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ANNUAL INDUSTRY REPORT - MANUFACTURES OF THE NON-FERROUS METALS GROUP

THE ELECTRICAL APPARATUS AND SUPPLIES INDUSTRY, 1938

This industrial group includes most of the concerns in Canada which manufacture equipment for use in the generation, transmission and utilization of electricity. However, it is not possible to include all such producers in this industry as the system of classification which is used for the annual Census of Industry provides for the grouping of concerns according to the chief component material of the major product made, and, under this system, some important manufacturers of electrical supplies must be allotted to other industries. For example, since clay is the chief material used in making porcelain insulators, the producers of these goods have been classified to the Clay Products Industry under the main group which embraces all manufactures of non-metallic minerals; similarly, the makers of electric washing machines have been included in the Machinery Industry of the iron and steel group. Again, some electrical supplies were made as minor products of plants which were primarily engaged in other lines of business and, therefore, were included in other industries. The output of electrical apparatus in these other industries, including electrical accessories for automobile and household use but excluding office and industrial machinery, amounted in value to about \$16,426,000 in 1938. The items which go to make up this outside production are shown in Table 14 in as much detail as it is possible without violating the secrecy clause of the Statistics Act, which provides that the Bureau may not publish information pertaining to individual companies.

Statistics given in Tables 1 to 13 of this report cover only the concerns in the Electrical Apparatus and Supplies Industry. Table 14 shows the output of certain electrical apparatus by firms in other industries. Tables 15 to 35 give the total Canadian output (regardless of the industries in which they were produced) of motors, generators, transformers, batteries, washing machines, vacuum cleaners, lighting fixtures, wire and cable, electric refrigerators, stoves, water heaters, radio tubes, conduit, radios, ironers, oil burners, and incandescent lamps.

Production by firms in the Electrical Apparatus and Supplies Industry was valued at \$90,129,119 in 1938, a decline of 8.3 per cent from the 1937 total of \$98,841,992. The 188 firms in this group in 1938 were distributed as follows: 136 in Ontario, 27 in Quebec, 11 in British Columbia, 10 in Manitoba and 4 in Alberta. These plants employing fixed and working capital amounting to \$97,122,970 gave employment to a monthly average of 20,353 people who were paid \$24,978,077 in salaries and wages. Materials worth \$35,916,344 were purchased during the year for use in manufacturing and an additional \$1,199,103 was spent for fuel and electricity.

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

Table 1 - PRINCIPAL STATISTICS, 1929 - 1938

Year	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
		\$	\$	\$	\$	\$	\$
1929 .....	139	101,767,108	20,871	26,725,215	1,098,506	49,625,522	113,796,002
1930 .....	149	102,379,896	20,568	26,260,004	1,082,700	43,111,629	104,577,790
1931 .....	163	100,057,945	18,207	22,474,319	950,975	32,385,342	81,578,595
1932 .....	169	82,458,754	14,505	16,262,368	976,453	20,414,844	53,264,918
1933 .....	174	80,844,131	11,767	12,428,430	851,575	14,504,289	37,012,509
1934 .....	174	77,980,366	13,657	15,220,022	986,528	21,308,006	50,234,811
1935 .....	182	75,499,255	15,549	17,594,759	1,070,801	25,409,806	61,152,834
1936 .....	186	79,794,524	17,037	19,501,882	1,187,942	30,484,468	72,288,548
1937 .....	191	97,187,905	21,706	26,291,436	1,351,249	41,695,446	98,841,992
1938 .....	188	97,122,970	20,353	24,978,077	1,199,103	35,916,344	90,129,119
% change 1938 from							
1937 .....	...	- 0.7	- 6.2	- 5.0	- 9.9	- 13.9	- 8.8

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.

Table 2 - PRINCIPAL STATISTICS, BY SUB-GROUPS, 1936 - 1938

Year	No. of plants	Capital employed	Average number of employees	Salaries and wages	Cost of materials at works	Gross selling value of products at works	
		\$	\$	\$	\$	\$	
<b>Motors, generators and transformers, chiefly -</b>							
1936 .....	13	29,978,850	5,846	6,610,410	7,216,954	19,513,644	
1937 .....	19	43,583,399	9,012	11,389,851	13,274,983	25,202,530	
1938 .....	22	43,476,813	8,743	10,934,920	10,584,446	35,606,875	
<b>Batteries, chiefly -</b>							
1936 .....	26	7,382,437	1,092	1,367,646	3,423,511	7,091,456	
1937 .....	27	7,228,584	1,143	1,524,744	4,074,846	7,925,917	
1938 .....	27	8,725,816	1,157	1,593,680	4,235,364	8,250,635	
<b>Radios and parts, chiefly -</b>							
1936 .....	25	8,277,402	2,817	2,656,103	5,987,668	12,628,297	
1937 .....	24	9,907,812	3,108	3,141,528	6,464,038	18,406,418	
1938 .....	21	8,946,284	2,801	2,802,952	5,404,617	10,853,672	
<b>Appliances, chiefly (vacuum cleaners, refrigerators, stoves, etc.) -</b>							
1936 .....	31	6,319,018	1,382	1,524,161	3,575,645	7,685,160	
1937 .....	35	5,917,533	1,285	1,436,880	3,217,467	7,757,469	
1938 .....	36	6,123,504	1,269	1,544,742	4,146,804	8,734,908	
<b>Cables and conduits, chiefly -</b>							
1936 .....	12	20,187,638	3,394	4,564,697	6,354,867	14,559,182	
1937 .....	13	22,923,257	4,760	6,039,529	10,601,180	24,370,967	
1938 .....	11	22,874,459	4,440	5,829,359	8,066,397	20,276,661	
<b>Lighting fixtures, chiefly -</b>							
1936 .....	20	1,088,358	448	436,536	644,583	1,476,924	
1937 .....	21	1,800,787	714	754,994	1,079,025	2,518,122	
1938 .....	18	1,200,034	485	513,883	681,969	1,784,374	
<b>Switchgear, panel boards, and wiring devices, chiefly -</b>							
1936 .....	22	2,656,396	822	862,717	1,304,646	2,888,605	
1937 .....	23	2,754,173	825	870,078	1,510,572	3,545,954	
1938 .....	28	3,855,654	1,036	1,198,626	2,132,883	4,542,788	
<b>Other electrical equipment, chiefly -</b>							
1936 .....	59	3,904,445	1,236	1,479,812	1,976,594	6,445,280	
1937 .....	29	3,072,560	859	1,153,852	1,473,355	4,114,609	
1938 .....	25	1,920,606	422	560,055	663,864	2,099,210	
<b>TOTAL</b>	1936 .....	186	79,794,524	17,037	19,501,882	30,484,468	72,288,548
	1937 .....	191	97,187,905	21,706	26,291,436	41,695,446	98,841,992
	1938 .....	188	97,122,970	20,353	24,978,077	35,916,344	90,129,119

Table 3 - PRINCIPAL STATISTICS, BY PROVINCES, 1937 and 1938

Province	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
	\$			\$		\$	
<u>1937</u>							
Nova Scotia .....	1)	23,538,041	5,591	6,610,587	342,717	10,221,152	23,457,042
Quebec .....	50)	22,905,949	5,215	6,449,159	504,978	8,407,807	20,937,284
Ontario .....	136	72,979,088	15,884	19,416,686	967,261	31,080,611	74,510,006
Manitoba .....	9	582,564	126	157,416	13,950	220,759	500,802
Alberta .....	4	88,406	22	21,129	2,216	26,882	47,431
British Columbia .....	11	199,806	83	105,618	5,105	146,062	326,711
CANADA .....	191	97,187,905	21,706	26,291,436	1,331,249	41,695,446	98,841,992
<u>1938</u>							
Quebec .....	27	22,905,949	5,215	6,449,159	504,978	8,407,807	20,937,284
Ontario .....	136	73,524,692	14,908	18,247,713	872,121	27,106,345	68,249,552
Manitoba .....	10	387,428	123	150,548	14,501	236,785	545,149
Alberta .....	4	80,692	26	22,131	1,862	28,184	67,050
British Columbia .....	11	224,209	81	108,726	5,641	157,223	332,304
CANADA .....	188	97,122,970	20,353	24,978,077	1,199,103	35,916,344	90,129,119

Table 4 - CAPITAL EMPLOYED, BY PROVINCES, 1937 and 1938

Province	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
	\$	\$	\$	\$
<u>1937</u>				
Nova Scotia and Quebec	11,980,664	6,443,727	5,113,650	23,538,041
Ontario .....	21,466,487	23,085,345	28,427,256	72,979,088
Manitoba .....	161,096	146,344	75,124	382,564
Alberta .....	52,188	26,055	10,165	88,406
British Columbia .....	72,649	69,368	57,789	199,806
CANADA .....	38,753,084	29,770,839	33,683,982	97,187,905
<u>1938</u>				
Quebec .....	12,050,477	5,596,585	5,479,087	22,905,949
Ontario .....	28,803,180	19,820,898	24,900,614	73,524,892
Manitoba .....	162,552	128,111	96,785	387,428
Alberta .....	35,345	24,452	20,895	80,692
British Columbia .....	102,001	71,642	50,566	224,209
CANADA .....	41,155,555	25,441,488	30,547,927	97,122,970

Table 5 - SIZE OF ESTABLISHMENTS ACCORDING TO PRODUCTION, NUMBER OF EMPLOYEES and CAPITAL EMPLOYED, 1938

	Number of plants	Capital employed	Average number of employees	Gross selling value of products at works
	\$			\$
(a) PRODUCTION				
Under \$5,000 .....	19	103,766	53	62,172
\$5,000 to \$25,000 .....	55	556,149	172	454,916
\$25,001 to \$50,000 .....	18	714,352	235	672,678
\$50,001 to \$100,000 .....	25	1,213,436	505	1,832,243
\$100,001 to \$250,000 .....	33	4,355,774	1,147	5,265,944
\$250,001 to \$500,000 .....	18	6,188,967	1,562	6,942,555
\$500,001 to \$1,000,000 .....	21	11,910,013	2,569	14,161,836
Over \$1,000,000 .....	19	72,080,513	14,110	60,736,777
TOTAL .....	188	97,122,970	20,353	90,129,119

Table 5 - SIZE OF ESTABLISHMENTS ACCORDING TO PRODUCTION, NUMBER OF EMPLOYEES and CAPITAL EMPLOYED, 1938  
(Concluded)

	Number of plants	Capital employed	Average number of employees	Gross selling value of products at works
		\$		\$
<b>(b) EMPLOYEES</b>				
1 or 2 .....	16	107,851	26	87,752
3 to 10 .....	47	833,840	267	979,069
11 to 20 .....	30	1,620,374	443	2,345,007
21 to 50 .....	35	5,998,855	1,047	4,807,507
51 to 100 .....	27	10,666,790	1,940	13,048,074
101 to 500 .....	26	23,947,532	5,105	24,630,479
Over 500 .....	9	55,947,750	11,525	44,231,231
<b>TOTAL .....</b>	<b>188</b>	<b>97,122,970</b>	<b>20,353</b>	<b>90,129,119</b>
<b>(c) CAPITAL</b>				
Under \$25,000 .....	54	528,739	264	721,642
\$25,000 to \$100,000 .....	59	3,014,564	1,130	4,706,458
\$100,001 to \$500,000 .....	41	10,732,680	2,840	14,147,947
\$500,001 to \$1,000,000 .....	18	12,908,396	2,643	14,785,347
Over \$1,000,000 .....	16	69,938,591	13,476	55,767,725
<b>TOTAL .....</b>	<b>188</b>	<b>97,122,970</b>	<b>20,353</b>	<b>90,129,119</b>

Table 6 - EMPLOYEES, SALARIES AND WAGES, BY PROVINCES, 1937 and 1938

Province	Average number of employees						Salaries	Wages	TOTAL SALARIES and WAGES			
	On Salaries		On Wages		TOTAL	\$						
	Male	Female	Male	Female								
<b>1937</b>												
Nova Scotia and Quebec	1,087	392	2,925	1,189	5,591	2,688,570	3,922,017	6,610,587				
Ontario .....	2,892	1,044	9,182	2,766	15,884	7,313,550	12,103,136	19,416,686				
Manitoba .....	31	8	85	2	126	77,766	59,650	137,416				
Alberta .....	5	2	14	1	22	8,264	12,865	21,129				
British Columbia .....	25	3	56	1	83	50,951	54,667	105,618				
<b>CANADA .....</b>	<b>4,058</b>	<b>1,449</b>	<b>12,260</b>	<b>3,959</b>	<b>21,706</b>	<b>10,139,101</b>	<b>16,152,335</b>	<b>26,291,436</b>				
<b>1938</b>												
Quebec .....	1,151	375	2,707	1,002	5,215	2,922,535	3,526,624	6,449,158				
Ontario .....	3,045	1,062	8,559	2,264	14,908	7,588,559	10,659,154	18,247,713				
Manitoba .....	35	6	80	2	123	87,867	62,481	150,348				
Alberta .....	6	2	18	...	26	8,047	14,084	22,131				
British Columbia .....	24	4	53	...	81	52,474	56,252	108,726				
<b>CANADA .....</b>	<b>4,239</b>	<b>1,449</b>	<b>11,397</b>	<b>3,268</b>	<b>20,353</b>	<b>10,659,482</b>	<b>14,318,595</b>	<b>24,978,077</b>				

Table 7 - WAGE-EARNERS, BY MONTHS, 1937 and 1938 (On 15th of each month)

Month	1 9 3 7			1 9 3 8		
	Male	Female	TOTAL	Male	Female	TOTAL
January .....	10,249	3,321	13,570	11,789	3,530	15,119
February .....	10,625	3,335	13,960	11,480	3,148	14,628
March .....	11,294	3,465	14,759	11,565	3,211	14,776
April .....	11,872	3,670	15,542	11,436	3,177	14,613
May .....	12,210	3,929	16,139	11,569	3,230	14,799
June .....	12,692	4,221	16,913	11,564	3,423	14,987
July .....	12,799	4,202	17,001	11,826	3,443	15,269
August .....	13,051	4,378	17,429	11,813	3,599	15,412
September .....	13,429	4,438	17,867	11,360	3,558	14,918
October .....	13,311	4,463	17,774	11,421	3,481	14,902
November .....	13,189	4,268	17,457	10,754	3,047	13,801
December .....	12,502	3,788	16,290	10,237	2,724	12,961
<b>AVERAGE .....</b>	<b>12,260</b>	<b>3,959</b>	<b>16,219</b>	<b>11,597</b>	<b>3,268</b>	<b>14,665</b>

Table 8 - REGULAR HOURS WORKED PER WEEK BY WAGE-EARNERS, 1938 (Overtime not included)

Regular hours worked per week	Percentage of wage-earners	Regular hours worked per week	Percentage of wage-earners
30 hours or less .....	2.9	49 - 50 hours .....	5.2
31 - 43 hours .....	22.2	51 - 54 hours .....	1.2
44 hours .....	28.5	55 hours .....	1.2
45 - 47 hours .....	32.1	56 - 64 hours .....	1.2
48 hours .....	5.1	65 hours or over .....	0.4

Table 9 - FUEL AND ELECTRICITY USED, 1937 and 1938

Kind	Unit of measure	1 9 3 7			1 9 3 8		
		Quantity	Cost at works	Quantity	Cost at works		
Bituminous coal - Canadian .....	short ton	26,833	154,940	21,730	127,124		
Imported .....	short ton	40,437	234,510	41,423	239,978		
Anthracite coal .....	short ton	3,342	25,559	3,435	26,599		
Coke .....	short ton	1,939	21,729	1,025	11,195		
Gasoline .....	Imp. gal.	10,467	2,479	8,145	2,447		
Kerosene .....	Imp. gal.	5,371	850	4,306	694		
Fuel oil .....	Imp. gal.	1,478,423	103,293	1,374,401	96,725		
Wood .....	cord	246	936	212	856		
Gas - Manufactured .....	M cu. ft.	137,375	103,645	133,068	91,312		
Natural .....	M cu. ft.	29,676	13,480	18,700	13,050		
Other fuel .....	\$		253	...	482		
Electricity purchased .....	K. W. H.	72,826,211	669,575	58,239,784	588,643		
TOTAL .....	\$	...	1,331,249	...	1,199,103		
Electricity generated for own use .....	K. W. H.	11,275,180	...	10,040,300	...		

Table 10 - POWER EQUIPMENT, 1937 and 1938

Kind	1 9 3 7			1 9 3 8		
	Number of units	Total rated horse power	Number of units	Total rated horse power		
Steam engines and turbines .....	16	7,270	16	7,545		
Diesel engines .....	1	25	1	30		
Gasoline, gas and oil engines (x) .....	3	262	1	15		
Hydraulic turbines or water wheels .....	8	4,407	7	4,400		
Total Primary Equipment .....	28	11,964	25	11,990		
Electric motors run by purchased power .....	10,436	69,153	10,487	69,568		
TOTAL .....	10,464	81,117	10,512	81,558		
Electric motors run by power generated by above primary units .....	1,021	5,329	1,041	5,566		
Stationary boilers .....	105	12,920	91	12,148		

Table 11 - POWER EQUIPMENT, 1938, showing - ORDINARILY IN USE - separately from - IN RESERVE OR IDLE

Kind	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 .....	13	3,245	5	4,300
Diesel engines .....	1	30	...	...
Gasoline, gas and oil engines (x) .....	1	15	...	...
Hydraulic turbines or water wheels .....	7	4,400	...	...
Total Primary Equipment .....	22	7,690	3	4,300
Electric motors run by purchased power .....	10,137	67,557	350	2,011
TOTAL .....	11,159	75,247	353	6,311
Electric motors run by power generated by above primary units .....	1,041	5,566	...	...
Stationary boilers .....	83	10,594	8	1,554

(x) Except diesel engines.

Table 12 - MATERIALS USED IN MANUFACTURING, 1937 and 1938

Materials	Unit of measure	Quantity	Cost at works		Cost at works	
			\$	\$	\$	\$
Aluminium -						
Castings .....	lb.	448,207	367,625	345,987	151,653	
Ingot and scrap .....	lb.	89,175	19,843	71,125	14,254	
Punchings and spinnings .....	lb.	54,974	34,521	81,102	44,224	
Rods and bars .....	lb.	655,861	134,559	569,219	118,274	
Sheets .....	lb.	210,751	70,188	193,174	63,859	
Other .....	lb.	274,565	117,482	200,156	80,037	
Ammonium chloride (sal ammoniac) .....	lb.	1,135,702	35,466	1,182,147	35,436	
Antimony .....	lb.	186,275	25,996	76,149	10,997	
Argon .....	cu.ft.	149,541	64,146	119,292	49,738	
Asbestos -						
Board .....	lb.	232,034	34,226	178,401	32,477	
Yarn .....	lb.	119,140	37,325	71,851	27,424	
Tape .....	lb.	...	16,730	14,945	13,602	
Bakelite in all forms .....	\$	...	255,794	...	274,855	
Battery boxes .....	no.	750,088	374,942	668,309	381,867	
Brass and bronze -						
Castings .....	lb.	1,472,543	466,926	886,512	273,363	
Rods and bars .....	lb.	1,576,381	274,532	1,237,443	205,760	
Tubing and pipe .....	lb.	149,308	44,365	88,389	27,425	
Lamp bases .....	\$	...	217,228	...	237,681	
Sheets .....	lb.	1,133,191	267,509	751,633	164,893	
Screws .....	\$	...	93,702	...	69,371	
Other .....	\$	...	149,982	...	47,033	
Carbon brushes, brush stock and plates .....	\$	...	113,292	...	91,074	
Carbon electrodes .....	\$	...	81,391	...	85,302	
Copper -						
Castings .....	lb.	165,963	41,339	89,121	27,861	
Ingots, slabs, wire bars, etc. .....	lb.	866,281	184,180	669,615	135,642	
Rods, including wire rods .....	lb.	34,367,135	4,564,040	24,152,604	3,045,196	
Scrap .....	lb.	170,463	14,659	42,751	5,239	
Tubing and pipe .....	lb.	427,010	127,373	322,969	94,466	
Sheets and plates .....	lb.	570,893	125,187	353,806	75,329	
Wire, bare .....	lb.	5,557,119	904,796	4,955,851	751,885	
Wire, enamelled .....	\$	...	546,076	...	395,887	
Wire, other insulated .....	\$	...	954,553	...	821,389	
Cotton and linen yarns .....	\$	...	794,913	...	662,865	
Cotton sheets, tapes and webbing .....	\$	...	131,987	...	89,003	
Cork sheet, etc. .....	\$	...	20,122	...	18,679	
Fibre rod, sheet, tubing, etc. .....	\$	...	167,001	...	110,929	
Frit for enamelling .....	lb.	638,278	52,689	578,014	48,315	
Glass bulbs, tubing and cane .....	\$	...	614,335	...	470,111	
Insulating varnishes, japsans, lacquers, etc. .....	\$	...	160,076	...	96,866	
Insulating waxes .....	\$	...	126,344	...	97,962	
Insulators, porcelain .....	\$	...	461,946	...	347,934	
Iron and steel -						
Pig iron .....	long ton	2,507	61,840	1,393	34,511	
Iron castings .....	\$	...	936,004	...	778,215	
Steel castings .....	short ton	804	99,755	315	68,264	
Steel forgings .....	short ton	1,471	194,109	225	35,668	
Steel bars .....	short ton	1,638	155,945	2,627	250,846	
Steel rods .....	short ton	1,482	257,719	1,097	203,310	
Iron and steel pipe .....	short ton	...	735,819	...	666,055	
Steel sheets .....	\$	...	1,980,710	...	1,297,804	
Steel wire .....	\$	...	257,854	...	164,585	
Structural steel .....	short ton	3,359	200,153	2,467	145,780	
Steel strip .....	short ton	2,529	357,759	3,521	386,985	
Stampings .....	\$	...	297,893	...	379,260	
Bolts, nuts and screws .....	\$	...	346,081	...	298,964	
Other iron and steel .....	\$	...	225,745	...	368,134	
Lead -						
Pig .....	lb.	21,054,881	1,093,836	21,467,082	975,748	
Scrap .....	lb.	129,400	5,830	154,125	6,718	
Other .....	lb.	808,605	50,431	874,760	46,160	
Lead oxide (litharge and red lead) .....	lb.	4,620,202	534,807	1,764,571	123,903	
Lumber .....	M bd.ft.	...	242,716	5,533	258,828	

Table 12 - MATERIALS USED IN MANUFACTURING, 1937 and 1938 (Concluded)

Materials	Unit of measure	1 9 3 7			1 9 3 8		
		Quantity	Cost at works	Quantity	Cost at works		
Manganese dioxide .....	lb.	4,207,634	75,970	4,187,176	84,588		
Mica .....	\$	...	87,829	...	66,877		
Mineral wool .....	lb.	385,588	8,194	404,535	9,423		
Nickel-silver tubing .....	ft.	94,019	6,436	70,542	4,410		
Nitrogen .....	cu. ft.	498,074	5,992	435,413	5,585		
Oil -							
Transformer .....	Imp. gal.	625,820	147,355	760,672	175,176		
Switch .....	Imp. gal.	59,250	14,558	25,563	6,151		
Paint .....	\$	...	199,847	...	256,951		
Paper .....	\$	...	304,504	...	302,372		
Pressboard .....	\$	...	105,288	...	77,736		
Radio cabinets .....	\$	...	1,430,301	...	1,024,044		
Radio parts for assembling .....	\$	...	2,911,622	...	2,605,550		
Radio tubes purchased and used to equip radio receiving sets manufactured .....	no.	1,614,417	1,026,584	1,357,846	755,270		
Refrigerator cabinets .....	\$	...	80,000	...	63,908		
Refrigerator parts .....	\$	...	64,778	...	991,897		
Resistance wire .....	\$	...	94,094	...	90,707		
Rubber, crude .....	lb.	1,382,805	102,382	844,370	108,963		
Rubber, other .....	lb.	1,231,553	253,998	1,055,578	145,831		
Silk, artificial .....	lb.	22,116	28,919	22,637	26,580		
Steel tanks .....	no.	12,682	115,255	...	104,201		
Sulphuric acid, 86° Be .....	lb.	4,446,397	65,288	4,123,474	60,279		
Talc .....	lb.	418,932	5,256	298,362	5,855		
Thermometers .....	no.	35,627	88,045	...	44,114		
Tungsten wire .....	\$	...	52,788	...	50,594		
Wood battery separators .....	\$	...	181,355	...	180,180		
Zinc -							
Ingot and bar .....	lb.	880,819	56,889	1,117,940	75,009		
Sheets .....	lb.	2,712,989	242,631	2,319,830	186,822		
Zinc chloride .....	lb.	423,498	24,385	436,562	21,909		
Electric motors purchased .....	\$	...	392,457	...	423,435		
All other materials .....	\$	...	11,481,398	...	10,928,828		
Containers and packing material .....	\$	...	897,880	...	756,070		
TOTAL .....	\$	...	41,695,446	...	35,916,344		

Table 13 - PRODUCTS MADE IN THE ELECTRICAL APPARATUS AND SUPPLIES INDUSTRY, 1937 and 1938

NOTE - In the Census of Industry the reporting firms are classified to certain industries in accordance with the nature of the main products which they manufacture. Data in this table represent only the output of concerns classified to the Electrical Apparatus and Supplies Industry (see Directory). The figures for the individual items do not necessarily represent the total output in Canada as these articles may have been produced as minor products by companies which have been classified to other industrial groups. The asterisk(x) indicates that the article was made also in other industries. For the total Canadian output of certain major items, see Tables 15 to 33.

Products	Unit of measure	1 9 3 7			1 9 3 8		
		Quantity	Gross selling value at works	Quantity	Gross selling value at works		
Appliances, motor driven, and parts, including vacuum cleaners(x), fans, washing machines(x), electric clocks(x), electric shavers(x), furnace blowers(x), air conditioners(x), floor polishers(x), clippers, etc. (See Tables 19, 20, 22 and 30) .....	\$	...	3,142,271	...	3,552,479		
Batteries and parts (See Table 25) .....	\$	...	6,608,914	...	6,209,421		
Conduit and fittings(x) (See Table 16) .....	\$	...	1,576,022	...	1,132,898		
Converter equipment -							
Motor generator sets, A.C. to D.C. .....	no.	99	375,520	66	386,580		
Motor generator sets, A.C. to A.C. .....	no.	1	1,024	...	...		
Other converter equipment and parts .....	\$	...	177,988	...	47,558		
Cooking and heating apparatus, electric -							
Stoves, grills, etc.(x) (See Table 26) .....	\$	...	1,151,797	...	985,795		
Heating elements (sold separately) .....	\$	...	49,519	...	134,772		

Table 15 - PRODUCTS MADE IN THE ELECTRICAL APPARATUS AND SUPPLIES INDUSTRY, 1937 and 1938 (Concluded)

Products	Unit of measure	1 9 3 7			1 9 3 8		
		Quantity	Gross selling value at works	\$	Quantity	Gross selling value at works	\$
Heaters, air and space (x) .....	no.	12,047	47,628		11,528	34,298	
Heaters, water, domestic (x) (See Table 28) .....	no.	21,279	126,835		17,478	100,685	
Heating pads, electric .....	no.	16,645	40,800		11,018	29,613	
Toasters -							
Commercial .....	no.	53,952	53,614		35,959	42,946	
Domestic - Sandwich .....	no.	26,479	57,998		26,685	61,549	
Other .....	no.	84,598	147,119		76,669	147,846	
Percolators and coffee urns, electric .....	no.	8,399	34,722		1,228	5,614	
Glass coffee makers, electric .....	no.	14,812	53,981		21,196	83,509	
Irons, flat, electric - Automatic .....	no. )	183,147	321,302		36,178	150,433	
Non-automatic .....	no. )				140,164	220,405	
Waffle irons, electric .....	no.	6,365	21,416		2,704	9,443	
All other cooking and heating apparatus .....	¶	...	56,373		...	95,734	
Cutouts and fuses -							
Primary cutouts, all types .....	¶	...	226,523		...	165,085	
Cutouts for cartridge and plug fuses .....	¶	...	46,109		...	112,672	
Cartridge and other fuses and renewals .....	¶	...	352,785		...	312,069	
Generators, A.C. and D.C. and parts (See Table 17) .....	no.	...	1,514,403		218	1,610,504	
Industrial electrical heating equipment -							
Furnaces, resistance, induction and arc types .....	no.	57	133,589		50	90,233	
Industrial ovens and commercial cooking ovens .....	no.	21	26,120		...	12,917	
Other industrial heating equipment .....	¶	...	123,881		...	125,437	
Instruments and meters (except ammeters for autos) -							
Demand meters .....	no.	6,897	108,952		5,106	93,748	
Watthour meters .....	no.	136,726	1,237,010		167,864	1,404,315	
Electrical indicating and graphic instruments .....	no.	1,541	71,527		1,404	64,671	
Other electrical instruments and meters .....	no.	1,709	76,844		...	65,733	
Meter and instrument parts .....	¶	...	166,337		...	133,384	
Lamps, incandescent -							
Standard size .....	no.	25,689,598	4,477,267		20,634,204	3,409,585	
Miniature size .....	no.	12,362,115	744,011		11,087,021	597,196	
Lighting fixtures(x) (See Table 24) .....	¶	...	1,973,584		...	1,899,845	
Line material (excluding wire and insulators) .....	¶	...	503,333		...	540,784	
Motors, A.C. and D.C. and parts(x) (See Table 18) .....	¶	...	7,672,278		...	6,161,573	
Panel boards and cabinets .....	¶	...	395,633		...	332,480	
Radio apparatus and parts(x) (except tubes and transformers) (See Table 25) .....	¶	...	13,224,740		...	10,534,260	
Rectifiers, for storage battery charging, and parts .....	no.	...	27,672		1,212	41,357	
Refrigerators, electric(x) (See Table 27) .....	¶	...	6,661,764		...	7,775,974	
Switch gear and protective equipment (except telephone switchboards) (See Table 32) .....	¶	...	3,213,886		...	3,523,459	
Telephone material (telephones, switchboards, etc.) .....	¶	...	6,199,096		...	5,623,676	
Time switches .....	¶	...	17,098		...	58,490	
Traffic signals and controls .....	¶	...	44,023		...	167,614	
Transformers and parts (See Table 15) .....	¶	...	5,624,512		...	5,787,177	
Therapeutic lamps and other electro-therapeutic apparatus .....	¶	...	34,232		...	114,413	
Vacuum tubes -							
Radio receiving tubes (See Table 29) .....	no.	5,320,687	1,760,109		1,969,598	1,108,408	
Other vacuum tubes, including X-ray tubes .....	¶	...	67,255		...	92,137	
Welding apparatus .....	¶	...	276,000		...	166,379	
Wiring devices (except auto starting switches and time switches) (See Table 33) .....	¶	...	3,470,345		...	2,715,187	
Wires(x) and cables, except aluminium (See Table 21) .....	¶	...	15,091,629		...	13,185,137	
Receipts from custom and repair work .....	¶	...	821,054		...	940,190	
Any electrical apparatus not elsewhere reported, including articles reported by only 1 or 2 firms..	¶	...	5,570,209		...	6,542,741	
All other products .....	¶	...	3,043,539		...	1,209,135	
<b>TOTAL .....</b>		...	98,841,992		...	90,129,119	

Table 14 - PRODUCTION OF CERTAIN ELECTRICAL APPARATUS BY FIRMS CLASSIFIED TO OTHER INDUSTRIES THAN THE ELECTRICAL APPARATUS AND SUPPLIES INDUSTRY, 1956 - 1958

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 13 to arrive at the total Canadian output for these items. (See Tables 15 to 50).

Products	Gross selling value at works		
	1956	1957	1958
Washing machines, electric .....	4,164,992	5,091,846	5,967,808
Stoves, rangettes, hot plates, etc., electric .....	1,488,591	1,756,364	1,895,093
Electrodes, furnace .....	2,518,488	5,217,821	2,806,659
Ignition coils, automobile .....	249,457	522,618	290,972
Generators and starters, automobile .....	1,568,192	2,052,018	1,366,693
Oil burners .....	288,192	257,685	151,448
Signs, electric, including neon signs .....	1,154,411	1,523,748	1,472,681
Lighting fixtures .....	95,570	116,915	87,062
Blowers for domestic furnaces .....	58,521	69,779	58,951
Water tank heaters, electric .....	17,454	18,020	17,528
Air and space heaters .....	4,000	4,500	4,680
Spark plugs, electric irons, electric motors, vacuum cleaners, copper wire, electric refrigerators, porcelain insulators, etc. ....	4,625,559	5,568,769	4,526,967
<b>TOTAL</b> .....	<b>16,012,567</b>	<b>19,759,885</b>	<b>16,426,722</b>

Table 15 - PRODUCTION OF TRANSFORMERS IN CANADA BY TYPES, 1957 and 1958

Type	1957			1958		
	Number	Total rating K.V.A.	Selling value at works	Number	Total rating K.V.A.	Selling value at works
Distribution transformers, 200 k.v.a. and under, and 15,000 volts and below .....	16,016	186,574	2,157,947	17,226	159,642	2,179,979
Power transformers, 200 k.v.a. to 7,500 k.v.a. inclusive, over 15,000 volts to and including 132,000 volts .....	414	445,812	1,974,055	292	511,597	1,457,707
Power transformers, over 7,500 k.v.a. or over 152,000 volts .....	55	291,863	609,702	27	492,250	1,299,277
Current and potential transformers .....	...	...	211,712	4,657	...	184,543
Constant current transformers .....	14	167	4,725	50	...	15,918
Series lamp transformers .....	347	...	7,611	864	...	51,065
Luminous tube transformers .....	18,117	...	152,707	7,138	...	84,949
Ignition transformers .....	...	...	248,178	2,053	...	14,779
Radio transformers .....	...	...	111,079	...	...	160,283
All other transformers .....	...	...	166,816	...	...	161,216
Parts and supplies .....	...	...	...	...	...	217,488
<b>TOTAL</b> .....	...	...	5,624,512	...	...	5,787,177

Table 16 - PRODUCTION IN CANADA OF CONDUIT FOR ELECTRICAL WIRING, 1957 and 1958

Items	1957			1958		
	Quantity	Selling value at works	\$	Quantity	Selling value at works	\$
Rigid iron conduit .....	lb.	15,749,409	1,201,459	11,700,092	945,502	
Flexible conduit (steel and non-metallic) ..	ft.	5,268,069	88,826	3,760,619	65,898	
Conduit fittings .....	...	...	285,757	...	182,528	
<b>TOTAL</b> .....	...	...	1,576,022	...	1,195,928	

Table 17 - PRODUCTION IN CANADA OF ELECTRIC GENERATORS AND PARTS, 1957 and 1958

	1957			1958		
	Number	Total rating k.v.a.	Selling value at works	Number	Total rating k.w.	Selling value at works
Alternating current .....	64	85,497 k.v.a.	900,125	80	179,228 k.v.a.	1,296,354
Direct current and including excitors .....	44	3,289 k.w.	55,071	48	10,375 k.w.	176,149
Accessories and parts for generators .....	...	...	539,112	...	...	99,925
<b>TOTAL</b> .....	...	...	1,294,506	...	...	1,572,428

Table 18 - PRODUCTION IN CANADA OF ELECTRIC MOTORS AND PARTS, 1937 and 1938 (From all industries)

	Number	Total rating	Selling value at works
<u>1937</u>			
1/3 h.p. and under .....	256,215	57,720 H.P.	2,270,038
Over 1/3 to 5 h.p. - single phase, A.C. ....	10,351	11,913 H.P.	479,496
Over 1/3 to 5 h.p. - induction .....	8,778	18,481 H.P.	654,018
Over 1/3 to 5 h.p. - D.C. ....	195	194 H.P.	12,664
Over 5 to 200 h.p. - induction .....	4,276	117,612 H.P.	1,479,036
Over 5 to 200 h.p. - D.C. ....	67	2,524 H.P.	86,085
201 h.p. and over - induction .....	47	20,275 H.P.	223,060
201 h.p. and over - D.C. ....	5	5,700 H.P.	100,804
Railway and vehicle motors - A.C. and D.C. ....	205	105 H.P.	15,791
Synchronous condensers and motors .....	156	85,010 K.V.A.	891,631
Starting and control equipment for electric railway and vehicle motors .....	...	...	285,930
Starting and control equipment for other motors .....	...	...	1,202,492
Accessories and parts for electric motors .....	...	...	257,011
<b>TOTAL</b> .....	...	...	<b>7,956,054</b>
<u>1938</u>			
1/3 h.p. and under - single phase, A.C. ....	199,359	51,827 H.P.	1,870,286
1/2 h.p. and 3/4 h.p. - single phase, A.C. ....	3,737	2,197 H.P.	119,278
1 h.p. to 5 h.p. inclusive - single phase, A.C. ....	2,516	4,048 H.P.	156,677
1/3 h.p. and under - polyphase, A.C. ....	480	142 H.P.	8,994
1/2 h.p. and 3/4 h.p. - polyphase, A.C. ....	1,165	743 H.P.	50,217
1 h.p. to 5 h.p. inclusive - polyphase, A.C. ....	6,012	15,951 H.P.	477,114
1/3 h.p. and under - D.C. ....	3,478	949 H.P.	58,949
1/2 h.p. and 3/4 h.p. - D.C. ....	127	77 H.P.	3,178
1 h.p. to 5 h.p. inclusive - D.C. ....	85	138 H.P.	3,478
Over 5 to 200 h.p. - induction .....	2,683	63,699 H.P.	892,909
Over 5 to 200 h.p. - D.C. ....	17	509 H.P.	21,710
201 h.p. and over - induction .....	50	19,975 H.P.	209,300
201 h.p. and over - D.C. ....	4	10,300 H.P.	230,769
Railway and vehicle motors, A.C. and D.C. ....	889	31,847 H.P.	453,411
Synchronous condensers and motors .....	75	27,494 K.V.A.	228,469
Starting and control equipment for electric railway and vehicle motors .....	...	...	369,097
Starting and control equipment for other motors .....	...	...	1,079,881
Accessories and parts for electric motors .....	...	...	187,276
<b>TOTAL</b> .....	...	...	<b>6,420,973</b>

Table 19 - PRODUCTION OF DOMESTIC WASHING MACHINES IN CANADA, 1927 - 1938 (From all industries)

Year	HAND		ELECTRIC		OTHER POWER		TOTAL	
	Number	Selling value at works	Number	Selling value at works	Number	Selling value at works	Number	Selling value at works
1927 .....	21,841	\$ 556,409	58,409	\$ 4,606,631	1,986	\$ 133,452	62,136	\$ 5,096,492
1928 .....	22,118	574,491	60,871	7,724,740	3,408	212,028	86,397	6,311,259
1929 .....	25,586	487,516	70,261	9,109,794	4,577	479,135	100,224	10,076,445
1930 .....	16,058	339,917	67,577	8,807,068	2,443	244,726	86,058	9,391,711
1931 .....	16,189	351,732	59,443	6,490,378	1,061	96,348	76,693	6,918,458
1932 .....	10,416	122,695	47,440	5,158,122	630	56,520	58,486	5,317,337
1933 .....	7,852	84,941	50,597	2,723,847	482	55,243	58,931	2,844,031
1934 .....	9,525	116,998	75,657	3,607,088	1,097	96,912	84,079	3,820,998
1935 .....	7,445	79,035	75,121	3,600,904	2,110	169,256	84,676	5,849,198
1936 .....	11,557	142,474	89,334	4,331,912	1,747	126,244	102,638	4,600,830
1937 .....	12,248	159,899	115,385	5,414,515	5,842	401,390	135,475	5,955,604
1938 .....	8,967	105,856	91,159	4,553,465	5,724	399,425	105,850	5,058,746

Table 20 - PRODUCTION OF DOMESTIC ELECTRIC IRONERS(x) IN CANADA, 1935 - 1938 (From all industries)

Year	Number	Selling value at works
1935 .....	9,028	\$ 364,626
1936 - Operated by own motor .....	5,435	309,309
Attached to washing machines .....	3,391	62,769
<b>TOTAL - 1936</b> .....	8,826	372,078
1937 - Operated by own motor .....	3,622	224,569
Attached to washing machine .....	1,101	30,608
<b>TOTAL - 1937</b> .....	4,723	254,977
1938 - Operated by own motor .....	2,812	177,849
Attached to washing machine .....	856	23,761
<b>TOTAL - 1938</b> .....	3,668	201,810

(x) Includes some gas and steam operated ironers.

Table 21 - PRODUCTION(x) OF ELECTRICAL WIRES AND CABLES, 1936 - 1958 (From all industries)

	Selling Value at Works		
	1936	1937	1938
Copper, bare .....	\$ 2,559,224	\$ 3,431,638	\$ 2,147,729
Weatherproof .....	1,042,714	1,582,800	1,416,084
Rubber insulated, braided .....	2,475,155	2,815,097	2,351,706
Cambric insulated, braided .....	70,547	143,696	105,895
Rubber insulated, leaded .....	188,189	348,877	360,887
Cambric insulated, leaded .....	245,150	465,064	118,011
Paper insulated, leaded .....	157,536	535,461	615,595
Rubber insulated telephone wires .....	785,379	1,027,827	282,713
Paper insulated telephone cable .....	846,692	1,075,069	900,195
Flexible cords, except telephone and switchboard cords .....	647,011	795,217	721,643
Armoured cable .....			28,687
Signal and control cable .....			751,694
Magnet wire - enamelled .....			425,590
all other .....	1,559,729	2,957,687	534,759
Non-metallic sheathed cable .....			1,112,650
All other wires and cables .....			
TOTAL .....	10,155,526	15,174,415	12,678,886

(x) Except aluminium wire and cable.

Table 22 - PRODUCTION OF ELECTRIC VACUUM CLEANERS AND PARTS, 1935 - 1958 (From all industries)

	1935	1936	1937	1938
Electric floor models .....	No. 38,728	40,621	44,721	40,897
\$ 1,510,401	1,475,656	1,701,507	1,517,851	
Electric hand models .....	No. 11,723	7,058	4,017	5,521
\$ 180,683	109,214	41,743	62,875	
Attachments and parts for above .....	\$ 657,339	547,276	295,270	216,724
TOTAL .....	\$ 2,348,423	1,930,146	2,036,520	1,797,050

Table 23 - PRODUCTION OF ELECTRIC BATTERIES, BY TYPES, 1937 and 1938

Kinds	1937		1938	
	Number	Selling value at works	Number	Selling value at works
<u>STORAGE -</u>		\$		\$
For internal combustion engine starting and ignition .....	662,100	2,821,072	645,840	2,682,248
For farm lighting plants (cells) .....	...	119,229	21,446	114,125
For railway service (cells) .....	5,718	120,924	4,401	84,765
For telephone switchboards .....	2,341	58,640	1,675	36,736
For motorcycle starting .....	2,548	7,758	2,685	8,187
For all other purposes .....	...	448,056	...	415,622
Total Storage .....	...	5,575,639	...	3,341,681
<u>DRY CELL -</u>				
6 inch cells .....	(cells) 1,382,526	376,223	1,127,008	309,153
B and C for radio .....	(cells) 24,274,227	1,588,025	25,550,787	1,347,708
Flashlight .....	(cells) 11,242,463	664,007	10,584,108	627,887
Other dry cells .....	(cells) 108,114	7,627	216,857	14,045
Total Dry Cells .....	...	2,435,880	...	2,298,768
Parts and supplies, including all other dry cells and primary wet cells .....	...	597,395	...	568,972
TOTAL .....	...	6,608,914	...	6,209,421

Table 24 - PRODUCTION IN CANADA OF ELECTRIC LIGHTING FIXTURES, 1936 - 1958 (From all industries)

	Selling Value at Works		
	1936	1937	1938
Interior lighting fixtures, residential .....	\$ 909,257	\$ 1,120,958	\$ 680,465
Interior lighting fixtures, metal reflectors .....	120,673	190,774	129,527
Interior store and office lighting fixtures .....	) 182,625	285,520	155,905
All other interior lighting fixtures .....	) 227,114	106,452	165,403
Exterior lighting fixtures .....	15,929	2,034	142,008
Exterior lighting control devices .....	17,606	50,399	2,171
Searchlights and floodlights .....	577,011	348,262	68,900
All other lighting equipment .....			377,250
TOTAL LIGHTING FIXTURES .....	1,850,195	2,084,399	1,699,429

Table 25 - PRODUCTION OF COMPLETE RADIO RECEIVING SETS IN CANADA, 1925 - 1958

Year	Number of sets	Selling value at works(x)	Year	Number of sets	Selling value at works(x)
1925 .....	48,551	2,278,292	1932 .....	121,468	6,808,877
1926 .....	42,450	2,255,098	1933 .....	112,273	4,401,513
1927 .....	47,500	3,748,622	1934 .....	188,710	8,196,248
1928 .....	81,052	7,486,127	1935 .....	191,293	9,493,599
1929 .....	150,050	15,604,145	1936 .....	253,896	11,588,175
1930 .....	170,082	19,196,956	1937 .....	289,247	11,696,717
1931 .....	291,711	18,555,710	1938 .....	242,721	8,801,981

(x) Not list prices.

Table 26 - NUMBER and FACTORY SELLING VALUE OF STOVES MADE IN CANADA, 1936 - 1958

Kind		1936	1937	1938
Coal and wood cooking stoves and ranges, all styles .....	No.	96,500	102,306	85,138
	\$	4,059,481	4,811,551	3,947,471
Coal and wood heating stoves (including all heaters, circulators, Quebec, b&x, Oak, Franklyn, Globe or laundry) .....	No.	108,647	120,635	77,752
	\$	1,068,602	1,118,159	800,417
Combination for gas and coal .....	No.	9,246	11,015	8,954
	\$	569,202	661,570	607,429
Combination for gas and electric .....	No.	525	...	...
	\$	31,500	...	...
Combination for coal and electric .....	No.	5,063	2,886	2,041
	\$	280,520	251,342	181,062
Gas cooking stoves and ranges, not combinations, including all styles with ovens .....	No.	26,727	27,900	23,597
	\$	1,017,146	1,154,213	938,892
Electric cooking stoves and ranges over 35 amperes, all styles with ovens .....	No.	29,354	35,205	32,513
	\$	2,096,348	2,540,456	2,512,084
Electric rangettes including cord attachment and oven as one unit .....	No.	11,195	11,741	20,354
	\$	194,702	193,879	217,321
Electric cooking plates and grills .....	No.	56,915	65,328	63,566
	\$	130,538	149,472	144,344
Gas cooking plates .....	No.	4,894	4,088	2,755
	\$	13,642	14,425	8,618
Gas heating stoves .....	No.	5,264	2,483	1,585
	\$	49,310	38,020	17,859
Oil and gasoline stoves .....	No.	14,550	20,927	33,326
	\$	112,477	184,466	243,252
TOTAL .....	\$	9,625,268	11,117,553	9,418,649

Table 27 - PRODUCTION OF ELECTRIC REFRIGERATORS IN CANADA, 1929 - 1958

	Number	Selling value at works
1929 - .....	4,687	1,608,304
1930 - .....	6,502	1,607,784
1931 - Individual domestic type .....	9,879	1,708,327
All other types .....	4,514	1,088,590
Total for 1931 .....	...	2,796,917
1932 - Individual domestic type .....	19,454	2,218,798
All other types .....	...	914,455
Total for 1932 .....	...	3,133,253
1933 - Individual domestic type .....	15,059	1,896,033
Individual commercial type for use in stores, etc. ....	574	107,855
All other types (compressors only, ice cream cabinets, etc.) .....	1,016	197,855
Total for 1933 .....	...	2,201,721
1934 - Individual domestic type .....	27,897	3,502,089
Individual commercial type .....	1,119	284,654
All other types (compressors only, ice cream cabinets, etc.) .....	1,241	146,279
Total for 1934 .....	...	3,933,022
1935 - Individual domestic type, complete, all sizes .....	22,452	2,855,079
Commercial (ice cream cabinets, room coolers, etc.) complete and remote condensing units only .....	2,271	359,752
Condensing units only .....	2,544	249,720
Total for 1935 .....	...	5,444,551

Table 27 - PRODUCTION OF ELECTRIC REFRIGERATORS IN CANADA, 1929 - 1938 (Concluded)

		Number	Selling value at works
1936	Individual domestic type, complete, all sizes .....	40,688	5,054,553
	Individual commercial type (ice cream cabinets, room coolers, etc.) .....		\$
	complete and remote .....	5,975	687,028
	Condensing units only .....	1,662	193,381
	Total for 1936 .....	...	5,934,962
1937	Individual domestic type, complete, all sizes .....	52,068	5,793,926
	Individual commercial type (ice cream cabinets, room coolers, etc.) .....		\$
	complete and remote .....	4,042	665,987
	Condensing units only .....	8,908	671,128
	Total for 1937 .....	...	7,131,036
1938	Individual domestic type, complete, all sizes .....	52,934	6,341,496
	Individual commercial type (ice cream cabinets, room coolers, etc.) .....		\$
	complete and remote .....	6,582	925,939
	Condensing units only .....	4,389	638,168
	Total for 1938 .....	...	7,905,605

Table 28 - PRODUCTION OF DOMESTIC WATER TANK HEATERS, 1937 and 1938

	1 9 3 7			1 9 3 8
	Number	Selling value at works	Number	Selling value at works
Cast iron for coal, wood or oil .....	4,169	38,876	5,029	50,981
Gas, automatic .....	5,108	234,063	3,920	218,124
Gas, not automatic .....	11,187	73,866	8,170	63,172
Electric, circulating type .....	3,761	52,663	3,666	67,160
Electric, immersion type .....	17,816	56,350	14,388	45,814
Electric, storage tank type .....	2,586	35,862	2,615	17,951
TOTAL .....	44,627	491,660	57,788	463,202

Table 29 - PRODUCTION IN CANADA and IMPORTS OF RADIO RECEIVING TUBES, 1929 - 1938

Year	PRODUCTION		IMPORTS	
	Number	Selling value at works	Number	Selling value at works
1929 .....	2,924,270	3,100,148	...	524,872
1930 .....	3,116,096	3,181,276	...	527,728
1931 .....	3,297,007	2,298,098	...	113,760
1932 .....	2,747,456	1,610,850	55,762	60,157
1933 .....	1,731,569	1,023,564	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	565,875	289,659
1937 .....	3,520,687	1,760,109	484,227	290,698
1938 .....	1,969,598	1,108,408	440,294	213,453

Table 30 - PRODUCTION OF OIL BURNERS IN CANADA, 1936 - 1938 (From all industries)

Type		1 9 3 6	1 9 3 7	1 9 3 8
Oil burners - Atmospheric gravity feed .....	No.	5,218	2,133	1,936
	\$	79,303	58,971	49,808
Power, for domestic and commercial uses .....	No.	1,136	1,483	1,366
	\$	208,889	174,514	168,691

Table 31 - PRODUCTION OF INCANDESCENT ELECTRIC LAMPS IN CANADA, 1931 - 1938

Year	STANDARD SIZE		MINIATURE SIZE	
	Number	Selling value at works	Number	Selling value at works
1931 .....	18,205,931	4,044,243	7,255,194	655,015
1932 .....	17,102,308	3,597,173	6,244,103	526,835
1933 .....	15,176,002	3,230,911	5,763,149	485,166
1934 .....	20,622,906	4,035,361	7,282,187	496,574
1935 .....	23,026,982	4,155,803	9,832,118	633,769
1936 .....	24,364,181	4,117,871	11,246,707	662,628
1937 .....	25,689,598	4,477,267	12,382,115	744,011
1938 .....	20,634,204	3,409,585	11,087,021	597,196

Table 32 - PRODUCTION OF ELECTRICAL SWITCH GEAR and PROTECTIVE EQUIPMENT (except telephone switchboards) 1937 and 1938

	Selling Value at Works	
	1937	1938
	\$	\$
Switchboard panels and equipment .....	1,434,807	1,438,628
Lightning arresters, other than radio, 15,000 volts and below .....	164,983	149,907
Lightning arresters, above 15,000 volts .....	109,781	138,475
Oil circuit breakers .....	698,578	797,013
Air circuit breakers .....	306,352	277,561
Disconnecting switches - Up to and including 15,000 volts .....	244,967	243,324
Over 15,000 volts .....		130,658
Generator voltage regulators and accessories .....	7,403	16,285
Parts and supplies .....	247,015	331,611
TOTAL .....	5,215,886	5,525,459

Table 33 - PRODUCTION OF WIRING DEVICES (except automobile starting switches and time switches) 1937 and 1938

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

Table 34 - IMPORTS INTO CANADA OF ELECTRICAL APPARATUS, 1937 and 1938

	1 9 3 7		1 9 5 8	
	Quantity	Value	Quantity	Value
		\$		\$
Batteries, primary, electric and galvanic, n.o.p. and complete parts (to March 31, 1938) .....	...	213,865	...	39,133
Batteries, primary (B) and (C) for radio (from April 1, 1938) .....	...	...	...	1,721
Batteries, electric and galvanic, primary, n.o.p. and complete parts (from April 1, 1938) .....	...	...	...	118,719
Batteries, electric, storage, and complete parts, n.o.p., including separator walls of wood, cut to size or not .....	...	180,367	...	91,191
Heating apparatus, n.o.p. ....	...	71,211	...	46,351
Electric dynamos and generators, n.o.p., and complete parts .....	...	774,228	...	585,458
Fuses, fuse plugs and cutouts, electric, and complete parts, n.o.p. ....	...	115,490	...	68,746
Lamps, electric, arc .....	...	6,424	...	14,710
Lamps, electric, incandescent, carbon filament .... No.	805,563	21,103	73,412	4,401
Lamps, electric, incandescent, metal filament .... No.	9,690,269	251,095	10,182,669	242,257
Lights - Electric head, side and tail lights, n.o.p.; electric torches or flashlights and parts .....	...	454,078	...	421,739
Electric light fixtures and appliances, n.o.p., and complete parts .....	...	815,966	...	779,964
Lightning arresters, choke coils, reactors and other protective devices, and complete parts, n.o.p. ....	...	50,956	...	55,273
Electrical instruments or apparatus of precision, of a class or kind not made in Canada (from Feb. 26, 1937) ..	...	59,533	...	98,443
Meters, electric, and complete parts .....	...	259,919	...	182,146
Motors, electric, n.o.p., and complete parts .....	...	2,308,669	...	1,880,553
Motors for electric fans, n.o.p. .... No.	19,826	60,196	17,712	53,026
Rheostats, controllers and other starting and controlling devices, and complete parts .....	...	769,228	...	580,298
Sad irons, electric, and complete parts .....	...	64,972	...	65,208
Self-contained lighting outfits and complete parts, n.o.p. ....	...	5,880	...	3,486

Table 34 - IMPORTS INTO CANADA OF ELECTRICAL APPARATUS, 1937 and 1938 (Concluded)

	1 9 3 7	Value	1 9 5 8	Value
	Quantity		Quantity	
Sockets, outlets and receptacles and complete parts .....	...	39,199	...	24,690
Spark plugs, magnetos, n.o.p., and other ignition apparatus and complete parts .....	...	21,159	...	11,624
Magneto and complete parts thereof, when imported by the manufacturers of internal combustion engines, for use exclusively in the manufacture of such engines in their own factories .....	...	10,516	...	6,875
Switchgear, flame proof, electric, for use underground in coal mines, and complete parts .....	...	10,865	...	48,551
Electric dry shaving machines of a class or kind not made in Canada, for use in removing human hair, and complete parts thereof .....	...	553,539	...	496,300
Steam turbo-generator sets, electric, 700 h.p. and greater, of a class or kind not made in Canada, and complete parts thereof .....	No. 20	694,521	No. 5	525,447
Switches, switchboards, circuit breakers and complete parts, n.o.p. ....	...	855,134	...	751,178
Telegraph apparatus, electric, and complete parts .....	...	215,445	...	121,800
Telephone apparatus, electric, and complete parts .....	...	971,730	...	799,852
Transformers and complete parts .....	...	256,540	...	409,265
Radio tubes .....	No. 484,227	290,698	440,294	213,453
Radio and wireless apparatus, electric, n.o.p. (to March 31, 1937) .....	...	592,717	...	...
Radio receiving sets (from April 1, 1937) .....	No. 5,151	158,785	8,290	184,109
Radio and wireless apparatus, electric, n.o.p. (from April 1, 1937) .....	...	2,128,635	...	2,114,846
Electric welding apparatus, not including motors (from February 26, 1937) .....	...	154,075	...	116,474
Electric apparatus, n.o.p., and complete parts .....	...	2,553,852	...	2,096,499
<b>TOTAL</b> .....	...	<b>15,506,144</b>	...	<b>15,055,526</b>

Table 35 - EXPORTS FROM CANADA OF ELECTRICAL APPARATUS, 1937 and 1938

Items	1 9 5 7	1 9 5 8
	\$	\$
<b>(a) EXPORTS</b>		
Batteries, storage .....	212,844	214,161
Batteries, n.o.p. ....	96,616	89,612
Telegraph, telephone and radio apparatus, n.o.p. ....	191,181	322,865
Radio and wireless apparatus (except batteries) .....	199,211	195,414
DYNAMOS, generators and motors .....	490,945	506,072
Electric stoves and parts .....	No. 22,256	15,254
	1,505,146	1,044,707
Electrical cooking and heating devices, domestic, n.o.p. ....	25,502	30,755
Spark plugs, magnetos and other ignition apparatus .....	747,240	625,926
Electric apparatus, n.o.p. ....	845,492	1,086,848
<b>TOTAL</b> .....	<b>4,509,975</b>	<b>4,114,160</b>
<b>(b) RE-EXPORTS</b>		
Telegraph, telephone and radio apparatus (except batteries) .....	66,287	85,385
DYNAMOS, generators and motors .....	45,585	57,229
Spark plugs, magnetos, and other ignition apparatus .....	5,756	5,078
Electric apparatus, n.o.p. ....	102,408	184,805
<b>TOTAL</b> .....	<b>218,034</b>	<b>310,477</b>

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, 1938

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

(See Appendix to Directory)

Names of Firms

Location of Plants

NOVA SCOTIA -

Amherst Battery Manufacturing Plant

108 Victoria St., Amherst

QUEBEC -

Cables, Conduits & Fittings Limited  
Canadian Laco Lamps Limited  
Canadian Marconi Company Ltd.  
Conduits National Co. Ltd.  
Devco Electric Switch Co.  
Economy Fuse & Mfg. Co. of Canada, Limited  
Electric Fixtures & Portable Lamp Mfg.  
Electrical Manufacturing Co. Ltd.  
Electrolier Mfg. Co. Limited  
Electrolux (Canada) Limited  
Elpeco of Canada, Limited  
Flex-I-Con Manufacturing Co. Ltd.  
Hale Brothers Limited  
Haliburton & White Limited  
Hart Battery Co. Limited  
Hughes, Benjamin, Electric Co.  
Lighting Appliance Co. of Canada, Ltd.  
Medical Equipment Mfg. Inc.  
National Electric Refrigerator Ltd.  
New Era Battery Co.  
Northern Electric Co. Limited  
Nu-Way Battery & Ignition Service  
Phillips Electrical Works Ltd.  
Pyle-National Co. of Canada, Limited  
RCA Victor Co. Ltd.  
Schick Shaver Limited  
Silax Company Ltd.  
Solex Company Limited  
Tempco Electric Mfg. Co.  
White, I. N., & Sons Ltd.

63 Richelieu St., St. Johns  
745 Guy St., Montreal  
2442 Trenton Ave., Montreal  
3081-C Ontario St. E., Montreal  
863 St. Maurice St., Montreal  
1030 St. Alexander St., Montreal  
690 Notre Dame St. W., Montreal  
Montmagny  
5849 Boyer St., Montreal  
1725 Basin St., Montreal  
6259 Notre Dame St. E., Montreal  
6155 Lafontaine St., Montreal  
6230 Chambord St., Montreal  
686 Notre Dame St. W., Montreal  
170 St. Georges St., St. Johns  
205 Vitre St. W., Montreal  
647 Vitre St. W., Montreal  
1396 St. Catherine St. W., Montreal  
Montmagny  
2240 Bellechasse St. E., Montreal  
1261 Shearer St., Montreal  
1200 Demontigny St. E., Montreal  
5795 De Gaspe Ave., Montreal  
4857 Acorn Ave., St. Henri, Montreal  
976 Lacasse St., Montreal  
St. Johns  
201 St. Louis St., St. Johns  
4060 St. Lawrence Blvd., Montreal  
480 Lagachetiere St. W., Montreal  
476 St. Henri St., Montreal

ONTARIO -

Aerovox Canada Ltd.  
Amalgamated Electric Corporation, Limited  
Arrow-Hart & Hegeman (Canada) Limited  
Backer, C. B., Co. Ltd.  
Baden Fence Co.  
Baird, Wm., & Son  
Baldwin-International Limited  
Boston Insulated Wire & Cable Co. Ltd.  
Branston, Chas. A., Limited  
Braun & Bonnick Limited  
Brock Snyder Mfg. Co.  
Burger Lighting Equipment Co.  
Burgess Battery Company  
Campbell, W. J., Co. Ltd.  
Canada Batteries Limited  
Canada Wire and Cable Co. Ltd.  
Canadian Astatic Ltd.  
Canadian Curtis Refrigeration Co. Ltd.  
Canadian Electric Box Co.  
Canadian Fitzgerald Limited  
Canadian Flexible Conduit  
Canadian General Electric Co. Ltd.

35 Catharine St. S., Hamilton  
384 Pape Ave., Toronto  
510 Spadina Ave., Toronto  
25 Aberdeen St., Ottawa  
Baden  
568 Dundas St., Woodstock  
620 King St. W., Toronto  
118 Shaw St., Hamilton  
58 Stewart St., Toronto  
22 Orillia St., Toronto 2  
21 John St., Grimsby  
11 Duncan St., Toronto  
399 Buttrey St., Niagara Falls  
137 Clarence St., Brantford  
927 Dufferin St., Toronto 4  
Leaside  
1736 Kingston Road, Toronto  
20 George St., Hamilton  
1402 Queen St. E., Toronto  
468 Wellington St. W., Toronto  
1874 Davenport Road, Toronto  
224 Wallace Ave., Toronto

DIRECTORY OF FIRMS INCLUDED IN THE ELECTRICAL APPARATUS AND SUPPLIES INDUSTRY, 1938 (Continued)

<u>Names of Firms</u>	<u>Location of Plants</u>
ONTARIO - (Continued)	
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)	
Canadian General Electric Co. Ltd. (Edison Lamp Works)	189 Dufferin St., Toronto
Canadian Jefferson Electric Co. Ltd.	221 Dufferin St., Toronto
Canadian Line Materials Limited	535 College St., Toronto
Canadian National Carbon Co. Ltd.	St. Clair Ave. E., Scarborough Junction, Toronto
Canadian Transformer Co.	805 Davenport Road, Toronto
Canadian Triangle Conduit Co. Ltd.	293 Queen St. S., Kitchener
Canadian Westinghouse Co. Ltd.	2382 Dundas St. W., Toronto
Cansfield Electrical Works Ltd.	Sanford Ave. and Myler St., Hamilton
Commercial Fixture Co. Ltd.	260 Geary Ave., Toronto
Commonwealth Electric Corp. Ltd.	75 Sherbourne St., Toronto
Conduits National Co. Ltd.	130 Dennistoun St. S., Welland
Continental Carbon of Canada, Ltd.	33 Labatt Ave., Toronto
Continental Electric Co. Ltd.	54 Sumach St., Toronto
Conroy Manufacturing Co. Ltd.	310 Spadina Ave., Toronto
Crouse-Hinds Co. of Canada, Ltd.	55 Catherine St., St. Catharines
Crown Electrical Manufacturing Co. Ltd.	7 Labatt Ave., Toronto
Curtis Lighting of Canada, Ltd.	31 Sydenham St., Brantford
Dominion Carbon Brush Co. Ltd.	260 Richmond St. W., Toronto
Dominion Cutout Co. Ltd.	250 Richmond St. W., Toronto 2
Dominion Electric Mfg. Co. Ltd.	250 Richmond St. W., Toronto 2
Dominion Electrohome Industries Ltd.	60 Sumach St., Toronto
Dominion Refrigeration Co. Ltd.	480 Victoria St., Kitchener
Durable Electric Appliance Co.	457 King St. W., Toronto
Eastern Power Devices, Ltd.	81 Jarvis St., Toronto
Electrical Apparatus Ltd.	1244 Dufferin St., Toronto
Electric Auto-Lite Limited	77 York St., Toronto
Electric Magnetic Blanket Co.	Christina St. N., Sarnia
Electric Products Co. of Canada	310 Spadina Ave., Toronto
Elgin Electric Co.	349 Carlaw Ave., Toronto
English Electric Co. of Canada, Ltd.	170 Portland St., Toronto
Exide Batteries of Canada, Ltd.	George St., St. Catharines
Falls Electric Resistors Limited	153 Dufferin St., Toronto
Federal Wire & Cable Co. Ltd.	Courtwright St., Fort Erie North
Ferranti Electric Ltd.	265 Suffolk St., Guelph
Fergusson, J. R.	Industrial St., Mount Dennis, Toronto 9
Flexible Shaft Co. Ltd.	Dundas
Force Electric Products	321 Weston Rd. S., Toronto
Frigidaire Corporation	Church and Guelph Sts., Acton
Garfinkel, Louis, & Co., Rosejoli Co. of Canada	Commercial St., Leaside
General Dry Batteries of Canada, Ltd.	48 Elm St., Toronto
Grohl's Cooler Ltd.	228 St. Helens Ave., Toronto
Hammond Mfg. Co.	Laurel and Duke Sts., Preston
Hart Manufacturing (Canada) Ltd.	38 Wellington St. W., Guelph
Hoover Company Limited	512 King St. E., Toronto
Hygrade Company Limited	Gage Ave. and Barton St., Hamilton
Igloo Refrigeration Co. Ltd.	151 Beverley St., Toronto
International Resistance Co. Ltd.	103 Bathurst St., Toronto
Ireland Mfg. Co.	187 Duchess St., Toronto
Jones & Moore Electric Co. Ltd.	93 Cannon St. W., Hamilton
Justus Electric Co.	296 Adelaide St. W., Toronto
Kearney, J. R., Corp. of Canada, Ltd.	Winchester
Kelvinator of Canada, Ltd.	660 King St. W., Toronto
La Salle Lead Products Ltd.	1152 Dundas St. E., London
Leff Electric Co.	680 Wyandotte St. E., Windsor
Leland Electric Canada Ltd.	261 Dundas St., London
Lincoln Electric Co. of Canada, Ltd.	9 Duke St., Toronto
Line & Cable Accessories Limited	65 Bellwoods Ave., Toronto 3
Market Electric Products Ltd.	347 Sorauren Ave., Toronto 3
Marr Machine & Mfg. Co.	23 Lewis St., Fort Erie North
Martin Electric Ltd.	62 Wallace Ave., Toronto
Meredith, C. C., & Co. Ltd.	624 King St. W., Toronto
Metal Industries Limited	Queen St. N., Streetsville
	112 York St., Hamilton

DIRECTORY OF FIRMS INCLUDED IN THE ELECTRICAL APPARATUS AND SUPPLIES INDUSTRY, 1938 (Continued)

<u>Names of Firms</u>	<u>Location of Plants</u>
<u>ONTARIO</u> (Concluded) -	
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.	12 Church St., Toronto
National Electric Mfg. Co.	510 King St. W., Toronto
Noma Electric Co. of Canada, Ltd.	179 John St., Toronto
Opal Mfg. Co.	48 Abell St., Toronto
Osborne Electric Co. Ltd.	1536 Dundas St. W., Toronto
Packard Electric Company, Ltd.	13 Race St., St. Catharines
P. & E. Division of Powerlite Devices Ltd.	171 John St., Toronto
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.	15 Bond St. W., Oshawa
Pole-Line Equipment Ltd.	2299 Dundas St. W., Toronto 3
Premier Vacuum Cleaner Co. Ltd.	18 Breadalbane St., Toronto
Prest-O-Lite Storage Battery Co. Ltd.	1352 Dufferin St., Toronto
Radiant Aluminum Co.	575 Adelaide St. W., Toronto
Radio Condenser Co. Ltd.	1010 Dufferin St., Toronto
Radio Valve Company of Canada, Ltd.	189 Dufferin St., Toronto
Railway & Power Engineering Corp. Ltd.	171 Eastern Ave., Toronto
Redi-Heat Electrical Appliance Co.	Mill St., Deseronto
Reed-Cameron	579 Richmond St. W., Toronto
Renco Therapeutic Co.	55 York St., Toronto
Renfrew Electric & Refrigerator Co. Ltd.	Elizabeth St., Renfrew
Robbins & Myers Co. of Canada, Ltd.	40 Morrell St., Brantford
Rogers-Majestic Corporation, Ltd.	622 Fleet St. W., Toronto 2
Rogers Radio Tubes, Ltd.	100 Sterling Road, Toronto
Samson-United of Canada, Ltd.	69 Sherbourne St., Toronto
Sangamo Co. Ltd.	183 George St., Toronto
Service Lamp Co. Ltd.	197 King St., London
Service Station Equipment Co. Ltd.	101 Hanson St., Toronto
Shonbeck Clock Co.	29 Mary St., Hamilton
Smith & Stone Limited	Georgetown
Sparton of Canada, Ltd.	Elm and Pine Sts., London
Square D Co. of Canada, Ltd.	672 Dupont St., Toronto
Standard Bronze Co. Ltd.	4 Trafalgar Ave., Toronto 3
Star Electric Fixtures Ltd.	107 Church St., Toronto
Sterne Equipment Co.	Brampton
Stewart-Warner Alemite Corp. of Canada Ltd.	Macdonald Ave., Belleville
Stomberg-Carlson Telephone Mfg. Co. of Canada, Ltd.	211 Geary Ave., Toronto
Superior Electrics Ltd.	Pembroke
Taylor Electric Mfg. Co. Ltd.	526 Adelaide St., London
Universal Cooler Co. of Canada, Ltd.	Brant St., Brantford
Virden, J. C., Ltd.	35 Front St. E., Toronto
Volta Manufacturing Co. Ltd.	Alexander St., Welland
Vulcan Electric Products	3160 Dundas St. W., Toronto
Walker Metal Products Ltd.	1500 Kildare Rd., Walkerville
Wheeler Reflector Co. of Canada, Ltd.	44 York St., Toronto
White Radio Ltd.	41 West Ave. N., Hamilton
Willard Storage Battery Co. of Canada, Ltd.	269 Campbell Ave., Toronto 9
Wilson Battery Products	21 Church St., Oshawa
Wynston, A. L., Jr., Ltd.	590 King St. W., Toronto
<u>MANITOBA</u> -	
Canadian Electric & Brass Ltd.	120 Lombard St., Winnipeg
Electric Heating & Mfg. Co. Ltd.	902 Home St., Winnipeg
Ex-Cel Battery Mfg. Co.	189 Market St. E., Winnipeg
Frip Ignition Co.	324 Good St., Winnipeg
Globelite Batteries Ltd.	147 Pacific Ave., Winnipeg
Ideal Electric Mfg.	372 Selkirk Ave., Winnipeg
Langley Electric Mfg. Co. Ltd.	677 Notre Dame Ave., Winnipeg
Leeders' Limited	1375 Portage Ave., Winnipeg
L. & S. Electric Mfg. Ltd.	157 Portage Ave., Winnipeg
Wahl Mfg. Co. of Canada	62 Albert St., Winnipeg

DIRECTORY OF FIRMS INCLUDED IN THE ELECTRICAL APPARATUS AND SUPPLIES INDUSTRY, 1938 (Continued)

<u>Names of Firms</u>	<u>Location of Plants</u>
<u>ALBERTA</u> -	
Alberta Battery Co. Ltd.	420 Ninth Ave. E., Calgary
Blais Brothers Battery Co. Ltd.	10519 - 105th Avenue, Edmonton
Calgary Battery Co.	117A - 11th Avenue W., Calgary
Langley Electric Co. Ltd.	1301 - 11th Ave. E., Calgary
Smith Batteries Ltd.	1012 - 9th Ave. W., Calgary
<u>BRITISH COLUMBIA</u> -	
Canadian Petersine Electric Incubator Ltd.	2701 Douglas Rd., New Westminster
Cemco Electrical Mfg. Co. Ltd.	165 W. Fourth Ave., Vancouver
Continental Batteries Ltd.	1130 Richards St., Vancouver
Cope & Son Ltd.	550 Cambie St., Vancouver
Coyle Batteries Ltd.	1481 Venables St., Vancouver
Cruickshank Brothers Ltd.	540 East Hastings St., Vancouver
Electric Panel Mfg. Ltd.	1250 Richards St., Vancouver
Field, N. M., Mfg. Co.	582 Richards St., Vancouver
Francis Battery & Tire Service Ltd.	1412 Quadra St., Victoria
Giant Battery Co.	1249 Granville St., Vancouver
Jones Brothers Batteries	866 Yates St., Victoria
Langley Manufacturing Co. Ltd.	Granville Island, Vancouver
Treleaven, J. M.	346 River Road, Eburne

APPENDIX TO DIRECTORY

LIST OF FIRMS MAKING CERTAIN ELECTRICAL APPARATUS OR SUPPLIES IN 1938 BUT WHICH HAVE BEEN CLASSIFIED TO OTHER INDUSTRIES (See Table 14)

<u>Names of Firms</u>	<u>Location of Plants</u>
Acme Fan and Blower Co. Ltd.	868 Arlington St., Winnipeg, Man.
Alcor Company	220 King St. W., Toronto, Ont.
Alpha Manufacturing Co. Ltd.	797 Notre Dame Ave., Winnipeg, Man.
Aluminum Co. of Canada Ltd.	Arvida, Que.
Atlas Boiler and Ship Repairs	Box 494, Prince Rupert, B.C.
Automatic Electric Sales & Service	104 Jarvis St., Toronto, Ont.
Babcock-Wilcox & Goldie-McCulloch Ltd.	Grand Ave. S., Galt, Ont.
Beach Foundry Co. Ltd.	Hinton Ave., Ottawa, Ont.
Bearings & Auto Parts Reg'd.	667 Lagauchetiere St., Montreal, Que.
Beatty Bros. Ltd.	Fergus, Ont.
Belanger, A., Ltée.	Montmagny, Que.
Bendix Eclipse Co. of Canada Ltd.	1473 Argyle Road, Walkerville, Ont.
Brantford Washing Machine Co. of Canada Ltd.	Brantford, Ont.
Bruleur Desro Star Enrg.	309 rue St. Georges, Three Rivers, Que.
Burnside, Harry	442 King St. W., Toronto, Ont.
Canada Motor Products Ltd.	66 Wellington St. W., Toronto, Ont.
Canada Vulcanizer & Equipment Co. Ltd.	1109 York St., London, Ont.
Canadian Ironing Machine Co. Ltd.	1151 Queen St. W., Toronto, Ont.
Canadian Ohio Brass Co. Ltd.	Niagara Falls, Ont.
Canadian Porcelain Co. Ltd.	Paradise Road, Hamilton, Ont.
Canadian Radiator Mfg. Co.	489 Wellington St. W., Toronto, Ont.
Canadian Summer Iron Works Ltd.	1214 E. Pender Street, Vancouver, B.C.
Chadwick Carroll Brass & Fixtures Ltd.	365 Wilson Ave., Hamilton, Ont.
Champion Spark Plug Co. of Canada, Ltd.	1624 Howard Ave., Windsor, Ont.
Clare Bros. & Co.	Preston, Ont.
Coffield Washer Co. Ltd.	77 Niagara St., Hamilton, Ont.
Connor, J. H., & Son Ltd.	10 Lloyd St., Ottawa, Ont.
Dominion Chain Co. Ltd.	800 Bender Ave., Niagara Falls, Ont.
Dowswell, Lees & Co. Ltd.	193 Elgin St., Hamilton, Ont.
Draft King Blowers	1960 Yonge St., Toronto, Ont.
Easy Washing Machine Co. Ltd.	Miranda & Schell Ave., Toronto, Ont.
Electro Metallurgical Co. of Canada Ltd.	Welland, Ont.
Ellinghausen, S. F.	Walkerton, Ont.



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APPENDIX TO DIRECTORY (Concluded)

Names of Firms

Enamel & Heating Products Ltd.  
Engineering Products of Canada Ltd.  
Essex Wire Corp. Ltd.  
Fairbanks, E. T., & Co. Ltd.  
Fairgrieve & Son Ltd.  
Findlays Limited  
General Steel Wares Ltd.  
Gilbert & Barker Mfg. Co. Ltd.  
Gilson Mfg. Co. Ltd.  
Greey, Wm. & J. G., Ltd.  
Guelph Stove Co. Ltd.  
Gurney Foundry Co. Ltd.  
Hamilton Potteries Ltd.  
Hastings Foundry  
Knight Rebound Controllers Ltd.  
Kondu Mfg. Co. Ltd.  
Kribs, W. A., Co. Ltd.  
La Fonderie de Joliette  
La Fonderie de L'Islet Ltée.  
MacDonald Metal Products Co. Ltd.  
Maxwells Ltd.  
McQuat & Son  
Mitchell, Robert, Co. Ltd.  
Moffats Ltd.  
Monarch Oil Burners Co.  
Morris, Herbert, Crane & Hoist Co. Ltd.  
McKinnon Industries Ltd.  
New Idea Furnaces Ltd.  
Northern Crane & Hoist Works Ltd.  
Norwood Foundry Co. Ltd.  
Orme's Ltd.  
Phillips Toronto Ltd.  
Premier Automatic Coal Burners  
Renfrew Machinery Co. Ltd.  
Shaver Heating Specialties Ltd.  
Shelton, W. G., Co. of Canada Ltd.  
Singer Mfg. Co.  
Standard Brass Foundry  
Thor Canadian Co. Ltd.  
Timken Silent Automatic of Canada Ltd.  
Trico Products Corp.  
Tudhope Metal Specialties Ltd.  
Underwood, G. W., & Co.  
Woods, W. C., Co. Ltd.

Location of Plants

Sackville, N.B.  
6259 Notre Dame St. E., Montreal, Que.  
1635 McDougall Ave., Windsor, Ont.  
Sherbrooke, Que.  
50 Dovercourt Road, Toronto, Ont.  
Carleton Place, Ont.  
London, Ont.  
207 Geary Ave., Toronto, Ont.  
York Road, Guelph, Ont.  
56 Esplanade St., Toronto, Ont.  
Guelph, Ont.  
96 Principal St., St. Laurent de Montreal, Que.  
100 Locke St., Hamilton, Ont.  
10 Pine St., Stratford, Ont.  
16 Sanford Ave. S., Hamilton, Ont.  
South St., Preston, Ont.  
Guelph Ave., Hespeler, Ont.  
Joliette, Que.  
L'Islet Station, Que.  
Waterloo, Que.  
73 Park Ave., St. Mary's, Ont.  
9 Princess St., Lachute Mills, Que.  
750 Belair Ave., Montreal, Que.  
Weston, Ont.  
701 St. Clair Ave. W., Toronto, Ont.  
Stanley St., Niagara Falls, Ont.  
Ontario St., St. Catharines, Ont.  
100 Charles St. E., Ingersoll, Ont.  
Argyle Road and Essex Terminal, Walkerville, Ont.  
Edmonton, Alberta  
175 Sparks St., Ottawa, Ont.  
260 Carlaw Ave., Toronto, Ont.  
1620 Bloor St. W., Toronto, Ont.  
Renfrew, Ont.  
331 Laurier Ave. W., Ottawa, Ont.  
428 Cannon St. E., Hamilton, Ont.  
165 St. Paul St., St. Johns, Que.  
561 Catharine St. N., Hamilton, Ont.  
Fleet & Bathurst Sts., Toronto, Ont.  
Walker Road, Walkerville, Ont.  
40 Courtwright St., Fort Erie N., Ont.  
Orillia, Ont.  
1791 William St., Montreal, Que.  
2480 Dundas St. W., Toronto, Ont.