464	99,500,824	8,892,855
Scrap	lb.	3,256,426	251,652	5,574,612	474,393
Other bars and rods	lb.	15,127	4,101	42,556	3,294
Pipe and tubing	lb.	45,177	9,094	39,888	8,961
Plates and sheets	lb.	497,964	99,112	640,597	118,044
Wire	lb.	379,889	41,256	196,768	30,676
Castings	lb.	1,663	457	4,679	1,202
Other	lb.	75,060	7,288	71,062	11,846
Lead—					
Pig	lb.	534,606	21,090	611,911	27,905
Scrap	lb.	156,136	4,989	128,779	6,420
Other	lb.	6,285	613	12,865	1,410
Nickel	lb.	.....	.....	156,313	48,091
Tin—					
Ingots	lb.	254,132	134,762	276,414	140,728
Scrap	lb.	26,954	12,932	12,290	5,096
Other	lb.	33,681	6,847	13,533	4,743
Zinc—					
Ingots and slabs	lb.	4,164,656	199,325	4,922,432	237,968
Scrap	lb.	51,223	2,075	158,239	9,351
Other	lb.	270,242	28,363	345,537	37,678
Other non-ferrous metals	lb.	1,259,472	98,894	1,962,671	177,028
Iron and steel—					
Pig iron	long ton	1,498	26,810	1,022	30,791
Castings, iron	short ton	247	28,734	258	31,634
Castings, steel	short ton	62	9,291	13	3,583
Bars and rods, steel	short ton	236	25,455	174	24,026
Wire, steel	short ton	615	65,351	684	69,866
Sheets, steel	short ton	312	25,216	250	32,319
Scrap iron and steel	short ton	1,990	20,262	2,058	23,740
Other iron and steel	short ton	613	55,436	778	74,569
Lumber	M cu. ft.	990	49,550	804	14,455
Foundry facings	lb.	219,176	6,670	196,349	6,188
Moulding sands	lb.	6,276,771	16,156	5,978,961	17,886
Plating and polishing supplies	$	.....	18,006	.....	4,737
Containers and packing materials	$	.....	25,496	.....	36,500
All other materials	$	.....	904,249	.....	796,615
Total	$	.....	**10,584,600**	.....	**14,182,328**

Table 51.—Products Made, 1935 and 1936

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 groups.

Products	Unit of measure	1935		1936	
		Quantity	Selling value at works	Quantity	Selling value at works
			$		$
Aluminium—					
Castings (1)	lb.	971,613	261,460	923,130	230,552
Other	lb.	52,782	10,353	57,341	17,080
Brass—					
Ingots (1)	lb.	2,205,893	146,189	2,971,901	147,051
Castings, not elsewhere specified (1)	lb.	1,908,094	449,691	3,018,041	586,927
Scrap (1)	lb.	277,693	17,558	281,908	21,862
Other, including bars and rods, sheets, tubing and wire, each of which were reported by only one company	lb.	12,301,277	1,907,952	13,871,134	2,223,133
Bronze—					
Ingots (1)	lb.	14,506	3,750	20,445	2,130
Castings, not elsewhere specified (1)	lb.	1,532,603	329,537	1,520,095	382,721
Other, including bars and rods, sheets, plates and strip, screen plate, tubing and wire	lb.	1,099,651	262,758	1,920,254	481,021
Copper—					
Ingots (1)	lb.	1,275	357	1,755	178
Castings	lb.	131,058	28,347	21,213	6,140
Bars and rods (except wire rods)	lb.	352,821	56,933	416,903	77,461
Wire rods	lb.	55,871,613	4,652,562	76,256,307	7,082,577
Scrap (1)	lb.	985,699	72,991	1,577,200	135,746
Other, including plates and sheets, and tubing	lb.	10,258,996	1,809,681	11,874,662	2,216,252
Iron castings (1)	short ton	1,858	183,743	2,513	191,987
Architectural work, brass and bronze (1)	$	.....	104,590	.....	105,300
Architectural work, iron (1)	$	.....	122,780	.....	146,000
Brass and copper hollow-ware and spinnings	$	.....	39,141	.....	31,850
Fire extinguishers (1)	$	.....	192,194	.....	222,359
Hardware, builders' (1)	$	.....	50,554	.....	59,907
Lighting fixtures (1)	$	.....	119,865	.....	95,370
Lightning rods and supplies	$	.....	37,896	.....	69,304
Meters, water and gas, and parts	$	.....	222,214	.....	372,502
Plumbers' supplies of brass or bronze, not elsewhere specified (1)	$	.....	692,447	.....	1,125,101
Railway car and locomotive bearings and fittings	short ton	6,767	1,654,580	6,954	1,933,341
Tanks, brass and copper	$	.....	79,350	.....	77,010
Taps, brass and bronze—Quantity given	No.	153,213	215,394	220,946	111,813
Quantity not given	$	.....	1,460	.....	11,370
Valves, brass and bronze (1)—Quantity given	No.	341,534	732,513	476,836	925,296
Quantity not given	$	.....	6,665	.....	29,905
Valves, iron body (1)	No.	12,852	268,405	16,576	339,614
Water, gas and steam fittings of brass or bronze not elsewhere specified	$	.....	265,580	.....	341,665
Wire cloth, brass and bronze	sq. ft.	2,331,017	1,088,552	2,743,249	1,280,614
Custom work and repairs	$	.....	261,524	.....	438,922
All other products (x)	$	.....	2,837,456	.....	3,427,406
Total	$	.....	**19,187,022**	.....	**24,947,467**

(x) Includes nickel-silver sheets and blanks, metal fasteners, furniture trimmings, bronze powders, pins, auto hardware, photo engravers' plates, fire department supplies, gauges, pot scourers, and other such articles which were reported by only one or two firms in this industry and which, therefore, cannot be itemized separately under the Statistics Act.

Table 52.—Total Production in Canada of Brass and Copper Wire and Cable, 1935 and 1936

NOTE.—These figures represent the total output for Canada and include the brass and copper wire and cable made by concerns which were not classified to the Brass and Copper Products Industry.

Kinds	Selling value at works	
	1935	1936
	$	$
Brass wire	34,143	33,889
Copper wire, bare	1,856,944	2,559,224
Weatherproof	744,901	1,042,714
Rubber insulated, braided	1,866,450	2,475,155
Cambric insulated, braided	69,937	70,547
Rubber insulated, leaded	212,579	188,189
Cambric insulated, leaded	160,231	243,150
Paper insulated, leaded	104,787	157,536
Telephone cable of all kinds	569,645	765,379
Armoured cable	515,142	647,011
Cord, heater, lamp, fixture, all rubber, etc	548,621	646,692
All other copper wire and cable	1,433,652	1,359,729
Total Brass and Copper Wire and Cable	**8,117,032**	**10,189,215**

Table 53.—Total Production in Canada of Electric Lighting Fixtures, 1935 and 1936

—	Selling value at works	
	1935	1936
	$	$
Interior lighting fixtures, residential	888,829	909,237
Interior lighting fixtures, metal reflectors	143,888	120,673
All other interior lighting fixtures	185,547	182,625
Exterior lighting standards	4,002	27,085
Exterior lighting fixtures	83,460	227,114
Exterior lighting control devices	2,964	15,929
Searchlights and floodlights	8,447	17,906
All other lighting equipment	103,587	349,926
Total Lighting Fixtures	**1,420,724**	**1,850,135**

Table 54.—Total Production in Canada of Brass and Iron Valves, 1935 and 1936

—	1935		1936	
	Number	Selling value at works	Number	Selling value at works
		$		$
Valves, brass and bronze—Quantity given	451,080	899,446	621,052	1,118,505
Quantity not given	.....	22,247	.....	33,905
Total	.....	**921,693**	.....	**1,152,410**
Valves, iron and steel—Quantity given	28,462	473,271	30,799	612,546
Quantity not given	.....	18,841	.....	1,055
Total	.....	**492,112**	.....	**613,601**

Table 55.—Imports into Canada of Brass and Copper and Their Products, 1935 and 1936

—		1935		1936	
		Quantity	Value	Quantity	Value
			$		$
BRASS AND ITS PRODUCTS					
Brass in blocks, ingots or pigs	cwt.	553	6,653	286	3,192
Brass, scrap	cwt.	1,366	10,506	5,461	38,418
Brass caps, adapted for use in the manufacture of electric batteries	$	.....	16,813	.....	15,856
Brass cups, being rough blanks, for the manufacture of paper shells or cartridges	$	.....	26,794	.....	42,614
Brass in bars and rods, in coils or otherwise, not less than 6 feet in length	cwt.	3,269	42,094	4,356	54,005
Brass in strips, sheets or plates, not polished, planished or coated	cwt.	3,042	63,958	2,695	54,692
Brass tubing, not polished, bent or otherwise manufactured in lengths of not less than 6 feet	lb.	368,124	81,802	400,665	93,916
Carburetors of brass	$	.....	2,733	.....	1,410
Coin locks	$	.....	1,016	.....	535
Pumps, hand, brass, n.o.p.	$	.....	3,416	.....	2,892
Valves, brass	$	.....	254,777	.....	316,184
Water meters and parts, n.o.p.	no.	483	33,249	69	29,458
Wire, brass, n.o.p.	lb.	420,637	91,200	317,258	72,634
Wire cloth, or woven wire of brass, n.o.p.	$	.....	27,055	.....	38,857
Manufactures of brass, n.o.p.	$	.....	1,582,751	.....	1,842,494
Total Brass and Its Products	$	.....	**2,244,817**	.....	**2,607,157**
COPPER AND ITS PRODUCTS					
Copper, precipitate of, crude	lb.	4,420	486	.....	.....
Copper, in blocks, pigs or ingots	cwt.	372	3,719	1,803	19,858
Copper, scrap; cathode plates of electrolytic copper for melting	cwt.	163	1,416	70	316
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 for use only in the manufacture of rods to be used exclusively as electrical conductors	cwt.	6,181	72,817	7,611	95,347
Copper in bars or rods, in lengths of not less than 6 feet, unmanufactured	cwt.	1,208	20,435	1,655	30,723
Copper in strips, sheets or plates, not polished, planished or coated	cwt.	3,243	60,044	3,787	71,262
Copper tubing, in lengths of not less than 6 feet, and not polished, bent or otherwise manufactured	lb.	362,778	81,193	431,244	106,253
Copper rollers adapted for use in calico printing	$	.....	71,836	.....	78,621
Copper wire, n.o.p.	lb.	16,271	3,566	21,055	5,017
Copper wire or cloth or woven wire of copper	$	.....	3,242	.....	6,263
Copper, manufactures of, n.o.p.	$	.....	352,961	.....	388,399
Total Copper and Its Products	$	.....	**671,715**	.....	**802,059**

Directory of Firms Included in the Brass and Copper Products Industry in Canada, 1936

NOTE.—This Directory carries only the names of the concerns which the Bureau has classified to the Brass and Copper Products Industry. This industry includes all works which were engaged CHIEFLY in making brass and bronze or 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 Ave., Saint John.
QUEBEC—	
Cuthbert, W. R., & Co	55 Duke St., Montreal.
Jenkins Bros. Ltd	617 St. Remi St., Montreal, and St. Joseph St., Lachine.
Robertson, James, Co., Ltd	946 William St., Montreal.
ONTARIO—	
Canadian Brass Co. Ltd	415 Dundas St., Galt.
Empire Brass Mfg. Co. Ltd	Dundas St. E., London.
Galt Brass Co. Ltd	471 Dundas St., Galt.
Monarch Brass Mfg. Co., Ltd	71 Brown's Ave., Toronto.
Morrison, James, Brass Mfg. Co. Ltd	276 King St. W., Toronto.
Mueller Ltd	Clifford St., Sarnia.
Penberthy Injector Co. Ltd	159 Windsor Ave., Windsor.
Wolverine Limited	76 Nelson St., 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 St., Halifax.
Way, T. P	721 Robie St., Halifax.
QUEBEC—	
Archambault Brass Foundry	8010 Henri Julien St., Montreal.
Bouliane Brass Foundry	941 Clarke St., Montreal.
Brass & Bronze Mfg. Co. Ltd	269 Craig St. W., Montreal.
Canadian Bronze Powder Works Ltd., incorporating Valleyfield Iron Works	Valleyfield.
Clark, C. O., & Bro	5010 St. Patrick St., Montreal.
Eastern Brass Foundry, Limited	514 Harbour St., Montreal.
Empire Brass Foundry Limited	137 Nazareth St., Montreal.
Excel Brass & Aluminum Works	117 Nazareth St., Montreal.
Hazel, James, & Son	128 Grant St., Quebec.
Miller's Brass Foundry, Reg'd	791 Hertel St., Three Rivers.
Mitchell, Robert, Co., Ltd., The	750 Belair Ave., Montreal, and 102 Monkland Blvd., St. Laurent.
Montreal Bronze Limited	999 Delorimier Ave., Montreal.
Union Screen Plate Co. of Canada, Ltd	78 Main St., Lennoxville.
Vandevoorde Foundry	910 Carlier St., Montreal.
ONTARIO—	
Anaconda American Brass Limited	Eighth and Birmingham Sts., New Toronto.
Atkins & Hoyle	69 Portland St., Toronto.
Balfour's Brass Foundry	65 Frederick St., Toronto.
Barber Die Castings Co	68 Sanford Ave., Hamilton.
Brydon Brass Mfg. Co	35 Collier St., Toronto.
Canadian Bell Foundry	34 Lancaster St., Kitchener.
Canadian Brass & Machine Works	20 Hamilton Ave., Ottawa.
Chadwick-Carroll Brass & Fixtures Limited	365 Wilson St., Hamilton.
Central Brass Foundry	48 Abell St., Toronto.
Clayton Brass Works, The	157 Waterloo St. E., Guelph.
Coulter Copper & Brass Co. Ltd	115 Sumach St., Toronto.
Dempsey, Chas. W	17 Division St., Guelph.
Dominion Gas Meter Co. Ltd	328 Wortley Road, London.
Dominion Smelting Works, Ltd	25 McKay St., Ottawa.
Dundas Brass	20 Park St., Dundas.
Elmira Aluminium Co	Elmira.
Fisher & Son	366 Wilson St., Hamilton.
Foley, J. J., Brass Foundry	Atherley Road, Orillia.
Howard, Fred G. (Elmira Aluminium Specialties)	Elmira.
Kitchener Brass & Aluminium Foundry	983 King St. W., Kitchener.
Kondu Manufacturing Co. Ltd	South St., Preston.
Lawrence, T. C., & Son	512 Dundas St., Galt.
May Foundry Co	2018 Buchanan Ave., Niagara Falls.
National Brass & Aluminum Foundry	117 St. Patrick St., Toronto.
Oakville Die Casting Co. Ltd	Oakville.
Ottawa Car Mfg. Co. Ltd	424 Slater St., Ottawa.
Petrie Brass Company	163 Sterling Road, Toronto.
Precision Die Castings Limited	282 St. Helens Ave., Toronto.
Quality Brass Foundry	Rossin House Lane, Toronto.
Queen City Brass Foundry	28 Dalhousie St., Toronto.
St. Catharines Brass Works, Ltd	62 George St., St. Catharines.
St. Thomas Bronze Co. Ltd	First Ave., St. Thomas.
Sherratt, W., & Son	6 Britain St., Toronto.

Directory of Firms Included in the Brass and Copper Products Industry in Canada, 1936—(concluded)

Names of firms	Location of plants
ONTARIO—(concluded)	
Standard Brass Foundry	Catharine and Burlington Sts., Hamilton.
Stratford Brass Co. Ltd	342 Erie St., Stratford.
Sully Brass Foundry Ltd	11 Wabash Ave., Toronto.
Tallman, A. H., Bronze Co. Ltd	Cavell Ave., Hamilton.
Toronto Brass Machine & Foundry Ltd	78 Market St., Toronto.
Wallaceburg Brass Limited	1355 Wallace St., Wallaceburg.
Wilson & Cousins Ltd	35 McCaul St., Toronto.
Windsor Brass Works Ltd	400 Hanna St. E., Windsor.
MANITOBA—	
Acme Brass Foundry	576 Minto St., Winnipeg.
Northwestern Brass Ltd	13 Bury St., Winnipeg.
Western Canada Bronze Co	595 Clifton St., Winnipeg.
Winnipeg Brass Limited	600 Clifton St., Winnipeg.
ALBERTA—	
Northwestern Brass Ltd	1609—24th Ave. E., Calgary.
BRITISH COLUMBIA—	
Hastings Brass Foundry	236 Clark Drive, Vancouver.
McPhail, Wm., & Sons (Canada) Ltd	251 East Second Ave., Vancouver.
Ornamental Bronze Company, Ltd	62—4th Ave. W., Vancouver.
Service Foundry	237 Industrial Ave., Vancouver.
Smith Bros. Foundry Limited	632 Pembroke St., Victoria.
Star Foundry Limited	194 West Third Ave., Vancouver.
Sumner Brass Foundry Limited	619 Bidwell St., Vancouver.
Vancouver Brass Works	1304 Frances St., Vancouver.
Victoria Brass & Iron Works Ltd	Pioneer St., Esquimalt.
Wilson's Brass Foundry	22 Second Ave. E., 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 St., Montreal.
Brehu, Chas. G	756 St. Paul St. W., Montreal.
Canada Wire & Cable Co. Ltd	Montreal East.
Cassidy and Maillard Limited	1575 Craig St. E., Montreal.
Christie, George, (Canada) Ltd	2106 Bellefueille St., Three Rivers.
Edwards, O. M., Co. of Canada, Ltd	5010 St. Patrick St., Montreal.
Golden Gate Mfg. Co. Ltd	361 Youville St., Montreal.
Imperial Pin Co. Ltd	2210 Parthenais St., Montreal.
Johnson Wire Works Ltd., The	4760 Dagenais St., Montreal.
Metalcraft Mfg. Co	907 St. Alexander St., Montreal.
Triangle Industries	912 Bleury St., Montreal.
Whitehouse, A. E	976 St. George St., Montreal.
ONTARIO—	
Air Coils Ltd	Colborne St., Oakville.
Alcor Co	220 King St. W., Toronto.
Booth, W. E., Co. Ltd	12 Mercer St., Toronto.
Breen, S. V	20 Lennox St., Toronto.
Canadian Meter Co. Ltd	90 Caroline St. N., Hamilton.
Canadian Terrazzo Metal Strip Co. Ltd	292 Geary Ave., Toronto.
Capital Wire Cloth & Mfg. Co. Ltd	Hinton Ave., Ottawa.
Crown Brass & Spinning Co	117 St. Patrick St., Toronto.
De Long Hook & Eye Co. of Canada, Ltd	Water St. N., St. Mary's.
Dodd & Struthers	105 Sandwich St. E., Walkerville.
Dominion Lightning Rod Co	63 Main St., Dundas.
Hahn Brass Co. Ltd	New Hamburg.
Jeune Canopy & Mfg. Co	1260 Queen St. W., Toronto.
Johnston Copper & Brass	83 Ryerson Ave., Toronto.
Metal Textile Corp. of Canada, Ltd	129 Steven St., Hamilton.
Neptune Meters Ltd	345 Sorauren Ave., Toronto.
Niagara Wire Weaving Co. Ltd	Robinson St., Niagara Falls.
Ottawa Brass Mfg. Co	542 Wellington St., Ottawa.
Patterson & Heward	319 King St. W., Toronto.
Phillips, B., Co. Ltd	32 Osborne Ave., Toronto.
Phillips Electrical Works Ltd	Brockville.
Pyrene Mfg. Co	91 Don Roadway, Toronto.
Riverdale Copper & Brass Co	284 King St. E., Toronto.
Sheppard, C., and Son	154 King St. E., Toronto.
Standard Meter Co. Ltd	10 Morrow Ave., Toronto.
Tickell, J. G., & Son	525 King St. W., Toronto.
Tools and Hardware Ltd	West St. S., Orillia.
Toronto Coppersmithing Co	1195 Queen St. E., Toronto.
Toronto Metal Spinning Co	32 Eastern Ave., Toronto.
Toronto Wire Works Co	942 Queen St. W., Toronto.
Universal Lightning Rod Co	Tannery St., Hespeler.
United-Carr Fastener Co. of Canada, Ltd	Gage Ave. and Beach Road, Hamilton.
Westwood Bros	214 Bathurst St., Toronto.
Wilson, J. A., Co. Ltd	9 Morrison St., Toronto.
MANITOBA—	
Liberty Fire Extinguisher Co. of Canada, Ltd	Wawanesa.

Production of Brass and Bronze in Other Industries

In addition to the companies which operated brass foundries as their chief business, there were 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, and valves, in 1935 and 1936, was as follows:—

—	1935		1936	
	Pounds	Selling value at works	Pounds	Selling value at works
		$		$
In iron foundries—Brass castings	531,683	127,936	291,340	64,610
Bronze castings	400,585	97,625	464,297	112,049
Brass and bronze valves	.....	182,515	144,816	193,213
In white metal alloy foundries—Brass castings	2,535,920	209,874	2,171,234	203,538
Brass bars and ingots	884,542	94,019	648,667	82,056
Bronze castings	97,569	19,000	2,300	426
Bronze bars and ingots	18,813	2,056	30,000	2,400

List of Brass and Bronze Foundries in Other Industries, 1936

Names of firms	Location of plants
(a) Iron Foundry Industry	
Bruce Stewart & Co. Ltd	Charlottetown, P.E.I.
Cook, H. S., & Co	Yarmouth, N.S.
Fleming Brothers	1595 Barrington St., Halifax, N.S.
Lunenburg Foundry Co. Ltd	Lunenburg, N.S.
I. Matheson & Co. Ltd	New Glasgow, N.S.
Sydney Foundry & Machine Works Limited	Sydney, N.S.
Thompson Bros. Machinery Co. Ltd	Liverpool, N.S.
Courtenay Iron-Brass Foundry	Rothesay Ave., Saint John, N.B.
John Abram's Sons Limited	62 Foundry St., Moncton, N.B.
McLennan Foundry & Machine Works Ltd	Campbellton, N.B.
Saint John Iron Works Limited	Saint John, N.B.
J. E. Bergeron	La Tuque, P.Q.
Crane Limited	3800 St. Patrick St., Montreal, P.Q.
La Fonderie Canadienne	374 St. Jacques St., St. Johns, P.Q.
La Fonderie de Joliette Ltée	2 Alice St., Joliette, P.Q.
T. McOuat & Son	Lachute Mills, P.Q.
Montreal Foundry Limited	1249 Conde St., Montreal, P.Q.
Quebec Brass and Iron Foundry Co. Ltd	53 Commercial St., Levis, P.Q.
Shawinigan Foundries Limited	Shawinigan Falls, P.Q.
Sorel Mechanical Shops Co. Ltd	Sorel, P.Q.
H. Walford Limited	2320 Aird Ave., Montreal, P.Q.
Algoma Steel Corporation Limited	Sault Ste. Marie, Ont.
Bradley Foundry	Paris, Ont.
Canada Valve and Hydrant Company Ltd	Brantford, Ont.
Corbett Foundry & Machine Co. Ltd	Owen Sound, Ont.
Cornwall Brass & Iron Foundries	Cornwall, Ont.
Cunningham & Son	Berryman Ave., St. Catharines, Ont.
C. A. Dunham Co. Ltd	1523 Davenport Road, Toronto, Ont.
Galt Malleable Iron Co. Ltd	Galt, Ont.
Goderich Iron & Brass Co. Ltd	Goderich, Ont.
Hastings Foundry	Stratford, Ont.
Thos. Lawson & Sons Limited	376 Wellington St., Ottawa, Ont.
Midland Engine Works	Midland, Ont.
Muskoka Foundry Limited	Bracebridge, Ont.
Northern Foundry & Machine Co. Ltd	Sault Ste. Marie, Ont.
Sandilands Valve Mfg. Co. Ltd	19 Concession St., Galt, Ont.
Sheldons Limited	96 Grand Ave. S., Galt, Ont.
Standard Sanitary Mfg. Co. Ltd	1000 Lansdowne Ave., Toronto, Ont.
Tweed Foundries Limited	Tweed, Ont.
Victoria Foundry Co	44 Booth St., Ottawa, Ont.
Wabi Iron Works	New Liskeard, Ont.
Warp Tension Governors Ltd	Cornwall, Ont.
Welland Iron and Brass Co	102 Niagara St., Welland, Ont.
Woodside Bros	Port Arthur, Ont.
Zenith Alloys	Dundas St., Brantford, Ont.
Winnipeg Foundry Co. Ltd	115 Robinson St., Winnipeg, Man.
Vulcan Iron Works Limited	Point Douglas Ave., Winnipeg, Man.
John East Iron Works Limited	121 Avenue C North, Saskatoon, Sask.

List of Brass and Bronze Foundries in Other Industries, 1936—(concluded)

Names of firms	Location of plants
Prince Albert Foundry Co.	17th St. and Central Ave., Prince Albert, Sask.
Springstein & Davidson Machine Shop	Sixth Ave. and Lorne St., Regina, Sask.
Alberta Foundry & Machine Co. Ltd.	Smeltic Ave., Medicine Hat, Alberta.
Calgary Iron Works Ltd.	410—418 Ninth Ave. E., Calgary, Alberta.
Nichols Bros. Ltd.	10103—95th St., Edmonton, Alberta.
Norwood Foundry Co. Ltd.	9111—111th Ave., Edmonton, Alberta.
Standard Iron Works Limited	21st St. and 100th Ave., Edmonton, Alberta.
Cranbrook Foundry Co. Ltd.	Cranbrook, B.C.
Jas. W. Dobeson	Nanaimo, B.C.
W. J. Ellis & Company	Kamloops, B.C.
Letson & Burpee Limited	172 Alexander St., Vancouver, B.C.
Ramsay & Adams Foundry Co. Ltd.	435 Garbally Rd., Victoria, B.C.
Victoria Machinery Depot Co. Ltd.	343 Bay St., Victoria, B.C.
(b) White Metal Alloys Industry	
Liberty Smelting Works	269 Prince St., Montreal, P.Q.
Canadian Hanson & Van Winkle Co. Ltd.	15-25 Morrow Ave., Toronto, Ont.
Hoyt Metal Co. of Canada, Ltd., and Canada Metal Co. Ltd.	721 Eastern Ave., Toronto, Ont.
Metal & Alloys Ltd.	1 Wiltshire Ave., Toronto, Ont.
Rahn Metals Limited	North Bay, Ont.

CHAPTER FOUR

THE WHITE METAL ALLOYS INDUSTRY

Statistics given in this chapter cover the operations of firms in Canada which were engaged chiefly in (a) the manufacture of white metal alloys such as babbitt metal, solders and type metal; (b) the refining of scrap to recover white metals such as zinc, tin, lead, etc.; and (c) the manufacture of such products as lead bars, sheet and pipe, antimonial lead, collapsible tubes, metal foil, etc., in which the white metals or their alloys are the chief constituent materials.

Thirty-five factories were included in this group for 1936 and the value of products was reported at $6,905,041. This value was the highest ever reported for the industry and exceeded the 1935 total by 12 per cent. Of the total output, 67 per cent was from 19 plants in Ontario and 27 per cent from 11 factories in Quebec; the remaining 6 per cent was accounted for by 2 plants in Manitoba and 3 in British Columbia.

Capital employed by these concerns amounted to $5,882,190 of which 50 per cent or $2,893,071 represented the value of land, buildings, plant and equipment. The investment in Ontario's plants was $4,231,475, in Quebec $1,212,462 and in Manitoba and British Columbia, $438,253.

Employment was given to an average of 894 workers in 1936, including 188 on salaries and 706 on wages. Salaries for the year amounted to $356,933 and wages to $660,799, a total of $1,017,732. In the previous year 797 persons were employed and their earnings totalled $911,644.

Materials used in manufacturing during 1936 cost $4,356,439 delivered at the works. Included in this total were 1,470 tons of pig tin worth $1,420,744; 4,812 tons of pig lead at $440,242; 1,045 tons of zinc spelter at $100,794; 1,083 tons of other metals (except scrap) at $461,756 and 17,001 tons of scrap of all kinds at $1,448,112.

Production of solders of all kinds amounted to 2,210 tons valued at $1,075,694 at factory prices; type metal totalled 1,953 tons at $377,673; babbitt metal totalled 1,331 tons at $475,544; and miscellaneous lead products such as bars, ingots, castings, pipe, traps and fittings, and antimonial lead amounted to 8,278 tons worth $1,093,596.

Table 56.—Principal Statistics, 1920-1936

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	246,523	24,277	1,556,716	2,181,273	600,280
1924	20	3,229,833	481	557,476	78,214	2,404,827	3,353,910	870,869
1925	22	3,782,120	529	619,973	54,494	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	3,554,979	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	6,466,168	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

Table 57.—Principal Statistics, by Provinces, 1935 and 1936

—	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
		$		$	$	$	$	$
1935								
Quebec	11	1,124,751	144	189,872	15,359	1,299,352	1,764,161	449,450
Ontario	17	3,943,198	611	668,673	60,270	2,422,345	4,055,290	1,572,675
Manitoba / British Columbia	2 / 2	453,771	42	53,099	7,874	271,413	362,951	83,664
Canada	**32**	**5,521,720**	**797**	**911,644**	**83,503**	**3,993,110**	**6,182,402**	**2,105,789**
1936								
Quebec	11	1,212,462	154	198,251	23,861	1,336,367	1,862,234	502,006
Ontario	19	4,231,475	700	771,174	67,651	2,704,641	4,628,092	1,855,800
Manitoba / British Columbia	2 / 3	438,253	40	48,307	8,348	315,431	414,715	90,936
Canada	**35**	**5,882,190**	**894**	**1,017,732**	**99,860**	**4,356,439**	**6,905,041**	**2,448,742**

Table 58.—Capital Employed, 1935 and 1936

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**
	$	$	$	$
1935				
Quebec	451,707	235,631	437,413	1,124,751
Ontario	2,220,773	841,905	880,520	3,943,198
Manitoba / British Columbia	221,862	136,719	95,190	453,771
Canada	**2,894,342**	**1,214,255**	**1,413,123**	**5,521,720**
1936				
Quebec	428,449	273,973	510,040	1,212,462
Ontario	2,237,720	822,953	1,170,802	4,231,475
Manitoba / British Columbia	226,902	98,306	113,045	438,253
Canada	**2,893,071**	**1,195,232**	**1,793,887**	**5,882,190**

Table 59.—Size of Establishments, According to Production, Number of Employees and Capital Employed, 1935 and 1936

—	1935				1936			
	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	3	25,780	7	15,102	7	116,074	18	32,227
$ 10,000 to $ 25,000	5	213,975	24	60,902	3	98,455	13	35,872
$ 25,001 to 50,000	7	331,044	54	272,186	5	276,686	43	186,306
$ 50,001 to 100,000	4	128,788	28	323,971	3	66,265	21	207,532
$100,001 to 250,000	6	1,016,549	162	942,304	9	1,167,732	135	1,362,483
Over $250,000	7	3,805,584	522	4,558,937	8	4,156,978	664	5,080,621
Total	**32**	**5,521,720**	**797**	**6,182,402**	**35**	**5,882,190**	**894**	**6,905,041**
(b) Employees								
1 or 2	3	35,201	6	23,138	6	50,943	10	35,311
3 to 10	16	956,553	95	891,689	15	1,011,996	93	1,031,912
11 to 20	5	661,992	71	683,039	6	702,227	84	925,142
Over 20	8	3,867,974	625	4,584,536	8	4,117,024	707	4,912,676
Total	**32**	**5,521,720**	**797**	**6,182,402**	**35**	**5,882,190**	**894**	**6,905,041**
(c) Capital								
Under $25,000	10	116,223	44	285,969	10	119,599	36	130,445
$ 25,000 to $ 100,000	9	500,374	81	454,173	11	511,026	83	827,386
$100,001 to $ 500,000	10	2,074,404	354	2,528,497	10	1,869,115	317	2,359,333
$500,001 to $1,000,000	3	2,830,719	318	2,913,763	4	3,382,450	458	3,587,877
Total	**32**	**5,521,720**	**797**	**6,182,402**	**35**	**5,882,190**	**894**	**6,905,041**

Table 60.—Employees, Salaries and Wages, by Provinces, 1935 and 1936

Provinces	Average number of employees					Salaries	Wages	Total salaries and wages
	On salaries		On wages		Total			
	Male	Female	Male	Female				
						$	$	$
1935								
Quebec	39	6	95	4	144	96,304	93,568	189,872
Ontario	76	40	343	152	611	215,628	453,045	668,673
Manitoba, British Columbia	8	6	28	.....	42	24,987	28,112	53,099
Canada	**123**	**52**	**466**	**156**	**797**	**336,919**	**574,725**	**911,644**
1936								
Quebec	41	9	101	3	154	103,132	95,119	198,251
Ontario	82	42	403	173	700	231,334	539,840	771,174
Manitoba, British Columbia	10	4	26	.....	40	22,467	25,840	48,307
Canada	**133**	**55**	**530**	**176**	**894**	**356,933**	**660,799**	**1,017,732**

Table 61.—Wage-Earners, by Months, 1935 and 1936 (on the 15th of each month)

Months	1935			1936		
	Male	Female	Total	Male	Female	Total
January	435	138	573	458	137	595
February	437	143	580	469	158	627
March	448	141	589	481	159	640
April	467	144	611	496	159	655
May	467	135	602	520	142	662
June	463	141	604	507	160	667
July	443	132	575	517	177	694
August	456	151	607	528	173	701
September	462	169	631	559	201	760
October	508	194	702	593	212	805
November	512	205	717	609	215	824
December	480	167	647	615	198	813
Average	**466**	**156**	**622**	**530**	**176**	**706**

Table 62.—Regular Hours Worked per Week by Wage-Earners, 1935 and 1936 (Overtime not included)

Regular hours worked per week	Percentage of wage-earners		Regular hours worked per week	Percentage of wage-earners	
	1935	1936		1935	1936
40 hours or less	8·9	2·3	51-53 hours	0·3	0·4
41-43 hours	1·3	0·3	54 hours	1·3	0·2
44 hours	23·6	18·7	55 hours	5·2	9·8
45-47 hours	16·1	22·3	56-59 hours	1·3	7·2
48 hours	16·1	5·0	60 hours and over	3·2	9·2
49-50 hours	22·7	24·6			

Table 63.—Fuel and Electricity Used, 1935 and 1936

Kinds	Unit of measure	1935		1936	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal—Canadian	short ton	253	1,777	737	5,090
Imported	short ton	1,998	14,063	2,625	18,993
Anthracite coal	short ton	288	2,175	56	665
Coke	short ton	770	6,272	645	5,771
Gasoline	Imp. gal.	6,600	1,022	10,925	1,623
Kerosene	Imp. gal.	451	78	447	76
Fuel oil	Imp. gal.	198,396	14,731	190,768	14,777
Wood	cord	34	204	37	240
Gas—Manufactured	M cu. ft.	23,751	6,677	31,980	9,229
Natural	M cu. ft.	3,118	1,811	5,484	3,355
Electricity purchased	K.W.H.	2,443,020	34,693	3,103,750	40,041
Total	xx	.....	**83,503**	.....	**99,860**

Table 64.—Power Equipment, 1935 and 1936

—	1935		1936	
	Number of units	Total rated horse-power	Number of units	Total rated horse-power
Electric motors operated by purchased power—In use	350	3,348	424	3,962
In reserve or idle	7	250	10	112
Total	**357**	**3,598**	**434**	**4,074**
Boilers—In use	.....	.....	1	18
In reserve or idle	3	130	1	65

Table 65.—Materials Used, 1935 and 1936

Materials	1935		1936	
	Quantity	Cost at works	Quantity	Cost at works
	lb.	$	lb.	$
Metals (other than scrap)—				
Aluminium sheets	810,489	180,525	1,052,658	215,761
Antimony, regulus	595,733	73,048	541,398	63,026
Cadmium	72,104	60,716	48,949	41,561
Copper bars, sheets, etc	130,404	11,664	57,378	6,450
Lead, pig	8,209,962	320,478	9,624,097	440,242
Nickel	189,943	57,733	220,631	65,648
Tin, pig	2,898,077	1,286,870	2,940,320	1,420,744
Zinc spelter	1,528,054	79,798	2,091,999	100,794
Other metals (except scrap)	180,931	11,213	248,565	69,310
Scrap metals—				
Brass, all kinds	2,327,959	142,594	1,639,031	89,359
Copper, all kinds	1,571,355	116,212	1,831,095	146,151
Lead battery plates	9,114,254	171,097	9,111,992	211,815
Lead, all other	2,809,926	94,557	2,542,215	98,162
Zinc, all kinds	704,980	22,976	590,630	20,580
Babbitt	2,207,199	454,439	2,193,573	198,991
Solder	94,532	15,762	41,898	3,959
Type metal	1,075,032	51,236	801,056	49,291
Drosses	3,700,594	83,289	5,434,670	177,556
Other scrap	7,433,025	343,653	9,845,651	452,248
Shipping containers	.....	19,899	.....	27,068
All other materials and supplies	.....	404,351	.....	457,723
Total	.....	**3,993,110**	.....	**4,356,439**

Table 66.—Products Made, 1935 and 1936

Products	1935		1936	
	Quantity	Selling value at works	Quantity	Selling value at works
	lb.	$	lb.	$
Babbitt metal	2,418,522	558,991	2,662,706	475,544
Bars and ingots of brass, bronze and aluminium	1,117,014	117,926	1,602,671	198,253
Castings of brass, bronze and aluminium	2,633,479	228,874	2,174,534	204,389
Castings, other (chiefly nickel and cadmium anodes and zinc alloy die castings)	744,482	266,547	1,133,207	337,588
Lead—				
Bars and ingots (except antimonial lead)	1,749,941	77,925	2,199,907	110,396
Castings	97,911	13,951	114,251	21,541
Pipe	2,374,497	173,097	2,555,031	242,003
Sheet	1,696,143	128,614	2,042,382	171,464
Traps and fittings	525,404	114,253	1,110,341	118,250
Antimonial lead	8,253,530	340,231	8,265,311	396,439
Other	633,400	80,676	259,993	27,412
Recovered Metals—				
Aluminium	.....	.....	245,000	41,916
Copper	1,538,997	116,124	2,226,508	179,901
Lead	1,401,982	52,396	2,326,452	83,271
Tin, and tin pipe	184,421	119,042	259,757	138,180
Zinc	1,799,494	67,569	2,687,067	108,593
Other	810,612	66,359	770,317	29,507
Scrap sold	448,591	22,827	544,339	19,701
Solders of all kinds	3,944,727	1,011,679	4,420,555	1,075,694
Type and type metal	4,346,228	385,991	3,906,174	377,673
Other products (x)	.....	2,239,330	.....	2,547,335
Total	.....	**6,182,402**	.....	**6,965,041**

(x) Includes data for foils, collapsible tubes, slide fasteners, drop and moulded shot, moulded bottle caps, nickel alloys and other products which were reported by only one or two companies in this industry, and for which the production figures cannot be shown separately.

Table 67.—Production of Babbitt, Solders, Type and Type Metal, 1924-1936

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	1,413,699	255,058	2,084,447	353,361	2,777,781	218,956
1933	1,485,915	320,472	2,244,210	498,362	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	365,991
1936	2,662,706	475,544	4,420,555	1,075,694	3,906,174	377,673

Table 68.—Imports into Canada and Exports of Lead, Tin, Zinc and Their Products, 1935 and 1936

(n.o.p. means "not otherwise provided for")

Items	Unit of measure	1935		1936	
		Quantity	Value	Quantity	Value
			$		$
IMPORTS					
Lead, pig and block	lb.	98,473	4,875	58,629	4,004
Lead, old and scrap	lb.	10,390	597	2,250	230
Lead, bars and sheets	lb.	69,794	2,959	36,192	2,117
Lead pipe	lb.	4,022	301	24,084	1,818
Lead capsules for bottles	.....	.....	44,965	.....	63,964
Lead shot and bullets	lb.	9,824	696	8,066	828
Tea lead	lb.	3,410	252	.....	.....
Manufactures of lead, n.o.p.	.....	.....	70,988	.....	79,823
Total lead and its products	.....	.....	**125,633**	.....	**152,784**
Tin in blocks, pigs and bars	lb.	4,677,000	2,323,177	4,846,800	2,182,419
Tinfoil	lb.	45,245	19,756	68,820	26,533
Collapsible tubes	.....	.....	44,335	.....	63,829
Total tin and its products	.....	.....	**2,387,268**	.....	**2,272,781**
Zinc spelter	lb.	115,300	4,254	.....	.....
Zinc in blocks, pigs, bars and rods and zinc plates, n.o.p.	lb.	18,100	2,111	11,400	1,238
Zinc strip and sheets, and zinc plates for marine boilers	lb.	5,579,000	349,013	5,739,200	394,327
Zinc dust	lb.	1,648,100	80,837	1,619,800	68,914
Zinc manufactures, n.o.p.	.....	.....	128,536	.....	121,863
Total zinc and its products	.....	.....	**564,751**	.....	**586,342**
Alloys, n.o.p.—					
Babbitt metal in blocks, bars, plates and sheets	lb.	72,300	12,639	33,900	9,893
Britannia metal in blocks, pigs and bars	lb.	6,000	1,948	8,900	2,939
Britannia metal, manufactures of, not plated	.....	.....	4,681	.....	4,428
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.	36,007	22,454	140,834	60,382
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)	.....	.....	5,109	.....	23,959
Phosphor tin and phosphor bronze, in blocks, bars, plates, sheets and wire	lb.	819,164	213,812	934,381	240,272
Yellow metal in bars, bolts and sheets, for use in the construction or repair of vessels	lb.	6,700	1,032	7,000	1,069
Total of above alloys, n.o.p.	.....	.....	**261,675**	.....	**342,942**
Type metal in blocks, bars, plates and sheets	lb.	1,888	516	4,649	906
Type for printing, including chases, quoins, and slugs of all kinds	.....	.....	52,357	.....	52,273
Total type and type metal	.....	.....	**52,873**	.....	**53,179**

Table 68.—Imports into Canada and Exports of Lead, Tin, Zinc and Their Products, 1935 and 1936—(concluded)

Items	Unit of measure	1935		1936	
		Quantity	Value	Quantity	Value
			$		$
EXPORTS					
Lead, metallic, contained in ore	lb.	11,305,100	289,955	9,395,500	287,569
Lead in pigs, refined lead, etc.	tons	141,457	6,871,469	160,675	10,113,282
Total lead and its products			**7,161,424**		**10,400,851**
Zinc contained in ore	lb.	19,600,200	337,732	39,132,000	727,253
Zinc spelter	tons	135,459	7,809,091	140,211	8,523,906
Zinc dross and ashes	lb.	6,267,500	63,719	5,007,100	63,875
Total zinc and its products			**8,211,142**		**9,315,034**

Directory of Firms in the White Metal Alloys Industry, 1936

Names of firms	Location of plants	Main products in 1936
QUEBEC—		
Atlas Metal & Alloys Co. (Canada) Ltd	421 St. Henry St., Montreal	Babbitt; solders; type and type metal; lead bars and ingots.
Colonial Fastener Company Ltd	2210 Parthenais St., Montreal	Slide fasteners.
Dominion Smelting and Refining Company	Sherbrooke and Marion Sts., Montreal	Antimonial lead.
Eagle Smelting and Refining Works Limited	400 Richmond St., Montreal	Babbitt; solders; type and type metal; lead, tin and zinc from scrap.
Liberty Smelting Works	271 Prince St., Montreal	Babbitt; solders; type and type metal; bronze and aluminium bars and ingots; tin, zinc, lead, aluminium and copper from scrap; brass castings.
Magnolia Metal Co. of Canada, Ltd.	2028 Manufacturers St., Montreal	Babbitt; solders; dross.
Mount Royal Metal Company, Ltd.	1205 Mill St., Montreal	Babbitt; solders; type and type metal; lead bars, and ingots; sheet lead; lead traps and fitlings; came lead; lead pipe; antimonial lead; tin and tin pipe; dross.
Ouellette, O. J., & Co	1419 Clarke St., Montreal	Type and type composition.
Robertson Lead Manufacturing Co. Ltd	6251 Lafontaine St., E., Montreal	Babbitt; solders; type and type metal; lead castings, bars and ingots, sheets, pipe, traps and fittings; antimonial lead; lead wool; copper, lead, tin and antimony from scrap.
Steel Company of Canada, Ltd., The	2320 Notre Dame St. W., Montreal	Babbitt; dropped and moulded shot.
Typographic Craftsmen, Ltd	455 Craig St. W., Montreal	Type and composition.
ONTARIO—		
Canada Foils, Limited	7 Fraser Ave., Toronto	Foils of lead, tin, aluminium, etc.
Canada Metal Co. Ltd., and Hoyt Metal Co. of Canada, Ltd	721 Eastern Ave., Toronto	Babbitt; solders; type and type metal; antimonial lead; lead bars and ingots; castings, pipe, sheets, traps and fittings, etc.; brass, bronze and aluminium ingots; bronze, aluminium and brass castings; lead, tin and antimony alloys; zinc and copper cames, bar tin; block tin pipe; soldering paste.
Canadian Hanson & Van Winkle Company Ltd	15 Morrow Ave., Toronto	Anodes of nickel, cadmium, zinc, tin and Monel; brass, bronze and copper castings.
Collapsible Tubes and Containers, Ltd	95 Sterling Rd., Toronto	Collapsible tubes; small aluminium articles.
Flash Fasteners of Canada Ltd	251 Spadina Ave., Toronto	Slide fasteners.
Dominion Type Foundry	99a King St. W., Toronto	Type and type metal.
Frankel Brothers, Ltd. and National Metal Co. Ltd	Don Rd. and Eastern Ave., Toronto	Babbitt; solders; type and type metal, antimonial lead; lead bars and ingots; lead and zinc from scrap.
General Smelting Co. of Canada Ltd	Wilcox St., Hamilton	Zinc and aluminium recovered from scrap.
Hewitt Metals Corp. Ltd	265 Hanna St. E., Windsor	Babbitt; lead bars and ingots; antimonial lead; block, bar and pig tin; solders; type and type metal.

Directory of Firms in the White Metal Alloys Industry, 1936—(concluded)

Names of firms	Location of plants	Main products in 1936
ONTARIO—(concluded)		
Holland Metal Company	7 Bolton Ave., Toronto	Solders, type and type metal; dross; lead bars and ingots.
Kester Solder Co. of Canada, Ltd.	51 Bruce St., Brantford	Solders.
Lightning Fastener Co. Ltd.	Davidson St., St. Catharines	Slide fasteners and component parts.
Metals and Alloys Ltd.	1 Wiltshire Ave., Toronto	Babbitt; bars and ingots, of lead, tin, brass, zinc, bronze and aluminium; solders; nickel alloys.
Modern Machine Company Ltd.	344 Queen St., Ottawa	Collapsible tubes; moulded tube and bottle caps.
Monarch Type Foundry	80 Nelson St., Toronto	Type and type metal.
Moore Type Foundry	88 Richmond St. W., Toronto	Type and type metal.
Rahn Metals, Ltd.	Regina St., North Bay	Babbitt; brass and bronze castings.
Schultz Die Casting Co. of Canada, Ltd.	Wallaceburg	Zinc alloy die castings.
Spooner Copperine Co. Ltd.	Port Hope	Solders.
MANITOBA—		
Canada Metal Co., Ltd., The	301 Chambers St., Winnipeg	Babbitt; solders; type and type metal; lead bars and ingots, pipe, sheet, etc., antimonial lead; bar tin.
Union Metal Co. Ltd., The	654 McGee St., Winnipeg	Babbitt; solders; type and type metal; antimonial lead; lead bars and ingots; cream can caps.
BRITISH COLUMBIA—		
Canada Metal Co. Ltd.	1428 Granville St., Vancouver	Babbitt; solders; type and type metal; lead bars and ingots, sheet, pipe, etc.; antimonial lead; bar tin.
Great Western Smelting Co. Ltd.	310 Prior St., Vancouver	Babbitt; solders; type and type metal; lead bars; antimonial lead; bar tin.
Northern Metals & Engineering Co.	1539 West 3rd Ave., Vancouver	Babbitt; lead and tin from scrap.

CHAPTER FIVE

THE JEWELLERY AND SILVERWARE INDUSTRY

Manufacturers of jewellery, silverware, etc., reported the value of their products at $10,684,548 in 1936. This year's output was the fourth in succession to show an increase over the preceding year; it exceeded the low of 1932 by 75 per cent and it was 11 per cent over the value of $9,592,659 for 1935. Jewellery production advanced in value to $2,775,237 from $2,473,763; clocks, watches and watch cases to $1,540,840 from $1,259,249; sterling silverware to $351,468 from $295,933; electro-plated wares to $2,580,463 from $2,550,501; fine gold to $1,244,636 from $975,760; and gold alloys to $430,993 from $361,227.

In 1936 there were 113 plants engaged in this line of manufactures, including 65 in Ontario, 33 in Quebec, 8 in British Columbia, 3 in Manitoba, 2 in Alberta and 1 in each of New Brunswick and Saskatchewan. Eighty-eight works in the jewellery manufacturing division of this industry employed 1,554 people and made goods worth $4,490,166, thirteen silverware plants with 1,310 employees made products worth $4,234,658, and the remaining 12 plants making dental supplies and recovering precious metals from scrap afforded employment to 95 people and had a combined output worth $1,959,724.

Altogether the 113 plants gave work to 2,959 people against 2,770 persons working in 112 plants during 1935. Total payments in salaries and wages advanced to $3,354,169 from $3,032,350 in the previous year.

Capital employed in 1936 amounted to $8,834,230, of which $3,428,038 represented the value of lands, buildings and equipment, $3,030,487 the value of inventories and $2,375,705 the operating capital. In 1935 capital was reported at $7,953,330.

Materials used in manufacturing processes, exclusive of fuel and electricity, cost $5,022,990 in 1936 against $4,519,732 in the previous year. Among the principal materials were old and scrap gold, fine gold, jewellers' findings, nickel-silver, precious stones, clock and watch parts and movements, cutlery steel and precious metals.

Chief import items under jewellery and silverware in 1936 were: clocks, watches, watch cases, clock and watch actions, movements, parts, etc., at $1,945,277; electro-plated ware at $1,077,866; and eye glass frames and metal parts for same at $475,798.

As reviewed in this chapter 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 jewellery; (b) silver-plated ware and sterling silverware; and (c) gold leaf, dental gold and other dental supplies, and precious metals from scrap and sweepings. Wholesalers, retailers or shops engaged only in repair work have not been included.

Table 69.—Principal Statistics, 1920-1936

Years	No. 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	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	10,653,458	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	10,159,074	2,634	3,431,059	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	2,050,948	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

Table 70.—Principal Statistics, by Provinces, 1935 and 1936

Provinces	No. 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	Net value of production
		$		$	$	$	$	$
1935								
Quebec	37	1,687,339	837	777,493	12,707	1,009,039	2,223,391	1,201,645
Ontario	61	6,150,419	1,862	2,182,578	84,708	3,450,456	7,201,087	3,665,923
British Columbia	8	81,346	51	55,457	1,233	43,228	124,808	80,347
Nova Scotia	1							
New Brunswick	1							
Manitoba	1	34,226	20	16,822	946	17,009	43,373	25,418
Saskatchewan	1							
Alberta	2							
Canada	**112**	**7,953,330**	**2,770**	**3,032,350**	**99,594**	**4,519,732**	**9,592,659**	**4,973,333**
1936								
Quebec	33	1,476,259	781	766,003	13,541	912,673	2,183,908	1,257,694
Ontario	65	7,239,343	2,107	2,512,395	96,206	4,048,609	8,324,071	4,179,256
Manitoba	3	30,794	10	6,647	837	3,962	15,280	10,481
British Columbia	8	78,167	54	62,454	1,341	46,071	136,226	88,814
New Brunswick	1							
Saskatchewan	1	9,667	7	6,670	201	11,675	25,063	13,187
Alberta	2							
Canada	**113**	**8,834,230**	**2,959**	**3,354,169**	**112,126**	**5,022,990**	**10,684,548**	**5,549,432**

Table 71.—Principal Statistics by Main Groups, 1935 and 1936

Groups	No. of plants	Capital employed	Average number of employees	Salaries and wages	Cost of materials at works	Gross selling value of products at works
		$		$	$	$
1935						
Refined precious metals and dental supplies	10	643,393	73	97,467	1,400,632	1,568,020
Silverware	10	2,818,693	884	1,119,885	1,139,338	3,152,908
Jewellery, clocks and watches	92	4,491,244	1,813	1,814,998	1,979,762	4,871,731
Total	**112**	**7,953,330**	**2,770**	**3,032,350**	**4,519,732**	**9,592,659**
1936						
Refined precious metals and dental supplies	12	1,134,641	95	127,807	1,765,770	1,959,724
Silverware	13	3,327,685	1,310	1,536,678	1,559,798	4,234,658
Jewellery, clocks and watches	88	4,371,904	1,554	1,689,684	1,697,422	4,490,166
Total	**113**	**8,834,230**	**2,959**	**3,354,169**	**5,022,990**	**10,684,548**

Table 72.—Capital Employed, by Provinces, 1935 and 1936

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**
	$	$	$	$
1935				
Quebec	668,885	636,621	381,833	**1,687,339**
Ontario	2,451,450	2,057,480	1,641,489	**6,150,419**
British Columbia	35,882	23,544	21,920	**81,346**
Other provinces	24,253	2,212	7,761	**34,226**
Canada	**3,180,470**	**2,719,857**	**2,053,003**	**7,953,330**
1936				
Quebec	590,474	585,442	300,343	**1,476,259**
Ontario	2,788,549	2,410,681	2,040,013	**7,239,343**
Manitoba	20,825	5,705	4,264	**30,794**
British Columbia	25,788	27,217	25,162	**78,167**
Other provinces	2,302	1,442	5,923	**9,667**
Canada	**3,428,038**	**3,030,487**	**2,375,705**	**8,834,230**

Table 73.—Size of Establishments According to Production, Number of Employees and Capital Employed, 1935 and 1936

—	1935				1936			
	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	22	129,045	46	68,720	15	56,384	26	41,625
$ 5,000 to $ 10,000	17	235,085	72	125,179	17	106,113	57	111,392
$ 10,001 to $ 25,000	26	396,318	195	432,585	25	403,333	185	406,429
$ 25,001 to $ 50,000	11	369,593	153	388,574	13	371,893	161	443,743
$ 50,001 to $100,000	11	790,126	201	740,497	17	904,181	302	1,142,666
$100,001 to $250,000	14	1,847,364	663	2,225,389	14	2,222,473	622	2,209,495
Over $250,000	11	4,185,799	1,440	5,611,715	12	4,769,853	1,606	6,329,198
Total	**112**	**7,953,330**	**2,770**	**9,592,659**	**113**	**8,834,230**	**2,959**	**10,684,548**
(b) Number of Employees								
1 or 2	23	82,411	36	94,350	20	80,973	30	84,610
3 to 10	48	1,174,248	284	1,730,760	46	1,119,342	272	1,590,925
11 to 20	13	403,939	188	418,791	15	699,435	211	918,753
21 to 50	14	1,473,625	414	1,764,767	17	1,654,524	435	2,144,134
51 to 100	6	1,297,816	491	1,450,003	6	1,366,099	428	1,029,608
101 to 500	8	3,521,291	1,357	4,133,988	9	3,913,857	1,583	4,916,512
Total	**112**	**7,953,330**	**2,770**	**9,592,659**	**113**	**8,834,230**	**2,959**	**10,684,548**
(c) Capital Employed								
Under $25,000	68	647,580	366	897,316	66	629,793	367	980,964
$ 25,000 to $ 100,000	24	1,366,228	433	1,692,704	23	1,185,293	578	1,606,871
$100,001 to $ 500,000	17	3,881,334	1,326	4,744,270	21	4,820,100	1,294	5,585,668
$500,001 to $1,000,000	3	2,058,188	645	2,258,369	3	2,199,044	720	2,511,045
Total	**112**	**7,953,330**	**2,770**	**9,592,659**	**113**	**8,834,230**	**2,959**	**10,684,548**

Table 74.—Employees Salaries and Wages, 1935 and 1936

Provinces	Average number of employees					Salaries	Wages	Total salaries and wages
	On salaries		On wages		Total			
	Male	Female	Male	Female				
1935						$	$	$
Quebec	97	45	502	193	837	256,071	521,422	777,493
Ontario	243	123	1,157	339	1,862	661,327	1,521,251	2,182,578
British Columbia	10	.....	41	.....	51	10,766	44,691	55,457
Other provinces	9	3	7	1	20	11,469	5,353	16,822
Canada	**359**	**171**	**1,707**	**533**	**2,770**	**939,633**	**2,092,717**	**3,032,350**
1936								
Quebec	85	42	472	182	781	246,990	519,013	766,003
Ontario	281	137	1,292	397	2,107	756,304	1,756,091	2,512,395
Manitoba	6	1	3	.....	10	5,135	1,512	6,647
British Columbia	10	.....	44	.....	54	11,071	51,383	62,454
Other provinces	3	.....	4	.....	7	3,541	3,129	6,670
Canada	**385**	**180**	**1,815**	**579**	**2,959**	**1,023,041**	**2,331,128**	**3,354,169**

Table 75.—Wage-Earners, by Months, 1935 and 1936 (On the 15th of each month)

Months	1935			1936		
	Male	Female	Total	Male	Female	Total
January	1,632	513	2,145	1,690	520	2,210
February	1,573	501	2,074	1,714	518	2,232
March	1,577	512	2,089	1,733	525	2,258
April	1,606	508	2,114	1,761	517	2,278
May	1,638	515	2,153	1,783	568	2,351
June	1,635	518	2,153	1,778	552	2,330
July	1,651	506	2,157	1,768	544	2,312
August	1,710	518	2,228	1,820	588	2,408
September	1,770	556	2,326	1,891	655	2,546
October	1,846	577	2,423	1,944	665	2,609
November	1,876	587	2,463	1,985	669	2,654
December	1,810	571	2,381	1,942	646	2,588
Average	**1,707**	**533**	**2,240**	**1,815**	**579**	**2,394**

Table 75.—Regular Hours Worked per Week by Wage-Earners, 1935 and 1936 (Overtime not included)

Regular hours worked per week	Percentage of wage-earners		Regular hours worked per week	Percentage of wage-earners	
	1935	1936		1935	1936
40 hours or less	5·3	5·4	51-53 hours	6·0	6·2
41-43 hours	0·5	0·5	54 hours	0·1	0·3
44 hours	26·2	29·7	55 hours	5·3	4·9
45-47 hours	25·8	27·3	56-59 hours	1·3	1·5
48 hours	18·3	12·9	60 hours or over	2·3	1·3
49-50 hours	8·9	10·0			

Table 77.—Fuel and Electricity Used, 1935 and 1936

Kinds	Unit of	1935		1936	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal—Canadian	short ton	813	5,496	1,031	7,057
Imported	short ton	4,863	31,444	4,797	30,819
Anthracite coal	short ton	180	2,017	253	2,719
Coke	short ton	72	495	17	173
Gasoline	Imp. gal.	3,312	626	4,313	833
Kerosene	Imp. gal.	1,337	220	718	104
Fuel oil	Imp. gal.	23,405	1,970	36,705	4,725
Wood	cord	29	161	27	122
Gas—Manufactured	M cu. ft.	15,587	13,532	18,364	14,977
Natural	M cu. ft.	76	56	323	333
Other fuel	xx	.....	60	.....	92
Electricity purchased	K.W.H.	3,248,802	43,517	3,489,817	50,172
Total	xx	.....	**99,594**	.....	**112,126**

Table 78.—Power Equipment, 1935 and 1936

Kinds	1935		1936	
	Number of units	Total rated horse power	Number of units	Total rated horse power
Electric motors run by purchased power:—				
Ordinarily in use	838	3,009	939	3,282
In reserve or idle	8	16	22	126
Total	**846**	**3,025**	**961**	**3,408**
Boilers	16	1,005	18	1,045

Table 79—Materials Used, 1935 and 1936

Materials	Cost at works	
	1935	1936
	$	$
Precious metals—		
Fine gold	820,453	774,385
Gold alloys	27,231	49,062
Fine silver	290,270	296,222
Silver alloys	73,457	47,175
Platinum	45,627	101,129
Old and scrap gold for refining	844,902	1,047,715
Jewellers' findings, waste and scrap for refining	265,656	422,837
Gold-filled wire and stock	132,174	121,517
Base metals and alloys—		
Britannia metal, including blanks for plating	51,693	71,334
Nickel-silver, including blanks for plating	301,831	341,408
Cutlery steel	161,252	151,585
Brass sheets	54,567	67,831
Copper sheets	81,538	91,901
Tin ingots	77,675	69,479
Solder	10,761	9,266
Other base metals and alloys	133,795	96,037
Other materials—		
Dental sundries	4,661	5,312
Precious and semi-precious stones	392,211	414,262
Crystals for watches and clocks	17,532	26,688
Clock and watch springs	24,118	26,964
Watch cases	34,160	37,898
Other watch parts, including complete movements	118,309	147,546
Celluloid	13,433	13,095
Semi-porcelain or china	3,340	6,766
Glass liners	88,115	95,839
Flatware (butter knives, salad servers, etc.)	1,910	3,072
Rouge and other polishes	48,464	45,929
Rhinestones and synthetic stones	.....	20,899
Containers, boxes, labels, etc.	155,476	165,911
All other materials	245,121	253,926
Total	**4,519,732**	**5,022,990**

Table 80.—Products, 1935 and 1936

Product	Selling value at works	
	1935	1936
	$	$
Fine gold recovered from scrap and sweepings	975,760	1,244,636
Fine silver recovered from scrap and sweepings	73,010	66,505
Platinum recovered from scrap and sweepings	17,285	11,247
Gold alloys	361,227	430,993
Silver alloys	6,880	21,250
Gold leaf, gold filled wire, sheet and tubing	128,925	156,347
Clocks and watches (x)	1,011,015	1,282,224
Watch cases	240,333	231,412
Jewellery of all kinds	2,473,763	2,775,237
Hollow-ware, electro-plated on Britannia metal	494,164	414,617
Hollow-ware, electro-plated on nickel-silver	231,997	169,195
Hollow-ware, electro-plated on brass and copper	754,908	915,170
Hollow-ware, sterling silver	124,664	138,040
Flatware, electro-plated on nickel silver	1,069,429	1,081,481
Flatware, sterling silver	171,269	213,428
Toiletware and dresserware, sterling silver	161,128	155,173
Cutlery	424,481	411,282
Blanks for plating, nickel-silver	87,231	93,374
Received for custom work and repairs	155,023	216,301
All other products (xx)	630,167	656,630
Total	**9,592,659**	**10,684,548**

(x) Does not include clocks worth $27,204 in 1936 and $17,901 in 1935 which were made as minor products in other industries.
(xx) Includes data for goods reported by less than three firms, such as spectacle frames and cases, pewter hollow-ware, glassware, lamps, stationery, cut glass, decorated glassware, etc.

Table 81.—Production of Jewellery, Clocks and Watches, and Watch Cases, 1925-1936

Years	Jewellery	Clocks and watches (x)	Watch cases
	$	$	$
1925	3,321,598	635,542	438,544
1926	3,169,911	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	252,926
1931	1,983,102	799,550	189,604
1932	1,613,417	727,079	144,640
1933	1,661,942	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

(x) Includes electric clocks which were made by concerns in the Electrical Apparatus and Supplies Industry.

Table 82.—Production of Silverware, 1925-1936

Years	Hollow-ware, electro-plated			Flatware, electro-plated	Sterling silver, hollow-ware and flatware	Cutlery
	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	776,770	674,650	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
1934	355,447	391,330	399,457	904,607	309,080	372,948
1935	494,167	231,997	754,908	1,069,429	295,933	424,481
1936	414,617	169,195	915,170	1,081,481	351,468	411,282

Table 83.—Imports into Canada and Exports of Jewellery, Silverware, Clocks and Watches, etc., 1935 and 1936

—	1935	1936
	$	$
Imports		
Clocks	285,149	336,373
Clock movements, clock cases and clockwork mechanisms	72,974	71,586
Time recorders and parts	24,297	18,797
Watches	126,753	139,996
Watch cases and parts thereof, finished or unfinished	95,518	155,255
Watch actions and movements, finished or unfinished	745,893	834,549
Parts of watch movements, finished or unfinished, not including plates	228,003	208,998
Parts of clock movements or of clockwork mechanisms, finished or unfinished, not including plates	125,585	179,723
Gold, silver and Dutch or schlag metal leaf	62,430	61,724
Gold and silver sweepings	.....	321
Gold, manufactures of, not otherwise provided for	24,285	26,565
Gold, unmanufactured, for commercial purposes	137,427	135,764
Electro-plated ware and gilt ware, not otherwise provided for	439,613	1,077,866
Medals of gold, silver or copper and other metallic articles actually bestowed as trophies or prizes	50,614	45,481
Silver, manufactures of, and articles consisting wholly or in part of sterling or other silverware	64,596	115,513
Jewellery, not otherwise provided for	631,150	645,673
Regalia and badges	20,613	22,957
Spectacle and eye-glass frames—metal parts, unfinished, for the manufacture of such frames	179,456	110,495
Spectacle and eye-glass frames and metal parts thereof, not otherwise provided for	387,543	365,303
Exports		
Jewellers' sweepings	772,725	825,251
Clocks, watches and parts	321,744	425,571
Plated ware, not otherwise provided for	12,851	19,589
Jewellery of all kinds	84,536	72,943

Directory of Firms in the Jewellery and Silverware Industry, 1936

Names of firms	Location of plants
(a) Precious metal products (except Jewellery and silverware)	
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.
Toronto Gold Leaf	17 Stephanie St., Toronto.
Williams Gold Refining Co. of Canada Ltd	Courtwright St., Fort Erie North.
ALBERTA—	
Calgary Dental Laboratory	607-12th Ave., E., Calgary.
(b) Silverware	
QUEBEC—	
Birks, Henry, & Sons, Ltd	Phillips Square, Montreal.
Camirand, Ltd	133 St. Paul St. West, Montreal.
ONTARIO—	
Benedict Proctor Mfg. Co. Ltd	Ontario St., Trenton.
Canadian Silversmiths Ltd	110 Adelaide St., W., Toronto.
Canada Wm. A. Rogers, Ltd. (Oneida Community, Ltd., Successor)	570 King St., W., Toronto.
International Silver Co. of Canada, Ltd	164 Wellington St., N., Hamilton, and 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.
BRITISH COLUMBIA—	
Carmichael, W. M	1023 Fort St., Victoria.
(c) Jewellery, Clocks and Watches	
NOVA SCOTIA—	
Eastwood, James	107 Archimedes St., New Glasgow.
QUEBEC—	
Bick & Ostor Co., Ltd	619 St. James St., W., 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., Montreal.
Hutt, Robert E	630 Dorchester St., W., Montreal.
Imperial Jewellery Mfg. Co	262 Vitre St., W., Montreal.
Ingersoll-Waterbury Co	209 St. Catherine St., W., Montreal.
Lamond, C., & Fils Limitée	929 Bleury St., Montreal.
Lasker, Moses	907 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.
Marion, Aly	360 Craig St., W., Montreal.
Modern Jewellery Mfg. Co. Reg'd	350 Notre Dame St., E., Montreal.
Paquet, M. Gedeon, Earg	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. I., 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.
Smith Patterson Co. Ltd	494 Lagauchetière St., W., Montreal.
Stephenson-Hutt Co. Ltd	630 Dorchester St., W., Montreal.
Vermette, O	4324 Delaroche St., Montreal.

Directory of Firms in the Jewellery and Silverware Industry, 1936—(concluded)

Names of firms	Location of plants
ONTARIO—	
A. & S. Platinum Co	102 Richmond St., W., Toronto.
Albert Products Co. Ltd	251 Spadina Ave., Toronto.
Amell, Robert, & Co	1 Terauhay St., Toronto.
American Watch Case Co. of Toronto Ltd	511 King St., W., 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 Mfg. 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 2.
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	55 York St., Toronto.
Garden & Green	51 Richmond St., E., Toronto.
Gray, Alfred	45 Richmond St., E., Toronto.
Jackson, How & Brooks & Co., Ltd	9 Temperance St., Toronto.
Jewel Craft	39 Lombard St., Toronto.
Johnston, 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.
Robertson & Turner	120 King St., E., Hamilton.
Royal Jewellery Mfg. Co	81 Yonge St. Arcade, Toronto.
Toronto Gold Leaf	17 Stephanie St., Toronto.
Traub Mfg. Co. of Canada, Ltd	Imperial Bldg., Walkerville.
Unity Jewellery Mfg. Co	60 Bond St., Toronto.
Vallier & Millard	1 Duchess St., Toronto.
Walker Brothers	229 Yonge St., 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—	
Freedman's Jewellery Manufacturing	260½ Fort St., Winnipeg.
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.
BRITISH COLUMBIA—	
Birkett & Cobold	434 W. Pender St., Vancouver.
Flewwelling, E. R	18 Hastings St., W., Vancouver.
Jacoby Brothers, Ltd	423 Hamilton St., Vancouver.
Muir, Leo	659 E. Hastings, Vancouver.
Pettigrew, J. D	Bernard Ave., Kelowna.
Trayling & Manson	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 automobiles and for household use but excluding office and industrial machinery, amounted in value to about $13,317,544 in 1936. The items which go to make up this outside production are shown in Table 97 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.

Production by firms in the Electrical Apparatus and Supplies Industry was valued at $72,288,548 in 1936 compared with $61,152,834 in 1935 and $50,234,811 in 1934. During the year under review there were 186 firms in this group, including 134 in Ontario, 29 in Quebec, 10 in British Columbia, 8 in Manitoba, 4 in Alberta, and 1 in Nova Scotia. These plants represented a fixed and working capital of $79,794,524 and afforded work to a monthly average of 17,037 people who received $19,501,882 in salaries and wages. A total of $30,484,468 was paid out for materials used in manufacturing processes and $1,187,942 was expended for fuel and electricity.

Statistics given in Tables 84 to 96 of this report cover only the concerns in the Electrical Apparatus and Supplies Industry. Table 97 shows the output of certain electrical apparatus by firms in other industries. Tables 98 to 117 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.

Imports into Canada under the heading of electrical apparatus were valued at $10,907,782 in 1936 against $8,484,271 in 1935. Exports of this class of Canadian-made goods were appraised at $3,455,812 and re-exports of imported goods at $180,292 in 1936. Details of imports and exports are shown in Tables 118 and 119.

Table 84.—Principal Statistics, 1920-1936

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	10,640	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	30,195,935	69,767,308	38,505,952
1927	130	80,475,999	16,813	20,613,592	897,154	32,714,875	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

Table 85.—Principal Statistics, by Sub-Groups, 1935 and 1936

—	Years	Number 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	1935	14	29,067,924	5,225	5,787,070	5,876,472	16,849,435
	1936	13	29,978,850	5,846	6,610,410	7,216,954	19,513,644
Batteries, chiefly	1935	32	7,238,971	1,095	1,328,613	2,925,693	5,499,599
	1936	26	7,382,437	1,092	1,367,646	3,423,511	7,091,456
Radios and parts, chiefly	1935	24	6,956,497	2,611	2,414,681	5,353,271	10,958,421
	1936	23	8,277,402	2,817	2,656,103	5,987,668	12,628,297
Appliances, chiefly, (vacuum cleaners, refrigerators, stoves, etc.)	1935	30	5,924,918	1,149	1,307,455	2,988,099	6,440,725
	1936	31	6,319,018	1,382	1,524,161	3,575,645	7,685,160
Cables and conduits, chiefly	1935	13	19,516,694	3,264	4,415,261	4,980,768	11,831,748
	1936	12	20,187,638	3,394	4,564,697	6,354,867	14,559,182
Lighting fixtures, chiefly	1935	17	1,273,800	458	425,745	470,446	1,217,759
	1936	20	1,088,338	448	436,536	644,583	1,476,924
Switchgear, panel boards, and wiring devices, chiefly	1935	21	2,693,971	749	742,196	1,154,961	2,630,290
	1936	22	2,656,396	822	862,717	1,304,646	2,888,605
Other electrical equipment, chiefly	1935	31	2,826,480	998	1,173,738	1,660,096	5,724,857
	1936	39	3,904,445	1,236	1,479,612	1,976,594	6,445,280
Total	**1935**	**182**	**75,499,255**	**15,549**	**17,594,759**	**25,409,806**	**61,152,834**
	1936	**186**	**79,794,524**	**17,037**	**19,501,882**	**30,484,468**	**72,288,548**

Table 86.—Principal Statistics, by Provinces, 1935 and 1936

Provinces	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
		$		$	$	$	$	$
1935								
Nova Scotia	1	19,444,918	3,906	4,807,981	276,716	5,468,628	13,047,816	7,302,472
Quebec	24							
Ontario	134	55,448,550	11,454	12,595,146	776,576	19,681,797	47,503,325	27,044,952
Manitoba	8	362,574	103	105,503	10,048	164,921	378,172	203,203
Alberta	4	67,055	16	18,209	2,113	17,065	44,111	24,933
British Columbia	11	176,158	70	67,920	5,348	77,395	179,410	96,667
Canada	**182**	**75,499,255**	**15,549**	**17,594,759**	**1,070,801**	**25,409,806**	**61,152,834**	**34,672,227**
1936								
Nova Scotia	1	20,764,054	4,201	5,131,880	295,030	6,639,889	15,702,574	8,767,655
Quebec	29							
Ontario	134	58,400,322	12,629	14,132,231	873,037	23,501,825	55,800,685	31,425,223
Manitoba	8	343,489	111	119,971	11,891	209,190	402,642	241,561
Alberta	4	97,018	21	21,917	2,274	21,795	58,796	34,727
British Columbia	10	189,641	75	95,883	5,110	111,769	263,851	146,972
Canada	**186**	**79,794,524**	**17,037**	**19,501,882**	**1,187,942**	**30,484,468**	**72,288,548**	**40,616,138**

Table 87.—Size of Establishments according to Production, Number of Employees and Capital Employed, 1935 and 1936

—	1935				1936			
	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	17	136,657	35	45,832	16	113,518	37	36,300
$ 5,000 to $ 10,000	14	116,452	62	95,433	16	144,547	55	120,008
$ 10,001 to $ 25,000	21	428,846	152	352,305	23	625,440	182	382,872
$ 25,001 to $ 50,000	33	1,151,244	395	1,209,203	20	653,472	232	724,613
$ 50,001 to $ 100,000	26	1,982,149	554	1,853,076	32	1,853,964	672	2,203,926
$100,001 to $ 250,000	20	3,790,510	836	3,214,564	23	3,520,596	707	3,636,331
$250,001 to $ 500,000	25	9,100,926	2,110	8,927,066	24	7,417,261	1,871	8,480,532
$500,001 to $1,000,000	14	9,791,505	1,634	9,360,721	18	11,295,612	2,465	12,592,131
Over $1,000,000	12	49,000,966	9,771	36,094,634	14	54,170,114	10,816	44,111,835
Total	**182**	**75,499,255**	**15,549**	**61,152,834**	**186**	**79,794,524**	**17,037**	**72,288,548**
(b) Employees								
1 or 2	16	107,378	26	47,207	18	114,195	27	70,081
3 to 10	49	1,058,781	287	1,077,915	52	1,384,141	333	1,407,052
11 to 20	39	2,301,650	602	2,792,093	30	1,677,394	474	2,041,365
21 to 50	33	5,356,951	1,154	5,898,347	35	5,048,199	1,177	6,020,758
51 to 100	20	7,800,404	1,605	8,367,091	21	7,633,845	1,558	9,037,117
101 to 500	19	16,782,312	3,668	15,773,780	25	22,714,661	5,269	25,210,632
Over 500	6	42,091,779	8,207	27,196,401	5	41,222,089	8,199	27,901,543
Total	**182**	**75,499,255**	**15,549**	**61,152,834**	**186**	**79,794,524**	**17,037**	**72,288,548**
(c) Capital								
Under $25,000	59	689,850	304	937,854	52	580,249	276	758,995
$ 25,000 to $ 100,000	52	2,435,872	853	3,009,032	59	2,629,017	955	3,439,849
$100,001 to $ 500,000	46	11,247,173	3,188	15,874,632	47	11,145,440	3,506	17,055,855
$500,001 to $1,000,000	12	8,079,461	1,421	6,705,102	15	10,060,452	1,881	10,548,850
Over $1,000,000	13	53,046,900	9,723	34,626,214	13	55,379,366	10,419	40,484,999
Total	**182**	**75,499,255**	**15,549**	**61,152,834**	**186**	**79,794,524**	**17,037**	**72,288,548**

Table 88.—Capital Employed, by Provinces, 1935 and 1936

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**
	$	$	$	$
1935				
Nova Scotia and Quebec	11,391,353	4,416,980	3,636,585	**19,444,918**
Ontario	24,835,734	12,319,630	18,293,186	**55,448,550**
Manitoba	180,696	104,090	77,788	**362,574**
Alberta	31,996	24,581	10,478	**67,055**
British Columbia	94,609	52,650	28,899	**176,158**
Canada	**36,534,388**	**16,917,931**	**22,046,936**	**75,499,255**
1936				
Nova Scotia and Quebec	11,882,828	4,506,322	4,374,904	**20,764,054**
Ontario	24,525,076	15,663,620	18,211,626	**58,400,322**
Manitoba	165,652	104,448	73,389	**343,489**
Alberta	58,922	26,637	11,459	**97,018**
British Columbia	88,511	54,712	46,418	**189,641**
Canada	**36,720,989**	**20,355,739**	**22,717,796**	**79,794,524**

Table 89.—Employees, Salaries and Wages, by Provinces, 1935 and 1936

Provinces	Average number of employees					Salaries	Wages	Total salaries and wages
	On salaries		On wages		Total			
	Male	Female	Male	Female				
						$	$	$
1935								
Nova Scotia and Quebec	935	319	1,963	689	3,906	2,374,756	2,433,225	4,807,981
Ontario	1,941	752	6,477	2,284	11,454	4,669,864	7,925,282	12,595,146
Manitoba	26	6	70	1	103	61,474	44,029	105,503
Alberta	5	1	10	.....	16	7,147	11,062	18,209
British Columbia	20	4	45	1	70	31,000	36,920	67,920
Canada	**2,927**	**1,082**	**8,565**	**2,975**	**15,549**	**7,144,241**	**10,450,518**	**17,594,759**
1936								
Nova Scotia and Quebec	967	345	2,110	779	4,201	2,398,051	2,733,829	5,131,880
Ontario	2,186	814	7,130	2,499	12,629	5,283,867	8,848,364	14,132,231
Manitoba	28	7	74	2	111	70,267	49,704	119,971
Alberta	7	1	13	.....	21	9,397	12,520	21,917
British Columbia	17	4	54	.....	75	42,372	53,511	95,883
Canada	**3,205**	**1,171**	**9,381**	**3,280**	**17,037**	**7,803,954**	**11,697,928**	**19,501,882**

Table 90.—Wage-Earners, by Months, 1935 and 1936. (On 15th of each month)

Months	1935			1936		
	Male	Female	Total	Male	Female	Total
January	7,808	2,532	10,340	8,642	2,813	11,455
February	8,063	2,505	10,568	8,611	2,794	11,405
March	7,928	2,442	10,370	8,730	2,757	11,487
April	8,021	2,318	10,339	8,755	2,738	11,493
May	8,002	2,349	10,351	9,126	3,036	12,162
June	8,163	2,583	10,746	9,489	3,370	12,859
July	8,473	2,788	11,261	9,661	3,554	13,215
August	8,843	3,329	12,172	9,763	3,604	13,367
September	9,204	3,793	12,997	10,109	3,734	13,843
October	9,586	3,977	13,563	10,152	3,851	14,003
November	9,636	3,860	13,496	10,049	3,682	13,731
December	9,043	3,247	12,290	9,878	3,411	13,289
Average	**8,565**	**2,975**	**11,540**	**9,381**	**3,280**	**12,661**

Table 91.—Regular Hours Worked per Week by Wage-Earners (Overtime not included), 1935 and 1936

Regular hours worked per week	Percentage of wage-earners		Regular hours worked per week	Percentage of wage-earners	
	1935	1936		1935	1936
40 hours or less	12·3	13·8	51-53 hours	0·7	0·8
41-43 hours	0·7	0·6	54 hours	0·8	0·5
44 hours	16·3	18·5	55 hours	1·4	4·4
45-47 hours	22·2	24·9	56-59 hours	1·5	1·2
48 hours	37·5	27·2	60 hours or over	1·7	0·7
49-50 hours	4·9	7·4			

Table 92.—Fuel and Electricity Used, 1935 and 1936

Kinds	Unit of measure	1935		1936	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal—Canadian	ton	20,927	115,816	23,692	133,260
Imported	ton	40,107	222,228	43,804	250,729
Anthracite coal	ton	2,943	23,562	3,974	28,002
Coke	ton	1,046	10,913	1,316	13,801
Gasoline	Imp. gal.	21,912	5,361	11,516	2,265
Kerosene	Imp. gal.	2,994	527	5,909	988
Fuel oil	Imp. gal.	1,103,498	82,735	1,319,548	90,676
Wood	cord	128	629	135	681
Gas—Manufactured	M cu. ft.	106,474	83,440	123,263	84,972
Natural	M cu. ft.	12,720	8,087	23,546	14,486
Other fuel	xx	.....	446	.....	468
Electricity purchased	K.W.H.	51,141,266	517,057	56,566,091	567,614
Total	xx	.....	**1,070,801**	.....	**1,187,942**
Electricity generated for own use	K.W.H.	10,873,000	.....	9,772,453	.....

Table 93.—Power Equipment, 1935 and 1936

Kinds	1935		1936	
	Number of units	Total rated horse power	Number of units	Total rated horse power
Steam engines and turbines	15	7,425	22	7,279
Gasoline, gas and oil engines	2	247	2	272
Hydraulic turbines or water wheels	7	4,400	7	4,400
Total primary equipment	24	12,072	31	11,951
Electric motors run by purchased power	8,697	96,260	9,116	60,160
Total	**8,721**	**108,332**	**9,147**	**72,111**
Electric motors run by power generated by above primary units	843	4,978	986	5,134
Total electric motors	9,540	101,238	10,102	65,294
Boilers	96	12,370	106	13,442

Table 94.—Power Equipment, 1936, Showing 'Ordinarily in Use' Separately from 'In Reserve or Idle'

Kinds	Ordinarily in Use		In Reserve or Idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
Steam engines and turbines	20	3,279	2	4,000
Gasoline, gas and oil engines	.....	.....	2	272
Hydraulic turbines or water wheels	7	4,400	.....	.....
Total primary equipment	27	7,679	4	4,272
Electric motors run by purchased power	8,760	58,381	356	1,779
Total	**8,787**	**66,060**	**360**	**6,051**
Electric motors run by power generated by above primary units	986	5,134	.....	.....
Total electric motors	9,746	63,515	356	1,779
Boilers	92	11,082	14	2,360

Table 95.—Materials Used in Manufacturing, 1935 and 1936

Materials	Unit of measure	1935		1936	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Aluminium—					
Castings	lb.	562,545	289,741	459,103	243,350
Ingot and scrap	lb.	38,362	7,485	45,624	10,063
Punchings and spinnings	lb.	50,960	29,719	42,306	27,218
Rods and bars	lb.	318,424	42,821	508,417	91,758
Sheets	lb.	146,809	45,722	359,061	97,037
Other	lb.	79,594	26,607	96,768	36,055
Ammonium chloride (sal ammoniac)	lb.	968,571	30,584	1,046,121	33,078
Antimony	lb.	130,380	15,267	156,397	19,021
Argon	cu. ft.	114,958	51,685	121,955	53,006
Asbestos—					
Board	lb.	122,111	20,175	147,311	21,651
Yarn	lb.	61,018	18,040	87,693	26,626
Tape	lb.	8,481	5,738	14,922	10,829
Bakelite in all forms	$	.....	148,439	.....	193,340
Battery boxes	no.	630,262	329,031	685,206	349,404
Brass and bronze—					
Castings	lb.	903,107	243,570	1,082,654	305,386
Rods and bars	lb.	884,679	134,553	1,288,116	196,103
Tubing and pipe	lb.	108,550	20,714	101,868	27,409
Lamp bases	$	.....	152,753	.....	249,580
Sheets	lb.	832,049	166,233	745,194	161,201
Screws	$	.....	40,935	.....	60,746
Other	$	.....	41,062	.....	35,503
Carbon brushes, brush stock and plates	$	.....	93,316	.....	86,331
Carbon electrodes	$	.....	58,952	.....	71,688
Copper—					
Castings	lb.	62,212	15,706	99,137	24,203
Bars and rods	lb.	22,374,396	1,919,008	25,702,675	2,562,314
Scrap	lb.	62,743	10,074	51,964	7,732
Tubing and pipe	lb.	434,131	53,647	655,102	138,864
Sheets and plates	lb.	235,944	44,070	304,733	62,417
Wire, bare	lb.	3,544,916	456,541	3,956,581	558,147
Wire, enamelled	$	.....	285,760	.....	369,796
Wire, other insulated	$	.....	422,431	.....	637,391
Cotton and linen yarns	$	.....	511,954	.....	572,996
Cotton sheets, tapes and webbing	$	.....	86,366	.....	88,051
Cork sheet, etc	$	.....	9,636	.....	17,846
Fibre rod, sheet, tubing, etc	$	.....	87,748	.....	107,654
Frit for enamelling	lb.	293,494	24,707	462,022	38,384
Glass bulbs, tubing and cane	$	.....	576,403	.....	585,611
Insulating varnishes, japans, lacquers, etc	$	.....	124,355	.....	120,668
Insulating waxes	$	.....	82,907	.....	106,786
Insulators, porcelain	$	.....	253,362	.....	317,804
Iron and steel—					
Pig iron	long ton	1,921	40,600	1,496	32,074
Iron castings	short ton	3,744	473,516	4,736	563,806
Steel castings	short ton	443	78,193	217	46,551
Steel forgings	short ton	587	69,279	396	44,578
Steel bars	short ton	1,421	120,613	1,362	124,000
Steel rods	short ton	945	135,699	1,205	156,584
Iron and steel pipe	short ton	4,285	434,253	5,488	548,883
Steel sheets	short ton	12,555	1,028,335	14,351	1,311,520
Steel wire	short ton	1,009	111,867	1,382	153,054
Structural steel	short ton	1,628	99,377	2,353	128,814
Steel strip	short ton	1,478	158,158	2,104	227,540
Stampings	$	.....	.....	.....	182,878
Bolts, nuts and screws	$	.....	154,793	.....	214,669
Other iron and steel	$	.....	168,972	.....	136,349
Lead—					
Pig	lb.	17,329,633	614,810	18,753,513	780,773
Scrap	lb.	106,732	2,364	160,456	3,313
Other	lb.	786,558	35,041	821,732	43,146
Lead oxide (litharge and red lead)	lb.	3,781,853	196,480	3,937,252	229,168
Lumber	M bd. ft.	6,012	161,477	3,893	174,267
Manganese dioxide	lb.	3,484,351	60,333	3,875,978	69,884
Mica	lb.	73,621	58,016	109,003	77,336
Mineral wool	lb.	256,411	6,102	311,962	18,563
Nickel-silver tubing	ft.	59,958	8,484	26,372	3,877
Nitrogen	cu. ft.	434,705	5,868	679,760	8,934
Oil—					
Transformer	Imp. gal.	246,727	60,002	352,858	84,979
Switch	Imp. gal.	59,297	13,665	36,969	8,862
Paint	$	.....	61,731	.....	146,249
Paper	$	.....	183,262	.....	229,777
Pressboard	$	.....	67,660	.....	73,815
Radio cabinets	no.	131,279	1,087,846	177,555	1,282,180
Radio parts for assembling	$	.....	2,689,705	.....	2,872,970
Radio tubes purchased and used to equip radio receiving sets manufactured	no.	.....	781,719	1,292,407	919,106
Resistance wire	$	.....	91,203	.....	85,563
Rubber, reclaimed or compounded	lb.	749,468	56,850	826,771	64,952
Rubber, other	lb.	533,803	101,913	742,003	128,641
Silk, artificial	lb.	20,771	28,108	22,902	28,400

Table 95.—Materials Used in Manufacturing, 1935 and 1936—(concluded)

Materials	Unit of measure	1935		1936	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Steel tanks	no.	1,975	31,639	4,153	53,401
Sulphuric acid, 66° Bé	lb.	3,540,443	58,714	3,677,518	60,391
Talc	lb.	332,908	4,297	382,493	4,946
Thermometers and thermostats	no.	13,408	40,558	20,763	55,964
Tungsten wire	$	.....	52,192	.....	47,856
Wood battery separators	$	.....	154,273	.....	157,828
Zinc—					
Ingot and bar	lb.	636,199	38,987	723,050	45,289
Sheets	lb.	2,193,970	147,673	2,452,853	177,833
Zinc chloride	lb.	348,756	18,695	356,105	20,429
Electric motors purchased	$	.....	.....	.....	335,697
All other materials	$	.....	7,774,730	.....	8,825,361
Containers and packing material	$	.....	663,937	.....	770,371
Total	$	.....	**25,409,806**	.....	**30,484,468**

Table 96.—Products Made in the Electrical Apparatus and Supplies Industry, 1935 and 1936

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 (x) indicates that the article was made also in other industries. For the total Canadian output of certain major items, see Tables 97 to 117.

Products	Unit of measure	1935		1936	
		Quantity	Gross selling value at works	Quantity	Gross selling value at works
			$		$
Appliances, motor driven, including vacuum cleaners (x), fans, washing machines (x), electric clocks (x), ironing machines (x), blowers (x), oil burners (x), floor polishers (x), shavers, clippers, etc. (See Tables 97, 101, 102 and 104)	$	.....	2,470,996	.....	2,530,124
Batteries and parts (See Table 105)	$	.....	5,370,086	.....	5,928,956
Conduit and fittings (x) (See Table 99)	$	.....	853,731	.....	1,044,708
Converter equipment—					
Motor generator sets, A.C. to D.C.	no.	69	106,123	104	112,844
Motor generator sets, A.C. to A.C.	no.	8	467,714	1	410,606
Other converter equipment and parts	$	.....	28,478	.....	70,299
Cooking and heating apparatus, electric—					
Stoves, grills, etc. (x) (See Table 107)	$	.....	841,902	.....	934,103
Heating elements (sold separately)	$	.....	.....	.....	33,049
Heaters, air and space (x)	no.	13,568	37,029	11,494	35,514
Heaters, water, domestic (x) (See Table 109)	no.	18,612	97,372	18,495	102,048
Toasters—					
Commercial	no.	123,207	208,671	49,707	49,895
Sandwich	no.			25,605	51,470
All other	no.			65,494	129,449
Percolators	no.	8,131	40,788	8,703	65,953
Glass coffee makers	no.	.....	.....	3,369	14,493
Irons, flat	no.	173,287	279,855	168,114	270,586
Waffle irons	no.	.....	.....	2,149	7,470
All other cooking and heating apparatus	$	.....	137,246	.....	103,352
Cutouts and fuses—					
Primary cutouts, all types	$	.....	175,384	.....	182,858
Cutouts for cartridge and plug fuses	no.	68,128	6,680	.....	39,981
Cartridge and other fuses and renewals	$	.....	264,778	.....	330,621
Generators, A.C. and D.C. and parts (See Table 100)	$	.....	1,485,712	.....	907,529
Industrial electrical heating equipment—					
Furnaces, resistance, induction and arc types, and industrial ovens	no.	66	103,415	57	94,799
Other industrial heating equipment	$	.....	46,575	.....	127,851
Instruments and meters (except ammeters for autos)—					
Demand meters	no.	6,080	87,810	3,999	92,784
Watthour meters	no.	73,808	665,494	106,681	877,133
Electrical indicating and graphic instruments	no.	759	46,709	956	46,048
Other electrical instruments and meters	no.	.....	81,348	1,124	42,397
Meter and instrument parts	$	.....	99,039	.....	123,222
Lamps, incandescent—					
Standard size	no.	23,026,982	4,155,803	24,364,181	4,117,871
Miniature size	no.	9,832,118	633,769	11,246,707	662,628
Lighting fixtures (x) (See Table 106)	$	.....	1,300,860	.....	1,754,825

Table 96.—Products Made in the Electrical Apparatus and Supplies Industry, 1935 and 1936—(concluded)

Products	Unit of measure	1935		1936	
		Quantity	Gross selling value at works	Quantity	Gross selling value at works
			$		$
Line material (excluding wire and insulators)	$	.....	266,855	.....	289,019
Motors, A.C. and D.C. and parts (x) (See Table 100)	$	.....	3,542,997	.....	4,383,438
Panel boards and cabinets	$	.....	226,278	.....	284,007
Radios and parts (x) (except tubes and transformers) (See Table 111)	$	.....	10,956,010	.....	11,909,260
Rectifiers, for storage battery charging, and parts	no.	160	6,645	.....	34,288
Refrigerators, electric (x) (See Table 108)	$	.....	3,207,795	.....	5,463,471
Switch gear and protective equipment (except telephone switchboards)—					
Switchboard panels and equipment	$	.....	901,456	.....	1,001,344
Lightning arresters	$	.....	144,824	.....	177,390
Oil circuit breakers	$	.....	240,754	.....	404,740
Air circuit breakers	$	.....	108,802	.....	127,365
Disconnecting switches	$	.....	185,496	.....	134,763
Other equipment, including parts and supplies	$	.....	136,526	.....	147,388
Telephone material (telephones, switchboards, etc.)	$	.....	2,575,001	.....	2,979,534
Transformers and parts (See Table 98)	$	.....	2,152,618	.....	2,893,156
Therapeutic lamps and other electro-therapeutic apparatus	$	.....	13,578	.....	30,187
Vacuum tubes—					
Radio receiving tubes (See Table 110)	no.	2,183,529	1,181,239	2,952,415	1,545,823
Other vacuum tubes including X-ray	no.	14,075	93,878	20,066	84,457
Welding apparatus	$	.....	217,478	.....	308,245
Wiring devices (except auto starting switches and time switches)—					
Sockets, brass shell	$	.....	205,897	.....	164,057
Sockets, porcelain	$	.....	90,028	.....	110,263
Switches, surface and flush types	$	.....	177,633	.....	191,038
Switches, enclosed safety type	$	.....	303,663	.....	350,901
Switches, canopy	$	.....	31,121	.....	34,580
Switches, all other	$	.....	167,265	.....	171,839
Receptacles, single and duplex (flush)	$	.....	80,760	.....	105,670
Cord sets	$	.....	104,888	.....	168,111
Other wiring devices	$	.....	798,757	.....	1,005,329
Wires (x) and cables, except aluminium (See Table 103)	$	.....	8,082,889	.....	10,127,986
Receipts from custom and repair work	$	.....	586,902	.....	685,331
Any electrical apparatus not elsewhere reported, including articles reported by only 1 or 2 firms	$	.....	2,195,718	.....	2,480,250
All other products	$	.....	2,054,656	.....	3,199,852
Total	$	.....	**61,152,834**	.....	**72,288,548**

Table 97.—Production of Certain Electrical Apparatus by Firms Classified to Industries other than the Electrical Apparatus and Supplies Industry, 1934-1936

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 96 to arrive at the total Canadian output for these items. (See Tables 98 to 117).

Products	Gross selling value at works		
	1934	1935	1936
	$	$	$
Radio sets and parts	2,077,530	45,291	65,798
Washing machines, electric	3,412,043	3,464,879	4,164,992
Stoves, rangettes, hot plates, etc., electric	1,021,391	1,241,088	1,488,391
Electrodes, furnace	1,575,233	1,739,435	2,318,488
Ignition coils, automobile	346,287	240,886	249,437
Generators and starters, automobile	1,400,056	1,829,617	1,568,192
Oil burners	509,478	266,353	288,192
Signs, electric	749,580	906,858	1,134,411
Lighting fixtures	80,334	119,864	95,370
Blowers for domestic furnaces	72,578	58,287	58,321
Water tank heaters, electric	12,053	16,081	17,434
Air and space heaters	2,000	7,057	4,000
Spark plugs, electric irons, electric motors, vacuum cleaners, copper wire, electric refrigerators, porcelain insulators, etc.	2,328,641	3,381,848	4,559,541
Total	**13,587,204**	**13,317,544**	**16,012,567**

Table 98.—Production of Transformers, by Types, 1935 and 1936

Types	1935			1936		
	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	6,446	87,585	783,921	8,357	114,493	1,115,234
Power transformers, 200 k.v.a. to 7,500 k.v.a. inclusive, over 15,000 volts to and including 132,000 volts	142	127,187	505,639	242	207,052	924,825
Power transformers, over 7,500 k.v.a. and over 132,000 volts	12	152,000	288,697	8	198,000	269,724
Current and potential transformers	2,838	.....	102,775	4,316	.....	114,411
Constant current transformers	36	294	5,344	73	550	21,776
Series lamp transformers	427	.....	10,895	539	.....	14,526
Luminous tube and ignition transformers	10,317	.....	76,170	12,199	.....	89,080
Radio transformers	.....	.....	123,100	.....	.....	187,355
All other transformers	.....	.....	44,971	.....	.....	60,255
Parts and supplies	.....	.....	211,106	.....	.....	95,970
Total	.....	.....	**2,152,618**	.....	.....	**2,893,156**

Table 99.—Production of Electrical Conduit in Canada, 1931-1936

Years	Rigid iron		Flexible (steel and non-metallic)	
	Quantity	Selling value at works	Quantity	Selling value at works
	lb.	$	ft.	$
1931	12,917,280	1,002,112	7,319,720	138,055
1932	7,998,647	494,832	4,721,791	81,966
1933	4,222,832	360,057	2,977,382	78,515
1934	6,308,120	530,918	4,105,988	76,533
1935	8,628,515	657,369	4,430,314	59,052
1936	10,251,308	778,540	4,951,922	79,978

Table 100.—Production of Electric Generators and Electric Motors in Canada, 1935 and 1936

(from all industries)

—	1935			1936		
	Number	Total rating	Selling value at works	Number	Total rating	Selling value at works
			$			$
Generators (excluding double current generators)—						
Alternating current	52	309,043 K.V.A.	1,397,138	37	70,041 K.V.A.	569,147
Direct current and including exciters	77	.....	43,011	49	2,028 K.W.	58,667
Steam turbo-generator sets	.....	.....	45,563	206	103 K.V.A.	279,715
Total Generators	.....	.....	**1,485,712**	.....	.....	**907,529**
Motors (excluding starting motors)—						
½ h.p. and under	151,886	37,952 H.P.	1,371,388	178,549	43,217 H.P.	1,477,065
Over ½ to 5 h.p.—single phase—A.C.	6,794	9,425 H.P.	358,707	8,140	9,821 H.P.	377,647
Over ½ to 5 h.p.—induction	5,651	11,798 H.P.	493,405	6,147	13,166 H.P.	441,742
Over ½ to 5 h.p.—D.C.	67	146 H.P.	9,814	185	164 H.P.	6,866
Over 5 to 200 h.p.—induction	1,918	46,857 H.P.	509,821	2,602	65,584 H.P.	815,683
Over 5 to 200 h.p.—D.C.	45	1,625 H.P.	47,488	21	536 H.P.	27,600
201 h.p. and over—induction	23	11,125 H.P.	66,705	32	12,825 H.P.	112,796
201 h.p. and over—D.C.	3	1,750 H.P.	19,677	1	1,350 H.P.	28,101
Railway and vehicle motors, A.C. and D.C.	.....	.....	.....	96	28,165 H.P.	242,533
Synchronous condensers and motors	43	14,370 K.V.A.	74,522	.....	.....	.....
Starting and control equipment	.....	.....	648,894	.....	.....	842,119
Accessories and parts for motors	.....	.....	133,112	.....	.....	244,185
Total Motors and Parts	.....	.....	**3,733,533**	.....	.....	**4,616,337**

Table 101.—Total Production of Domestic Washing Machines in Canada, 1927-1936

(from all industries)

Years	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**	**5,096,492**
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	3,667,088	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**

Table 102.—Production of Domestic Electric Ironers (*) in Canada, 1935 and 1936

(from all industries)

Years	Number	Selling value at works
		$
1935	9,028	364,626
1936—Operated by own motor	5,435	309,309
Attached to washing machines	3,391	62,769
Total—1936	**8,826**	**372,078**

(x) Includes a few gas and steam heated ironers.

Table 103.—Total Production in Canada of Copper Wire and Cable, 1934-1936

(from all industries)

Kinds	Selling value at works		
	1934	1935	1936
	$	$	$
Copper wire, bare	1,692,376	1,856,944	2,559,224
Weatherproof	939,614	744,901	1,042,714
Rubber insulated, braided	1,416,529	1,866,450	2,475,155
Cambric insulated, braided	90,080	69,937	70,547
Rubber insulated, leaded	299,891	212,579	188,189
Cambric insulated, leaded	172,718	160,231	243,150
Paper insulated, leaded	185,865	104,787	157,530
Telephone cable of all kinds	423,922	569,645	765,379
Armoured cable	496,277	515,142	647,011
Cord, heater, lamp, fixture, all rubber, etc	550,037	548,621	646,602
All other copper wire and cable	1,269,404	1,433,652	1,359,729
Total Copper Wire and Cable	**7,536,713**	**8,082,889**	**10,155,326**

Table 104.—Production of Electric Vacuum Cleaners and Parts in Canada, 1933-1936

(from all industries)

—		1933	1934	1935	1936
Electric floor models	No.	22,802	32,163	38,728	40,621
	$	746,577	1,174,044	1,510,401	1,473,656
Electric hand models	No.	28,151	15,663	11,723	7,058
	$	272,773	163,858	180,683	109,214
Attachments and parts for above	$	276,587	212,006	657,339	347,276
Total	**$**	**1,295,937**	**1,549,908**	**2,348,423**	**1,930,146**

Table 105.—Production of Electric Batteries in Canada, by Types, 1935 and 1936

Kinds	1935		1936	
	Number	Selling value works	Number	Selling value at works
		$		$
Storage—				
For internal combustion engine starting and ignition	561,710	2,378,414	608,025	2,542,313
For farm lighting plants (cells)	14,728	78,311	17,743	93,328
For railway service (cells)	3,853	82,903	6,260	145,573
For telephone switchboards	1,599	30,585	1,160	35,567
For motorcycle starting	2,995	10,604	2,151	8,002
For all other purposes	.....	303,978	.....	450,526
Total Storage	.....	**2,884,795**	.....	**3,275,369**
Dry cell—				
6 inch cells (cells)	1,472,858	402,303	1,537,289	418,877
B and C for radio (cells)	19,800,253	1,136,764	22,517,403	1,323,406
Flashlight (cells)	10,044,403	598,443	9,386,366	560,893
Other dry cells (cells)	43,170	2,715	78,252	5,432
Total dry cells	.....	**2,140,225**	.....	**2,308,608**
Parts and supplies, including all other dry cells and primary wet cells	.....	345,066	.....	344,979
Total	.....	**5,370,086**	.....	**5,928,956**

Table 106.—Total Production in Canada of Electric Lighting Fixtures, 1934-1936

(from all industries)

—	Selling value at works		
	1934	1935	1936
	$	$	$
Interior lighting fixtures, residential	633,835	888,829	909,237
Interior lighting fixtures, metal reflectors	85,665	143,888	120,673
All other interior lighting fixtures	100,808	185,547	182,625
Exterior lighting standards	21,360	4,002	27,085
Exterior lighting fixtures	73,220	83,460	227,114
Exterior lighting control devices	9,714	2,964	15,929
Searchlights and floodlights	20,661	8,447	17,606
All other lighting equipment	50,156	103,587	349,926
Total lighting fixtures	**995,419**	**1,420,724**	**1,850,195**

Table 107.—Number and Factory Selling Value of Stoves Made in Canada, 1933-1936

Kinds		1933	1934	1935	1936
Coal and wood cooking stoves and ranges, all styles	No.	59,068	74,291	83,201	96,250
	$	2,034,434	2,904,462	3,232,965	4,045,067
Coal and wood heating stoves (including all heaters, circulators, Quebec, box, oak, Franklyn, globe or laundry) (x)	No.	29,599	52,056	58,489	109,119
	$	456,495	716,318	815,115	1,076,990
Combination for gas and coal	No.	3,537	5,796	7,049	9,246
	$	237,165	404,118	466,249	506,717
Combination for gas and electric	No.	.....	7	6	550
	$	.....	560	300	34,600
Combination for coal and electric	No.	887	1,055	1,541	3,038
	$	80,736	104,992	133,327	277,220
Gas cooking stoves and ranges not combinations, including all styles with ovens	No.	16,490	20,596	23,939	26,727
	$	557,024	783,634	858,210	1,017,146
Electric cooking stoves and ranges over 35 amperes, all styles with ovens	No.	15,445	18,575	24,094	29,442
	$	1,115,144	1,358,050	1,782,527	2,097,256
Electric rangettes, including cord attachment and oven as one unit	No.	1,663	5,561	6,312	11,195
	$	35,863	88,357	85,038	194,701
Electric cooking plates and grills	No.	29,201	61,064	94,528	56,913
	$	80,265	130,901	181,217	130,537
Gas cooking plates	No.	4,771	3,987	3,768	4,894
	$	37,813	30,521	10,867	13,042
Gas heaters	No.	Not recorded		.....	2,194
	$			.....	27,910
Oil and gasoline stoves	No.	Not recorded		.....	14,550
	$			.....	112,476
Total	$	**4,634,939**	**6,521,913**	**7,565,815**	**9,594,262**

(x) Includes 39,735 sheet iron stoves and airtight heaters worth $99,126 in 1936; these items not included in earlier years.

Table 108.—Production of Electric Refrigerators in Canada, 1929-1936

—	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	**14,193**	**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	**16,649**	**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	**30,257**	**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	**27,067**	**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	**46,325**	**5,934,962**

Table 109.—Production of Domestic Water Heaters in Canada, 1934-1936

(From all industries)

Items	1934		1935		1936	
	Number	Selling value at works	Number	Selling value at works	Number	Selling value at works
		$		$		$
Electric—Circulating type	2,241	28,024	4,103	28,646	3,236	40,601
Immersion type	8,308	33,717	14,899	49,265	15,521	51,695
Storage tank type	1,236	24,108	1,807	35,542	2,465	27,186
Total electric	11,785	85,849	20,809	113,453	21,222	119,482
Gas—Automatic	1,005	51,305	946	62,185	2,271	90,426
Not automatic	13,758	80,029	12,473	74,103	12,293	68,332
Total gas	14,763	131,334	13,419	136,288	14,564	158,758
Coal, wood or oil, cast iron	Not available		Not available		3,978	40,120
Indirect water heaters and converters	Not available		Not available		155	6,912
Grand total	**26,548**	**217,183**	**34,228**	**249,741**	**39,919**	**324,372**

Table 110.—Production in Canada and Imports of Radio Receiving Tubes, 1929-1936

Years	Production		Imports	
	Number	Selling value at works	Number	Value
		$		$
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

Table 111.—Production of Complete Radio Receiving Sets in Canada, 1925-1936

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

(x) Not list prices.

Table 112.—Production of Radio Receiving Sets, by Quarters, 1933-1936

—	1933	1934	1935	1936
	No.	No.	No.	No.
First quarter	9,480	32,531	23,573	28,717
Second quarter	12,765	25,453	24,711	40,954
Third quarter	22,061	46,969	56,043	92,327
Fourth quarter	67,967	83,757	86,966	91,898
Total	**112,273**	**188,710**	**191,293**	**253,896**

Table 113.—Producers' Sales of Radio Receiving Sets, by Provinces, 1932-1936

Provinces	1932	1933	1934	1935	1936
	No.	No.	No.	No.	No.
Maritimes	8,740	8,720	12,566	12,903	16,941
Quebec	30,545	26,559	31,384	34,276	47,238
Ontario	52,412	53,622	66,834	78,698	97,034
Manitoba	12,875	12,542	16,251	18,583	28,591
Saskatchewan and Alberta	16,059	15,741	23,277	28,257	35,602
British Columbia	12,823	13,309	16,865	17,572	22,514
Canada	**133,454**	**130,493**	**167,177**	**190,289**	**247,920**

Table 114.—Producers' Sales of Radio Receiving Sets, by Provinces and Quarters, 1931-1936

Provinces	Years	First quarter	Second quarter	Third quarter	Fourth quarter	Calendar year	Per cent of total for year
		No.	No.	No.	No.	No.	%
Maritimes	1931	2,611	2,000	4,786	7,901	17,298	6·0
	1932	2,591	602	1,940	3,607	8,740	6·6
	1933	1,704	836	1,763	4,417	8,720	6·7
	1934	2,146	1,096	2,647	6,677	12,566	7·5
	1935	1,497	1,035	3,820	6,551	12,903	6·8
	1936	1,996	1,466	5,887	7,592	16,941	6·8
Quebec	1931	13,624	7,907	22,648	33,992	78,171	27·3
	1932	10,820	2,953	6,166	10,606	30,545	22·9
	1933	3,971	3,168	5,304	14,116	26,559	20·3
	1934	5,217	3,254	6,778	16,135	31,384	18·8
	1935	4,574	3,979	8,879	16,844	34,276	18·0
	1936	6,442	6,051	14,003	20,742	47,238	19·1
Ontario	1931	23,272	12,355	30,342	60,435	126,404	44·2
	1932	19,252	4,498	12,164	16,498	52,412	39·3
	1933	10,584	6,256	11,589	25,193	53,622	41·1
	1934	11,639	9,392	15,463	30,340	66,834	40·0
	1935	12,667	13,432	19,350	33,249	78,698	41·4
	1936	15,948	15,084	27,015	38,987	97,034	39·1
Manitoba	1931	2,581	1,491	5,919	9,349	19,340	6·7
	1932	3,083	1,463	4,458	3,871	12,875	9·6
	1933	1,806	908	2,635	7,193	12,542	9·6
	1934	1,680	935	5,063	8,573	16,251	9·7
	1935	1,269	1,226	7,742	8,346	18,583	9·8
	1936	2,686	2,546	13,808	9,551	28,591	.....
Saskatchewan and Alberta	1931	2,107	2,243	5,713	10,944	21,007	7·4
	1932	3,301	854	5,719	6,185	16,059	12·0
	1933	2,157	1,014	4,366	8,204	15,741	12·1
	1934	1,852	1,285	8,455	11,685	23,277	13·9
	1935	1,040	2,831	13,571	10,815	28,257	14·8
	1936	2,167	3,735	15,675	14,025	35,602	14·4
British Columbia	1931	3,458	2,096	7,500	10,848	23,902	8·4
	1932	3,357	840	3,853	4,773	12,823	9·6
	1933	1,592	1,902	3,709	6,106	13,309	10·2
	1934	2,886	1,637	4,289	8,053	16,865	10·1
	1935	2,219	1,308	5,602	8,443	17,572	9·2
	1936	2,575	2,864	8,206	8,869	22,514	9·1
Canada	**1931**	**47,653**	**28,092**	**76,908**	**133,169**	**286,122**	**100·0**
	1932	**42,404**	**11,210**	**34,300**	**45,540**	**133,454**	**100·0**
	1933	**21,814**	**14,084**	**29,366**	**65,229**	**130,493**	**100·0**
	1934	**25,420**	**17,599**	**42,695**	**81,163**	**167,177**	**100·0**
	1935	**23,266**	**23,811**	**58,964**	**84,248**	**190,289**	**100·0**
	1936	**31,814**	**31,746**	**84,594**	**99,766**	**247,920**	**100·0**

Table 115.—Producers' Sales in Canada of All Types of Radio Sets, by Classes

Classes according to number of tubes	Unit	Prince Edward Island, Nova Scotia and New Brunswick	Quebec	Ontario
A.C. Operated Receiving Sets—				
Consols only—				
4 tubes or less	No.	.....	106	82
5 tubes	No.	2,296	6,919	14,068
6 tubes	No.	1,278	3,119	7,105
7 tubes	No.	651	2,415	4,232
8 tubes	No.	1,125	3,254	6,219
9 tubes	No.	760	2,151	3,963
10 tubes	No.	355	1,844	2,198
11 tubes	No.	90	620	825
12 tubes and over	No.	169	1,360	1,655
Total Consols	No.	6,724	21,788	40,347
Total Value at List Prices	$	817,440	2,872,957	5,114,672
Table and Mantle only—				
4 tubes or less	No.	734	7,621	7,665
5 tubes	No.	3,080	8,710	14,973
6 tubes	No.	956	1,671	2,693
7 tubes	No.	418	1,285	1,546
8 tubes and over	No.	691	1,551	2,096
Total Table and Mantle	No.	5,879	20,838	28,973
Total Value at List Prices	$	413,973	1,255,240	1,756,748
Combinations, phonograph and radio	No.	30	333	298
Value at List Prices	$	8,010	101,849	83,903
Total A.C. Receiving Sets	**No.**	**12,633**	**42,959**	**69,618**
Total Value of A.C. Sets at List Prices	**$**	**1,239,423**	**4,230,046**	**6,955,323**
Automobile Sets—				
4 tubes or less	No.	3	21	31
5 tubes	No.	166	618	2,677
6 tubes	No.	190	820	11,703
7 tubes and over	No.	2	7	608
Total Automobile Sets	**No.**	**361**	**1,466**	**15,019**
Total Value of Automobile Sets at List Prices	**$**	**21,370**	**87,222**	**785,286**
Portable Sets	No.	6	18	30
Value of portable sets at list prices	$	673	1,928	3,075
Battery Operated Receiving Sets (excluding automobile and portable)—				
Consols only—				
4 tubes or less	No.	196	253	699
5 tubes	No.	421	252	1,564
6 tubes	No.	501	336	1,117
7 tubes	No.	199	94	1,021
8 tubes and over	No.	175	94	372
Total Consols	No.	1,492	1,029	4,773
Total Value at List Prices	$	139,078	100,353	420,325
Table and Mantle only—				
4 tubes or less	No.	705	769	2,534
5 tubes	No.	803	444	2,227
6 tubes	No.	553	394	1,901
7 tubes	No.	269	82	712
8 tubes and over	No.	119	77	220
Total Table and Mantle	No.	2,449	1,766	7,594
Total Value at List Prices	$	144,486	105,937	453,564
Total All Battery Sets (except automobile and portable)	**No.**	**3,941**	**2,795**	**12,367**
Total Value of Battery Sets at List Prices	**$**	**283,564**	**206,290**	**873,889**
Grand Total—All Sets	**No.**	**16,941**	**47,238**	**97,034**
Grand Total Value of All Sets at List Prices	**$**	**1,545,030**	**4,525,486**	**8,617,573**

and Provinces, Calendar Year 1936 with Comparative Totals for 1935 and 1934

Manitoba	Saskatchewan	Alberta	British Columbia	Canada 1936	Canada 1935	Canada 1934
15	10	20	30	263	2,465	2,271
1,436	721	967	2,339	28,746	27,935	19,951
1,293	370	708	1,579	15,452	15,266	18,149
929	269	523	1,416	10,435	11,202	8,774
1,171	560	714	1,749	14,792	9,813	11,147
823	335	585	1,466	10,083	1,589	1,315
512	243	273	763	6,188	6,208	4,321
172	55	95	197	2,054	1,866	2,035
369	144	234	554	4,485	2,940	2,263
6,720	2,707	4,119	10,093	92,498	79,284	70,526
911,258	359,798	552,072	1,368,141	11,996,338	9,325,056	(x)
1,477	777	1,383	2,342	21,999	9,667	14,311
2,049	935	1,635	3,292	34,674	27,705	25,834
528	217	456	891	7,412	11,478	13,281
299	188	283	686	4,705	3,528	1,593
306	177	312	752	5,885	2,995	2,512
4,659	2,294	4,069	7,963	74,675	55,373	57,534
300,385	140,483	250,830	516,446	4,634,105	3,358,554	(x)
80	17	47	129	934	431	1,114
21,108	4,276	12,666	37,491	269,303	145,238	(x)
11,459	5,018	8,235	18,185	168,107	135,088	129,174
1,232,751	504,537	815,568	1,922,078	16,899,746	12,828,848	(x)
18	.....	3	6	82	1,354	3,439
316	109	188	394	4,468	3,702	3,421
183	142	239	287	13,564	11,306	5,319
1	1	2	4	625	9	189
518	252	432	691	18,739	16,371	12,368
30,661	15,034	25,555	41,012	1,906,140	937,331	(x)
7	2	12	24	99	172	337
581	209	1,459	2,925	10,850	13,017	(x)
568	462	522	164	2,864	1,364	772
1,831	1,417	1,502	375	7,362	5,822	1,481
1,357	1,464	1,403	347	6,525	4,276	4,106
637	328	356	141	2,776	5,388	5,343
582	374	521	242	2,360	361	1,163
4,975	4,045	4,304	1,269	21,887	17,214	15,865
475,789	369,815	403,716	127,338	2,036,414	1,505,612	(x)
3,185	2,120	2,419	792	12,524	4,634	1,317
4,505	2,357	2,849	712	13,897	8,236	4,556
2,763	1,405	1,049	469	8,534	5,910	1,616
756	519	182	132	2,652	2,520	1,315
423	168	234	240	1,481	141	629
11,632	6,569	6,733	2,345	39,988	21,444	9,433
626,448	373,260	370,691	148,297	2,222,683	1,229,712	(x)
16,607	10,614	11,037	3,614	60,975	38,658	25,298
1,102,237	743,075	774,407	275,635	4,259,097	2,735,324	(x)
28,591	15,886	19,716	22,514	247,920	190,289	167,177
2,366,230	1,262,875	1,616,989	2,241,650	22,175,833	16,513,520	(x)

(x) Value at list prices not available for 1934.

Table 116.—Production of Oil Burners in Canada, 1934-1936

(From all industries)

Types		1934	1935	1936
Oil burners—Atmospheric, gravity feed	No.	6,497	4,436	5,218
	$	147,481	100,773	79,303
Power, for domestic and commercial uses	No.	2,148	1,165	1,136
	$	363,521	165,480	208,889

Table 117.—Production of Incandescent Electric Lamps in Canada, 1931-1936

Years	Standard size		Miniature size	
	Number	Selling value at works	Number	Selling value at works
		$		$
1931	18,205,931	4,044,243	7,255,194	655,015
1932	17,102,308	3,597,173	6,244,103	526,835
1933	15,176,002	3,250,911	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	633,760
1936	24,364,181	4,117,871	11,246,707	662,628

Table 118.—Imports into Canada of Electrical Apparatus, 1935 and 1936

Items		1935		1936	
		Quantity	Value	Quantity	Value
			$		$
Batteries, primary, electric and galvanic, n.o.p. and complete parts		.....	124,228	.....	138,748
Batteries, electric, storage, and complete parts, n.o.p., including separator walls of wood, cut to size or not		.....	136,065	.....	144,122
Heating apparatus, n.o.p.		.....	53,999	.....	93,479
Electric dynamos and generators, n.o.p., and complete parts		.....	247,890	.....	447,275
Fuses, fuse plugs and cutouts, electric, and complete parts, n.o.p.		.....	63,555	.....	96,794
Lamps, electric, arc		.....	28,593	.....	5,546
Lamps, electric, incandescent, carbon filament	No.	143,786	18,910	486,030	18,830
Lamps, electric, incandescent, metal filament	No.	2,242,934	131,488	3,780,325	215,088
Lights—Electric head, side and tail lights, n.o.p.; electric torches or flashlights and parts		.....	549,690	.....	492,811
Electric light fixtures and appliances, n.o.p., and complete parts		.....	208,031	.....	574,577
Lightning arresters, choke coils, reactors and other protective devices, and complete parts, n.o.p.		.....	33,076	.....	40,391
Meters, electric, and complete parts		.....	110,995	.....	164,128
Motors, electric, n.o.p., and complete parts		.....	1,099,791	.....	1,496,966
Motors for electric fans, n.o.p.	No.	2,093	18,685	10,086	46,012
Rheostats, controllers and other starting and controlling devices, and complete parts		.....	342,240	.....	468,781
Sad irons, electric, and complete parts		.....	22,446	.....	38,745
Self-contained lighting outfits and complete parts, n.o.p.		.....	2,658	.....	3,477
Sockets, outlets and receptacles and complete parts		.....	74,367	.....	64,535
Spark plugs, magnetos, n.o.p., and other ignition apparatus and complete parts		.....	294,882	.....	97,422
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		.....	9,665	.....	10,204
Switchgear, flame proof, electric, for use underground in coal mines, and complete parts		.....	15,252	.....	18,096
Electric dry shaving machines of a class or kind not made in Canada, for use in removing human hair, and complete parts thereof		.....	74,273	.....	204,169
Steam turbo-generator sets, electric, 700 h.p. and greater, of a class or kind not made in Canada, and complete parts thereof	No.	9	186,847	8	300,731
Switches, switchboards, circuit breakers and complete parts, n.o.p.		.....	534,306	.....	593,457
Telegraph apparatus, electric, and complete parts		.....	32,381	.....	77,756
Telephone apparatus, electric, and complete parts		.....	450,904	.....	634,615
Transformers and complete parts		.....	91,687	.....	113,032
Radio tubes	No.	460,749	258,149	565,873	289,659
Radio and wireless apparatus, electric, n.o.p.		.....	1,695,450	.....	2,256,540
Electric apparatus, n.o.p., and complete parts		.....	1,573,768	.....	1,781,796
Total	$	.....	**8,484,271**	.....	**10,907,782**

Table 119.—Exports from Canada of Electrical Apparatus, 1935 and 1936

Items	1935	1936
	$	$
(a) EXPORTS		
Batteries, storage	170,595	139,504
Batteries, n.o.p	174,922	105,725
Telegraph, telephone and radio apparatus, n.o.p	217,819	266,332
Radio and wireless apparatus (except batteries)	144,936	287,580
Dynamos, generators and motors	167,398	316,424
Electric stoves and other electrical heating and cooking devices—(To March 31, 1935)	279,791	.....
Electric stoves and parts (From April 1, 1935) No.	11,500	17,961
$	745,850	1,112,108
Electrical cooking and heating devices, domestic, n.o.p. (from April 1, 1935)	20,363	25,420
Spark plugs, magnetos and other ignition apparatus	524,144	725,959
Electric apparatus, n.o.p	288,137	476,760
Total	**2,723,955**	**3,455,812**
(b) RE-EXPORTS		
Telegraph, telephone and radio apparatus (except batteries)	46,344	55,713
Dynamos, generators and motors	21,728	31,346
Spark plugs, magnetos, and other ignition apparatus	1,887	3,578
Electric apparatus, n.o.p	80,903	89,655
Total	**150,862**	**180,292**

NOTE.—The letters "n.o.p." mean "not otherwise provided for" in the statistical classification.

Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1936

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	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	2591 Notre Dame St. E., Montreal.
Fittes Battery & Ignition Limited	3475 Park Ave., Montreal.
Flex-I-Con Manufacturing Co. Ltd	1315 Bellechasse 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.
New Era Battery Co	2240 Bellechasse St. E., Montreal.
Northern Electric Co. Limited	1261 Shearer St., Montreal.
Nu Way Battery Ignition Service Reg'd	1200 Demontigny E., Montreal.
Phillips Electrical Works Ltd	5795 De Gaspé Ave., Montreal.
Pyle-National Co. of Canada, Limited	4857 Acorn Ave., St. Henri, Montreal.
R. C. A. Victor Co. Ltd	925 Lenoir St., Montreal.
Schick Shaver Limited	St. Johns.
Solex Company Limited	4060 St. Lawrence Blvd., Montreal.
Sunlite-Electric Co. Limited	362 Notre Dame St. W., Montreal.
White, I. N., & Sons Ltd	476 St. Henri St., Montreal.
ONTARIO—	
Amalgamated Electric Corporation, Limited	372 Pape Ave., Toronto.
Arrow-Hart & Hegeman (Canada) Limited	310 Spadina Ave., Toronto.
Backer, C. B., Co. Ltd	25 Aberdeen St., Ottawa.
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.
Branston, Chas. A., Limited	58 Stewart St., Toronto.
Braun & Bonnick Limited	22 Orillia St., Toronto.

Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1936—(continued)

Names of firms	Location of plants
ONTARIO—*Continued*	
Brock Snyder Mfg. Co.	21 John St., Grimsby.
Burgess Battery Company	399 Buttrey St., Niagara Falls.
Campbell, W. J., Co. Ltd.	137 Clarence St., Brantford.
Canada Batteries Limited	927 Dufferin St., Toronto.
Canadian Wire and Cable Co. Ltd.	Leaside.
Canadian Chromalox Co. Ltd.	251 Queen St. E., Toronto.
Canadian Crocker-Wheeler Co. Ltd.	George St., St. Catharines.
Canadian Curtis Refrigeration Co. Ltd.	20 George St., Hamilton.
Canadian Electric Box Co.	1402 Queen St. E., Toronto.
Canadian Fitzgerald Limited	468 Wellingston St. W., Toronto.
Canadian Flexible Conduit	1874 Davenport Rd., 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.	126 Don Esplanade, 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.	21 Sydenham St., Brantford.
Curtis Lighting of Canada, Ltd.	260 Richmond St. W., Toronto.
Delta Products Limited	35 Catharine St. S., Hamilton.
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 Electrohome 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.
Electric Auto-Lite Limited	Christina St. N., Sarnia.
Electric Magnetic Blanket Co.	310 Spadina Ave., Toronto.
Electric Products Co. of Canada	349 Carlaw Ave., Toronto.
Elgin Electric Co.	170 Portland St., Toronto.
Erie Resistor of Canada, Ltd.	Room 412, Terminal Warehouse Building, Toronto.
Exide Batteries of Canada, Ltd.	153 Dufferin St., Toronto.
Falls Electric Resistors Limited	Courtwright St., Fort Erie North.
Federal Wire & Cable Co. Ltd.	225 Dublin St., Guelph.
Ferranti Electric Ltd.	Industrial St., Mount Dennis, Toronto.
Fergusson, J. R.	56 Ainslie St. N., Galt.
Flexible Shaft Co. Ltd.	321 Weston Rd. S., Toronto.
Force Electric Products	Montrose St., Preston.
Frigidaire Corporation	35 Fraser Ave., Toronto.
Garfinkel, Louis & Co. Rosejoli Co. of Canada	48 Elm St., Toronto.
General Dry Batteries of Canada, Ltd.	228 St. Helen's Ave., Toronto.
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.
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 Ltd.	630 Wyandotte St. E., Windsor.
Leff Electric Co.	261 Dundas St., London.
Leland Electric Canada Ltd.	9 Duke St., Toronto.
Lighting Products Ltd.	366 Adelaide St. W., 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.
Meredith, C. C., & Co. Ltd.	Queen St., Streetsville.
Metal Industries Ltd.	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
National Batteries Ltd.	45 Richmond St. E., Toronto.
National Electric Mfg. Co.	510 King St. W., Toronto.

Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1936—(concluded)

Names of firms	Location of plants
ONTARIO—Concluded	
Noma Electric Co. of Canada, Ltd	179 John St., Toronto.
Osborne Electric Co. Ltd	2368 Dundas St. W., Toronto.
Packard Electric Company, Ltd	13 Race St., St. Catharines.
P. & E. Division of Powerlite Devices Ltd	171 John St., Toronto.
Philco 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	43 Ritson Rd. N., Oshawa.
Pole-Line Equipment Ltd	106 Jarvis St., Toronto.
Premier Vacuum Cleaner Co. Ltd	18 Brendalbane 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	579 Richmond St. W., 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.
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.
Sampson-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	Corner 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.
Stewart-Warner Alemite Corp. of Canada Ltd	McDonald 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	1511 Kildare Rd., Walkerville.
Walsh Electrical Co	465 Church St., Toronto.
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	270 King St. W., Toronto.
MANITOBA—	
Canadian Electric & Brass Ltd	120 Lombard St., Winnipeg.
Electric Heating & Mfg. Co. Ltd	902 Home 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	10519-104th Avenue, Edmonton.
Langley Electric Co. Ltd	1301-11th Ave. E., Calgary.
Smith Batteries Ltd	1012-9th Ave. W., Calgary.
BRITISH COLUMBIA—	
Canadian Petersime Electric Incubators Ltd	2701 Douglas Rd., New Westminster.
Cemco Electrical Mfg. Co. Ltd	165 W. Fourth Ave., Vancouver.
Cops & 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.
Francis Battery Service	1412 Quadra St., Victoria.
Jones Brothers Service Station Ltd	806 Yates St., Victoria.
Langley Mfg. Co. Ltd	Granville Island, Vancouver.
Treleaven, J. M	No. 17 Road, Lulu Island, Vancouver.

Appendix to Directory

List of Firms Which Made Certain Electrical Apparatus or Supplies in 1936 but Which Have Been Classified to Other Industries (See Table 97)

Names of firms	Location of plants
Aluminum Company of Canada	Arvida, P.Q.
Altorfer Brothers of Canada, Ltd	1615 William St., Montreal, P.Q.
Armstrong Foundry & Machine Shop Ltd	Wellington St., Orangeville, Ont.
Atlas Engineering & Machine Co. Ltd	80 Eastern Ave., Toronto.
Babcock-Wilcox and Goldie-McCulloch Ltd	Galt, Ont.
Beach Foundry Limited	Hinton Ave., Ottawa, Ont.
Beatty Brothers Ltd	Fergus, Ont.
Belanger, A., Ltée	Montmagny, P.Q.
Bendix Eclipse of Canada, Ltd	Argyle Road, Walkerville, Ont.
Black & Decker Mfg. Co. Ltd	10 St. Sophie Lane, Montreal, P.Q.
Boyd, A. G., & Co	100 Front St. E., Toronto, Ont.
Brantford Washing Machine Co. of Canada, Ltd	Brantford, Ont.
Brown Engineering Corp. Ltd	360 Dufferin St., Toronto, Ont.
Caloric Furnace Co. Ltd	Alliston, Ont.
Canada Foundries & Forgings Ltd	Water St. W., Brockville, Ont.
Canadian Colortype Ltd	290 York St., Hamilton, 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 Sirocco Co. Ltd	300 Banwell St., Windsor, Ont.
Canadian Radiator Mfg. Co	196 Adelaide St. W., Toronto, Ont.
Chadwick Carroll Brass & Fixtures Ltd	365 Wilson Ave., Hamilton, Ont.
Chadwick, F., & Son, Brass Co. Ltd	8 George St., Hamilton, Ont.
Champion Spark Plug Co. of Canada, Ltd	1416 Howard Ave., Windsor, Ont.
Clare Brothers & Company	Preston, Ont.
Coffield Washer Co. Ltd	77 Niagara St., Hamilton, Ont.
Connor, J. H., & Son, Ltd	10 Lloyd St., Ottawa, Ont.
Corman Engineering Co	81 Portland St., Toronto, Ont.
Crown Brass & Spinning Co	117 St. Patrick St., Toronto, Ont.
Dominion Foundry Limited	167 St. Hubert St., Point Viau, P.Q.
Dowswell Lees & Co. Ltd	193 Elgin St., Hamilton, Ont.
Draft King Blowers	1960 Yonge St., Toronto, Ont.
Easy Washing Machine Co. Ltd	Mirandi and Schell Aves., Toronto, Ont.
Electric Auto Lite Ltd	Christina St. S., Sarnia, Ont.
Electro Metallurgical Co. of Canada, Ltd	Welland, Ont.
Enamel & Heating Products Ltd	Sackville, N.B.
Engineering Products of Canada, Ltd	6259 Notre Dame St. E., Montreal, P.Q.
Enterprise Foundry Co. Ltd	Sackville, N.B.
Essex Wire Corporation Ltd	1217 McDougall Ave., Windsor, Ont.
Fairbanks, E. T., & Co. Ltd	Sherbrooke, P.Q.
Fairgrieve & Son, Ltd	50 Dovercourt Rd., Toronto, Ont.
Findlays Ltd	Carleton Place, Ont.
Fonderie Rigaud	Rigaud, P.Q.
General Steel Wares, Ltd	London, Ont.
Gilbert & Barker Mfg. Co. Ltd	207 Geary Ave., Toronto, Ont.
Gilson Mfg. Co. Ltd	York Road, Guelph, Ont.
Globe Iron Works	1815 Pandora St., Vancouver, B.C.
Grocy, William & J. G., Limited	56 Esplanade St., Toronto, Ont.
Guelph Stove Co. Ltd	Guelph, Ont.
Gurney Foundry Co. Ltd	96 Principal St., St. Laurent de Montreal, P.Q.
Hall Foundry Co. Ltd	Hespeler, Ont.
Hamilton Machine Co	11 Ferguson Ave., Hamilton, Ont.
Hardware & Woodenware Ltd	Coaticook, P.Q.
Hampson, Q.C	Walkerton, Ont.
Hastings Brass Foundry	236 Clarke Drive, Vancouver, B.C.
Hastings, Maurice	10 Pine St., Stratford, Ont.
Hepburn, John T., Ltd	18 Van Horne St., Toronto, Ont.
Hi Power Furnace & Stoker Co. Ltd	5750 Granville St., Vancouver, B.C.
Ingersoll Machine & Tool Co. Ltd	King St. W., Ingersoll, Ont.
Johnson Copper & Brass	83 Ryerson Ave., Toronto, Ont.
Kinkade Burners	54 Wellington St., Stratford, Ont.
Kondu Mfg. Co. Ltd	South St., Preston, Ont.
Kraeuter & Co. of Canada, Ltd	80 Duchess St., Toronto, Ont.
Kribs, W. A., Co. Ltd	Guelph Ave., Hespeler, Ont.
La Cie Bedard Ltee	L'Assomption, P.Q.
La Fonderie de Joliette	Joliette, P.Q.
La Fonderie de L'Islet Ltée	L'Islet Station, P.Q.
La Fonderie de Ste. Croix Ltée	Ste. Croix, P.Q.
MacDonald Metal Products Co. Ltd	Waterloo, P.Q.
Maple Leaf Electric Tools Ltd	171 Eastern Ave., Toronto, Ont.
Maxwells Ltd	73 Park Ave., St. Mary's, Ont.
May Oil Burner Co. of Canada, Ltd	17 Ellen St., Toronto, Ont.
Metal Stampings Ltd	435 Fleet St., Toronto, Ont.
Mitchell, Robert, Co. Ltd	750 Belair Ave., Montreal, P.Q.
Monarch Oil Burners Co	701 St. Clair Ave. W., Toronto, Ont.

Appendix to Directory—(concluded)

List of Firms Which Made Certain Electrical Apparatus or Supplies in 1936 but Which Have Been Classified to Other Industries (See Table 97)—(concluded)

Names of firms	Location of plants
McKinnon Industries Limited	Ontario St., St. Catharines, Ont.
Moffats Limited	Weston, Ont.
Toronto Metal Spinning Co	32 Eastern Ave., Toronto, Ont.
Metal Stampings Ltd	Fleet St., Toronto, Ont.
Niagara Foundry Co	Buttrey St., Niagara Falls, Ont.
Orme's Limited	175 Sparks St., Ottawa, Ont.
Paquette, P., Co	Nelson St., Penetanguishene, Ont.
Premier Automatic Coal Burners	1620 Bloor St. W., Toronto, Ont.
Radigan, John, & Co	48 Ferguson Ave. S., Hamilton, Ont.
Renfrew Machinery Co. Ltd	Renfrew, Ont.
Sheldons Limited	96 Grand Ave., Galt, Ont.
Shenton, H. E	110 Aikman Ave., Hamilton, Ont.
Superior Engineering Co. Ltd	254 Adelaide St. W., Toronto, Ont.
Shaver Heating Specialties Ltd	331 Laurier Ave. W., Ottawa, Ont.
Service Station Equipment Co. Ltd	101 Hanson St., Toronto, Ont.
Smith & Stone, Ltd	Georgetown, Ont.
Standard Bronze Co. Ltd	4 Trafalgar Ave., Toronto, Ont.
Thor Canadian Co. Ltd	Fleet and Bathurst Sts., Toronto, Ont.
Timken Silent Automatic of Canada, Ltd	Walker Road, Walkerville, Ont.
Toronto Blower Co	156 Duke St., Toronto, Ont.
Toronto Foundry Co	1884 Davenport Road, Toronto, Ont.
Tudhope Metal Specialties Ltd	Orillia, Ont.
Wilson, J. A., Co. Limited	9 Morrison St., Toronto, Ont.

CHAPTER SEVEN

THE NON-FERROUS SMELTING AND REFINING INDUSTRY

Finally revised statistical data relating to operations conducted by the non-ferrous metallurgical industries in Canada, during 1936, distinctly reflect the recent and large increase in the production of refined non-ferrous metals and primary metal products in the smelters and refineries of the Dominion.

The gross value of all products totalled $229,737,420 in 1936 compared with $186,245,658 in 1935, or an increase of 23·3 per cent. Refined products included gold, silver, copper, lead, zinc, aluminium, cobalt, cadmium, selenium, tellurium, radium salts, uranium compounds, bismuth and sulphur; other end products of individual plants or companies included copper-nickel matte, cobalt and nickel salts and oxides, arsenious oxide, sulphur in sulphuric acid, platinum metals residues, and blister and anode copper.

The estimated cost of ores, concentrates and other material treated during 1936 was $137,857,432; fuels and purchased electricity consumed totalled $12,613,763; chemicals and various other process supplies used amounted to $7,989,580, and the net value of production or value added by processing was estimated at $71,276,645, or an increase of 19·9 per cent above that of the preceding year.

Capital employed in 1936 by the combined firms comprising the industry totalled $143,858,717; 10,015 employees were reported and $14,346,050 distributed in salaries and wages.

Among the world producers of copper on a smelting and mine basis, Canada ranked third in 1936, being surpassed only by the United States and Chile. Final data for the same year indicate that the Dominion is now the world's fourth largest producer of the metal in the refined state.

Allocated according to origin of ore, Canada, in 1936, was the fourth largest world producer of lead in the form of base bullion, the output of the Canadian industry being exceeded, in the order of their magnitude only by those of the United States, Mexico and Australia.

As a world producer of metallic zinc, Canada was credited in 1936 with third position, the United States and Belgium being the two leading nations engaged in the reduction of zinc ores; the Dominion, however, ranks second in world importance as a producer of the metal from domestic ores.

According to the Internal Trade Branch of the Bureau, base metals security prices gained more consistently in 1936 than any other group, rising from 214·8 in January to 241·1 for April (1926 = 100). Then, after a minor decline to 239·2, they advanced without interruption to 317·8 for December. Spectacular increases in base metal commodity prices, particularly in the final quarter, furnished considerable support for improvement in base metal stock prices. Gains of the latter, however, were approximately three times as great as those for commodity prices.

Review of the Industry by Provinces

Quebec.—The Aluminum Company of Canada Limited made an important extension to its plant at Arvida; this was for the extraction of alumina from bauxite by the "Bayer" process. In 1936 it was reported that Demerara bauxite from British Guiana is now used at the Arvida plant, the mineral being shipped direct from MacKenzie, British Guiana, to Port Alfred on the Saguenay river; thus the production of aluminium at Arvida is an all-empire enterprise, from mines to finished product. The one plant of the Company located at Arvida was active throughout the year, while aluminium ingot was manufactured at both the Shawinigan Falls and Arvida reduction plants.

During 1936 the smelter of Noranda Mines Limited treated 1,120,455 tons of ore, concentrate and refinery slag, and produced 65,376,337 pounds of anodes; after deducting the amount of copper, gold and silver in the refinery slag that was smelted, the estimated production of new copper, gold and silver was 62,750,342 pounds of fine copper, 342,495 ounces of gold and 543,250 ounces of silver. The concentrator milled 1,070,597 tons of ore from the Horne mine, the average

analysis of which was 1·86 per cent copper, 0·137 ounces gold per ton and 0·34 ounces silver per ton, from which 179,027 tons of concentrate were produced; the cyanide mill treated 149,700 tons of pyrite from the flotation plant tailing, from which 10,016 ounces of gold were recovered. The tonnage of direct smelting ore delivered to the smelter was 483,895, containing 2·82 per cent copper, 0·370 ounces of gold per ton and 0·46 ounces of silver per ton.

Siliceous fluxing ore delivered to the smelter totalled 455,438 tons containing 0·46 per cent copper, 0·128 ounces of gold per ton and 0·17 ounces of silver per ton.

Steady operations were maintained throughout 1936 by Canadian Copper Refiners Limited, at its electrolytic copper refinery located in Montreal East; production at this plant included electrolytic copper, gold, silver, selenium and tellurium.

Ontario.—The International Nickel Company of Canada, Limited milled and concentrated 3,317,988 tons of ore in 1936 and the concentrator capacity was enlarged to treat 11,000 tons of ore per day. The Copper Cliff smelter produced 149,000 tons of bessemer matte and 139,796 tons of blister copper. This plant was extended during the year and two reverberatory furnaces and seven converters installed, thus bringing the total smelter equipment to seven reverberatory furnaces and nineteen converters. These additional facilities increased productive capacity by one-third. At the Coniston smelter the four blast furnaces and five converters were operated throughout the year. Ore to the amount of 834,314 tons was processed and 56,827 tons of bessemer matte produced. The nickel refinery of the company, located at Port Colborne, Ontario, operated at capacity throughout the year and produced 103,860,757 pounds of nickel; an addition to this plant, which increased capacity by 50 per cent, was completed during 1936; a small plant was also built for the fabrication of "monel" hot water tanks and range boilers.

The reduction plant of Falconbridge Nickel Mines Limited was in operation 332·6 days in 1936; suspension of operations was forced through the failure of power-supply when the Stinson generating station of the Hydro Electric Power Commission was destroyed by fire in September; smelter extensions were completed during the shutdown. During the year 327,783 tons of ore were treated, of which 126,782 tons were milling grade and 201,001 tons for direct smelting. From this were produced 10,244 short tons of matte containing 5,682·5 short tons of nickel and 2,644·4 short tons of copper. Ore treated was reported to contain 1·90 per cent nickel and 0·92 per cent copper. Adjustments and increases at the smelter embraced the erection of an 18 x 300 foot reinforced concrete chimney, a new dust chamber and flue system. Sintering capacity was increased, a gas exhausting and dust collecting system installed and a new flue constructed; a new converter was also installed and the blast furnace extended.

Near Coward, in the Temagami Forest Reserve, nickel-copper ores were smelted by Cuniptau Mines Limited and the resultant matte was exported for further treatment in European metallurgical plants.

At Deloro, in Hastings County, the smelter and refinery of the Deloro Smelting and Refining Co. Ltd. was in continuous operation throughout the year. This company treats silver-cobalt ores from Northern Ontario and produces silver bullion, white arsenic, cobalt metal, cobalt salts and oxides, nickel oxide, and a silver-lead-bismuth bullion.

During 1936 the Port Hope radium refinery of Eldorado Gold Mines Limited constantly increased its production and the company reports that definite evidence is in hand that the processes now in effect are satisfactory, economical and profitable. With the considerable and rather accelerated increase in production which has been required to meet the demands for radium (present production—March, 1937—being at the approximate rate of 2·5 grams per month) the facilities at the refinery were soon strained and it has been decided to treble the capacity of the present refinery. November, 1936, witnessed the completion in production of the first ounce of radium. Uranium is also produced from pitchblende at the Port Hope refinery and the company reports that there is a widespread demand for this product in the ceramic industry, in which it is utilized in the colouring of glass, pottery and enamelware and for obtaining a satisfactory glaze. In addition to radium and uranium products the company also recovers important quantities of silver.

Blister copper treated in the electrolytic refinery of the Ontario Refining Co. Limited at Copper Cliff, Ontario, averaged slightly over 12,000 tons per month and operations were above the rated capacity for the first time. There were several new developments during the year, the most important being the installation of a 30 ton arc type electric melting furnace, and a scheme for

transporting molten copper from the Copper Cliff smelter to the refinery, a distance of about one mile. Gold, silver, tellurium, selenium, nickel salts and nickel residues are also produced in this refinery.

Manitoba and Saskatchewan.—The copper smelter of the Hudson Bay Mining and Smelting Co. Limited is located on or adjacent to the inter-provincial boundary between Manitoba and Saskatchewan. It was operated continuously throughout 1936, treating nearly the same tonnage of pay charge as in the preceding year. All but 135 tons of pay charge was from materials produced by the company. Due to the fact that a considerable tonnage of custom copper concentrates was expected to be received during the latter part of 1937, several alterations were made to increase the capacity of the reverberatory furnace, also a fourth copper roaster installation was completed during the fore part of the year. There was smelted in the reverberatory furnace during 1936 a total of 296,877 tons of Flin Flon ore and concentrates, averaging 0·393 ounces gold per ton, 5·10 ounces silver per ton and 8·23 per cent copper. There were produced and shipped 22,658 tons of blister copper, with an average assay of gold, 5·004 ounces per ton; silver, 63·48 ounces per ton and copper 98·67 per cent. The average tonnage of new pay material treated per day by the smelter was 812 tons.

There was treated in the cyanide plant a total of 1,073,778 tons of sulphide ore tailings, which had an average assay value of gold, 0·0350 ounces per ton and silver, 0·506 ounces per ton; from the treatment of these tailings there were recovered 12,782 ounces gold, 133,105 ounces silver and 53,387 pounds of copper; this material was sent to the copper converters and is included in the blister copper production under the copper smelter.

The electrolytic zinc plant operated continuously throughout the year producing the largest amount of slab zinc to date; the grade of the electrolytic zinc produced was 99·9901 per cent zinc. The production of die casting zinc, which amounted to 2,098 tons, was almost double that of the preceding year. There was treated during the year in the zinc plant a total of 87,137 tons of zinc concentrates averaging 0·059 ounces of gold per ton, 1·77 ounces of silver per ton, 0·77 per cent copper and 45·5 per cent zinc, from which was produced for sale a total of 64,437,820 pounds of slab zinc. There was also produced the usual zinc plant residue which was sent to stock piles.

The complete cadmium plant was finished and a total of 5,413 dry tons of precipitates drawn from stocks and current production were treated during the year. From this source and the stocks of cathode cadmium on hand there was produced a total of 259,883 pounds of metallic cadmium, which assayed 99·9925 per cent cadmium.

British Columbia.—Consolidated Mining and Smelting Company of Canada Limited reported that the cost of mining and milling a ton of ore was exactly the same as in 1935; the direct cost per pound of recoverable metal was slightly less, due to the grade of the ore extracted being about three-quarters of one per cent of metal content above 1935. Production in the lead smelting plant was an all-time high record and costs were an all-time low record; lead recoveries were slightly lower than in 1935. Lead production in the refinery increased steadily throughout the year, the tonnage for 1936 being 182,541 tons against 164,329 in 1935, the previous record year. Production in the zinc plant was 118,971 tons against 119,572 tons in 1935. While the cost of zinc in 1936 was ·17 cents higher than in 1935, it was more than accounted for in lower silver credit. Zinc concentrates sold increased the zinc production to 125,694 tons; a purer grade of zinc was made and a product carrying 99·995 per cent zinc can be supplied regularly. Cadmium, a by-product metal from zinc reduction, and bismuth, a by-product metal from lead operation, added about $400,000 to the receipts from the metal sales.

The fertilizer plant has been undergoing several changes to combine the operations of the direct production units with the new sulphur dioxide absorption and recovery plants. Up to 165 tons per day of excellent grade ammonium sulphate have been recovered at a cost slightly above the cost of that made directly from ammonia and sulphuric acid. A remarkably pure elemental sulphur is also obtained from these plants. All the gases from the zinc plant will now be treated, the sulphur from the fumes being recovered as ammonium sulphate, sulphuric acid and elemental sulphur—the last two being interchangeable. When the absorption plant proved successful, an appropriation was made to build further absorption plants to treat the tail gas from the sulphuric acid plant and to start recovery of the low-grade roaster gas from the lead plant. Two additional units have been added to the hydrogen plant (the limiting plant in the ammonia group), making a 37 ton increase in the ammonia production.

Table 120.—Principal Statistics, 1925-1936

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	77,996,265	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	68,045,975
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	3,856,490*	154,604,285	229,737,420	71,276,645

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

Table 121.—Wage-Earners by Months, 1935 and 1936

Months	1935	1936
	No.	No.
January	7,280	8,660
February	7,407	8,544
March	7,452	8,665
April	7,636	8,694
May	7,945	8,858
June	7,982	8,912
July	8,201	9,406
August	8,495	9,606
September	8,231	9,626
October	8,365	9,623
November	8,587	9,542
December	8,529	9,669
Average	**8,069**	**9,152**

Table 122.—Regular Hours Worked per Week, by Wage-Earners, 1935 and 1936. (Overtime not included)

Regular hours worked per week	Per cent of wage-earners		Regular hours worked per week	Per cent of wage-earners	
	1935	1936		1935	1936
40 hours per week or less	28·9	29·9	51-53 hours	.....	.....
41-43 hours	0·1	.....	54 hours	2.4	.....
44 hours	3·5	4·8	55 hours	.....	1·9
45-47 hours	5·6	7·2	56-59 hours	4·9	5·0
48 hours	47·9	50·6	60 hours and over	6·7	0·6
49-50 hours	.....	.....			

Table 123.—Fuel and Electricity used in the Non-Ferrous Smelting and Refining Industry, 1935 and 1936

Kind	Unit of measure	For light and power		For metallurgical purposes	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
1935					
Bituminous coal—Canadian	ton	8,226	40,146	389,978	2,455,340
Imported	ton	23,165	143,050	99,086	553,355
Anthracite	ton	70	1,148	46	334
Coke	ton	2,167	22,782	255,916	2,464,933
Gasoline (exclusive of that used in motor cars)	Imp. gal.	61,556	11,501	609	181
Fuel oil and diesel oil	Imp. gal.	3,241,265	130,583	11,518,943	610,359
Kerosene or coal oil	Imp. gal.	5,728	1,247	.....	.....
Wood (cords of 128 cu. ft.)	cord	204	1,482	8,800	61,347
Gas—Manufactured	M cu. ft.	61,674	8,186	44,386	5,000
Natural	M cu. ft.	131	107	.....	.....
Other fuel	xxx	.....	7,694	.....	3,287
Electricity purchased	K.W.H.	1,054,483,030	3,408,455	577,944,639	1,312,181
Total	xxx	.....	**3,776,381**	.....	**7,466,317**
Electricity generated for own use	K.W.H.	18,600,918	.....	4,282,499	.....
1936					
Bituminous coal—Canadian	ton	12,256	61,194	459,313	2,843,370
Imported	ton	27,320	161,631	78,589	432,705
Anthracite	ton	52	737	.....	.....
Coke	ton	1,142	12,616	279,452	2,727,535
Gasoline (exclusive of that used in motor cars)	Imp. gal.	82,557	16,274	2,358	680
Fuel oil and diesel oil	Imp. gal.	76,060	5,334	14,597,844	766,708
Kerosene or coal oil	Imp. gal.	2,871	645	4,371	870
Wood (cords of 128 cu. ft.)	cord	9	28	8,764	67,105
Gas—Manufactured	M cu. ft.	653	1,325	28,463	2,909
Natural	M cu. ft.	370	260	.....	.....
Other fuel	xxx	.....	882	.....	7,882
Electricity purchased	K.W.H.	1,240,494,288	3,595,564	942,223,934	1,887,513
Total	xxx	.....	**3,856,490**	.....	**8,757,273**
Electricity generated for own use	K.W.H.	29,851,136	.....	55,123,271	.....

Table 124.—Power Equipment in the Non-Ferrous Smelting and Refining Industry, 1935 and 1936

—	1935		1936	
	Number of units	Total horse power	Number of units	Total horse power
Steam engines and steam turbines	39	19,831	36	14,610
Diesel engines	.....	.....	1	156
Gasoline, gas and oil engines (except diesel)	39	2,283	35	2,197
Hydraulic turbines or water wheels	10	14,035	11	51,125
Total primary equipment	88	36,149	83	68,088
Electric motors operated by purchased power	4,985	246,698	5,685	280,950
Total	**5,073**	**282,847**	**5,768**	**349,038**
Electric motors operated by company's power	879	17,149	617	8,456
Total electric motors	5,864	263,847	6,302	289,406
Boilers	60	27,826	62	28,391

Table 125.—Power Equipment, 1936, 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
Steam engines and steam turbines	24	7,691	12	6,919
Diesel engines	1	156	.....	.....
Gasoline, gas and oil engines (except diesel)	11	457	24	1,740
Hydraulic turbines or water wheels	11	51,125	.....	.....
Total primary equipment	47	59,429	36	8,659
Electric motors run by purchased power	5,101	254,009	584	26,941
Total	**5,148**	**313,438**	**620**	**35,600**
Electric motors run by above primary units	575	7,922	42	534
Total electric motors	5,676	261,931	626	27,475
Boilers	51	25,159	11	3,232

Table 126.—Metal Prices, 1932-1936

Metal	Market	Unit of measure	1932	1933	1934	1935	1936
			$	$	$	$	$
Arsenic (As_2O_3)	New York	Pound	0·04	0·04	0·04	0·035	0·035
Cobalt (nominal)	New York	Pound	2·50	2·50	2·50	2·50	2·50
Cobalt oxide	New York	Pound	1·35	1·35	1·35	1·37	1·38
Copper	New York	Pound	0·05555	0·07025	0·08428	0·08649	0·09474
Copper	London	Pound	0·06380*	0·074548*	0·074193*	0·07795*	0·09477*
Lead	London	Pound	0·0211*	0·023910*	0·024364*	0·03133*	0·03913*
Silver	New York	Ounce	0·3167*	0·378328*	0·474609*	0·64790*	0·45126*
Zinc	London	Pound	0·0240*	0·032105*	0·030436*	0·03099*	0·03315*
Gold	World	Fine Ounce	23·47*	28·60*	34·50*	35·19*	35·03*

*Computed in Canadian dollars.

Table 127.—Capacities of Canadian Copper Smelting and Refining Works, 1936 (*)

Company	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)
Consolidated Mining & Smelting Co. of Canada, Ltd. (b)	.....	.....	1	48,000	2	16,000
Falconbridge Nickel Mines Ltd.	1	275,000	.....	.....	3	25,000
Hudson Bay Mining & Smelting Co. Ltd.	.....	.....	1	325,000	2	.....
Noranda Mines Ltd.	.....	.....	2	950,000	4	175,000
International Nickel Company of Canada Ltd.	4	800,000	7	2,800,000	24	.....
Electrolytic Copper Refineries—			Annual capacity—short tons			
Canadian Copper Refiners Ltd.			65,000			
Ontario Refining Co. Ltd.			120,000			

(*) American Bureau of Metal Statistics.
(b) Idle.

Table 128.—Production* of New Copper in Canada, from All Sources, 1932-1936

—	Pounds	$
1932	247,679,070	15,294,058
1933	299,982,448	21,634,853
1934	364,761,062	26,671,438
1935	418,997,700	32,311,960
1936	421,027,732	39,514,101

*Including copper in ores and matte exported and in blister and anode copper made in Canada.

Table 129.—Copper Production in Canada, by Provinces and Sources, 1935 and 1936

—	1935		1936	
	Pounds	$	Pounds	$
By Provinces—				
Nova Scotia	.....	.....	779,307	73,855
Quebec	79,050,906	6,162,350	66,340,175	6,287,058
Ontario	252,027,928	19,295,965	287,914,078	26,898,926
Manitoba	38,011,371	2,963,146	29,853,220	2,829,199
Saskatchewan	11,429,452	890,974	14,971,609	1,418,849
British Columbia	38,478,043	2,999,525	21,169,343	2,006,219
Total	**418,997,700**	**32,311,960**	**421,027,732**	**39,514,101**
By Sources—				
In blister and anode copper produced	386,840,587	30,155,849	382,310,369	36,231,553
In ore, concentrates and copper matte exported	19,612,674	1,528,889	13,894,160	930,053
In nickel-copper matte exported	12,544,439	627,222	24,823,203	2,352,495
Total	**418,997,700**	**32,311,960**	**421,027,732**	**39,514,101**

Table 130.—Imports and Exports of Copper and Its Products, 1935 and 1936

Items	1935		1936	
	Pounds	$	Pounds	$
Imports—				
Copper in bars or rods, when imported by manufacturers of trolley, telegraph and telephone wires and electric cables for use only in the manufacture of such articles in their own factories	611,500	72,117	742,400	93,489
Copper bars for use only in the manufacture of rods to be used exclusively in the manufacture of electrical conductors, and copper rods for such manufacture, individual units of conductors not to exceed area of No. 7-0 gauge conductor	6,600	700	18,700	1,858
Copper in bars or rods, in lengths of not less than 6 feet, unmanufactured	120,800	20,435	165,500	30,723
Copper in blocks, pigs or ingots	37,200	3,719	189,300	19,858
Copper, scrap, cathode plates, etc	16,300	1,416	7,000	316
Copper in strips, sheets or plates not polished or coated	324,300	60,044	378,700	71,262
Copper tubing in lengths of not less than 6 feet, and not polished, bent or otherwise manufactured	362,778	81,193	431,244	106,253
Copper wire	16,271	3,566	21,055	5,017
Copper wire cloth, or woven wire of copper	.....	3,242	.....	6,263
Copper, manufactures of, n.o.p	.....	352,961	.....	388,399
Copper, precipitate of, crude	4,420	486	.....	.....
Anodes of nickel, zinc, copper, silver or gold	.....	.....	.....	6,384
Copper, sub-acetate of, or verdigris, dry	6,613	1,062	7,015	1,212
Copper, sulphate of (blue vitriol)	5,518,899	161,092	4,542,122	149,889
Copper rollers adapted for use in calico printing	.....	71,836	.....	78,621
Copper, sulphate of, dehydrated, for agricultural or spraying purposes	32,100	2,747	7,000	583
Total	.....	**836,616**	.....	**960,127**
Exports—				
Copper, fine, contained in ore, matte, regulus, etc	38,702,700	1,870,542	45,519,600	2,971,042
Copper, blister	73,356,200	5,589,624	.....	.....
Copper, old and scrap	6,327,400	360,000	8,108,700	535,753
Copper in ingots, bars, cakes, slabs and billets	243,535,200	18,061,278	310,860,400	27,460,714
Copper in rods, strips, sheets, plates, and tubing	36,516,100	3,065,480	48,152,900	4,769,923
Copper wire and cable	.....	469,552	.....	469,789
Copper manufactures, n.o.p	.....	245,221	.....	294,433
Total	.....	**29,661,697**	.....	**36,501,654**
Copper coin, foreign	.....	1,596	.....	3,048
Copper coin, Canadian	.....	93	.....	570

(x) Includes a small production from the Northwest Territories..

Table 131.—Production of Primary Refined Copper in Canada, 1931-1936

	Short tons
1931	92,183
1932	90,077
1933	112,245
1934	149,261
1935	173,290
1936	191,818

Table 132.—Copper Production of the World on Smeltery Basis, for Specified Years

(Taken from *The American Bureau of Metal Statistics*)

(In tons of 2,000 lb.)

—	1928	1931	1935	1936
United States	1,060,568	612,732	493,552	724,296
Whereof from scrap	32,666	12,893	74,725	65,262
Whereof from foreign ore	92,703	75,208	38,727	44,063
Mexico	50,577	47,427	45,387	35,395
Canada	62,046	119,925	193,553	189,241
Chile	305,855	237,711	285,743	269,652
Peru	57,641	48,655	31,800	35,741
Austria	3,773	3,566	1,474	1,543
Finland	.....	.....	.....	7,205
Germany	53,462	61,178	61,729	65,366
Great Britain	15,432	10,472	11,023	6,720
Yugoslavia	16,629	26,842	42,689	43,126
Norway	868	4,301	9,308	9,173
Russia	22,046	34,278	69,717	91,491
Spain	23,381	19,377	11,500	9,500
Sweden	3,743	4,852	9,656	10,991
Other Europe	11,410	8,178	3,700	3,600
Japan	75,213	83,607	76,507	86,672
India	.....	4,557	7,728	8,062
Other Asia	1,000	1,000	1,000	1,000
Australasia	10,917	14,796	17,793	17,832
Africa	129,538	151,174	293,576	269,578
Whereof, Belgian Congo	.....	132,300	118,699	105,500
Whereof, Rhodesia	.....	8,393	163,319	154,337
Total	**1,904,699**	**1,491,628**	**1,667,435**	**1,886,184**
Deduct, U.S. Scrap	32,666	12,893	74,725	65,262
Total New Copper	**1,871,433**	**1,481,735**	**1,592,710**	**1,820,922**

Table 133.—Lead Smelting Capacity of Canada

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

NOTE.—According to the American Bureau of Metal Statistics, the lead refining capacity of the world in 1936 aggregated about 3,103,000 tons, including 1,030,000 short tons in the United States and about 2,073,000 elsewhere; there was an increase of about 80,000 tons in capacity during 1936, occurring entirely outside of the United States; probably not more than 900,000 tons of the listed capacity in the United States and 1,500,000 tons elsewhere, a total of 2,400,000 tons, is to be rated as useful and effective, the remainder being obsolete, incapable of economical ore supply, or otherwise useless. Lead refining capacity of some of the more important lead producing countries, other than the United States, expressed in metric tons, are: Canada, 163,300; Mexico, 293,900; Belgium, 137,000; France, 119,700; Germany, 207,000; Great Britain, 165,800; Spain, 263,300 and Australia, 203,000.

Table 134.—Lead Production* in Canada, by Provinces, 1935 and 1936

—	1935		1936	
	Pounds	Value	Pounds	Value
		$		$
Nova Scotia	.....	.....	1,901,712	74,414
Quebec	2,047,624	64,156	2,047,689	80,126
Ontario	22,532	706	17,442	683
Manitoba	19,179	601	.....	.....
British Columbia	336,784,326	10,552,059	376,645,367	14,738,133
Yukon (a)	231,418	7,250	2,568,699	100,513
Total	**339,105,079**	**10,624,772**	**383,180,909**	**14,993,869**

* Including lead in ores exported.

(a) Including a small quantity of lead produced in the Northwest Territories in 1935.

Table 135.—Imports and Exports of Lead, 1935 and 1936

—	1935		1936	
	Pounds	Value	Pounds	Value
		$		$
IMPORTS—				
Old and scrap, pig and block	108,863	5,472	63,879	4,234
Bars and sheets	69,794	2,959	36,192	2,117
Litharge	1,750,400	100,689	1,968,600	124,001
Acetate of lead	216,600	16,504	128,569	8,637
Nitrate of lead	201,160	11,447	163,283	9,292
Other manufactures	.....	70,988	.....	79,823
Pipe lead	4,022	301	24,084	1,818
Shots and bullets	9,824	696	8,066	828
Tea lead	3,410	252	.....	.....
Lead arsenate	324,328	26,388	223,300	20,096
Lead tetraethyl, compounds of	2,381,734	1,249,477	3,019,356	1,414,720
Lead capsules for bottles	.....	44,965	.....	63,964
Lead pigments—				
Dry white lead	16,196	1,089	21,302	1,458
White lead, ground in oil	16,788	1,424	15,137	1,348
Dry red lead and orange mineral	595,584	35,392	847,859	55,353
Total	.....	**1,568,043**	.....	**1,787,689**
EXPORTS—				
Lead, contained in ore	11,305,100	289,955	9,395,500	287,569
Pig lead	282,913,500	6,871,469	321,350,900	10,113,282
White lead	217,100	14,068	634,200	43,555
Total	.....	**7,175,492**	.....	**10,444,406**

Table 136.—Production of Refined Lead in Canada, 1931-1936

—	Pounds
1931	278,448,457
1932	253,136,522
1933	254,565,861
1934	314,457,735†
1935	327,515,277†
1936	363,449,490†

† Primary lead only.

Table 137.—World Production of Lead (a)

(Supplied by *The American Bureau of Metal Statistics*)

(short tons)

Origin	1922	1929	1933	1934	1935	1936
North America	649,022	1,121,394	562,213	687,515	744,843	828,551
South America	6,547	34,038	12,617	10,892	9,658	24,300
Total Europe	314,647	458,279	404,199	446,521	449,503	454,921
Total Asia	53,441	100,743	92,453	90,776	89,574	94,061
Australia	118,064	195,403	233,532	226,336	243,046	221,121
Africa	37,419	22,663	16,395	30,105	27,236	23,200
Grand Total	**1,179,140**	**1,932,520**	**1,321,409**	**1,492,145**	**1,563,860**	**1,646,154**

(a) In general, output is reported in terms of base bullion allocated as far as possible to origin of ore, according to the American Bureau of Metal Statistics.

NOTE.—Of the output recorded for North America in 1936, Canada contributed 184,659 short tons, excluding lead exported to European countries. As a world producer of lead Canada ranked fourth in 1936.

Table 138.—Capacity and Production of Electrolytic Zinc Plants in Canada, 1934-1936

—	Maximum h.p. used	Estimated annual capacity for cathode zinc (short tons)	Actual production as ingot size (short tons)		
			1934	1935	1936
	(a)	(b)			
Consolidated Mining & Smelting Co. of Canada Ltd	67,000	143,000	110,217	119,051	119,478
Hudson Bay Mining & Smelting Co. Ltd	19,600	35,000	24,714	30,052	32,219

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

NOTE.—The American Bureau of Metal Statistics estimates the capacity of American zinc metallurgical works at the end of 1936 as being nominally for the production of 700,000 short tons of spelter per annum by distilling and 204,000 tons by electrolysis, a total of 904,000 tons, but the first-class effective capacity is something less, probably not more than for 850,000 tons, and perhaps materially less than that. The effective capacity outside the United States (exclusive of Russia) at the end of 1936 is estimated at 1,150,000 metric tons whereof about 250,000 tons were in Australia, Canada and Mexico, and about 900,000 tons elsewhere.

Table 139.—Production* of New Zinc in Canada, by Provinces, 1935 and 1936

—	1935		1936	
	Pounds	Value	Pounds	Value
		$		$
Nova Scotia	.....	.....	6,180,219	204,874
Quebec	5,322,844	164,955	6,896,123	228,606
Manitoba	51,129,980	1,584,513	36,744,951	1,218,095
Saskatchewan	8,974,720	278,126	27,692,869	918,019
British Columbia	255,222,315	7,909,314	255,668,574	8,475,413
Total	**320,649,859**	**9,936,908**	**333,182,736**	**11,045,007**

* From all sources, including metal in ores exported.

Table 140.—Imports and Exports of Zinc and Its Products, 1935 and 1936

—	1935		1936	
	Pounds	$	Pounds	$
IMPORTS—				
Zinc dust	1,648,100	80,837	1,619,800	68,914
Zinc in blocks, pigs, bars and rods, and zinc plates, n.o.p.	18,100	2,111	11,400	1,238
Zinc in sheets and strips, and zinc plates for marine boilers	5,579,000	349,013	5,739,200	394,327
Zinc spelter	115,300	4,254	.....	.....
Zinc white (zinc oxide)	11,768,314	460,122	13,240,889	519,425
Zinc sulphate	2,042,284	29,459	832,886	12,830
Zinc, chloride of	1,809,056	55,942	1,933,034	60,724
Zinc, manufactures of, n.o.p.	.....	128,536	.....	121,863
Lithopone	17,383,273	620,615	18,859,547	666,667
Total	.....	**1,730,889**	.....	**1,845,988**
EXPORTS—				
Zinc, contained in ore	19,600,200	337,732	39,132,000	727,253
Zinc, scrap, dross and ashes	6,267,500	63,719	5,007,100	63,875
Zinc, spelter	270,918,800	7,809,691	280,422,900	8,523,906
Total	**296,786,500**	**8,211,142**	**324,562,000**	**9,315,034**

(†) From all sources, including metal in ores exported.

Table 141.—Refined New Zinc Produced in Canada, 1931-1936

	Short tons
1931	118,622
1932	86,141
1933	91,946
1934	134,917
1935	149,523
1936	151,103

Table 142.—World's Production of Zinc (a)

(Supplied by the *American Bureau of Metal Statistics*)
(In short tons—2,000 lb.)

Country	1929	1935	1936
United States	631,601	431,499	523,166
Mexico	29,954	44,084	35,506
Canada	86,049	149,103	151,697
Belgium	218,145	200,332	217,908
Czechoslovakia	12,604	10,283	8,667
France	100,984	56,729	59,084
Germany	112,435	136,906	150,354
Great Britain	65,294	67,717	68,086
Italy	17,421	28,950	29,762
Yugoslavia	8,061	3,752	3,967
Netherlands	28,342	15,153	17,006
Norway	6,080	49,624	49,604
Poland	186,324	93,688	105,197
Russia	3,789	50,922	72,752
Spain	13,035	8,429	8,601
Sweden	5,201	.....	.....
Australia	56,001	74,856	77,778
Japan	24,360	37,206	43,342
French Indo-China	4,196	4,250	4,528
Rhodesia	13,575	23,122	23,217
Grand Total	**1,623,451**	**1,486,605**	**1,650,222**

(a) The statistics in this table are the summaries of production as made by the metallurgical works of the world whose principal business is the reduction of ore. Insofar as they produce slab zinc from secondary material, such is included. The quantity of such inclusion is, however, relatively small. Production is not allocated according to the origin of the ore except in the instances of the United States and Mexico beginning 1929. Slab zinc produced in the United States from Mexican ore has been separated and credited to Mexico in that year and subsequently. Other production from Mexican ore is included in figures of countries where treated.

Table 143.—World Production of Nickel Ore, 1932-1936 (a)

(Supplied by the *American Bureau of Metal Statistics*)
(in terms of metal)
(short tons)

Country	1932	1933	1934	1935	1936
Canada (b)	15,164	41,632	64,344	69,258	84,869
New Caledonia (c)	3,200	4,900	5,500	6,200	5,000
Greece (e)	1,053	1,344	1,200	1,200	1,300*
India (d)	1,042	1,090	1,354	1,640	1,500
Norway	1,042	1,096	1,532	1,677	1,700*
Russia	.....	.....	951	1,500*	2,000*

(a) Production outside of these countries is very small.
(b) Production in all forms from Canadian ores.
(c) Exports of matte; content, estimated at 75%. Estimated for 1936.
(d) Nickel content of speiss obtained as a by-product.
(e) Nickel and cobalt content beginning 1934.
* Conjectural.

Table 144.—World Production* of Aluminium

(Supplied by the *American Bureau of Metal Statistics*)
(in metric tons)

Country	1922	1929	1932	1934	1935	1936
United States	33,600	102,100	47,600	33,646	54,113	102,028
Canada	10,000	42,000	18,000	15,500	20,556	26,900
Europe	48,200	137,198	87,769	119,656	179,404	229,500
Japan	.....	.....	.....	700	4,000	5,000
Total for World	**91,800**	**281,298**	**153,369**	**169,502**	**258,073**	**363,428**

* Omitted from this table are possible small productions in Belgium and Hungary, as to which information is uncertain.

Table 145.—Production of Gold, by Provinces, 1935 and 1936

Provinces	1935		1936	
	Fine ounces	Value in Canadian funds	Fine ounces	Value in Canadian funds
		$		$
Nova Scotia	9,376	329,942	11,960	418,959
Quebec	470,552	16,558,725	666,905	23,361,682
Ontario	2,220,336	78,133,624	2,378,503	83,318,960
Manitoba	142,613	5,018,551	139,273	4,878,733
Saskatchewan	14,323	504,026	48,981	1,715,805
Alberta	150	5,279	109	3,818
British Columbia	391,633	13,781,565	451,938	15,831,388
Yukon	35,907	1,263,567	50,359	1,764,076
Canada	**3,284,890**	**115,595,279**	**3,748,028**	**131,293,421**

Table 146.—Source of Canadian Fine Gold Production, by Percentages, 1932-1936

—	1932	1933	1934	1935	1936
	%	%	%	%	%
In alluvial gold	1·8	2·0	2·0	1·84	2·27
In crude gold bullion (x)	79·3	79·8	78·68	78·83	77·37
In base bullion (from silver-lead ores, etc.)	1·0	0·7	1·09	2·17	1·60
In blister and anode copper	15·1	14·2	13·41	13·21	13·80
In ores, matte, slags, etc., exported	2·8	3·3	4·82	3·95	4·96
	100·0	100·0	100·0	100·0	100·0

(x) Includes a relatively small quantity of gold contained in inter-provincial shipments of gold ores to smelters.

Table 147.—Production of Silver, by Provinces, 1935 and 1936

—	1935		1936	
	Fine ounces	$	Fine ounces	$
Nova Scotia	372	241	107,642	48,576
Quebec	668,836	433,338	724,339	326,872
Ontario	5,161,651	3,344,229	5,219,366	2,355,343
Manitoba	1,206,454	781,660	791,489	357,175
Saskatchewan	201,608	130,622	642,497	289,940
Alberta	16	10	9	4
British Columbia	9,178,400	5,946,677	9,748,715	4,399,303
Yukon and Northwest Territories	201,221	130,371	1,100,430	496,591
Canada	**16,618,558**	**10,767,148**	**18,334,487**	**8,273,864**

Table 148.—Source of Canadian Silver Production by Percentages, 1932-1936

—	1932	1933	1934	1935	1936
In silver-cobalt ores	28·5	20·4	18·7	15·0	12·24
(x) In base bullion	29·2	34·6	45·1	47·9	46·28
In gold ores (bullion and placer)	2·5	3·0	7·2	7·4	9·67
In blister copper	15·5	19·5	23·4	26·1	23·76
In matte, copper ores and silver-lead ores exported	24·3	22·5	5·6	3·6	8·05
	100·0	100·0	100·0	100·0	100·0

(x) Chiefly from silver-lead ores.

Table 149.—Other Non-Ferrous Products Produced in Canadian Smelters and Refineries, 1935-1936

—	Unit	1935		1936	
			$		$
Arsenic (AS_2O_3)	lb.	2,558,789	75,326	1,365,606	42,491
Bismuth	lb.	13,797	13,245	364,165	360,523
Cadmium	lb.	580,530	441,203	785,916	699,465
Cobalt (a)	lb.	681,419	512,705	887,591	804,676
Palladium, rhodium, iridium, etc	oz.	84,772	1,962,937	103,671	2,483,075
Platinum (b)	oz.	105,335	3,444,455	131,551	5,319,922
Radium, uranium	.....		(data not published)		
Selenium	lb.	366,425	703,536	350,857	621,017
Tellerium	lb.	16,425	32,850	35,591	62,997
Sulphur (b)	ton	52,924	529,240	58,964	589,640

(a) Includes metal in ores exported and salts manufactured.
(b) Sulphur recovered from smelter gases (as elemental sulphur and in sulphuric acid made).

Directory

Canadian Copper Smelting Companies

Name	Head office address	Plant location
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) Cuniptau Mines Ltd	38 King St. W., Toronto, Ont	Goward, Ont.

(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) Also produced refined silver, tellurium and selenium.

Canadian Lead Smelting and Refining Companies

Consolidated Mining and Smelting Co. of Canada, Limited*	215 St. James St. W., Montreal, P.Q	Trail, B.C.

*Produce bismuth or bismuth-bearing bullion as by-products.

Canadian Electrolytic Zinc Refining Companies (x)

Consolidated Mining and 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.

(x) Also produce cadmium.

Canadian Smelters and Refiners of Cobalt-Silver-Arsenic Ores

Deloro Smelting and Refining Company Ltd.†	Deloro, Ont	Deloro, Ont.

†Produce silver, cobalt, arsenic and bismuth.

Canadian Refiners of Uranium-Radium Ores

Eldorado Gold Mines Ltd	Star Building, Toronto, Ont	Port Hope, Ont.

Canadian Producers of Primary Aluminium

Aluminum Co. of Canada Ltd	Canada Life Bldg., Toronto 2, Ont	Arvida and Shawinigan Falls, P.Q.

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

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 1936 only 18 plants were included in this industry; 14 were located in Ontario, 3 in Quebec, and 1 in Manitoba. Production from these factories was valued at $1,163,555, the number of employees was 333, payments for salaries and wages totalled $382,902, and materials for manufacturing cost $333,438.

Products included gasoline lamps, lanterns, camp stoves and irons; cigarette lighters, lamp and lantern burners, weatherstrip, screens, railway and marine lamps and lanterns, atomizers and perfume sprays, name plates and spray painting equipment. The output of weatherstrip amounted to $57,909 in 1936 compared with $88,455 in 1935. Figures for other commodities cannot be published as there were only one or two producers in each case.

Table 150.—Principal Statistics, 1920-1936

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	947,705	656,208
1928	17	943,914	227	269,807	9,109	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	920,624	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

Table 151.—Principal Statistics, by Provinces, 1935 and 1936

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	Net value of production
		$		$	$	$	$	$
1935								
Ontario	15	1,020,655	263	305,671	12,182	301,590	1,055,139	741,367
Quebec, Manitoba	4, 2	159,111	46	44,298	2,548	35,748	114,896	76,600
Canada	**21**	**1,179,766**	**309**	**349,969**	**14,730**	**337,338**	**1,170,035**	**817,967**
1936								
Ontario	14	1,019,558	288	338,962	12,086	297,438	1,042,597	733,073
Quebec, Manitoba	3, 1	158,083	45	43,940	2,585	36,000	120,958	82,373
Canada	**18**	**1,177,641**	**333**	**382,902**	**14,671**	**333,438**	**1,163,555**	**815,446**

Table 152.—Establishments Grouped According to Production, Number of Employees and Capital Employed, 1935 and 1936

—	1935				1936			
	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
		$		$		$		$
(a) Production								
Under $10,000	7	59,716	13	28,705	5	43,044	15	24,863
$10,000 to $25,000	6	106,615	34	110,659	6	105,618	43	102,541
Over $25,000	8	1,013,435	262	1,030,671	7	1,028,979	275	1,036,151
Total	**21**	**1,179,766**	**309**	**1,170,035**	**18**	**1,177,641**	**333**	**1,163,555**
(b) Employees								
1 or 2	6	55,591	8	38,203	2	9,659	4	5,439
3 to 10	8	104,524	44	135,563	11	182,498	71	184,399
Over 10	7	1,019,651	257	996,269	5	985,484	258	973,717
Total	**21**	**1,179,766**	**309**	**1,170,035**	**18**	**1,177,641**	**333**	**1,163,555**
(c) Capital								
Under $25,000	14	131,738	72	202,698	11	106,021	74	[illegible]
$25,000 and over	7	1,048,028	237	967,337	7	1,071,620	259	[illegible]
Total	**21**	**1,179,766**	**309**	**1,170,035**	**18**	**1,177,641**	**333**	**1,163,555**

Table 153.—Capital Employed, by Provinces, 1935 and 1936

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**
	$	$	$	$
1935				
Ontario	370,167	284,791	365,697	**1,020,655**
Other provinces	90,549	25,630	42,932	**159,111**
Canada	**460,716**	**310,421**	**408,629**	**1,179,766**
1936				
Ontario	354,572	346,612	318,374	**1,019,558**
Other provinces	84,249	29,797	44,037	**158,083**
Canada	**438,821**	**376,409**	**362,411**	**1,177,641**

Table 154.—Employees, Salaries and Wages, by Provinces, 1935 and 1936

Provinces	Average number of employees					Salaries	Wages	**Total salaries and wages**
	On salaries		On wages		**Total**			
	Male	Female	Male	Female				
						$	$	$
1935								
Ontario	54	22	147	40	**263**	133,746	171,925	**305,671**
Other provinces	14	3	20	9	**46**	25,364	18,934	**44,298**
Canada	**68**	**25**	**167**	**49**	**309**	**159,110**	**190,859**	**349,969**
1936								
Ontario	72	27	146	43	**288**	162,409	176,553	**338,962**
Other provinces	8	4	25	8	**45**	21,823	22,117	**43,940**
Canada	**80**	**31**	**171**	**51**	**333**	**184,232**	**198,670**	**382,902**

Table 155.—Wage-Earners, by Months, 1935 and 1936

Months	1935			1936		
	Male	Female	Total	Male	Female	Total
January	132	39	171	154	46	200
February	144	41	185	155	47	202
March	164	47	211	182	53	235
April	167	49	216	158	52	210
May	168	46	214	167	51	218
June	176	48	224	173	49	222
July	168	46	214	171	49	220
August	169	42	211	175	48	223
September	167	48	215	178	49	227
October	180	61	241	187	52	239
November	190	59	249	186	54	240
December	185	63	248	159	48	207
Average	167	49	216	171	51	222

Table 156.—Fuel and Electricity Used, 1935 and 1936

Kinds	Unit of measure	1935		1936	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Bituminous coal	short ton	679	4,266	607	3,673
Anthracite coal	short ton	73	691	89	799
Coke	short ton	12	141	12	97
Gasoline	Imp. gal.	5,439	1,212	4,056	872
Fuel oil	Imp. gal.	.....	.....	4,140	414
Gas—Manufactured	M cu. ft.	2,193	1,892	2,644	2,320
Natural	M cu. ft.	259	195	437	218
Other fuel	.....	.....	7	.....	.....
Electricity purchased	K.W.H.	393,027	6,326	405,447	6,278
Total	xxx	.....	**14,730**	.....	**14,671**

Table 157.—Power Equipment, 1935 and 1936

Kinds	1935		1936	
	Number of units	Total rated horse power	Number of units	Total rated horse power
Electric motors run (x) by purchased power	69	388	70	394
Total	**69**	**388**	**70**	**394**
Boilers	2	175	2	175

(x) All ordinarily in use.

Table 158.—Materials Used in Manufacturing, 1935 and 1936

Materials	Unit of measure	1933		1936	
		Quantity	Cost at works	Quantity	Cost at works
			$		$
Iron castings	lb.	174,255	13,607	184,980	14,358
Aluminium sheets	lb.	15,000	4,442	21,089	5,608
Brass	lb.	399,848	82,754	456,665	89,149
Bronze	lb.	23,858	4,608	32,950	5,868
Zinc	lb.	124,986	8,880	108,348	10,817
Containers (boxes, etc.)	.....	.....	17,304	.....	23,828
All other materials	.....	.....	205,743	.....	183,810
Total	.....	.....	**337,338**	.....	**333,438**

Table 159.—Products Made, 1935 and 1936

Products	Gross selling value at works	
	1935	1936
	$	$
Weatherstrip	88,455	70,528
Screens for windows, and screen doors	32,841	26,619
All other products (*)	1,048,739	1,066,408
Total	**1,170,035**	**1,163,555**

* 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, 1936

Names of firms	Location of plants	Main products in 1936
QUEBEC—		
Modern Lite Mfg. Co.	710 Notre Dame St., Montreal	Lamp stands and lamp shades.
Piper, Hiram L., Co. Ltd.	555 St. Remi St., Montreal	Railway and marine lamps and lanterns.
Safety Car Heating & Lighting Co.	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, channels and sills.
Coleman Lamp & Stove Co. Ltd.	9 Davis Ave., Toronto	Gasoline vapour appliances such as lamps, lanterns, 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, metal weatherstrip and caulking.
Etched Name Plate Co.	2022 Gerrard St. E., Toronto	Name plates; sill strip and radio dials and pointers.
Fords Golden Weatherstrip Co.	111 Prospect St., Hamilton	Metal weatherstrip.
Higgin Manufacturing Co.	33 McCaul St., Toronto	Metal screens; sash; metal weatherstrip and Venetian blinds.
Ideal All Metal Weatherstrip Co.	1107 Broadview Ave., Toronto	Metal weatherstrip; screens and sash.
Metal Specialties	67 Portland Ave., Toronto	Metal spinnings.
Schultz Manufacturing Co. Ltd.	156 York St., Hamilton	Lamp and lantern burners.
Toronto Weatherstrip & Screen Co.	245 Browning Ave., Toronto	Metal weatherstrip and screens.
Westwood Bros.	214 Bathurst St., Toronto	Lighters, thermometers.
Winston, A. E.	2 Gibson Ave., Toronto	Metal weatherstrip, screens and sash.
MANITOBA—		
Peace Weatherstrip	284 Stradbrook Ave., Winnipeg	Metal weatherstrip.

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