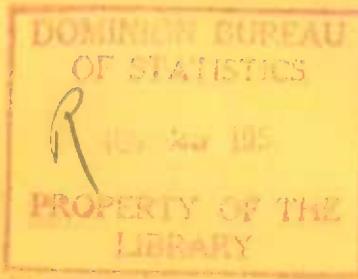


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GOVERNMENT OF CANADA



THE ELECTRICAL APPARATUS
AND SUPPLIES INDUSTRY

1949





DOMINION BUREAU OF STATISTICS — DEPARTMENT OF TRADE AND COMMERCE

THE ELECTRICAL APPARATUS AND SUPPLIES INDUSTRY

1949

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Prepared in the Mining, Metallurgical and Chemical Section,
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NOTICE

The Industry and Merchandising Division of the Bureau of Statistics collects and compiles figures on (a) the primary industries in Canada—mining, forestry and fishing; (b) manufacturing; (c) construction, and (d) merchandising and services.

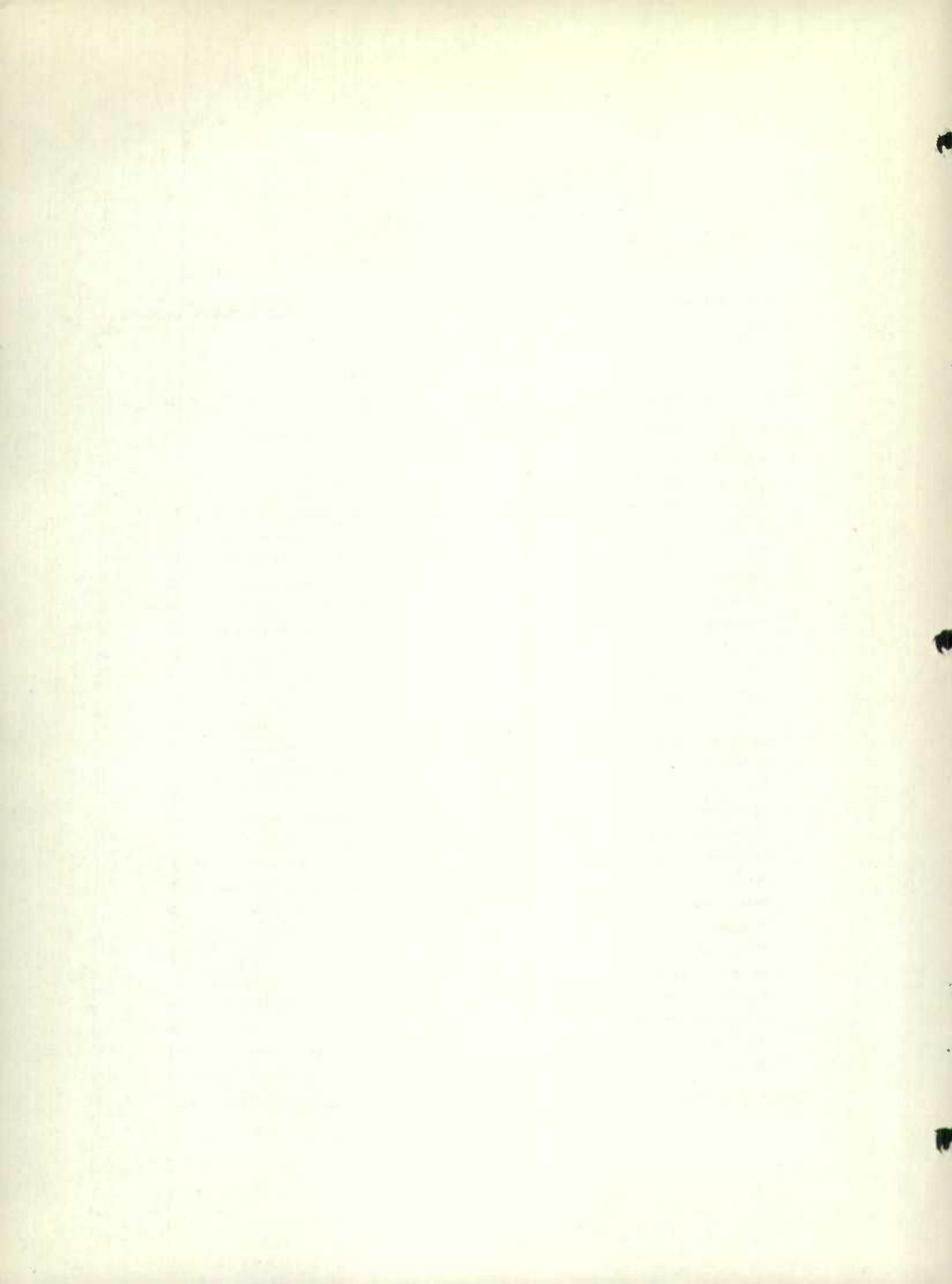
For the purpose of annual compilation and publication, the manufacturing industries have been classified into major groups, prefaced by two reports of a general nature, as follows:

- I Summary Report on Manufacturing Industries
- II Manufacturing Industries by Geographical Distribution
- III Foods and Beverages
- IV Tobacco and Tobacco Products
- V Rubber Products
- VI Leather Products
- VII Miscellaneous Manufactures
- VIII Textiles
- IX Wood and Paper Products
- X Printing Trades
- XI Operations in the Woods
- XII Iron and Steel Products
- XIII Transportation Equipment
- XIV Non-ferrous Metal Products
- XV Electrical Apparatus and Supplies
- XVI Non-metallic Mineral Products
- XVII Products of Petroleum and Coal
- XVIII Chemicals and Allied Products

This is the only report for Group XV. It gives separately the principal statistics for the five sub-subdivisions of this major group.

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THE ELECTRICAL APPARATUS AND SUPPLIES INDUSTRY

1949

Production by firms in the Electrical Apparatus and Supplies Industry was valued at \$486,286,355 in 1949, an increase of 14.2 per cent over the 1948 total of \$425,725,279. The 365 firms which reported in this group for 1949 were distributed across Canada as follows: 1 in Nova Scotia; 74 in Quebec; 246 in Ontario; 17 in Manitoba; 3 in Alberta and 24 in British Columbia. These plants gave employment to a monthly average of 55,916 workers who were paid \$137,278,521 in salaries and wages. Materials worth \$212,460,413 were purchased for use in manufacturing processes and an additional \$4,483,959 were spent for fuel and electricity.

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 group under the Standard Industrial Classification which is used for the annual Census of Industry. According to this system which combines the concept of "purpose" with that of "chief component material" some important producers must be allotted to other industries. For example, since clay is the chief material used in making porcelain insulators, the producers of these goods have been classified to the Clay Products Industry under the main group which embraces all manufactures of non-metallic minerals; similarly, the makers of electric washing machines have been included in the Machinery Industry of the iron and steel group. Again, some electrical supplies were made as minor products of plants which were primarily engaged in other lines of business and, therefore, were included in other industries. The output of electrical apparatus in these other industries, including electrical accessories for automobile and household use but excluding office and industrial machinery, amounted in value to about 89 millions in 1949.

Statistics given in Tables 1 to 5 and 34 of this report cover only the concerns in the Electrical Appa-

ratus and Supplies Industry. Tables 6 to 32 give the total Canadian output (regardless of the industry in which produced) of generators, motors, transformers, conduit, switch gear, vacuum cleaners, dry cell batteries, storage batteries, radios, radio tubes, flat irons, toasters, lamps, wire and cable, stoves, welding apparatus, control equipment, water tank heaters, refrigeration equipment, cutouts and fuses, lighting fixtures, wiring devices, converter equipment, pole line hardware, washing machines and ironers. Table 33 is a special compilation covering imports and exports of certain specified electrical products.

The new Standard Industrial Classification which is being used by the Dominion Bureau of Statistics in its compilations for 1949 provides for a breakdown of the Electrical Apparatus and Supplies group into five divisions and individual firms were classified to each of these divisions according to the nature of their principal product. For example, a firm primarily concerned with the production of radios (that is, 50% or more of its output by value being accounted for by radios) was classified to the Radios and Radio Parts group. It follows, of course, that by using this principle not all producers of radios are coded in this class. For instance, a firm chiefly engaged in, say the production of refrigerators, might also make radios as a secondary product. In this case it would properly be classified to the Refrigerators, Vacuum Cleaners and Appliances group. Principal statistics for the five groups are detailed in Table 2.

As a result of the adoption of the Standard Industrial Classification it was necessary to re-classify some firms to and from the Electrical Apparatus and Supplies group. This means that the data for 1949 are not strictly comparable with previous years; however, a special study by the Bureau indicates that the net effect of these changes is so small as to be almost negligible.

TABLE 1. Principal Statistics of the Electrical Apparatus and Supplies Industry, 1945-1949

Year	Number of plants	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
1945.....	247	44,129	76,468,795	2,570,945	92,041,030	230,531,874
1946.....	266	43,998	74,510,479	2,664,455	101,939,272	234,572,653
1947.....	296	52,736	103,891,016	3,515,897	162,131,266	366,506,203
1948.....	314	53,873	122,113,644	4,046,490	180,344,829	425,725,279
1949.....	365	55,916	137,278,521	4,483,959	212,460,413	486,286,355
Per cent change 1949 from 1948.....	-	+3.8	+12.4	+10.8	+17.8	+14.2

Note. Profits or losses cannot be calculated from the above figures as data are not available for general expense items, such as interest, rent, depreciation, taxes, insurance, advertising, etc.

ELECTRICAL APPARATUS AND SUPPLIES

TABLE 2. Principal Statistics, by Sub-groups¹ 1949

Group	Number of plants	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
Batteries.....	24	2,140	5,232,393	289,978	18,509,992	31,167,039
Heavy Electrical Machinery and Equipment.....	46	19,490	51,522,690	1,627,879	63,755,040	158,150,426
Radios and Radio Parts	61	7,363	16,555,750	367,158	23,941,389	51,466,388
Refrigerators, Vacuum Cleaners and Appliances	89	7,327	16,999,953	605,404	40,784,883	84,494,340
Miscellaneous Electrical Products.....	145	19,596	46,967,735	1,593,540	65,469,109	161,008,162
Total.....	365	55,916	137,278,521	4,483,959	212,460,413	486,286,355

Note. Above breakdown not available before 1949.

1. Sub-division made on basis of principal products.

TABLE 3. Principal Statistics, by Provinces, 1948 and 1949

Province	Number of plants	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
1948			\$	\$	\$	\$
Quebec	62	15,656	35,273,364	912,052	41,365,012	96,710,269
Ontario	212	37,160	84,870,467	3,049,143	134,979,346	320,304,834
Manitoba	14	576	941,776	55,226	2,551,022	5,460,060
Alberta	4	21	39,983	4,298	92,175	189,264
British Columbia.....	22	460	988,054	25,771	1,357,274	3,060,852
Canada.....	314	53,873	122,113,644	4,046,490	180,344,829	425,725,279
1949			\$	\$	\$	\$
Nova Scotia	1	15,895	38,364,493	1,044,311	46,603,233	117,519,265
Quebec	74	38,905	96,640,088	3,341,154	161,768,924	359,403,071
Ontario	246	634	1,167,992	64,815	2,684,977	5,947,035
Manitoba	17	11	15,681	1,660	14,707	40,400
Alberta	3	471	1,090,267	32,019	1,388,572	3,376,562
Canada.....	365	55,916	137,278,521	4,483,959	212,460,413	486,286,355

TABLE 4. Products Made in the Electrical Apparatus and Supplies Industry, 1948 and 1949

	1948		1949	
	Quantity	Selling value at works		
			Number	\$
Apparatus:				
Converter equipment (see Table 29).....	—	4,661,441	—	1,719,693
Industrial control (see Table 22).....	—	7,652,908	—	8,071,596
Generators and parts (see Table 6).....	—	6,543,513	—	8,197,221
Motors (x) and parts (see Table 7).....	—	27,433,149	—	27,005,087
Switchgear and protective equipment (x) (see Table 10).....	—	21,299,980	—	26,974,003
Transformers and parts (see Table 8).....	—	30,376,104	—	35,524,976
Welding apparatus (x) (see Table 21).....	—	2,727,943	—	2,718,358
Appliances:				
Cooking and heating equipment:				
Stoves, rangelettes, cooking plates (x) (see Table 20).....	—	10,482,430	—	11,630,072
Heating elements for stoves, etc. (x).....	—	386,046	—	1,074,868
Radiant heaters, electric (x).....	36,123	198,215	35,602	197,389
Unit heaters (x).....	—	217,007	—	102,041
Heating pads, electric (x).....	102,432	438,710	115,684	488,758
Water heaters, electric (x) (see Table 23).....	129,943	713,282	167,209	1,364,555
Flat irons, electric (x) (see Table 16).....	356,151	2,467,919	439,634	2,325,721
Toasters, electric (x) (see Table 17).....	266,095	1,596,582	395,316	2,480,796
All other cooking and heating apparatus.....	—	1,451,432	—	2,645,240

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. 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 6 to 32.

TABLE 4. Products Made in the Electrical Apparatus and Supplies Industry, 1948 and 1949 -- Concluded

	1948		1949	
	Quantity	Selling value at works	Quantity	Selling value at works
	Number	\$	Number	\$
Motor-driven equipment:				
Food mixers, electric	Not for publication		53,392	1,335,468
Vacuum cleaners and parts (x) (see Table 11).....	—	6,698,065	—	7,807,553
Fans, A.C. and D.C.:				
Portable type	108,831	901,350	117,439	1,014,841
All other types (x).....	53,390	468,414	41,779	554,303
All other motor driven appliances, including washing machines, air conditioners, etc..	—	6,857,076	—	8,502,859
Refrigeration equipment (x) (see Tables 24 and 25).	—	33,734,205	—	48,408,212
Batteries:				
Storage batteries (see Table 13).....	—	16,004,758	—	15,287,518
Dry cell batteries (see Table 12).....	—	9,396,923	—	8,285,999
Parts and supplies for batteries, and wet cell type batteries.....	—	2,438,677	—	2,204,153
Conduit and fittings (x) (see Table 9).	—	4,741,962	—	4,967,335
Cutouts and fuses (see Table 26).	—	2,884,857	—	2,697,836
Electro-therapeutic apparatus (X-ray machines, therapeutic lamps, etc.).	—	613,006	—	779,861
Electrical industrial heating equipment:				
Furnaces:				
(Resistance type).....	—	690,579	—	402,696
(Other types).....	—	380,650	—	936,956
Industrial ovens.....	—			
Other industrial heating equipment).....	—			
Instruments and meters:				
Watt hour meters.....	502,461	5,894,750	597,500	7,204,878
Electrical indicating instruments (x).....	—	274,525	—	356,109
Other electrical instruments and meters (x).....	—	847,878	—	1,203,156
Parts for instruments and meters.....	—	382,507	—	524,413
Lamps (bulbs):				
Incandescent (except therapeutic) (see Table 18).....	93,467,730	9,498,729	89,174,084	10,076,304
Fluorescent (see Table 18).....	3,984,900	2,422,940	5,359,484	3,383,134
Lighting fixtures (x) (see Table 27).	—	15,334,515	—	14,493,277
Line material, including pole line hardware (x) (see Table 30).	—	2,615,795	—	5,877,776
Radio apparatus and supplies:				
Radio receiving sets for civilian use (x) (see Table 14).....	—	25,014,261	800,240	31,422,182
Phonographs, electrically operated.....	5,216	137,701	34,988	689,831
Record players, electrically operated.....	23,601	423,409	39,549	624,140
Radio transmission equipment for civilian use	—	2,717,120	—	3,146,428
Radio condensers.....	—	1,166,171	—	1,824,148
All other radio equipment, except tubes and transformers.....	—	4,004,739	—	5,910,218
Signal systems:				
Traffic	—	239,599	—	333,149
Fire alarm.....	—	295,537	—	689,365
Interior signal and clock systems, excluding telephone.....	—	281,548	—	477,223
Vacuum tubes (see Table 15).	—	1,866,584	—	3,305,242
Wiring devices (x) (see Table 28).	—	10,780,505	—	12,414,883
Wires and cables (x) (see Table 19).	—	76,002,729	—	76,135,649
Miscellaneous:				
Pencers, electric (x).....	8,086	69,670	13,308	115,336
Rectifiers for storage battery charging	—	479,062	—	493,947
Telephone materials, including exchange switchboards, telephones, transmitters, etc.	—	31,888,120	—	32,530,935
All other products, not separately specified	—	25,017,902	—	33,565,707
Amount received for repair work.	—	3,611,780	—	3,782,961
Total all products.	—	425,725,279	—	486,286,355

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. 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 6 to 32.

1. Includes "fast" battery chargers.

ELECTRICAL APPARATUS AND SUPPLIES

TABLE 5. Materials Used in the Electrical Apparatus and Supplies Industry 1948 and 1949

Material	Unit of measure	1948		1949	
		Quantity	Cost of works	Quantity	Cost at works
			\$		\$
Aluminum:					
Castings.....	lb.	1,868,007	1,022,211	2,927,630	1,831,492
Ingots.....	lb.	679,471	134,953	615,193	141,608
Punchings.....	lb.	179,795	134,679	265,001	137,781
Rods and bars.....	lb.	7,566,616	1,457,643	14,799,648	3,039,393
Scrap.....	lb.	28,589	2,322	—	5,730
Sheets.....	lb.	2,048,332	611,473	2,210,957	704,942
Other.....		—	688,133	—	472,258
Ammonium chloride (sal ammoniac).....	lb.	3,031,793	172,970	2,346,488	142,478
Antimony.....	lb.	112,561	38,795	125,541	43,820
Argon.....	cu. ft.	814,815	57,242	1,022,077	72,974
Battery boxes and containers.....		—	1,340,447	—	1,524,201
Brass:					
Castings.....	lb.	555,527	284,771	392,841	154,973
Ingots.....	lb.	1,025,542	207,743	706,484	135,996
Rods and bars.....	lb.	2,429,124	676,813	2,395,885	694,216
Tubing and pipe.....	lb.	134,800	62,251	240,233	99,370
Sheets.....	lb.	1,893,158	600,934	1,624,186	525,898
Lamp bases.....		—	866,010	—	949,645
Scrap.....	lb.	41,911	7,339	18,568	1,926
Other.....		—	532,580	—	562,671
Bronze:					
Castings.....	lb.	431,807	203,725	902,881	451,996
Rods and bars.....	lb.	1,466,016	513,822	858,476	301,931
Tubing and pipe.....	lb.	13,218	8,880	30,117	13,751
Sheets and plates.....	lb.	173,458	85,733	193,811	96,098
Scrap.....	lb.	41,971	5,435	62,071	7,110
Other.....		—	180,521	—	268,937
Carbon plates, blanks, etc.....		—	144,025	—	198,517
Carbon brushes.....		—	79,356	—	105,926
Carbon electrodes.....		—	230,171	—	199,521
Chalk or whiting.....		Not available separately		645,422	14,261
Copper:					
Castings.....	lb.	223,188	107,148	299,574	128,927
Ingots, slabs, wire bars, etc.....	lb.	564,386	174,392	439,288	111,873
Rods.....	lb.	94,023,723	23,254,127	88,417,421	19,085,355
Scrap.....	lb.	31,114	5,082	22,646	3,553
Sheets and plates.....	lb.	2,748,654	990,958	3,815,232	1,303,142
Tubing and pipe.....	lb.	723,580	295,626	1,331,381	554,175
Wire, bare.....	lb.	6,018,009	1,742,148	4,694,904	1,329,199
Wire, enamelled.....	lb.	6,865,672	2,760,813	6,802,250	2,665,749
Wire, other insulated.....		—	3,673,515	—	3,879,465
Other.....		—	623,332	—	571,583
Cotton and linen sheets, tapes, etc.....		—	3,388,267	—	2,957,844
Glass bulbs, tubing and cane.....		—	1,535,973	—	1,916,662
Insulating varnishes and japsans.....		—	764,257	—	543,811
Insulating waxes.....		—	1,139,125	—	806,912
Insulators, porcelain.....		—	1,817,911	—	2,238,788
Iron and steel (except alloy):					
Pig iron.....	Net tons	5,148	217,652	7,443	355,291
Iron castings.....	Net tons	13,631	2,124,663	9,262	2,359,496
Steel bars.....	Net tons	4,850	883,336	10,936	1,375,333
Steel castings.....	Net tons	986	365,269	2,372	671,018
Steel forgings.....	Net tons	590	199,271	1,064	428,398
Steel rods.....	Net tons	4,583	1,104,542	3,581	865,931
Iron and steel pipe.....		—	2,065,228	—	2,564,300
Steel strips.....	Net tons	13,496	2,175,375	13,782	2,020,469
Steel sheets.....	Net tons	59,458	9,682,516	63,514	7,211,477
Steel wire.....	Net tons	9,606	1,438,102	13,143	2,189,400

TABLE 5. Materials Used in the Electrical Apparatus and Supplies Industry, 1948 and 1949 — Concluded

Material	Unit of measure	1948		1949	
		Quantity	Cost at works	Quantity	Cost at works
		\$			\$
Iron and steel (except alloy) — concluded					
Structural steel.....	Net tons	7,294	966,322	8,136	1,013,684
Steel stampings.....	—	—	955,083	—	1,461,336
Bolts, nuts and screws.....	—	—	1,209,319	—	1,327,654
Scrap iron and steel.....	Net tons	2,712	84,438	3,586	79,103
Other iron and steel.....	—	—	900,272	—	733,049
Alloy steel:					
Carbon and alloy tool steel, including high speed.....	Net tons	737	258,144	—	292,990
Stainless.....	—	—	185,691	—	217,358
Silicon sheets and strips.....	Net tons	Not available separately	—	17,344	4,348,868
Other alloy steel.....	—	—	357,364	—	136,244
Lead:					
Pig (pure).....	lb.	43,441,233	6,593,076	39,332,518	6,406,435
Antimonial.....	lb.	20,128,438	3,358,746	22,187,542	3,151,588
Scrap.....	lb.	49,786	4,753	88,466	8,300
Other.....	—	—	202,839	—	120,066
Lead oxide (litharge and red lead).....	lb.	4,952,422	1,007,352	4,286,765	805,917
Lumber.....	M bd. ft.	11,878	1,028,315	12,286	1,143,867
Manganese dioxide.....	lb.	9,327,736	352,885	8,016,083	307,273
Mercury.....	lb.	13,151	28,145	9,137	17,820
Mica.....	lb.	402,877	547,942	531,149	716,261
Nickel-silver, all forms.....	—	—	123,852	—	167,264
Nitrogen.....	cu. ft.	1,352,327	16,207	1,855,152	30,091
Oil:					
Transformer.....	Imp. gal.	2,028,305	692,230	2,421,910	838,034
Switch.....	Imp. gal.	4,535	2,394	4,451	2,113
Paints, stains, lacquers, etc.	—	—	1,313,547	—	1,780,945
Radio cabinets.....	—	—	5,023,836	—	4,408,655
Radio parts for assembling.....	—	—	9,693,185	—	12,172,633
Radio tubes purchased and used to equip radio receiving sets made by manufacturer in own plant	No.	3,006,732	1,424,003	4,317,488	2,370,837
Refrigerator cabinets.....	—	—	336,569	—	2,281,992
Refrigerator parts.....	—	—	10,183,007	—	15,022,338
Rubber:					
Crude.....	lb.	998,730	215,923	930,503	177,511
Other.....	—	—	1,198,394	—	965,746
Resistance wire.....	—	—	692,505	—	732,167
Silk, artificial.....	lb.	35,272	50,222	16,841	25,972
Silver.....	Troy oz.	28,939	21,050	49,065	53,801
Steel tanks.....	No.	—	601,498	—	902,338
Sulphuric acid, 100%.....	lb.	8,599,608	129,797	9,249,180	138,857
Talc.....	lb.	1,316,130	16,428	1,630,039	20,796
Tin.....	lb.	149,773	126,095	180,228	156,587
Tungsten wire.....	—	—	102,883	—	122,053
Wood battery separators.....	—	—	667,204	—	636,252
Zinc:					
Ingots and bars.....	lb.	4,364,738	558,804	2,912,705	349,355
Sheets.....	lb.	191,383	98,446	102,108	20,490
Other.....	—	—	991,019	—	870,276
Zinc chloride.....	lb.	1,225,090	67,434	1,377,005	118,007
Electric motors purchased.....	—	—	1,356,131	—	1,394,214
All other materials.....	—	—	49,976,102	—	68,881,430
Containers and packing material.....	—	—	3,745,773	—	4,489,626
Total Materials.....	—	—	180,344,829	—	212,460,413

ELECTRICAL APPARATUS AND SUPPLIES

TABLE 6. Production¹ of Electric Generators and Parts, 1948 and 1949

		Number	Total rating	Selling value at works
				\$
	1948			
A.C., 1000 k.v.a. and under:				
500 r.p.m. and above.....	143	17,470 k.v.a.	606,905	
Under 500 r.p.m.....	2	1,350 k.v.a.	28,415	
A.C., 1001 k.v.a. and above, all speeds.....	24	531,968 k.v.a.	5,496,353	
D.C. and including excitors:				
½ k.w. and ¼ k.w.....	—	—	—	—
1 k.w. to 1000 k.w.....	41	8,977 k.w.	273,854	
1001 k.w. and over.....	—	—	—	—
Accessories and parts for generators.....	—	—	—	137,986
Total.....	—	—	—	6,543,513
	1949			
A.C., 1000 k.v.a. and under:				
500 r.p.m. and above.....	137	17,544 k.v.a.	395,684	
Under 500 r.p.m.....	7	1,200 k.v.a.	41,000	
A.C., 1001 k.v.a. and above, all speeds.....	28	540,670 k.v.a.	6,787,077	
D.C. and including excitors:				
½ k.w. and ¼ k.w.....	—	—	—	—
1 k.w. to 1000 k.w.....	50	2,202 k.w.	186,271	
1001 k.w. and over.....	3	4,000 k.w.	55,500	
Accessories and parts for generators.....	—	—	—	731,689
Total.....	—	—	—	8,197,221

1. Exclusive of automobile generators, engine-driven generator sets and motor-generator sets.

TABLE 7. Production of Electric Motors and Parts, 1948 and 1949 (From all Industries)

		Number	Total rating	Selling value at works
		H.P.		\$
	1948			
Single phase, induction:				
½ h.p. and under ¹	792,671	182,590	9,808,603	
½ h.p. and ¾ h.p.....	45,852	25,767	1,982,847	
1 h.p. to 5 h.p., inclusive.....	14,821	23,793	1,349,362	
Polyphase, induction:				
½ h.p. and under.....	3,007	761	84,725	
½ h.p. and ¾ h.p.....	5,144	3,077	292,463	
1 h.p. to 5 h.p., inclusive.....	31,294	86,470	3,248,979	
D.C.:				
½ h.p. and under ¹	86,487	—	428,839	
½ h.p. and ¾ h.p.....	502	260	21,196	
1 h.p. to 5 h.p., inclusive.....	611	1,942	96,103	
Polyphase, induction:				
6 h.p. to 25 h.p., inclusive.....	11,444	167,652	3,874,525	
26 h.p. to 100 h.p., inclusive.....	2,920	146,203	2,131,643	
101 h.p. to 200 h.p., inclusive.....	282	41,620	676,463	
201 h.p. and over.....	90	30,562	485,251	
D.C.:				
6 h.p. to 25 h.p., inclusive.....	428	7,603	244,132	
26 h.p. to 100 h.p., inclusive.....	91	3,625	141,998	
101 h.p. to 200 h.p., inclusive.....	11	1,731	51,671	
201 h.p. and over.....	13	12,170	247,165	
Railway and vehicle motors, A.C. and D.C.	522	75,060	1,195,450	
Shaded pole type motors, ½ to ½ h.p. Inclusive.....	113,009	—	279,767	
Synchronous motors and condensers:				
1000 h.p. or k.v.a. and under.....	181	102,345 k.v.a.	1,184,509	
1001 h.p. or k.v.a. and over.....	13	56,600 k.v.a.	561,923	
Accessories and parts for motors.....	—	—	—	698,034
Total.....	—	—	—	29,085,648

1. Does not include shaded pole or universal motors.

TABLE 7. Production of Electric Motors and Parts, 1948 and 1949 (From All Industries) — Concluded

		Number	Total rating	Selling value at works
		H.P.	\$	
1949				
Single phase, induction:				
$\frac{1}{3}$ h.p. and under ¹	798,611	176,419	9,513,256	
$\frac{1}{2}$ h.p. and $\frac{3}{4}$ h.p.	39,457	22,109	1,536,027	
1 h.p. to 5 h.p., inclusive	14,271	23,452	1,135,454	
Polyphase, induction:				
$\frac{1}{3}$ h.p. and under	8,026	2,491	980,818	
$\frac{1}{2}$ h.p. and $\frac{3}{4}$ h.p.	7,204	3,990	347,405	
1 h.p. to 5 h.p., inclusive	25,865	60,207	2,584,656	
D.C.:				
$\frac{1}{3}$ h.p. and under ¹	389,396	13,915	1,782,913	
$\frac{1}{2}$ h.p. and $\frac{3}{4}$ h.p.	337	175	21,002	
1 h.p. to 5 h.p., inclusive	96	197	22,449	
Polyphase, induction:				
6 h.p. to 25 h.p., inclusive	7,877	87,628	2,071,634	
26 h.p. to 100 h.p., inclusive	2,294	108,633	1,501,183	
101 h.p. to 200 h.p., inclusive	376	45,490	735,774	
201 h.p. and over	154	39,459	646,898	
D.C.:				
6 h.p. to 25 h.p., inclusive	34	427	34,984	
26 h.p. to 100 h.p., inclusive		1		
101 h.p. to 200 h.p., inclusive		1		
201 h.p. and over		1		
Railway and vehicle motors, A.C. and D.C.	1,033	208,959	3,024,659	
shaded pole type motors, all ratings	52,321	—	177,700	
Universal type motors, all ratings		1		
Synchronous motors and condensers:				
1000 h.p. or k.v.a. and under	99	24,346 k.v.a.	771,737	
1001 h.p. or k.v.a. and over	14	66,677 k.v.a.	933,771	
Total of items marked ¹	—	—	437,180	
Accessories and parts for motors	—	—	874,653	
Total	—	—	29,114,133	

1. Does not include shaded pole or universal motors.

TABLE 8. Production of Transformers, by Types, 1948 and 1949

Type	1948			1949		
	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	72,444	—	13,331,885	72,232	—	13,426,044
Power transformers, 201 k.v.a. to 7,500 k.v.a., inclusive, and over 15,000 volts to and including 132,000 volts	1,049	—	7,476,679	1,185	—	7,769,168
Power transformers, over 7,500 k.v.a. or over 132,000 volts	55	1,108,000	3,111,335	111	2,085,770	6,737,137
Feeder regulators:						
Induction type	22	—	129,577	50	7,136	355,775
Step voltage type	142	—	581,127	121	—	638,394
Current transformers	13,475	—	704,375	16,932	—	948,833
Potential transformers	2,640	—	569,911	4,663	—	531,250
Constant current transformers	82	—	63,720	53	—	34,400
Luminous tube transformers	24,394	—	418,140	19,146	—	425,550
Ignition transformers	8,156	—	102,371	67,843	—	717,486
Radio transformers	197,677	—	333,078	269,358	—	425,996
Fluorescent transformers and ballasts	319,330	—	1,549,617	550,523	—	2,130,618
All other transformers	—	—	1,214,482	—	—	1,139,124
Parts and supplies	—	—	789,807	—	—	245,201
Total	—	—	30,376,104	—	—	35,524,976

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TABLE 9. Production of Conduit¹ for Electrical Wiring, 1948 and 1949

Item	1948.		1949	
	Quantity	Selling value at works	Quantity	Selling value at works
Rigid conduit:		\$		\$
Iron.....lb.	19,689,720	2,676,291	20,972,169	2,858,583
Electrical metallic tubing.....lb.	3,668,104	201,985	2,050,648	569,747
Flexible conduit (steel and non-metallic).....ft.			3,027,124	158,615
Total.....	—	2,878,276	—	3,586,945

1. Does not include aluminum conduit.

TABLE 10. Production of Electrical Switch Gear and Protective Equipment (Except telephone switchboards) 1948 and 1949

	Selling value at works	
	1948	1949
Switchboard panels and equipment.....	5,851,294	6,839,995
Panel boards and cabinets.....	2,453,419	2,825,555
Lightning arresters, other than radio:		
15,000 volts and under.....	829,957	521,885
Over 15,000 volts.....	281,484	355,684
Power circuit breakers.....	3,596,053	6,233,205
Low voltage air circuit breakers.....	1,655,560	2,006,208
Disconnecting switches:		
Up to and including 15,000 volts.....	1,279,079	733,532
Over 15,000 volts.....	1,002,291	1,652,813
Switches, enclosed safety type.....	2,669,794	3,625,920
Generator voltage regulators and accessories.....	44,697	102,927
Current limiting apparatus.....	156,971	167,213
Relays.....	500,473	473,574
Parts and supplies for above.....	589,428	730,097
Other protective equipment.....	671,980	1,289,131
Total.....	21,582,480	27,557,739

TABLE 11. Production of Electric Vacuum Cleaners and Parts, 1940-1949 (From all Industries)

Year	Floor Models ¹		Cylinder Models		Hand Models		Attachments and parts		Total	
	Number	\$	Number	\$	Number	\$	Number	\$	Number	\$
1940.....	41,169	1,597,523			2,272	31,357	—	272,670	—	1,901,550
1941.....	41,169	1,580,915	Included		3,325	55,335	—	319,788	—	1,956,038
1942.....	34,547	1,306,686	under		487	9,943	—	245,674	—	1,562,303
1943.....	2,577	75,850	floor		1,586	18,662	—	143,379	—	241,891
1944.....	1,403	30,955	models		494	6,037	—	227,406	—	264,398
1945.....	14,220	580,542			—	—	—	345,942	—	926,484
1946.....	24,274	1,229,992	31,247	1,158,844	—	—	—	731,038	—	3,119,874
1947.....	42,748	2,198,136	62,547	2,610,013	—	—	—	1,014,807	—	5,822,956
1948.....	33,583	1,992,757	85,002	4,008,347	1	19	—	825,881	—	6,827,004
1949.....	34,308	1,985,022	106,952	5,021,712	Not available for publication		—	1,105,210 ²	—	8,111,944

1. Includes upright models only in 1946, 1947, 1948 and 1949 but both upright models and cylinder type models for earlier years.

2. Includes some hand models.

TABLE 12. Production of Dry Cell Batteries, 1948 and 1949

		Quantity	Selling value at works
			\$
1948			
Dry cell:			
6 inch batteries.....	No. of cells	2,747,561	979,193
Radio batteries for portable sets.....	No. of cells	15,124,387	784,120
Radio batteries for non-portable sets.....	No. of cells	68,639,313	4,863,786
Flashlight batteries.....	No. of cells	34,264,673	2,368,949
Hearing aid batteries:			
" A " batteries.....	No. of cells	822,660	99,043
" B " batteries.....	No. of cells	4,047,492	158,482
All other dry batteries.....	No. of cells	3,401,589	143,350
Total		—	9,396,923
1949			
Dry cell:			
6 inch batteries.....	No. of cells	2,438,255	946,623
Radio batteries for portable sets.....	No. of cells	22,985,666	1,081,450
Radio batteries for non-portable sets.....	No. of cells	51,541,263	4,098,656
Flashlight batteries.....	No. of cells	27,891,291	1,962,098
Hearing aid batteries:			
" A " batteries.....	No. of cells	747,110	87,694
" B " batteries.....	No. of cells	2,545,429	101,895
All other dry batteries.....	No. of cells	57,493	7,583
Total		—	8,285,999

TABLE 13. Production of Electric Storage Batteries, by Types, 1948 and 1949

Kind	1948		1949	
	Number	Selling value at works	Number	Selling value at works
	\$		\$	
For internal combustion engine starting and ignition.....	1,458,149	13,048,841	1,439,604	12,727,407
For farm lighting plants (cells).....	50,613	523,290	37,881	386,673
For railway service (cells).....	10,247	340,034	16,551	630,992
For telephone switchboards.....	12,710	426,641	14,201	352,662
For motorcycle starting.....	2,818	18,122	1,618	14,346
For all other purposes.....	—	1,647,830	—	1,175,438
Total	—	16,004,758	—	15,287,518

TABLE 14. Production¹ of Complete Radio Receiving Sets, 1940-1949

Year	Number of sets	Selling value at works	Year	Number of sets	Selling value at works
		\$			\$
1940.....	485,010	11,268,339	1945.....	50,317	979,173
1941.....	386,372	9,215,364	1946.....	603,199	15,759,724
1942.....	177,149	4,682,401	1947.....	984,276	33,063,220
1943.....	979	18,840	1948.....	639,493	25,411,443
1944.....	—	—	1949.....	800,361	31,425,879

1. Includes television sets but not radio communication equipment for military purposes.

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TABLE 15. Production of Radio Receiving Tubes, 1940-1949

Year	Number	Selling value at works	Year	Number	Selling value at works
		\$			\$
1940.....	4,117,577	1,813,841	1945.....	5,679,037	3,280,500
1941.....	3,268,102	1,497,115	1946.....	5,933,363	2,438,268
1942.....	3,442,352	1,277,862	1947.....	7,985,211	3,747,175
1943.....	4,106,047	2,256,086	1948.....	4,040,949	1,831,086
1944.....	5,904,517	3,746,266	1949.....	4,682,943	2,787,421

TABLE 16. Production of Electric Flat Irons, 1940-1949

Year	Automatic		Not Automatic		Total	
	Number	Selling value at works	Number	Selling value at works	Number	Selling value at works
	\$		\$		\$	
1940.....	54,205	234,711	179,612	271,027	233,817	505,738
1941.....	72,214	286,273	199,321	343,915	271,535	630,188
1942.....	27,207	120,009	106,579	267,407	133,786	387,516
1943.....	11,795	70,698	48,688	141,853	60,483	212,551
1944.....	1,720	25,074	111,764	283,027	113,484	308,101
1945.....	52,268	237,420	126,991	357,717	179,259	595,137
1946.....	208,476	1,273,007	293,247	875,595	501,723	2,148,602
1947.....	222,304	1,526,635	218,234	750,553	440,538	2,777,188
1948.....	233,437	2,224,472	138,213	425,610	371,650	2,650,082
1949.....	322,060	2,245,242	145,186	401,715	467,246	2,646,957

TABLE 17. Production¹ of Electric Toasters, 1940-1949

Year	Domestic Type		Commercial Type		Total	
	Number	Selling value at works	Number	Selling value at works	Number	Selling value at works
	\$		\$		\$	
1940.....					171,015	320,740
1941.....					196,030	404,047
1942.....					131,327	349,784
1943.....					7,788	52,476
1944.....					6,981	44,785
1945.....					142,044	493,248
1946.....					331,678	1,044,437
1947.....					312,687	1,217,515
1948.....					266,101	1,596,607
1949.....	366,298	2,169,639	33,909	368,556	400,207	2,538,195

1. Includes toaster-grills.

TABLE 18. Production of Electric Lamps (Bulbs), 1940-1949

Year	Incandescent Type				Fluorescent Type	
	Standard Size		Miniature Size		All Sizes	
	Number	Selling value at works	Number	Selling value at works	Number	Selling value at works
	\$		\$			\$
1940.....	28,216,496	4,529,711	15,572,768	750,902		
1941.....	34,421,898	5,714,415	25,407,836	1,249,669		
1942.....	40,982,505	6,631,613	27,159,064	1,405,313		
1943.....	35,334,233	5,618,011	21,737,956	1,220,676		
1944.....	39,298,127	4,922,362	19,522,020	1,049,025	736,535	346,691
1945.....	44,397,206	5,628,626	20,216,048	1,151,350	1,509,555	696,291
1946.....	49,174,360	6,553,989	30,973,583	1,454,748	2,018,658	1,090,062
1947.....	53,990,563	7,172,059	38,580,950	1,768,405	2,899,330	1,522,527
1948.....	53,104,627	7,547,409	40,363,003	1,951,320	3,984,900	2,422,940
1949.....	54,793,834	7,823,042	34,380,250	2,253,262	5,359,484	3,383,134

Not collected
separately

TABLE 19. Production of Electrical Wires and Cables, 1948 and 1949 (From All Industries)

	Selling Value at Works	
	1948	1949
	\$	\$
Un-insulated conductors:		
Copper, copperweld, including trolley wire.....	7,674,452	6,680,452
Copperweld-copper composite conductors and C.C.S.R.....	1,906,156	861,698
Aluminum and A.C.S.R. conductors and aluminum alloys.....	12,058,840	15,420,301
Brass and bronze wires and cables.....	743,690	499,436
Galvanized steel conductors.....	274,873	225,138
Weatherproof wires. (All types).....	7,744,216	6,650,442
Rubber insulated and braided. (Type R, RP, RH, RW, high voltage, inner member, aircraft, automobile, non-metallic underground, plain R.C., service entrance cable, all other R.C. types, N.O.P.).....	8,743,250	7,037,538
Cambric insulated and braided. (All types where V.C. is used as the insulant).....	716,681	590,295
Thermo-plastic wires and cables. (All types except telephone wires and cables).....	3,458,337	4,066,135
Rubber insulated leaded power cable. (Including armoured cable of this type and L.C. control cable).....	2,363,786	1,541,945
Cambric insulated leaded power cable (including armoured cable of this type).....	896,311	665,871
Paper insulated leaded power cable (including armoured cable of this type).....	3,122,181	3,104,580
Rubber insulated telephone wires (Including PVC) (drop, duct, inside, station, bridle, etc.).....	2,312,678	2,421,018
Paper insulated telephone cable (including armoured cable of this type).....	9,547,805	13,006,930
Flexible cords (except telephone and switchboard) including jacketed types.....	2,293,240	2,215,013
Flexible armoured cable (AC and ACL).....	3,585,075	3,024,723
Signal and control cable, non-leaded.....	132,765	205,867
Non-metallic sheathed cables.....	4,905,580	4,506,017
Magnet wires:		
enamelled.....	4,640,076	4,626,652
all others.....	3,822,862	2,743,432
Asbestos insulated (all types).....	759,889	776,855
Cord assemblies.....	1,036,621	842,813
All other types of wire and cable.....	2,863,917	4,069,731
Total.....	85,603,281	85,784,882

TABLE 20. Factory Sales of Stoves, 1947-1949 (Data assembled from all industries)

	1947	1948	1949 ¹
Coal, wood and sawdust cooking stoves and ranges, all styles.....	No. 122,065 \$ 8,308,275	155,297 11,836,707	119,474 9,558,631
Coal, wood and sawdust heating stoves (including all heaters, circulators, Quebec, box, oak, No. Franklyn, Globe or laundry).....	No. 144,927 \$ 1,798,877	126,975 1,687,012	111,932 1,609,489
Combination for gas and coal.....	No. 9,415 \$ 951,418	8,358 894,492	11,376 1,298,581
Combination for coal and electric.....	No. 1,103 \$ 162,066	1,322 187,071	5,155 824,456
Gas cooking stoves and ranges, not combinations, including all styles with ovens.....	No. 25,029 \$ 1,781,785	38,216 2,998,189	51,605 4,589,825
Electric cooking stoves and ranges over 35 amperes, all styles with ovens.....	No. 64,642 \$ 7,995,071	125,027 14,878,936	128,927 18,667,191
Electric rangettes, including cord attachment and oven as one unit.....	No. 51,199 \$ 1,227,472	66,708 2,269,117	60,776 2,284,174
Electric cooking plates and grills (including stoves for glass coffee makers).....	No. 252,506 \$ 1,243,437	246,528 1,183,915	208,038 964,629
Gas cooking plates.....	No. 1,177 \$ 7,320	3,365 16,638	10,484 38,242
Gas heating stoves.....	No. 7,511 \$ 194,949	9,015 235,627	13,976 331,675
Oil and gasoline stoves and heaters.....	No. 264,590 \$ 3,527,253	229,131 2,227,416	178,424 2,699,695
Total.....	\$ 27,197,923	38,415,120	42,866,988

1. Preliminary and subject to revision on further examination of reports from producers.

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TABLE 21. Production of Electric Welding Apparatus and Welding Rod¹, 1940-1949

Year	Welding Apparatus		Welding Rod ²	
	Electric arc welding equipment with controls	Other electric welding apparatus	Quantity	Value of Sales
	\$	\$	Tons	\$
1940.....	378,749	32,392		
1941.....	614,787	176,256		
1942.....	1,205,502	109,083		
1943.....	1,076,250	87,139		
1944.....	546,521	145,601		
1945.....	674,478	205,600		
1946.....	713,308	173,006		
1947.....	579,321	226,016	8,951	1,880,014
1948.....	764,033	232,215	10,494	2,315,402
1949.....	740,797	243,107	9,277	2,399,825

1. Includes both gas and electric welding rod of ferrous type. Complete data on non-ferrous types not available.

2. Factory sales.

TABLE 22. Production of Industrial Control Equipment, 1948 and 1949

	Selling Value at Works	
	1948	1949
	\$	\$
Starting and control equipment for electric railway and vehicle motors.....	1,615,374	1,156,783
(a) A.C. reduced voltage starters, manual and magnetic, for use with squirrel cage induction motors.....	451,790	563,020
A.C. manual starting switches for use with single phase and polyphase induction motors.....	260,683	332,280
A.C. magnetic control (exclusive of magnetic type in Items (a) and (b)).....	864,913	802,752
Synchronous motor starters, all types.....	211,731	270,155
D.C. magnetic control, including D.C. magnetic switches (line starters).....	95,187	551,141
(b) A.C. magnetic switches (line starters),.....	1,785,853	2,201,155
A.C. and D.C. drum switches and resistors for use with drum switches.....	41,506	110,155
A.C. and D.C. dial starters, rheostats and resistors other than those used with drum switches.....	109,835	219,940
A.C. and D.C. brakes.....	67,060	127,296
All other industrial control, including accessories.....	2,148,976	1,706,920
Total.....	7,652,908	8,071,596

TABLE 23. Production of Domestic Water Tank Heaters, 1948 and 1949 (From all industries)

	1948		1949	
	Number	Selling value at works	Number	Selling value at works
	\$			\$
Cast iron for coal, wood or oil (120 gallons or less).....	5,769	142,932	8,295	269,567
Gas, automatic.....	10,401	767,086	16,318	1,126,337
Gas, not automatic.....	17,475	190,662	20,402	242,586
Electric, circulating type.....	20,581	255,814	26,163	275,586
Electric, immersion type.....	86,829	321,829	109,880	351,736
Clamp-on type.....	24,396	144,522	26,094	133,525
Electric, automatic storage tank type including tank and controls.....	14,880	1,046,342	22,605	1,604,205
Total.....	180,331	2,869,187	229,757	4,002,822

TABLE 24. Production¹ of Electric Refrigeration Equipment, 1940-1949

Year	Individual domestic type, complete, all sizes		All other types ²	Total
	Number	\$	\$	\$
1940.....	53,165	6,249,335	2,296,408	8,545,743
1941.....	64,093	7,627,255	2,790,761	10,418,016
1942.....	37,792	4,585,701	2,136,121	6,721,822
1943.....	358	33,470	764,937	798,407
1944.....	237	70,690	1,192,282	1,262,972
1945.....	2,418	355,225	1,244,841	1,600,066
1946.....	56,786	8,597,025	5,164,518	13,761,543
1947.....	108,106	18,584,643	9,323,816	27,908,459
1948.....	138,714	25,164,314	13,140,894	38,305,208
1949.....	206,185	36,736,492	16,672,556	53,409,048

1. Production figures include equipment manufactured or assembled in Canada.

2. Includes ice-cream cabinets, display cases, condensing units only, beverage coolers, etc. See Table 25.

TABLE 25. Production of Electrical Refrigeration Equipment, 1948 and 1949 (From all Industries)

	1948		1949	
	Number	Selling value at works	Number	Selling value at works
Individual domestic type, all sizes.....	138,714	\$ 25,164,314	206,185	36,736,492
Domestic condensing units only.....	21,297	1,351,775	37,029	2,582,202
Commercial reach-in boxes, complete.....	3,828	1,392,929	4,637	1,658,262
Commercial condensing units only.....	22,437	2,551,126	34,404	2,829,402
Commercial evaporators, finned coils, blower coils, and the like, only.....				
Ice cream cabinets, complete.....	9,308	2,792,887	7,693	2,544,889
Milk coolers, complete.....	923	222,516	929	234,619
Individual home and farm freezers, domestic type, complete, all sizes	1,415	419,541	2,290	681,897
All other electric refrigeration.....	—	4,410,120	—	6,141,285
Total	—	38,305,208	—	53,409,048

TABLE 26. Production of Cutouts and Fuses, 1948 and 1949

	Selling value at works	
	1948	1949
Primary cutouts:		
15,000 volts and less, except oil type.....	1,023,339	899,453
Over 15,000 volts, except oil type.....	79,126	83,160
Oil type.....		
Individual cutouts for cartridge and plug fuses.....	282,691	205,401
Cartridge fuses.....	560,828	498,386
All other fuses.....	807,914	787,097
Renewal elements for fuses.....	130,959	224,339
Total	2,884,857	2,697,836

ELECTRICAL APPARATUS AND SUPPLIES

TABLE 27. Production of Electric Lighting Fixtures, 1948 and 1949 (From all Industries)

Type	Selling value at works	
	1948	1949
	\$	\$
Residential:		
Incandescent.....	1,947,560	2,337,754
Fluorescent.....	1,103,412	1,169,956
Commercial:		
Incandescent.....	849,662	1,234,320
Fluorescent.....	4,637,260	4,309,794
Industrial:		
Incandescent.....	812,608	903,776
Fluorescent.....	2,249,347	2,254,999
Street-lighting.....	1,507,055	1,175,139
Searchlights and floodlights.....	356,688	270,929
Exterior lighting control devices and other lighting equipment ¹	2,070,186	1,342,122
Total	15,733,778	14,998,789

1. Does not include floor lamps or table lamps.

TABLE 28. Production of Wiring Devices, 1948 and 1949

	Selling value at works	
	1948	1949
	\$	\$
Sockets (lamp holders):		
Brass shell.....	659,739	761,296
Porcelain and moulded.....	802,935	788,058
Switches:		
Surface and flush types.....	985,243	895,496
Appliance.....	788,683	937,894
Canopy and pendant.....	74,686	59,555
All other.....	414,754	429,040
Receptacles (convenience outlets) single and duplex.....	1,252,847	953,579
Wall plates for switches and outlets.....	259,576	232,083
Attachment plugs, caps and cord connectors.....	360,017	313,965
Heater (or appliance) plugs and other plug devices.....	302,821	318,048
Cord sets (all types).....	612,682	1,155,166
Outlet and switch boxes.....	1,887,606	2,224,781
Outlet box connectors.....	80,754	406,520
Other wiring devices (except automobile starting switches and time switches).....	2,367,130	3,226,300
Total	10,849,473	12,701,781

TABLE 29. Production of Converter Equipment, 1948 and 1949

	1948	Number	Total rating	Selling value at works	
				\$	
Motor-generator sets:					
A.C. to D.C.		440	20,718 k.w.	1,606,904	
A.C. to A.C.		20	104,730 k.v.a.	2,171,061	
Synchronous converters and double current generators.....				—	—
Dynamotors, balancer sets and boosters.....				—	—
(Mercury arc rectifiers for power purposes).....				—	883,476
(Parts and supplies for converter equipment).....				—	
Total				—	4,661,441
Motor-generator sets:	1949				
A.C. to D.C.		120	7,462 k.w.	542,860	
A.C. to A.C.		11	26,475 k.v.a.	995,808	
Synchronous converters and double current generators.....				—	—
Dynamotors, balancer sets and boosters.....				—	—
(Mercury arc rectifiers for power purposes).....				—	181,025
(Parts and supplies for converter equipment).....				—	
Total				—	1,719,693

TABLE 30. Production of Pole Line Hardware, 1940-1949 (From All Industries)

Year	Selling value at works	Year	Selling value at works
	\$		\$
1940.....	1,424,545	1945.....	1,408,991
1941.....	2,070,723	1946.....	2,908,760
1942.....	2,133,225	1947.....	4,388,444
1943.....	1,102,705	1948.....	5,525,302
1944.....	1,098,582	1949.....	6,987,494

TABLE 31. Production of Domestic Washing Machines, 1940-1949 (From All Industries)

Year	Hand		Electric		Other Power		Total	
	Number	Selling value at works	Number	Selling value at works	Number	Selling value at works	Number	Selling value at works
	\$		\$		\$		\$	
1940.....	8,207	102,536	99,562	5,065,093	9,742	673,621	117,511	5,841,250
1941.....	9,992	133,713	104,583	5,326,865	13,687	996,960	128,262	6,457,538
1942.....	7,816	105,551	52,198	3,062,705	7,237	549,680	67,251	3,717,936
1943.....	7,789	98,200	5,373	336,300	38	3,323	13,200	437,823
1944.....	10,162	146,873	22,967	1,467,458	729	64,255	33,858	1,678,586
1945.....	9,753	129,353	44,809	2,974,767	5,346	432,642	59,908	3,536,762
1946.....	8,209	126,820	96,386	7,083,844	10,595	1,036,278	115,190	8,246,942
1947.....	6,225	100,017	193,468	16,809,878	20,346	2,198,111	220,039	19,108,006
1948.....	8,062	149,429	296,800	27,573,419	29,611	3,530,832	334,473	31,253,680
1949.....	3,906	68,537	304,273	27,957,728	38,075	4,475,176	346,254	32,501,441

TABLE 32. Production of Domestic Electric Ironing Machines, 1940-1949 (From All Industries)

Year	Operated by own motor		Attached to washing machine		Total	
	Number	\$	Number	\$	Number	\$
	\$		\$			\$
1940.....	3,142	186,906	430	9,472	3,572	196,376
1941.....	2,109	124,458	231	6,221	2,240	130,679
1942.....	1,955	168,472	109	3,211	2,064	171,683
1943.....	77	5,973	1	25	78	5,998
1944.....	—	—	—	—	—	—
1945.....	9	1,030	—	—	9	1,030
1946.....	—	—	—	—	—	—
1947.....	7,923	529,231	—	—	7,923	529,231
1948.....	17,215	1,309,980	—	—	17,215	1,309,980
1949.....	18,058	1,349,433	—	—	18,058	1,349,433

TABLE 33. Imports and Exports of Specified Electrical Products, 1948 and 1949

	1948		1949	
	Number	Value	Number	Value
	\$		\$	
(a) IMPORTS:				
Batteries for flashlights, and parts.....	—	63,110	—	44,467
Batteries, hearing aid, and parts.....	Not available separately	—	—	196,740
Batteries, electric and galvanic primary, and complete parts, n.o.p.	—	168,980	—	153,005
Storage batteries, n.o.p., and parts, including separator walls of wood.....	—	642,037	—	933,426
Heating apparatus, electric, other than for cooking or space heating.....	—	486,499	—	495,820
Dynamos or generators, and parts.....	—	4,124,219	—	3,439,504
Fuses, fuse plugs and cutouts, electric, and complete parts, n.o.p.	—	443,543	—	424,387
Fluorescent tubes and other arc lamps.....	49,002	48,409	157,626	52,901
Lamps, electric, incandescent, carbon filament.....	608	173	3,343	818
Lamps, electric incandescent, metal filament.....	46,023	17,922	4,078,510	141,539
Lights - electric head, side and tail lights, n.o.p.; electric torches or flashlights and parts	—	706,889	—	457,551

ELECTRICAL APPARATUS AND SUPPLIES

TABLE 33. Imports and Exports of Specified Electrical Products, 1948 and 1949 — Concluded

	1948		1949	
	Number	Value	Number	Value
			\$	
(a) IMPORTS — Continued				
Electric light fixtures and appliances, n.o.p., and complete parts	—	2,691,289	—	3,029,817
Lightning arresters, choke coils, reactors and other protective devices, and complete parts, n.o.p.	—	102,601	—	133,715
Magneton and complete parts, for the manufacture of internal combustion engines	—	79,251	—	64,250
Electrical instruments and apparatus of precision of a class or kind not made in Canada, as enumerated in tariff item 445n	—	1,444,856	—	1,665,514
Meters, electric, and complete parts	—	845,740	—	983,053
Motors, electric, valued at less than \$10 each	60,057	248,630	143,744	430,107
Motors, electric, n.o.p., valued at \$10 or over; and complete parts	—	7,983,771	—	8,153,930
Rheostats, controllers and other starting and controlling devices, and parts, n.o.p.	—	3,967,334	—	5,433,473
Sad irons, electric, and parts	—	185,273	—	192,553
Self-contained lighting outfits and parts, n.o.p.	—	479,309	—	94,853
Sockets, outlets and receptacles and parts, n.o.p.	—	685,009	—	536,634
Spark plugs, magnetos, n.o.p., and other ignition apparatus and parts	—	111,122	—	33,857
Switches, switchboards, n.o.p., circuit breakers and parts	—	4,856,418	—	4,826,407
Switch gear, flame proof, electric, for use underground in coal mines, and parts	—	58,347	—	263,043
Telegraph apparatus, electric, and parts	—	1,660,964	—	1,732,775
Telephone apparatus, electric, and parts	—	6,248,691	—	6,122,684
Transformers and parts, n.o.p.	—	1,363,641	—	1,853,020
Radio tubes	938,103	711,778	1,310,140	1,308,532
Radio receiving sets	1,886	271,425	1,882	203,350
Radio receiving sets, parts of, as enumerated in tariff item 445o	—	1,972,706	—	2,894,387
Radio tube parts as enumerated in tariff item 445p	—	274,041	—	589,830
Radio and wireless apparatus, electric, n.o.p.	—	5,988,988	—	6,782,893
Electric dry shaving machines, for use in removing human hair, and parts thereof	—	375,429	—	787,089
Electric steam turbo generator sets, 700 b.p. and greater, of a class or kind not made in Canada, and parts	19	2,771,275	22	3,846,111
Electric or gas welding apparatus, not including motors	—	2,943,236	—	2,887,315
Sound equipment	Not available separately		—	622,352
Electrical apparatus, n.o.p., and parts	—	7,104,317	—	7,990,748
Total Accounted For	—	62,127,222	—	69,802,480
(b) EXPORTS:				
Batteries, storage, and parts	—	1,760,331	—	863,078
Batteries and parts, n.o.p.	—	461,900	—	441,730
Radio receiving sets (except batteries)	27,815	893,388	33,334	1,426,936
Radio and wireless apparatus, n.o.p. (except batteries)	—	1,540,580	—	1,538,982
Telegraph and telephone apparatus, n.o.p.	—	324,091	—	94,483
Transformers and parts	—	389,044	—	976,290
DYNAMOS AND GENERATORS AND PARTS	—	1,011,616	—	930,493
Electric meters and parts	—	1,628,000	—	2,368,844
Electric motors and parts	106,387	2,906,906	120,111	1,904,442
Electric stoves and parts	27,296	2,767,944	3,163	337,680
Electric heating and cooking devices, domestic, n.o.p.	—	343,322	—	44,893
Spark plugs, magnetos and other ignition apparatus	—	1,219,483	—	544,174
Switches, sockets and other wiring devices	—	291,941	—	292,132
Electric lamps and shades	—	55,693	—	23,432
Electric light fixtures and parts	—	218,997	—	46,030
Electrical apparatus, n.o.p.	—	1,009,078	—	842,065
Total Accounted For	—	16,822,314	—	12,675,074

Note. Information on items not listed in the above table may be obtained by writing direct to the Dominion Bureau of Statistics, Ottawa.

TABLE 34. Employees and Earnings in the Electrical Apparatus and Supplies Industry by Provinces, 1948 and 1949

Province	Average Number of Employees					Earnings		
	Supervisory and office		Production and related workers		Total employees	Supervisory and office	Production and related workers	Total earnings
	Male	Female	Male	Female				
1948								
Quebec.....	2,644	1,316	8,505	3,191	15,656	10,960,712	24,312,652	35,273,364
Ontario.....	5,218	2,504	21,304	8,134	37,160	21,368,335	63,502,132	84,870,467
Manitoba.....	79	33	255	209	576	313,800	627,976	941,776
Alberta.....	3	1	17	—	21	9,054	30,929	39,983
British Columbia.....	70	29	327	34	460	268,579	719,475	988,054
Canada	8,014	3,883	30,408	11,568	53,873	32,920,480	89,193,164	122,113,644
1949								
Nova Scotia and Quebec	3,204	1,303	8,410	2,978	15,895	12,901,430	25,463,063	38,364,493
Ontario.....	5,747	2,734	22,054	8,370	38,905	25,954,926	70,685,162	96,640,088
Manitoba.....	120	35	281	198	634	444,647	723,345	1,167,992
Alberta.....	2	—	9	—	11	1,800	13,881	15,681
British Columbia.....	79	33	322	37	471	334,218	756,049	1,090,267
Canada	9,132	4,105	31,076	11,583	55,916	39,637,021	97,641,500	137,278,521

Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1949

Name of Firm	Location of Plant
(a) Batteries	
QUEBEC:	
Hart Battery Company Limited.....	170 St. George St., St. Johns
New Era Battery Company.....	2240 Bellechasse St., Montreal
Service Specialty Company Ltd.....	1858 St. Luke St., Montreal
ONTARIO:	
Burgess Battery Company.....	415 Buttrey St., Niagara Falls
Exide Batteries of Canada Ltd.....	153 Dufferin St., Toronto
General Dry Batteries of Canada Ltd.....	228 St. Helen's Ave., Toronto
Gould Storage Battery Limited.....	Hickson Avenue, Kingston
Hay Battery Co., Limited, The.....	1122-24 Barton St. E., Hamilton
La Salle Lead Products Ltd.....	680 Wyandotte St. E., Windsor
National Carbon Limited	805 Davenport Road, Toronto
Prest-O-Lite Battery Co. Ltd.....	1352-60 Dufferin St., Toronto
Radium Battery.....	374 Barton St. E., Hamilton
Willard Storage Battery Co. of Canada Ltd.....	269 Campbell Ave., Toronto
MANITOBA:	
Globelite Batteries Limited.....	146 Alexander Ave., Winnipeg
Ray-O-Vac (Canada) Limited.....	Berry St. and Sargent, St. James
ALBERTA:	
Alberta Battery Company Ltd.....	1312 Centre St. S., Calgary
Calgary Battery Co.....	111-12th Ave. W., Calgary
BRITISH COLUMBIA:	
Arrow Batteries.....	901 E. Hastings, Vancouver
Francis Battery Service.....	1412 Quadra St. W., Victoria
Giant Battery Co.	1249 Granville St., Vancouver
Globelite Batteries (B.C.) Limited.....	8650 Barnard St., Vancouver
International Battery Corp. Limited.....	1130 Richards St., Vancouver
Jones Bros. Batteries	1314 Quadra St., Victoria
Marshall Batteries Limited.....	319 E. Second St., Vancouver

ELECTRICAL APPARATUS AND SUPPLIES

Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1949 - Continued

Name of Firm	Location of Plant
(b) Heavy Electrical Machinery and Equipment	
QUEBEC:	
Air Reduction Canada Limited	3081 Ontario St. E., Montreal
Bepco Canada Ltd.	4018 St. Catherine St. W., Montreal
Devoe Electric Switch Co. Ltd., The	863 St. Maurice St., Montreal
Electric Tamper & Equipment Co. of Canada Ltd.	2115 Workman St., Montreal
Electric Switchgear Ltd.	115 St. Denis Ave., St. Lambert, Montreal
Hughes, Benjamin, Electric Company	205 Vitre St. W., Montreal
Universal Wire & Cable Co. Ltd., The	2155 Moreau St., Montreal
White, T.N., & Sons Limited.....	471 De La Friponne St., Montreal
World Electric Products Ltd.	143 Lagauchetiere St. W., Montreal
ONTARIO:	
Allanson Armature Mfg. Co. Ltd.	21 McCaul St., Toronto
Alliance Tool & Motor Co. Ltd., The	Grand and Queensway, Toronto
Amalgamated Electric Corp. Ltd.	384 Pape Ave., Toronto
Bepco Canada Limited	45 Niagara St., Toronto
Canadian Controllers Limited	169 Eastern Ave., Toronto
Canadian Electric Box Co. Ltd.	1402 Queen St. E., Toronto
Canadian General Electric Co. Ltd.	940 Lansdowne Ave., Toronto
Canadian General Electric Co. Ltd.	107 Park St., Peterborough
Canadian Transformers Limited.....	56 King St. N., Waterloo
Canadian Westinghouse Co. Ltd. (2 divisions).	286 Sanford Ave. N., Hamilton
Cansfield Electrical Works Limited.....	Aberdeen Avenue, Hamilton
Commonwealth Electric Corporation Ltd.	260 Geary Ave., Toronto
Dominion Cutout Co. Limited.....	130 Dennistoun St. S., Welland
Dominion Electric Mfg. Co. Ltd.	250 Richmond St. W., Toronto
Eastern Power Devices Limited	80 Leslie St., Toronto
English Electric Company of Canada Ltd.	29 Wabash Ave., Toronto
Ferranti Electric Limited.	George Street, St. Catharines
Fraser, D.M., Limited.....	Industry St., Mount Dennis, Toronto
Hammond Manufacturing Co. Ltd.	54-56 Lombard St., Toronto
International Machinery Co.	40 Wellington St. W., Guelph
Jones & Moore Electric Co. Ltd.	81 Mars Ave., Hamilton
Leland Electric Canada Ltd.	296 Adelaide St. W., Toronto
Lincoln Electric Co. of Canada Ltd.	50 Crimen St., Guelph
Lovatt Engineering Limited.....	179 Wicksteed Ave., Leaside
Moloney Electric Co. of Canada Ltd.	3545 Danforth Ave., Toronto
Packard Electric Co. Limited	213-219 Sterling Road, Toronto
Powerlite Devices Ltd. (P. & E. Division)	Race Street, St. Catharines
Redmond Motors of Canada Ltd.	1870 Davenport Road, Toronto
Robbins & Myers Co. of Canada Ltd., The	121 Woodworth Ave., St. Thomas
Sangamo Company, Limited.....	Morrell Street, Brantford
Square D Company of Canada Limited.....	215 Laird Drive, Leaside, Toronto
Supreme Power Supplies Ltd.	Industry Street, Toronto
	Newcastle and Audley Sts., Mimico
MANITOBA:	
Langley Electric Mfg. Co. Ltd.	677 Notre Dame Ave., Winnipeg
Pioneer Electric Limited	102 Hebert St., St. Boniface
BRITISH COLUMBIA:	
Cemco Electrical Mfg. Co. Limited	22 E. 5th Avenue, Vancouver
Electric Panel Manufacturing Ltd.	1250 Richards St., Vancouver
Langley Mfg. Company Ltd.	Granville Island, Vancouver
(c) Radios and Radio Parts	
NOVA SCOTIA:	
Cossor (Canada) Ltd.	301-303 Windsor St., Halifax
QUEBEC:	
Canadian Aviation Electronics Ltd.	St. Hubert
Canadian Marconi Company	2440 Trenton Road, Montreal

Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1949 - Continued

Name of Firm	Location of Plant
(c) Radios and Radio Parts - Continued	
QUEBEC - Concluded	
Chaput, Paul, Limitée.....	2222 Ontario St. E., Montreal
Electrical Products Mfg. Co. Ltd.	3570 Louis Veuillot St., Montreal
Electrolabs Reg'd.	445 St. Peter St., Montreal
Federal Electric Manufacturing Co. Ltd.	9600 St. Lawrence Blvd., Montreal
Monarch Radio Mfg. Co.	3839 Arcade St., Montreal
RCA Victor Company Limited.....	1001 Lenoir St., Montreal
Television Radio Aerial Mfg. Co. Ltd.	1252 Notre Dame St. W., Montreal
Televox Systems Reg'd.	154 St. Bernard St., Quebec
Utah Electronics (Canada) Ltd.	300 Chambly Road, Longueuil
ONTARIO :	
Aerovox Canada Limited.....	1551 Barton St. E., Hamilton
Amplifier Co. of Canada.....	134 Leslie St., Toronto
Appleby, A., & Co. of Canada Ltd.	Small Arms Building, Long Branch
Arrow Radio Company	1829 Davenport Road, Toronto
Brand and Millen Ltd.	Small Arms Building, Long Branch
Cahoon, L.D., & Company Ltd.	2271 Danforth Ave., Toronto
Camed Television Company.....	119 York St., Toronto
Canadian Admiral Corp. Ltd.	Malton
Canadian Astatic Limited.....	2271-2273 Danforth Ave., Toronto
Canadian General Electric Co. Ltd.	830 Lansdowne Ave., Toronto
Cannon Electric Co. Ltd.	2451 Danforth Ave., Toronto
Circulex (Canada) Limited.....	1166 Bay St., Toronto
Copper Wire Products Ltd.	137 Oxford St., Guelph
Dominion Electromechanical Industries Ltd.	39 Edward St. and 480 Victoria St., Kitchener
Electronic Coil Company.....	62 Colborne St. E., Orillia
Electronic Recorder Limited.....	351 Carlaw Ave., Toronto
Erie Resistor of Canada Ltd.	1151 Roselawn Ave., Toronto
Farley, T.S., Limited.....	174 Catherine St. N., Hamilton
General Radionics Limited.....	Municipal Airport, Hamilton
International Resistance Co. Ltd.	349 Carlaw Avenue, Toronto
Manning Radio Ltd.	2 Northview Terrace, Toronto
Marsland Engineering Co.	154 Victoria St. S., Kitchener
Meredith, C.C., & Co. Limited.....	Queen N. and Elgin Sts., Streetsville
Micro Engineering Laboratory.....	rear 455 Ontario St., Toronto
Northern Electric Co. Ltd.	250 Sidney St., Belleville
Philco Corporation of Canada Ltd.	1244 Dufferin St., Toronto
Pye Canada Limited.....	First Street, Ajax
Radio Components Ltd.	560 King St. W., Toronto
Radio Condenser Co. Ltd.	1131 Bloor St. W., Toronto
Radio Speakers (Canada) Ltd.	37 Hanna Ave., Toronto
Radio Valve Co. of Canada Ltd.	189 Dufferin St., Toronto
Rogers Electronic Tubes Limited.....	11-19 Brentcliffe Road, Leaside
Rogers Majestic Limited.....	11-19 Brentcliffe Road, Leaside
Smallwood, S.G., Limited.....	397 King St. E., Kitchener
Soundmaster Equipment.....	256 Kent St., Ottawa
Sparton of Canada Limited.....	Elm and Pine Sts., London
Speight, N.H., Laboratories.....	145 Wellington St. W., Toronto
Standard Radio Products.....	108 Sydney St., Kitchener
Stewart-Warner Alemite Corp. of Canada Ltd.	MacDonald Avenue, Belleville
Stromberg-Carlson Co. Ltd.	211 Geary Ave., Toronto
Telecom Limited.....	93 Church St., Toronto
Tipping, Stanley, Esq.	36 Esgore Drive, Toronto
Transvision-Television (Canada) Ltd.	Hamilton
White Radio Limited.....	41 West Ave. N., Hamilton
MANITOBA :	
Thorkelson Radio Products.....	592 Erin St., Winnipeg

ELECTRICAL APPARATUS AND SUPPLIES

Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1949 - Continued

Name of Firm	Location of Plant
(c) Radios and Radio Parts - Concluded	
BRITISH COLUMBIA:	
Barvic Engineering Limited.....	1285 Homer St., Vancouver
Chisholm Industries Limited.....	4515 Main St., Vancouver
Electronic Products Co., Ltd.....	1569 West 6th Ave., Vancouver
Research Industries Limited	1667 West 4th Ave., Vancouver
(d) Refrigerators, Vacuum Cleaners and Appliances	
QUEBEC:	
Canadian Armature Works.....	6595 St. Urbain St., Montreal
Canadian General Electric Company Ltd.....	5781 Notre Dame St. E., Montreal
Colsan Limited.....	636 St. Paul St. W., Montreal
Danby Appliance Co., The.....	2157 St. Patrick St., Montreal
Electric Fixtures & Portable Lamp Mfg. Co.....	640 St. Paul St. W., Montreal
Electrolux (Canada) Limited	201 Laurier Ave. E., Montreal
Electro-Steam Manufacturing Co. Ltd.....	5316 Park Ave., Montreal
Evercold Refrigeration Ltd.....	7855 Decarie Blvd., Montreal
Giant Electric Mfg. Co. Ltd.....	40 Hurtubise Blvd., Montreal E.
H & S Products Co.....	4215 Boulianne Lane, Montreal
La Compagnie Bédard Ltée.....	L'Assomption
Lalonde, Frank P., Ltd.....	Dorval
Northern Machinery Company Ltd.....	184 St. Paul St. W., Montreal
Progress Restaurant & Equipment Mfg. Ltd	4865 St. Lawrence Blvd., Montreal
Racine & Racine Mfg.	Granby
Saulnier & Frère Enr.....	St. Paul
Victor Refrigeration Co. Ltd.....	15 Ave. des Industries, Lévis
Warmspring Limited.....	5168 Côte des Neiges Road, Montreal
Wolmak Products Ltd.....	9500 St. Lawrence Blvd., Montreal
Wright, P. M., Electrical Co.....	1327 Dorchester St. W., Montreal
ONTARIO:	
Addison Industries Limited.....	9-11 Hanna Ave., Toronto
Aero-Vent Electric Co. Ltd.....	1104 Bay St., Toronto
Air-Coils Mfg. Co. Ltd	29 Brock St. N., Oakville
Backer, C. B., Company Ltd	25 Aberdeen St., Ottawa
Bersted Manufacturing Co.....	75 Chisholm St. S., Oakville
Bridges Manufacturing Co.....	185 Bay St., Toronto
Brock Snyder Mfg. Co., The	21 John St., Grimsby
Brutoco Manufacturers Ltd.....	1623 St. Clair Ave. W., Toronto
Canadian Curtis Refrigeration Co. Ltd	20 St. George St., Hamilton
Canadian General Electric Co. Ltd.....	80 Bradford St., Barrie
Canadian General Electric Co. Ltd.....	224 Wallace Ave., Toronto
Carrier Engineering Ltd	857 Queensway, Toronto
Chandler Electric Co.....	21 Scott St., Toronto
Clyde Fans Limited	162 King St. E., Toronto
Continental Electric Co. Ltd.....	310 Spadina Ave., Toronto
Domestic Electric Co.....	272 Church St., Toronto
Dowe, Geo. P., Co Ltd	Stop 22A Yonge St., Richvale
Electrical Accessory Co. of Toronto Ltd.....	Stop 22A Yonge St., Richvale
Electric Magnetic Blanket Co.....	52 King St. W., Cobourg
Electro-Sun Limited	3487 Dundas St. W., Toronto
Elgin Electric Mfg. Co.....	570 Queen St. E., Toronto
Endress, George W., Co. Ltd.....	186 Munro St., Toronto
Ever-Bright Ltd.....	2700 St. Clair Ave. W., Toronto
Force Electric Products.....	163 Church St., Acton
Frigidaire Products of Canada Ltd	Commercial Road, Leaside
Gelling Industries Limited.....	201 Major St., Welland
Gilson Manufacturing Co. Ltd.....	York Road, Guelph
Graham Metal Products Ltd.....	1439 King St., Preston

Directory of Firms Included in the Electrical Apparatus, 1949 — Continued

Name of Firm	Location of Plant
(e) Miscellaneous Electrical Products — Continued	
ONTARIO — Continued	
Curtis Lighting of Canada Ltd.	195 Wicksteed Ave., Toronto
Dalgleish Electric Supply	124 McNab St. N., Hamilton
Dominion Carbon Brush Co. Ltd.	250 Richmond St. W., Toronto
Dominion Machine & Tool Co. Ltd.	12 Bater Ave., Toronto
Electric & Pole Line Industries Ltd.	76 Logan Ave., Toronto
Electronic Associates Limited	2760 Yonge St., Toronto
Epheta Mfg. Co. (Canada) Ltd.	R.R. No. 6 Indian Creek Road, Chatham
Etlin, H.B., Mfg. Co.	39 Golden Ave., Toronto
Federal Wire & Cable Co. Ltd.	265 Suffolk St., Guelph
Fleck, R.D., & Co. Ltd.	184 Bond St. W., Oshawa
Froзнаre Cooler Company	Merritville Highway, St. Catharines
Grotell Electric Company	214 Ossington Ave., Toronto
Hallman, J.C., Mfg. Co. Ltd.	41 John St. W., Waterloo
Hart Manufacturing (Canada) Ltd.	155 Edward St., Aurora
Hastie & Dupuis	259 Bradley St., Eastview
Henderson Electric Co. Ltd.	927 Dupont St., Toronto
Holden Lighting Mfg. Ltd.	11A Yorkville Ave., Toronto
Industrial Research	11½ King St. E., Toronto
Industrial Wire & Cable Ltd.	35 Golden Ave., Toronto
Kamro Lighting Products	R.R. No. 1, Weston
Kearney, James R., Corp. of Canada Ltd.	3 Crawford St., Guelph
Kenny Electrical Mfg. Co. Ltd.	3705 Bathurst St., Toronto
Kondu Mfg. Co. Limited	South Street, Preston
Kruger Mfg. Company	441 King St. W., Toronto
Landy, M.A., Co. Ltd.	47 Lucy Ave., Toronto
Line & Cable Accessories Ltd.	347 Sorauren Ave., Toronto
Mahold, R.H., Limited	2781 Dufferin St., Toronto
Markel Electric Products Ltd.	23 Lewis St., Fort Erie
Marr Machine & Mfg. Co. Ltd.	160 Perth Ave., Toronto
Measurement Engineering Ltd.	232 John St., Arnprior
Merit Manufacturing Co.	965 College St., Toronto
Metal Industries Limited	112 York St., Hamilton
Millard Electric Limited	27 Cockburn St., Perth
Mitchell Mfg. Co. Ltd.	11 Davies Ave., Toronto
Morganite Carbon Products, Canada, Ltd.	195 Eastern Ave., Toronto
Noma Electric Co. of Canada, Ltd.	Second Ave. and 14th Street, Owen Sound
Osborne Electric Co. Ltd.	95 Wesley St., Etobicoke
Paramount Electric Co.	182 Adelaide St. W., Toronto
Pasteuray of Canada Ltd.	102 Bay St. N., Hamilton
Penn Controls Limited	246 Parliament St., Toronto
Phillips Electrical Works Ltd.	Kingston Road, Brockville
Pierce Fuse Corporation Ltd.	210 Courtwright St., Fort Erie
Polytronics Co.	582 Bathurst St., Toronto
Regent Equipment Mfg. Co. Ltd.	455 King St. W., Toronto
Service Lamp Co. Ltd.	197 King St., London
Slater, N., Co. Ltd.	2 Sydney St., Hamilton
Smith, F. Lawrence, & Sons	530 Richmond St. W. (rear), Toronto
Smith & Stone Limited	Georgetown
Star Electric Fixtures Ltd.	141 Church St., Toronto
Stark Electronic Instruments Ltd.	37 Hanna Ave., Toronto
Sterne Equipment Co. Ltd.	152 Lappin Ave., Toronto
Swift Devices Limited	14 George St., Hamilton
Taylor Electric Mfg. Co. Ltd.	625 Princess Ave., London
Toronto Metal Spinning Ltd.	32 Eastern Ave., Toronto
Virden, John C., Limited	35 Front St. E., Toronto
Vulcan Electric Products Ltd.	3160 Dundas St. W., Toronto
Walfer Electronics Co. Ltd.	35 Cameron St., Dundas
Waldman, Harvey, & Co.	52 Dickens Ave., Toronto

ELECTRICAL APPARATUS AND SUPPLIES

Directory of Firms Included in the Electrical Apparatus, 1949 — Concluded

Name of Firm	Location of Plant
(e) Miscellaneous Electrical Products — Concluded	
ONTARIO: — Concluded	
Walker Metal Products Ltd.	1500 Kildare Road, Walkerville
Wickett, Bradford J.	2792 Yonge St., Toronto
Wilson, J.A., Lighting & Display Ltd.	9 Morrison St., Toronto
Wynston, A.L., Jr., Ltd.	251 Spadina Ave., Toronto
MANITOBA:	
Advance Lighting Co.	55 Myrtle St., Winnipeg
Caswell, W.A.	190 Chestnut St., Winnipeg
Globe Electric Mfg. Co. Ltd.	501 Main St., Winnipeg
Ideal Electric Mfg. Co.	372 Selkirk Ave., Winnipeg
Lighting Materials Ltd.	803 Erin St., Winnipeg
L. & S. Electric Mfg. Ltd.	466-70 Ross Ave., Winnipeg
Melco Electric Co. Ltd.	Queen & Eleventh Sts., Brandon
Super-Lite Electric Mfg. Co. Ltd.	1465 Notre Dame Ave., Winnipeg
ALBERTA:	
Donovan, R.L., & Co. Ltd.	14225 Stony Plain Road, Edmonton
BRITISH COLUMBIA:	
Duck, John, & Son Limited	1246 Hornby St., Vancouver
Ekolite Limited	369 East Hastings St., Vancouver
Electrical Industries Ltd.	550 Cambie St., Vancouver
Freeman, W., & Son	275 Woodland Drive, Vancouver
Lenkurt Electric Co. of Canada Ltd.	926 East Hastings St., Vancouver
Marine Electric Limited	1703 W. Georgia St., Vancouver
Rainbow Lighting Co. Ltd.	239 Main St., Vancouver
Vancouver Lighting Supply Co. Ltd.	926 East Hastings St., Vancouver
Western Lighting Fixture Co. Ltd.	246 West Second Ave., Vancouver

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Directory of Firms Included in the Electrical Apparatus and Supplies Industry, 1949 - Continued

Name of Firm	Location of Plant
(d) Refrigerators, Vacuum Cleaners and Appliances — (Concluded)	
ONTARIO — (concluded)	
Groh's Cooler Limited.....	Duke and Laurel Sts., Preston
Hanksraft (Canada) Limited.....	186 Munro St., Toronto
Hoover Company Ltd., The	Gage and Barton Sts., Hamilton
Hygrade Electric Mfg. Co.....	841-843 College St., Toronto
Independent Electric Limited.....	111 Adelaide St. W., Toronto
Ireland Manufacturing Co.	93 Cannon St. W., Hamilton
Keep Rite Refrigeration Ltd.	44 Elgin St., Brantford
Kelvinator of Canada Ltd.	1152 Dundas St. E., London
Knight Rebound Controllers Ltd.	16 Sanford Ave. S., Hamilton
Leff, H. I., Company	447 Dundas St., London
MacLeod, J. K., & Co. Ltd.	2 River St., Toronto
McCormack Smyth Ltd.	242 Mineola Road, Port Credit
National Electric Mfg. Co.	280 Lansdowne Ave., Toronto
Opal Manufacturing Co. Ltd.	526 Bay St., Toronto
Phono Motors Limited.....	114-116 Jarvis St., Toronto
Pittsburg Water Heater Co. of Canada.....	End of Park Road, Grimsby Beach
Power Appliances Mfg. Co.	330 Adelaide St. W., Toronto
Premier Vacuum Cleaner Co. Ltd., The	18 Breadalbane St., Toronto
Pyrexon Ray Company Ltd.	1254 Dundas St. W., Toronto
Redi-Heat Electric Company Ltd.	Mill Street, Deseronto
Reed-Cameron.....	516 Richmond St. W., Toronto
Renfrew Electric & Refrigerator Co. Ltd.	Elizabeth Street, Renfrew
Sanson United of Canada Ltd.	69 Sherbourne St., Toronto
Sims Motor Units of Canada Ltd.	88 Merton St., Toronto
Stafford Metals Limited.....	37 Hanna Avenue, Toronto
Standard Electric Mfg. Co.	897 Queen St. W., Toronto
Steam Electric Products Ltd.	220 Adelaide St. W., Toronto
Sunbeam Corporation (Canada) Ltd.	321 Weston Road, Toronto
Superior Electrics Limited.....	Pembroke St. E., Pembroke
Taymouth Industries Ltd.	Taymall Avenue, Toronto
Thermax Limited.....	Orillia
Torcan Mfg. Co.	2720 Dundas St. W., Toronto
Triad Appliances.....	130 Queen's Drive, Weston
Universal Cooler Co. Ltd.	145 Brant St., Brantford
Vendall Limited.....	2040 Buchanan Ave., Niagara Falls
Wood, W. C., Co. Ltd., The.....	123 Woolwich St., Guelph
MANITOBA:	
A. B. C. Electric Limited.....	505 Sherburn St., Winnipeg
Coldstream Refrigerator Mfg. Ltd.	166 Osborne St., Winnipeg
Electric Heating & Manufacturing Co. Ltd.	902 Home St., Winnipeg
Red Devil Heating & Mfg. Co.	272 Selkirk Ave., Winnipeg
BRITISH COLUMBIA:	
Allied Engineering of B. C. Ltd.	2043-4th Ave. W., Vancouver
(e) Miscellaneous Electrical Products	
QUEBEC :	
Cables, Conduits & Fittings Limited.....	69 Richelieu St., St. Johns
Canadian General Electric Co. Ltd.	Centre Industriel No. 5, Quebec
Canadian Laco Lamps Limited.....	745 Guy St., Montreal
Columbia Electric Limited.....	261 Queen St., Montreal
Conduits National Company Ltd.	10150 Notre Dame St. E., Montreal
Economy Fuse & Mfg. Co. of Canada Ltd.	1030 St. Alexander St., Montreal
Edwards of Canada Limited.....	675 Butler St., Montreal
Electroliner Manufacturing Co. Ltd.	5849 Boyer St., Montreal
Flex-I-Con Mfg. Company Ltd.	8155 Lafontaine St., Montreal

ELECTRICAL APPARATUS AND SUPPLIES

Directory of Firms Included in the Electrical Apparatus, 1949 — Continued

Name of Firm	Location of Plant
(e) Miscellaneous Electrical Products — Continued	
QUEBEC — Concluded:	
Hale Brothers Limited.....	6222 Chambord St., Montreal
Haliburton & White Limited.....	688 Notre Dame St. W., Montreal
Iberville Fittings Limited.....	167 First St., Iberville
Keith & Cronin Reg'd.....	7220 Clarke St., Montreal
L'Air-Liquide Society.....	5030 Rouen St., Montreal
Mid-Day Fluorescent Fixtures Inc.....	931 Amherst St., Montreal
Nagels Art Metal Works.....	15 — 6th Ave., Ville St. Pierre, Montreal
Northern Electric Co. Ltd.....	1261 Shearer St., Montreal
Peerless Electric Limited.....	1090 Pratt Ave., Outremont
Perfect Daylight Fixtures Co. Ltd., The.....	6615 Papineau Ave., Montreal
Phillips Electrical Works Limited.....	5795 De Gaspé St., Montreal
Presto Electric Co. of Canada Ltd.....	425 River St., Verdun
Radio Engineering Products Ltd.....	4305 Iberville St., Montreal
Rest-Glow Mfg. Co. Ltd.....	6845 St. Urbain St., Montreal
Rosemont Industries Ltd.....	2090 Moreau St., Montreal
Ross Productions Co.....	1414 Notre Dame St. W., Montreal
Saxe Bros. inc.....	6215 Henri Julien Ave., Montreal
Solex Company Ltd., The.....	280 Faillon St. W., Montreal
Sylvania Electric "Canada" Ltd.....	452 Heriot St., Drummondville
Temco Electric Mfg. Co.....	8045 Durocher Ave., Montreal
United Metal Mfg. Co.....	69 Bernard St. E., Montreal
Val St. Laurent Crystal Co. Ltd.....	77 Vitre St. W., Montreal
ONTARIO:	
Allbright Corporation of Canada Ltd.....	1315 Queen St. E., Toronto
Allman Electric.....	342 Keewatin Ave., Toronto
Ardron Mfg. Co.....	9 Niagara St., Toronto
Arrow-Hart & Hegeman (Canada) Ltd.....	Industry Street, Toronto
Automatic Watchdog Controls Ltd.....	5 Blackmore St., Toronto
Bach-Simpson Limited.....	71 Carling St., London
Baden Electric Fence Co.....	Baden
Baldwin-International Ltd.....	3006 Bloor St. W., Toronto
Bamford-Regis Ltd.....	166 Dalhousie St., Ottawa
Bayly Engineering Ltd.....	5 — 1st Street, Ajax
Boston Insulated Wire & Cable Co. Ltd.....	118 Shaw St., Hamilton
Bowman Electric Herder.....	Petersburg
Branston, Chas. A., Limited.....	2508 Yonge St., Toronto
Burger Lighting Equipment Co.....	690 King St. W., Toronto
Burke Electric & X-Ray Co. Ltd.....	61-63 Yorkville Ave., Toronto
Burndy Canada Ltd.....	381 Greenwood Ave., Toronto
C. & M. Products Ltd.....	255 Raleigh Ave., Toronto
Camesco Fluorescent Corp. Ltd.....	2382 Dundas St. W., Toronto
Campbell Electric Limited.....	131 Clarence St., Brantford
Commercial Fixture Co. Ltd.....	2368 Dundas St. W., Toronto
Cumberland Supply Co. Ltd.....	Port Credit
Canada Wire & Cable Co. Ltd.....	Laird Drive, Leaside
Canadian Electric Resistors Ltd.....	33 Lombard St., Toronto
Canadian Fluorescent Light Co.....	62 Major St., Toronto
Canadian General Electric Co. Ltd.....	221 Dufferin St., Toronto
Canadian General Electric Co. Ltd.....	Queen Elizabeth Highway, Oakville
Canadian Line Materials Ltd.....	St. Clair Ave., Scarborough Junction
Canadian Sterling Electric Ltd.....	428 Cannon St. E., Hamilton
Canadian Strobe & Electric Corp.....	222 Front St. E., Toronto
Canadian Triangle Wire & Cable Co. Ltd.....	4006 Dundas St. W., Toronto
Conduits National Company Ltd.....	33 Labatt Ave., Toronto
Cordo (Canada).....	330 Adelaide St. W., Toronto
Crouse-Hinds Company of Canada Ltd.....	7-21 Labatt Ave., Toronto
Crown Electrical Mfg. Ltd.....	19 Sydenham St., Brantford

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