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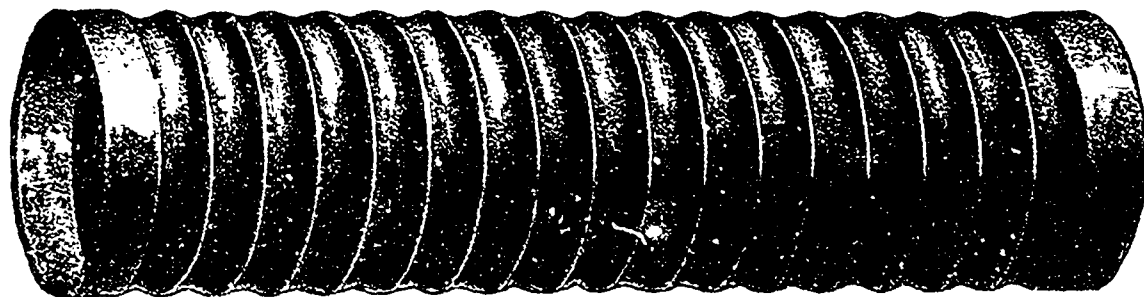
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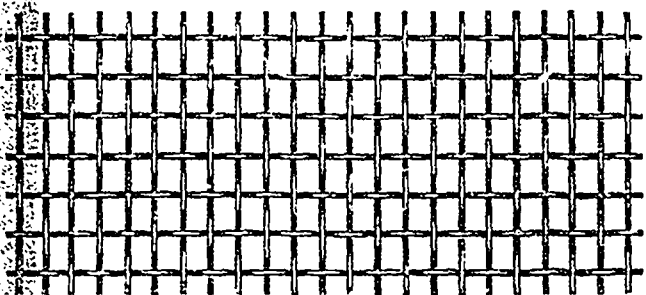
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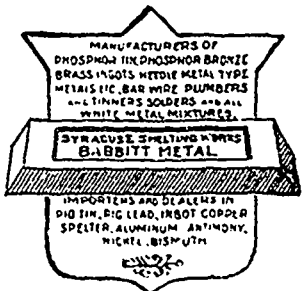
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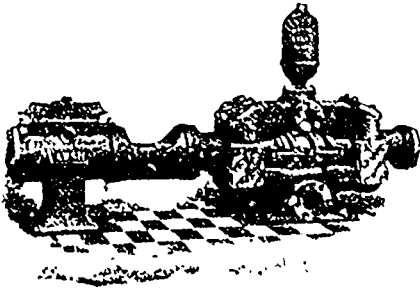
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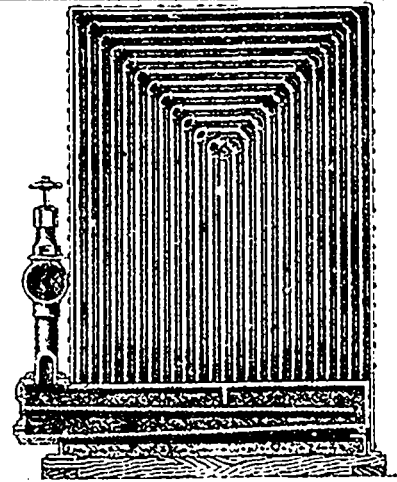
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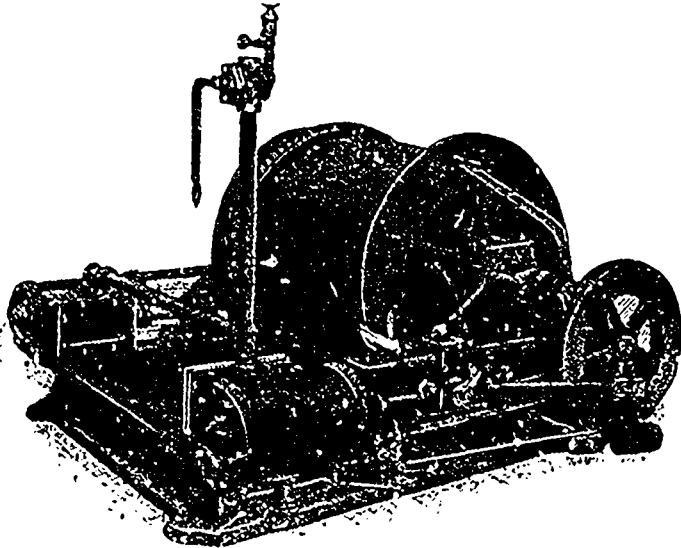
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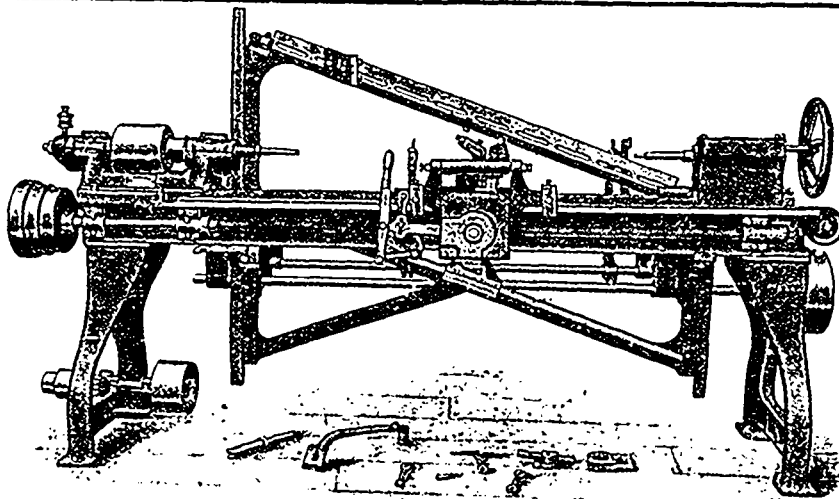
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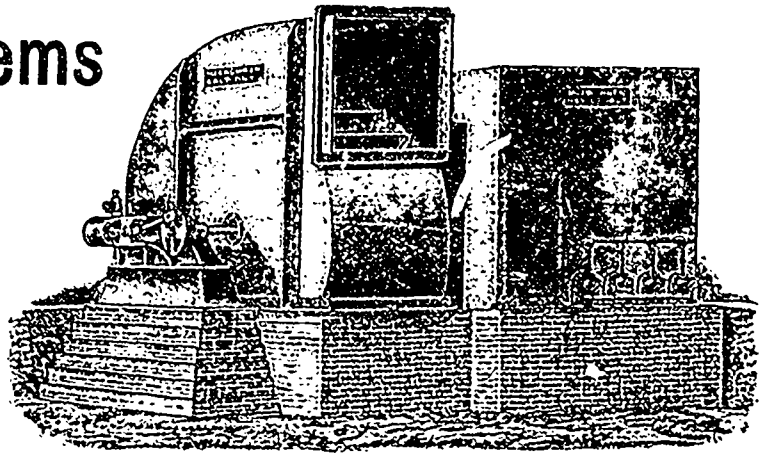
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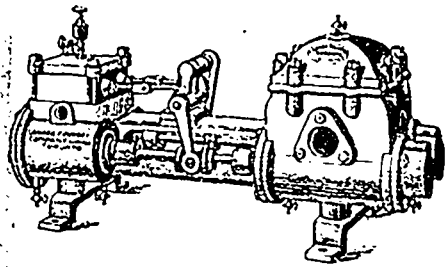
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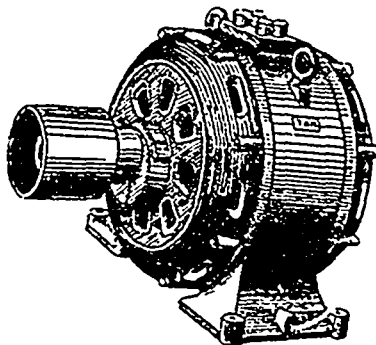
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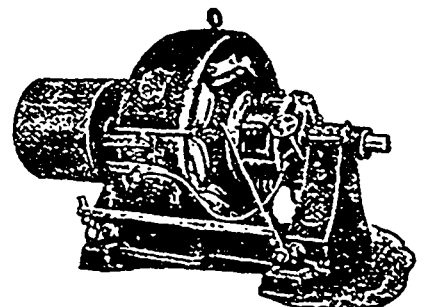
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Third. —We have a thoroughly well equipped wrought and structural steel department.

Fourth.—There is no universal elevator or conveyor and we furnish that which best solves the problem presented.

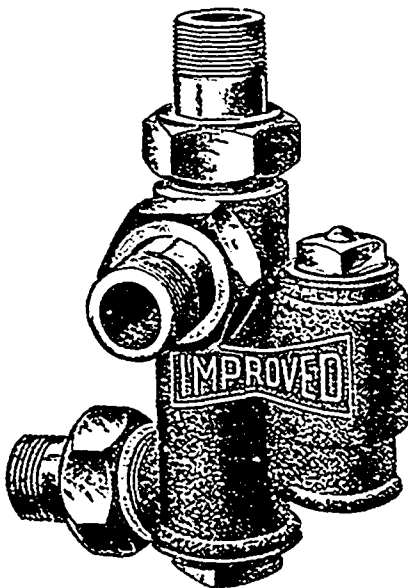
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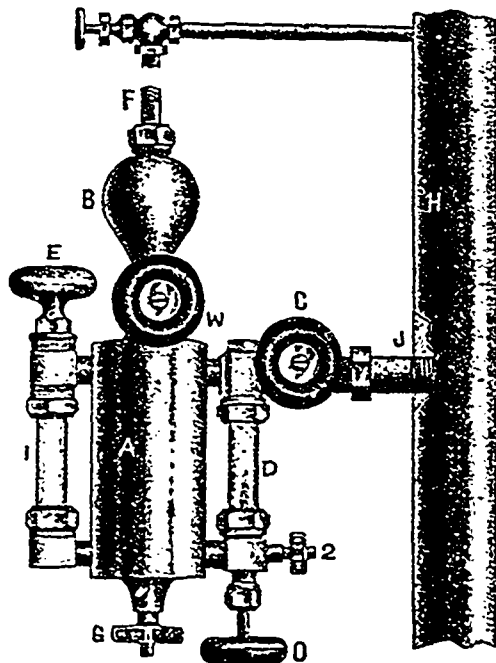
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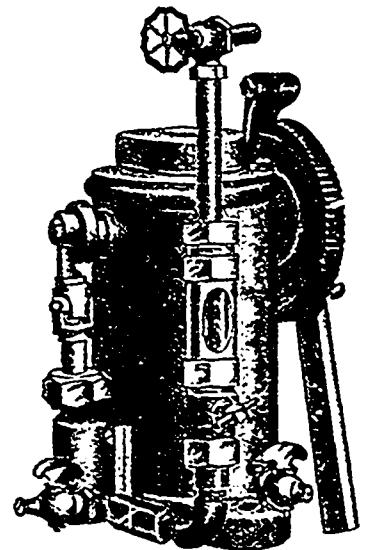
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SIEVES of all kinds

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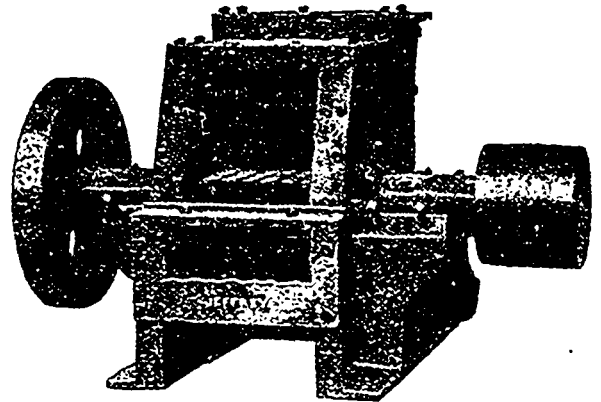
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FREE CRUSHING TESTS MADE WITH Jeffrey Pulverizers

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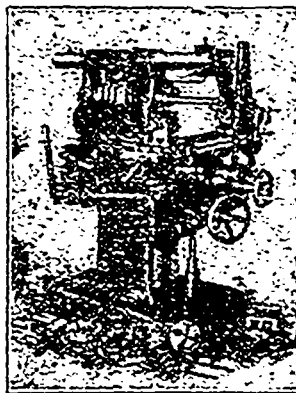
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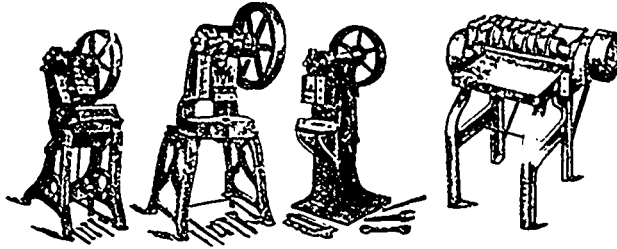
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Also Planers, Shapers, Drills, Slotters, and other Machine Shop Equipment.

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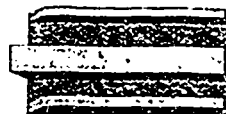
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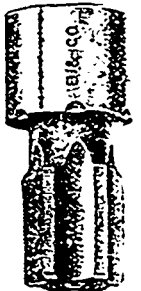
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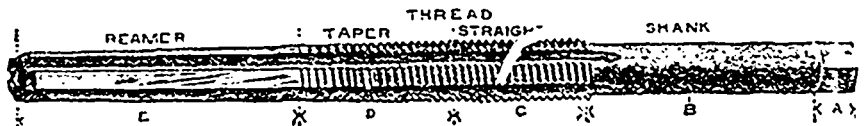


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SUBSCRIPTIONS:

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J. J. CASSIDY, Editor and Manager

Classified Index Page 42
Index to Advertisers Page 49

THE FUEL QUESTION.

The imports of fuel into Canada in the fiscal year 1904, for home consumption, and the values thereof were as follows:

Anthracite and dust—free.

	Tons.	Value.
Great Britain.....	13,411	\$51,356
United States.....	2,261,607	10,409,867
Total.....	2,275,018	\$10,461,223

Coke—free.

	Tons.	Value.
Great Britain....	5,873	\$ 22,440
United States.....	215,177	742,683
Total.....	221,050	\$765,123

Charcoal—duty 20 per cent.

	Value.	Duty Paid.
United States.....	\$22,156	
Other countries.....	\$8	
Total.....	\$22,224	Duty paid \$4,444.80

Bituminous—duty 53c. per short ton.

	Tons.	Value.	Duty Paid.
Great Britain.....	123,113	\$281,944	\$44,100.20
United States.....	3,930,665	\$,825,970	2,083,252.51
Other countries.....	122	294	1.59
Total.....	4,053,900	\$9,108,208	\$2,127,354.30

Bituminous dust—duty 20 per cent.

	Tons.	Value.	Duty Paid.
Great Britain.....	36,241	\$53,442	\$3,995.75
United States.....	571,800	490,681	76,066.00
Total.....	608,041	\$544,123	\$80,061.75

Total imports of free fuel:

	Tons.	Value.
Anthracite.....	2,275,018	\$10,461,223
Coke.....	221,050	765,123
Total.....	2,496,068	\$11,226,346

Total imports dutiable fuel:

	Tons.	Value.	Duty Paid.
Bituminous.....	4,053,900	\$9,108,208	\$2,127,354.30
Bituminous dust.....	608,041	544,123	80,061.75
Total.....	4,661,941	\$9,652,331	\$2,207,416.00
Charcoal.....		22,224	4,444.80

Grand total 7,158,009 20,900,901 \$2,211,860.80

Total exports of bituminous coal of home production in Canada in 1904 were:

	Tons.	Value.
Great Britain.....	14,120	\$50,523
United States.....	1,382,693	3,565,910
Other countries.....	249,692	280,227
Total.....	1,646,505	\$4,346,660

The provinces of Nova Scotia, New Brunswick, Prince Edward Island and Quebec find the source of their supplies of mineral fuel chiefly in the mines of Nova Scotia. This must necessarily be so because of their geographical positions; and the sale of Nova Scotia coal must be restricted to those provinces and to the New England states. There are valuable coal mines, also, on Vancouver island and in the Rocky Mountains of British Columbia, and the demands of that province are supplied from those sources. The excess of the production going to the states of Washington, Oregon and California, British Columbia coal being of superior quality to any found on the Pacific coast of the United States. All these portions of Canada, from Montreal to the Rocky Mountains, possessing no known deposits of coal, certainly none that have been developed, have of necessity to depend for their fuel supplies upon Pennsylvania, Ohio, Indiana, Illinois and West Virginia. The dependence of central Canada for mineral fuel, as we have shown, is upon these neighboring American states, the requirement being, in 1904, for 7,158,000 tons valued at \$20,900,900 upon which \$2,211,864 duty was paid.

The question of reciprocity in coal with the United States is a most important one. No doubt on general principles every important Canadian industry should receive adequate tariff protection, but the coal industries of both Nova Scotia and British Columbia are not only not benefitted by the duty, but are injured, and will continue to be injured by it. The duty has no beneficial effect on Nova Scotia coal consumed in the Maritime Provinces and Quebec, nor on British Columbia coal in that province; but because of the American duty, the trade of Nova Scotia coal is handicapped in the New England States, and the sale of British Columbia coal is similarly handicapped in the American Pacific coast states. The fact that the total exports of Canadian coal in 1904 amounted to only 1,646,505 tons, valued at \$4,346,660 tells against a most important industry. It cannot expand to any considerable extent at home, and must therefore remain practically as it now is, unless the restriction in a most valuable foreign market is removed.

On the other hand, those sections of Canada between Montreal and the Rocky Mountains which last year required more than 7,000,000 tons of foreign coal, valued at more than \$20,000,000 were compelled to pay more than \$2,211,000 for the privilege of importing it.

The question is, how long will the manufacturing and other industrial interests of central Canada submit to paying more than \$2,211,000 in duty upon their fuel ostensibly for the benefit of an industry which does not require it, but is rather handicapped by it.

Market value means the fair value of the property, as between one who wants to purchase and one who wants to sell any article, not what could be obtained for it under peculiar circumstances, when a greater than its fair price could be obtained; not its speculative value; not a value obtained from the necessities of another. Nor, on the other hand, is it to be limited to that price which the property would bring when forced off at auction, under the hammer. It is what it would bring at a fair public sale, when one party wanted to sell and the other to buy.

SELECTED LIST

— OF —

Canadian Imports of Manufactures, Etc.

FROM GREAT BRITAIN, UNITED STATES, AND ALL COUNTRIES
IN 1904

Following are tabulated classified statements showing in detail the values of 250 different manufactures of dutiable merchandise imported into Canada during the fiscal year ending June 30, 1904, and the duties imposed thereon by the general tariff, a rebate of 33½ per cent. being allowed upon goods made in Great Britain. It should be borne in mind that 1898 was the first full fiscal year in which the British preferential tariff was in effect. A statement also shows in detail the values of 104 different non-dutiable semi-manufactured and raw products of similar character, indicating the sources of origin of what to Canadian manufacturers, are their raw materials.

For convenience in the study of the statements the dutiable articles are classified as follows :

- | | |
|--|----------------------------------|
| 1. Iron and Steel and manufactures of. | 9. Paints, Pigments and Colors. |
| 2. Brass and Copper and manufactures of. | 10. Agricultural Implements. |
| 3. Hardware. | 11. Vehicles. |
| 4. Metals and manufactures of. | 12. Musical Instruments. |
| 5. Electrical Machinery and appliances. | 13. Paper and manufactures of. |
| 6. Fuels. | 14. Leather and manufactures of. |
| 7. Clays, etc., and manufactures of. | 15. Miscellaneous. |
| 8. Minerals. | |

No reference is made in these statements to textile goods.

IRON AND STEEL AND MANUFACTURES OF -57 Items.

ARTICLES.	General Tariff.	Great Britain Preferential Tariff.	United States General Tariff.	All Countries.
Springs, axles, etc., n.e.s.	35 p.c.	\$30,515	\$34,653	\$651
Bar iron or steel, n.o.p.	\$7 per ton	328,405	634,302	1,024
Castings, rough, n.e.s.	25 p.c.	12,880	209,843	223
Cast iron pipe.	\$8 per ton	137,233	79,406	217
Chain, 5-16 in. dia.	5 p.c.	57,750	98,584	162
Chain, malleable, sprocket.	20 p.c.	None	30,313	30
Chain, n.e.s.	30 p.c.	14,592	67,335	88
Locomotives, n.e.s.	35 p.c.	584,720	1,568,365	2,431
Fire engines.	25 p.c.	None	8,235	8
Fire extinguishers.	35 p.c.	None	49,596	49
Gasoline engines.	35 p.c.	1,413	126,353	127
Steam engines and boilers.	25 p.c.	43,939	406,156	466
Pipe fittings.	30 p.c.	1,324	351,245	352
Forgings, shafting, etc.	30 p.c.	5,082	128,181	139
Iron or steel ingots.	\$2 per ton	39,901	105,342	216
Bridges and parts of.	35 p.c.	373	146,996	147
Ore crushers.	25 p.c.	2,186	62,228	65
Portable engines.	25 p.c.	None	485,598	485
Portable saw mills.	25 p.c.	None	12,522	12
Portable machines, n.e.s.	25 p.c.	2,180	2,272	46
Portable machines, parts of.	25 p.c.	None	169,602	169
Sewing machines and parts.	30 p.c.	11,918	323,931	336
Slot machines.	25 p.c.	None	12,233	12
Typewriting machines.	25 p.c.	None	167,143	167
Machinery, n.o.p.	25 p.c.	268,399	4,795,439	5,191
Malleable castings.	25 p.c.	81	16,349	16
Mould boards.	5 p.c.	22	164,391	168
Pumps, n.e.s.	25 p.c.	615	199,770	202
Railway bars, n.e.s.	30 p.c.	62,148	137,148	263
Railway fish plates.	\$8 per ton	29,403	71,982	265
Rolled angles, beams, etc., n.e.s.	10 p.c.	202,206	418,567	946
Rolled hoop, band, etc., 18 gauge, n.e.s.	\$7 per ton	17,621	57,968	82
Rolled hoop, band, etc., less than 18 gauge, n.e.s.	5 p.c.	16,005	49,246	71
Rolled angles, beams, etc., n.o.p., less than 35 lbs. per yard.	\$7 per ton	80,277	206,030	229

IRON AND STEEL AND MANUFACTURES OF—Continued.

ARTICLES.	General Tariff.	Great Britain Preferential Tariff.	United States General Tariff.	All Countries.
Rolled plates and sheets, n.e.s.	\$7 per ton	\$110,128	\$143,946	\$305,670
Rolled plates and sheets, n.o.p.	10 p.c.	291,169	246,596	575,932
Rolled plates and sheets, 17 gauge, n.o.p.	5 p.c.	296,082	178,831	509,904
Safe and vault doors.	30 p.c.	None	92,865	92,890
Rolls, chilled iron.	30 p.c.	7	11,201	11,658
Sheets, corrugated, galvanized.	25 p.c.	19,446	2,529	21,975
Skelp, iron and steel.	5 p.c.	134,841	326,194	557,944
Switches, frogs and crossings.	30 p.c.	None	24,616	24,616
Tubes, boiler.	5 p.c.	55,676	288,308	375,575
Tubes, 1½ in. dia.	10 p.c.	205	4,213	4,418
Tubes, bicycle.	10 p.c.	1,888	10,530	12,418
Tubes, 2 in. dia., n.o.s.	15 p.c.	25,093	469,162	495,887
Tubes, 2 in. or less, n.e.s.	35 p.c.	33,694	82,297	115,991
Tubes, other, n.o.p.	30 p.c.	1,406	44,005	45,461
Sheets, galvanized, mfrs. of.	25 p.c.	8,823	12,180	21,101
Wire rope, n.e.s.	25 p.c.	105,397	62,391	173,567
Steel, chrome.	15 p.c.	None	18,796	18,796
Steel bridge plates.	10 p.c.	9,635	141,269	220,692
Steel bars of value greater than 2½c. lb.	5 p.c.	174,338	454,955	650,318
Machine tools, all kinds, n.o.p.	30 p.c.	40,580	777,267	875,080
Unenumerated.	30 p.c.	120,488	2,051,900	2,243,020
Lithographic presses.	10 p.c.	243	16,122	16,365
Printing presses.	10 p.c.	14,303	460,743	491,379
Total.		\$3,394,670	\$17,318,240	\$22,393,122

2. BRASS AND COPPER AND MANUFACTURES OF—8 Items.

Brass nails, tacks, etc.	30 p.c.	612	6,245	8,620
Brass pumps.	30 p.c.	179	19,906	20,259
Brass wire, plain.	10 p.c.	2,011	14,057	16,217
Brass wire, cloth, n.e.s.	25 p.c.	32,789	11,048	46,166
Brass manufactures of, n.o.p.	30 p.c.	42,096	545,049	616,220
Copper nails, tacks, etc.	30 p.c.	451	3,428	3,879
Copper wire, plain.	15 p.c.	5	25,258	25,263
Copper, all other manufactures of, n.o.p.	30 p.c.	1,444	63,554	67,252
Total.		\$79,587	\$688,545	\$803,876

3. HARDWARE—36 Items.

Emery and manufactures of.	25 p.c.	598	28,533	29,273
Anvils and vises.	30 p.c.	16,378	35,970	53,263
Butts and hinges.	30 p.c.	1,039	57,002	58,059
Tacks, shoe.	35 p.c.	149	5,297	5,446
Tacks, cut.	35 p.c.	9	8,173	8,182
Hardware, builders'.	30 p.c.	89,747	663,175	758,741
Horseshoes.	30 p.c.	None	6,810	6,810
Locks, all kinds.	30 p.c.	6,081	188,075	195,744
Nails and spikes, etc., wrought, n.e.s.	30 p.c.	2,528	14,023	16,636
Nails and spikes, cut.	½c. per lb.	1,662	94,931	97,221
Nails, wire, n.o.p.	¾c. per lb.	17	30,982	31,133
Smoothing irons.	25 p.c.	285	9,179	9,464
Scraws, wood, n.e.s.	35 p.c.	1,090	19,109	20,199
Scales, balances, etc.	30 p.c.	2,638	110,250	114,585
Skates.	35 p.c.	12	5,643	27,191
Stoves and parts, n.o.s.	25 p.c.	3,610	359,865	365,997
Ware, agate.	35 p.c.	4,122	22,942	62,774
Ware, enameled, n.e.s.	30 p.c.	8,635	123,290	132,702
Wire bale ties.	30 p.c.	None	2,262	2,262
Wire cloth, iron and steel.	30 p.c.	45,276	10,972	56,366
Wire door screens.	30 p.c.	3,035	11,531	14,581
Wire fencing, n.e.s.	15 p.c.	941	18,228	19,169
Wire, covered, n.e.s.	30 p.c.	18,297	170,992	193,940
Wire, n.o.p.	20 p.c.	17,773	158,531	202,153
Nuts, washers and rivets, n.e.s.	¾c. per lb.	6,300	139,175	147,719
Table cutlery, n.o.p.	30 p.c.	219,728	31,686	265,651
Cutlery, all others, n.e.s.	30 p.c.	65,067	62,590	199,997
Guns, rifles, etc.	30 p.c.	35,059	299,099	459,878
Bayonets, foils, etc.	30 p.c.	67	1,253	1,971
Adzes, hatchets, etc.	30 p.c.	3,741	50,165	54,277
Axes.	25 p.c.	None	38,844	38,844
Saws.	30 p.c.	2,915	182,090	189,587
Files and rasps, n.e.s.	30 p.c.	8,180	61,414	80,255
Scrow, metal, n.o.p.	35 p.c.	137	12,014	12,495
Sand paper.	25 p.c.	1,253	84,512	85,791
Tinware, n.e.s.	25 p.c.	16,812	123,808	150,978
Total.		\$583,181	\$3,242,415	\$4,169,334

4. METALS AND MANUFACTURES OF—19 Items.

ARTICLES.	General Tariff.	Great Britain Preferential Tariff.	United States General Tariff.	All Countries.
Bells and gongs.....	30 p.c.	\$833	\$33,243	\$36,020
Buttons, metal pantaloons.....	25 p.c.	950	24,015	29,356
Buttons metal, n.o.p.....	35 p.c.	27,203	125,250	299,456
Lead bars and sheets.....	25 p.c.	32,295	6,208	39,614
Lead pipe.....	35 p.c.	4,346	1,622	5,968
Lead, mfrs. of, n.o.p.....	30 p.c.	7,475	24,406	61,856
Rabbit metal.....	10 p.c.	4,048	47,708	51,755
Britannia metal, mfrs. of.....	25 p.c.	2,240	20,839	25,551
Metal buckles, (not jewelry).....	30 p.c.	6,924	29,720	52,163
Furniture springs.....	30 p.c.	187	15,798	15,985
Phosphor tin.....	10 p.c.	2,173	9,402	12,443
German silver goods.....	25 p.c.	8,330	26,565	36,622
Lamps and lanterns.....	30 p.c.	4,407	350,252	379,931
Nickle plated ware, n.e.s.....	30 p.c.	4,725	69,229	77,671
Nickle anodes.....	10 p.c.	None	13,360	13,360
Patterns, metal.....	30 p.c.	None	32,636	32,636
Pins, n.o.p.....	30 p.c.	44,344	40,012	100,249
Wire, all kinds, n.o.p.....	20 p.c.	111	11,139	11,358
Zinc, mfrs. of, n.o.p.....	25 p.c.	1,174	12,193	14,092
Total.....		\$151,765	\$893,597	\$1,296,226

5. ELECTRICAL MACHINERY AND APPLIANCES—7 Items.

Electric light carbons, n.e.s.....	35 p.c.	144	22,036	25,985
Carbon, 6 inch.....	15 p.c.	None	62,794	62,794
Electric apparatus, n.e.s.....	25 p.c.	23,283	1,792,835	1,829,189
Motors and Dynamos.....	25 p.c.	19,488	459,186	488,944
Electric light glass bulbs.....	10 p.c.	None	48,940	50,266
Electric light fixtures.....	30 p.c.	10,501	219,555	238,189
Gas meters.....	35 p.c.	8,357	12,160	20,517
Total.....		\$61,773	\$2,517,506	\$2,715,884

6. FUELS—3 Items.

Charcoal.....	20 p.c.	10,228	22,160	32,476
Coal bituminous.....	53c. per ton	273,448	8,825,970	9,108,208
Coal dust, n.e.s.....	20 p.c.	48,134	490,681	544,123
Total.....		\$331,810	\$9,338,811	\$9,684,807

7. CLAYS, EARTHS, ETC., AND MANUFACTURES OF—11 Items.

Fire brick and lung.....	20 p.c.	1,594	36,133	38,355
Building brick.....	20 p.c.	6,416	110,797	117,468
Paving brick.....	20 p.c.	1,790	27,963	29,753
Drain tiles.....	20 p.c.	81	1,556	1,637
Sewer pipe, etc.....	35 p.c.	8,677	44,981	53,958
Manufactures, n.o.p.....	20 p.c.	1,175	14,673	17,204
Portland cement..... 12½ c. per 100 lbs.		164,627	510,718	995,017
Cement, n.e.s. and mfrs. of, n.o.p.....	20 p.c.	2,614	10,936	14,305
Earthenware bath tubs, n.o.p.....	30 p.c.	2,639	68,119	70,927
Earthenware tiles.....	35 p.c.	18,652	35,028	55,319
Earthenware, n.e.s.....	30 p.c.	11,949	43,043	56,388
Total.....		\$220,214	\$903,947	\$1,450,311

8. MINERALS—12 Items.

Asbestos, mfrs. of.....	25 p.c.	3,490	77,909	83,827
Blacklead.....	25 p.c.	6,383	19,252	26,053
Mineral substances, n.o.p.....	20 p.c.	10,238	25,655	43,157
Plumbago, mfrs. of, n.e.s.....	25 p.c.	3,078	9,495	12,737
Coal oil, n.e.s.....	5c. per gal.	2,419	1,523,187	1,526,989
Products of petroleum, n.e.s.....	5c. per gal.	None	100,609	130,609
Fuel oil.....	2½ c. per gal.	None	275,515	275,515
Lubricating oil.....	5c. per gal.	None	245,864	245,864
Lubricating oil, all other, n.e.s.....	25 p.c.	4,057	114,092	119,063
Slate, roofing.....	25 p.c.	None	37,163	38,245
Slate, school.....	25 p.c.	92	27,632	28,091
Slate, n.e.s.....	25 p.c.	None	17,356	17,354
Total.....		\$29,757	\$2,473,729	\$2,547,494

9. PAINTS, PIGMENTS AND COLOURS—9 Items.

ARTICLES.	General Tariff.	Great Britain Preferential Tariff.	United States General Tariff.	All Countries.
Bronze powder.....	25 p.c.	\$4,013	\$13,187	\$53,633
Colors, dry, n.e.s.....	20 p.c.	13,357	84,622	109,287
Ready mixed paints, n.e.s.....	25 p.c.	27,960	134,545	165,269
Dry white and red lead.....	5 p.c.	108,929	349,770	662,098
Ochres and siennas.....	20 p.c.	552	4,482	13,303
Oxides, n.e.s.....	25 p.c.	6,841	10,490	23,333
Paints mixed with varnish.....	25 p.c.	350	3,075	3,623
Paints, anti-corrosive, n.e.s.....	25 p.c.	8,177	30,283	40,397
Varnishes, etc., n.e.s.....	20 cts. per gal. and 20 p.c.	32,771	94,839	128,838
Total.....		\$202,950	\$725,293	\$1,199,781

10 AGRICULTURAL IMPLEMENTS—21 Items.

Cultivators.....	20 p.c.	None	12,468	12,468
Grain drills.....	20 p.c.	None	102,339	102,339
Farm rollers.....	25 p.c.	22	4,875	4,897
Farm forks.....	25 p.c.	98	6,227	6,325
Harrows.....	20 p.c.	20	82,074	82,112
Harvesters.....	20 p.c.	None	746,894	746,894
Hay tedders.....	25 p.c.	None	27,439	27,439
Hoes.....	25 p.c.	125	1,078	1,278
Horse rakes.....	20 p.c.	None	173,044	173,044
Lawn mowers.....	35 p.c.	None	14,682	14,682
Manure spreaders.....	20 p.c.	107	16,496	16,603
Mowing machines.....	20 p.c.	None	331,964	331,964
Plows.....	20 p.c.	56	299,820	300,135
Reapers.....	20 p.c.	None	48,325	48,325
Scythes.....	25 p.c.	3,035	13,947	17,126
Spades and Shovels.....	35 p.c.	15,200	17,471	33,084
Parts, paying 20 per cent.....	20 p.c.	323	673,475	673,848
All others, n.e.s.....	25 p.c.	2,856	38,581	42,100
Seed cutters.....	25 p.c.	None	2,350	2,350
Horse powers.....	25 p.c.	None	5,797	5,797
Thrashers.....	25 p.c.	None	291,774	291,774
Total.....		\$21,842	\$2,911,120	\$2,934,594

11. VEHICLES—15 Items.

Buggies, carriages, etc.....	35 p.c.	1,175	98,794	100,898
Farm wagons.....	25 p.c.	None	236,829	236,829
Freight wagons.....	25 p.c.	109	26,837	26,946
Finished parts, n.e.s.....	35 p.c.	835	96,512	97,347
Railway cars, passenger.....	30 p.c.	None	106,449	106,449
Cars, tram or horse.....	30 p.c.	None	5,934	5,934
Cars, box and flat.....	30 p.c.	None	181,110	181,110
Cars, parts of.....	30 p.c.	17,732	236,880	316,575
Road scrapers.....	30 p.c.	None	49,329	49,329
Sleighs.....	25 p.c.	None	27,570	27,570
Wheel barrows.....	30 p.c.	319	90,002	91,486
Bicycles.....	30 p.c.	525	51,272	52,143
“ parts of.....	30 p.c.	4,301	102,219	107,353
Children's carriages.....	35 p.c.	223	27,898	28,344
Automobiles.....	25 p.c.	2,403	312,854	315,475
Total.....		\$27,623	\$1,650,489	\$1,743,798

12 MUSICAL INSTRUMENTS—6 Items.

Brass band instruments.....	25 p.c.	7,343	8,949	32,156
Cabinet organs.....	30 p.c.	122	14,951	15,284
Parts of organs.....	25 p.c.	654	17,577	18,241
Pianos.....	30 p.c.	1,151	105,360	107,388
Parts of pianos.....	25 p.c.	9	136,830	147,377
Other musical instruments, n.e.s.....	30 p.c.	1,393	43,465	140,513
Total.....		\$10,682	\$327,132	\$460,959

13. PAPER AND MANUFACTURES OF—14 Items.

Paper, photographers.....	30 p.c.	4,463	105,814	110,865
Bags and sacks.....	25 p.c.	351	45,526	48,201
Cardboard, n.e.s.....	35 p.c.	5,590	52,648	60,312
Envelopes.....	35 p.c.	14,362	49,692	66,784
Felt or straw board.....	25 p.c.	527	99,761	100,470
Wall paper.....	35 p.c.	10,987	173,326	187,342
Leather board.....	25 p.c.	None	23,604	23,636
Gill board.....	10 p.c.	2,266	31,159	35,575
Manufactures, n.o.p., n.e.s.....	35 p.c.	109,239	486,420	658,772

13. PAPER AND MANUFACTURES OF—Continued.

ARTICLES.	General Tariff.	Great Britain Preferential Tariff.	United States General Tariff.	All Countries.
Printing paper, n.e.s.	25 p.c.	\$135,378	\$239,033	\$435,082
Coated paper	35 p.c.	31,992	93,571	154,738
Straw board, rolls	25 p.c.	30	10,025	11,217
Wrapping paper	25 p.c.	2,625	34,207	47,801
All kinds, n.e.s.	25 p.c.	137,245	408,736	610,447
Total		\$455,315	\$1,903,522	\$2,549,242

14. LEATHER AND MANUFACTURES OF—7 Items.

ARTICLES.	General Tariff.	Great Britain Preferential Tariff.	United States General Tariff.	All Countries.
Leather, sole, all kinds	15 p.c.	30,996	15,881	58,600
Leather for belting	15 p.c.	85,098	721	86,018
Leather, upper	17½ p.c.	27,663	86,679	127,828
Leather boots and shoes	25 p.c.	36,588	953,687	996,150
Leather, harness and saddlery	30 p.c.	16,137	77,188	95,076
Leather belting	20 p.c.	22,306	31,815	55,167
Leather, all others, n.o.p.	25 p.c.	3,012	154,812	178,555
Total		\$221,800	\$1,320,783	\$1,597,394

15. MISCELLANEOUS—25 Items.

ARTICLES.	General Tariff.	Great Britain Preferential Tariff.	United States General Tariff.	All Countries.
Boats, pleasure	25 p.c.	151	32,914	33,735
Clocks and movements	25 p.c.	5,578	234,516	289,412
Furniture, house and office	30 p.c.	29,088	526,242	582,292
Ammunition, rifle, etc.	30 p.c.	144,086	170,523	316,589
Gutta percha, boots and shoes	25 p.c.	296	141,281	141,695
Gutta percha, belting	25 p.c.	1,076	49,618	50,694
Gutta percha, hose	35 p.c.	877	47,404	48,440
Gutta percha, packing	35 p.c.	1,034	40,395	50,854
Ink, writing	20 p.c.	15,167	36,229	55,202
Ink, printing	20 p.c.	7,969	91,971	100,742
Wind mills	25 p.c.	None	33,914	33,914
Jewelery, n.o.p.	30 p.c.	64,355	688,665	869,238
Optical, etc., instruments, n.e.s.	25 p.c.	18,829	138,386	199,084
Spectacles, etc.	30 p.c.	444	10,283	12,819
Spectacle frames and parts	20 p.c.	26	51,291	53,051
Pocket books, etc.	30 p.c.	21,915	105,096	189,013
Soap, laundry	1c. per lb.	2,408	56,347	59,523
Soap, castile	2c. per lb.	4	4,791	73,412
Soap, toilet	35 p.c.	30,692	106,320	145,272
Soap powders	30 p.c.	36	79,162	79,655
Grindstones	15 p.c.	4,504	33,345	38,141
Watches	25 p.c.	1,054	24,419	76,602
Watch cases	30 p.c.	172	93,049	103,625
Watch movements	10 p.c.	758	583,233	755,901
Total		\$350,489	\$3,388,364	\$4,358,988

For greater convenience in the study of the statement the articles enumerated are classified as follows:

ARTICLES.	Great Britain Preferential Tariff.	United States General Tariff.	All Countries.
1. Iron and steel and manufactures of	\$3,394,670	\$17,318,240	\$22,393,122
2. Brass and copper and manufactures of	79,587	688,545	803,876
3. Hardware	583,181	3,242,415	4,169,354
4. Metals and manufactures of	151,765	893,597	1,296,226
5. Electrical machinery and appliances	61,773	2,517,506	2,715,884
6. Fuels	331,810	9,338,811	9,684,807
7. Clays, etc. and manufactures of	220,214	903,947	1,450,311
8. Minerals	29,757	2,473,729	2,547,494
9. Paints, pigments and colors	202,950	725,293	1,199,731
10. Agricultural implements	21,842	2,911,120	2,934,594
11. Vehicles	27,623	1,650,489	1,743,796
12. Musical instruments	10,682	327,132	460,959
13. Paper and manufactures of	455,315	1,903,522	2,549,242
14. Leather and manufactures of	221,800	1,320,783	1,597,394
15. Miscellaneous	350,489	3,388,394	4,358,988
Total	\$6,183,458	\$49,603,523	\$59,905,810

The value of all merchandise imported into Canada for home consumption from Great Britain in 1904 was as follows :

	Value.	Duty Paid.
Dutiable under General Tariff	\$5,781,301	\$3,094,910
“ under Preferential Tariff	38,475,505	7,454,733
Total	\$44,256,806	\$10,549,643
Free goods	16,837,745	
Total dutiable and free	\$61,094,551	

The average rate of duty paid upon dutiable British imports under the general tariff was 53.5 per cent., and under the preferential tariff 19.3 per cent. Merchandise imported from Great Britain under the general tariff, the product of that country consisted of spirits, wines, tobacco, etc., to which no tariff preference is shown.

The value of all merchandise imported for home consumption from the United States in 1904 was as follows :

Dutiable.....	\$77,543,780
Free.....	73,282,735
Total	\$150,826,515

The amount of duty collected upon the dutiable merchandise was \$19,554,585, or at the rate of 25.2 per cent.

The value of all imported merchandise, dutiable and free, entered for consumption in Canada in 1904 was as under :

	Great Britain.	United States.	All other Countries.	Total.
Dutiable.....	\$44,939,829	\$77,543,780	\$26,425,967	\$148,909,576
Proportion	30.1 per cent.	52 per cent.	17.9 per cent.	100.00 per cent.
Free.....	\$16,837,745	\$73,282,735	\$12,434,276	\$102,554,756
Proportion	16.4 per cent.	71.4 per cent.	12.2 per cent.	100.00 per cent.
Dutiable and free.....	\$61,777,574	\$150,826,515	\$38,860,243	\$251,464,332
Proportion	24.5 per cent.	60.0 per cent.	15.5 per cent.	100.00 per cent.

The value of all dutiable merchandise imported into Canada for home consumption in 1904, and the duties imposed thereon was as follows :

	Value.	Duty Paid.	Rate of Duty.
General tariff.....	\$99,167,713	\$30,168,411	30.4 per cent.
Preferential tariff.....	44,765,253	8,889,410	19.8 per cent.
Surtax tariff.....	4,976,610	1,896,528	38.2 per cent.
Total	\$148,909,576	\$40,954,349	27.5 per cent.

The aggregate trade of Canada in 1904 on the basis of goods entered for consumption and domestic goods exported was as under .

	Great Britain.	United States.	All Countries.
Duty collected on dutiable goods	\$179,368,950	\$223,599,447	\$464,985,567
	\$10,838,017	\$19,554,585	\$40,954,349

Under an amendment to the Customs Act, passed in 1903, provision was made for the collection of a surtax of 33½ per cent. on merchandise coming into Canada for home consumption from any foreign country which treats imports from Canada less favorably than those from other countries. This surtax is applied to merchandise of German origin only, but does not apply to the products of other countries imported through German ports.

Under the French Treaty, by which certain dutiable articles made in France and its dependencies were accorded a special tariff preference, merchandise to the value of \$726,708 was imported into Canada for home consumption in 1904 upon which \$195,928 duties were paid.

SELECTED LIST, FREE IMPORTS, 1904.

MANUFACTURES—60 Items.

ARTICLES.	Great Britain.	United States.	All Countries.
Bells for churches.....	\$4,996	\$11,965	\$43,053
Binder twine.....	591	1,459,113	1,459,704
Articles for manufacture of.....	8,495	66,207	74,702
Bolting cloth.....	None	15,220	15,359
Books for schools, Colleges, etc.....	57,978	134,993	213,466
“ scientific, etc.....	7,094	97,686	113,539
Brick, fire, for manufacture	119,352	234,534	365,479
Coal, tar and pitch.....	25,743	96,855	122,598
Coke.....	22,440	742,683	765,123
Colors, oxides etc. n.e.s.....	1,704	19,683	24,819
Cotton waste.....	41,759	381,593	444,835
Cotton wool.....	4,249	5,927,226	5,955,145
Crucibles—clay or plumbago.....	8,996	19,508	28,773
Diamond drills, for prospecting.....	300	10,777	11,077
Dyes, aniline.....	28,297	181,544	375,402
Dyeing or tanning articles, n.e.s.....	3,621	13,413	22,522
Extract of Logwood, etc.....	71,813	328,994	440,202
Gums, amber, arabic, etc.....	27,983	284,850	315,901
Salt petre.....	17,596	39,004	86,308

MANUFACTURES—Continued.

ARTICLES.	Great Britain.	United States.	All Countries.
Soda—nitrate of	\$32	\$161,215	\$258,578
Duck—for bolting and hose.....	313	197,219	197,532
Glove fasteners.....	8,390	114,894	128,579
Lamp Black.....	208	23,718	26,569
Metals,—Aluminum.....	31,980	68,442	101,427
“ Anchors.....	11,120	6,911	18,106
“ Brass, bolts, bars, etc.....	1,711	95,274	96,985
“ “ strips, sheets, etc.....	6,863	177,551	184,414
“ “ tubing.....	16,406	91,329	107,735
“ Copper bolts, bars, etc.....	716	748,728	749,438
“ “ strips, sheets, etc.....	32,207	264,707	296,914
“ “ tubing.....	2,736	42,173	44,109
“ “ pigs, ingots, etc.....	18,728	217,990	236,718
“ Cream separators.....	171,114	272,275	450,429
“ “ articles for.....	5,195	34,822	40,017
“ Iron or steel rods for making coil wire.....	346,537	727,115	1,134,149
“ Rolled iron tubes for manufactures.....	51,776	99,241	151,017
“ Locomotive and car wheel tire.....	670	17,631	95,750
“ Machinery for beet sugar factories.....	none	12,278	12,278
“ “ for mining.....	67,140	940,258	1,018,590
“ Platinum wire, bars, strips, etc.....	548	27,424	28,112
“ Ribs, etc., for umbrellas.....	31,174	78,707	134,112
“ Sewing machine attachments.....	18	47,397	47,517
“ German silver, ingots, etc.....	none	12,968	13,047
“ Steel rails.....	1,830,834	1,261,480	4,329,363
“ Steel cut to shape for saws, etc.....	13,061	102,608	115,669
“ Steel for files, augurs, etc.....	50,744	106,414	162,511
“ steel for carriage springs, etc.....	18,112	110,011	132,871
“ Tin in block, pig and bars.....	292,319	457,499	720,213
“ Tin plates and sheets.....	1,215,700	246,111	1,461,811
“ Tin foil.....	313	42,809	51,890
“ Barbed fencing wire.....	46,380	764,101	847,019
“ Galvanized wire.....	8,687	592,988	638,513
“ Zinc, block, pigs, etc.....	33,005	22,041	138,057
Pianos, articles for manufacture of.....	2,353	33,616	63,625
Rubber, crude.....	733	2,196,939	2,197,712
“ hard, in sheets, etc.....	747	276,139	277,770
Surgical and dental instruments.....	19,317	136,026	170,344
Gold and silver coin.....	52,666	6,971,359	7,029,371
Gold bullion.....	15	525,450	525,566
Silver bullion.....	277	319,119	319,396
Total.....	\$4,843,852	\$28,710,824	\$35,631,861

THE FOREST—22 Items.

Cork wood.....	\$4,250	\$54,419	\$78,357
D Shovel handles.....	110	45,776	45,886
Felloes, hickory.....	None	27,610	27,610
Bolts, heading, etc.....	None	29,376	29,376
Billets, hickory.....	None	4,007	4,007
Spokes, sawn to shape.....	None	2,612	2,612
“ rough turned.....	None	178,603	178,603
Hubs for wheels.....	3	24,071	24,074
Railroad ties.....	None	202,887	202,887
Logs, round.....	None	395,984	396,318
Lumber, cherry, etc.....	None	456,479	457,419
“ Mahogany.....	11,494	126,894	138,388
“ Oak.....	41	1,492,536	1,492,577
“ Pitch pine.....	5	302,370	302,375
“ Walnut.....	None	57,770	57,770
“ Ash.....	None	97,479	97,479
Timber, hewn or sawn.....	419	324,864	326,760
Boards, plank, etc., partly dressed.....	155	2,658,006	2,663,571
Laths.....	None	58,779	59,691
Shingles.....	None	22,141	22,141
Staves.....	None	146,566	146,580
Fire wood.....	None	112,631	112,631
Total.....	\$16,477	\$6,821,860	\$6,867,142

THE MINE—13 Items.

ARTICLES.	Great Britain.	United States.	All Countries.
China clay.....	\$60,022	\$14,305	\$74,327
Fire clay.....	15,223	36,942	52,716
All other clays, n.e.s.....	3,375	13,638	17,502
Anthracite and dust.....	51,356	10,409,867	10,461,223
Emery.....	2,147	19,408	21,626
Gannister.....	2,261	267	2,528
Gravel and sand.....	975	11,589	107,547
Pumico.....	253	5,942	6,537
Alumina.....	14,275	11,695	108,956
Cryolite.....	None	14,513	14,513
Litharge.....	17,134	3,995	32,633
Ores of metals.....	8,026	706,364	1,112,193
Whiting.....	37,166	5,341	42,507
Total	\$212,213	\$11,253,866	\$12,054,808

ANIMAL PRODUCTS—9 Items.

Bone, black.....	333	86,744	89,668
Bristles.....	33,544	39,178	83,202
Fur skins, not dressed, n.e.s.....	320,113	1,344,641	2,346,940
Degras.....	13,541	62,629	82,802
Soap grease.....	None	232,791	232,791
Hair, cleaned or uncleaned.....	447	51,009	54,988
Horse hair.....	17,069	7,295	25,239
Hides and skins.....	660,658	2,741,011	4,775,464
Rennet.....	43	59,422	84,070
Total	\$1,045,748	\$4,715,720	\$7,866,164

RECAPITULATION.

	Great Britain.	United States.	All other Countries.	Total.
Manufactures 60 items.....	\$4,843,852	\$28,710,824	\$2,077,185	\$35,631,861
The Forest 22 ".....	16,477	6,821,860	28,805	6,867,142
The Mine 13 ".....	212,213	11,253,866	588,729	12,054,808
Animal products 9 ".....	1,045,748	4,715,720	2,104,696	7,866,164
Total	\$6,118,290	\$51,502,270	\$4,799,415	\$62,419,975
Proportion.....	9.8 per cent.	82.5 per cent.	7.7 per cent.	100.00 per cent.

In 1904 the declared value of free imports of Settlers effects into Canada was as follows :

Great Britain.	United States.	All other Countries.	Total.
\$1,431,292	\$3,233,437	\$94,184	\$6,758,913

CANADIAN EXPORTS.

The following shows the values of a selected list of 67 articles of Canadian manufacture exported in the fiscal year 1904, the character of the articles exported and their destination :

ARTICLES.	Great Britain.	United States.	All Countries.
Agricultural implements.....	\$479,667	\$26,837	\$2,556,834
Books, pamphlets, etc.....	54,010	83,904	178,987
Bread.....	725	5,701	37,481
Cartridges.....	26,388	91,060	130,855
Charcoal.....	none	14,878	14,878
Coke.....	none	258,047	258,047
Cement.....	31	1,849	3,205
Clothing.....	26,161	44,575	143,155
Cordage.....	35,132	447,071	517,072
Cotton fabrics.....	57,658	18,321	537,789
Cotton— other.....	9,801	6,086	31,492
Cotton waste.....	251	80,813	81,664
Drugs, Chemicals, etc. n.e.s.....	84,195	341,414	690,928
Dyestuffs.....	384	1,395	4,626
Electrical apparatus.....	3,706	7,897	15,610
Explosives.....	19	168,931	198,820
Fertilizers.....	none	174,775	177,138
Fur—manufactures of.....	6,952	13,463	24,548
Glass and glassware.....	4,182	4,594	12,161
Grindstones manufactured.....	4	9,297	12,676
Hats and caps.....	481	960	5,503
Household effects, n.e.s.....	118,995	1,115,472	1,259,291
India rubber, manufactures of.....	39,378	9,994	128,067
Iron and steel and manufactures of.....	123,459	809,431	1,046,279

CANADIAN EXPORTS—Continued.

ARTICLES	Great Britain.	United States	All Countries.
Stoves.....	\$665	\$4,712	\$13,428
Castings, n.e.s.	37,175	19,747	82,385
Pig iron ..	118,142	34,206	160,227
Machinery, n.e.s.	99,765	84,081	350,040
Sewing machines.	541	11,098	20,663
Typewriters ..	111,600	944	150,914
Hardware, n.e.s.	33,200	14,278	98,288
Leather, sole ..	1,585,174	24,838	1,733,621
Leather, upper.	182,936	805	191,058
Leather, n.e.s.	147,556	41,626	225,968
Boots and shoes.	5,620	26,954	152,116
Harness and saddlery	1,459	3,683	9,240
Leather—other manufactures of.	12,150	74,271	94,024
Lime.....	None	83,962	104,028
Liquors—whisky	47,949	428,149	570,097
Metals n.o.p.	96,643	61,859	542,401
Musical instruments—organs.	200,838	4,452	279,106
“ “ —pianos	9,490	40,136	68,631
Paper, n.e.s.	447,536	180,563	1,083,620
Plumbago, manufactures of.	None	7,130	14,644
Soap	10	2,330	20,474
Tar.....	29	24,299	27,775
Tin—manufactures of	636	14,618	67,529
Vehicles—Carriages	450	2,983	78,045
“ Carts.....	1,493	2,741	13,375
“ wagons.....	249	1,391	3,681
“ bicycles.....	889	1,904	206,846
“ other.....	1,780	12,001	16,889
Household furniture	168,745	22,542	340,251
Doors, sashes and blinds	153,567	3,364	187,558
Wood pulp.....	548,720	1,807,442	2,409,074
“ manufactures of, n.e.s.	275,718	56,375	395,047
Woolen goods ..	6,403	12,383	57,004
Total ..	\$3,358,787	\$6,838,622	\$17,735,861

TOTAL VALUE OF EXPORTS.

The total value of all exports of Canadian produce in 1904 were :

Manufactures.....	\$6,231,094	\$7,416,498	\$19,864,049
The mine.....	641,072	32,025,193	33,626,739
The fisheries.....	3,084,930	4,224,226	10,759,029
The forest.....	14,962,927	15,009,838	33,091,922
Animals and their produce..	57,920,010	4,217,653	63,812,117
Agricultural products	27,266,656	3,863,021	57,138,875
Miscellaneous ..	14,203	100,456	121,708
Total	\$110,120,892	\$66,856,885	\$198,414,439

The following statement shows the value of merchandise imported into and exported from Canada through United States ports, from and to foreign countries in 1904 :

	Imports.	Exports.
Great Britain	\$12,685,878	\$29,274,168
Entire British Empire	16,370,811	32,655,899
Other Countries	8,791,568	5,144,088

Total in-transit trade through United States :

Imports.....	\$25,162,379
Exports	37,799,987
Total	\$62,962,366

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CAPTAINS OF INDUSTRY.

The following items of information, which are classified under the title "Captains of Industry," relate to matters that are of special interest to every advertiser on these pages, and to every concern in Canada interested in any manufacturing industry whatever, this interest extending to supply houses also.

If a new manufacturing enterprise of any kind is being started, or an electric lighting plant instituted, or an electric railroad, or a telephone, or a telegraph line is being constructed; or a saw mill, a woolen, cotton, or knitting mill; or if any industrial establishment has been destroyed by fire with a probability of its being rebuilt, our friends should understand that possibly there may be something in the event for them. Do you catch on to the idea?

The starting of any such concern means a demand for some sort of machines, machinery, or supplies, such as steam engines and boilers, shafting, pulleys, bolting, lubricants, machinery supplies, wood or iron working machinery, ventilating and drying apparatus; pumps, valves, packing, dynamos, motors, wire, arc and incandescent lamps, and an infinite variety of electrical supplies, chemicals, acids, alkalies, etc. It is well worth the while of every reader of the Canadian Manufacturer to closely inspect all items under the head of Captains of Industry.

The United Empire Loyalist Association of Ontario will present an address to the Governor-General expressing approval of "some form of inter-Imperial preferential tariff between the various parts of the British Empire," and a contribution "towards the expense of Imperial naval responsibilities" on the part of Canada. The suggestion is made that the Dominion should undertake to provide for the royal navy a battleship, fully equipped and armed, every five years, thus making a fixed periodical contribution of substantial value and definite purpose. The ships to be thus built, it will be further suggested, should bear the name of some place in Canada, especially selected with a view to sentiment or historical associations. The Governor-General will be asked to initiate and promote such action as he and his Ministers may deem proper.

The Saturday Night, Limited, Toronto, have been incorporated with a capital of \$50,000, to acquire the publication Saturday Night, and to carry on a printing and publishing business. The provisional directors include E. E. Sheppard, E. B. Bitchart and R. A. Montgomery, Toronto.

J. W. Scales, Limited, Toronto, have been incorporated with a capital of \$40,000, to manufacture tobacco, cigars, etc., and to acquire the business of J. W. Scales. The provisional directors include Geo. Milligan, A. Milligan and C. H. Sales, Toronto.

The Madoc Mining Co., a United States corporation, have been licensed to carry on a sulphur, brimstone and iron pyrites mining business in Ontario with a capital of \$40,000. H. J. Mills, Madoc, Ont., their attorney.

The Premier Electric Light & Power Co., Wallaceburg, Ont., have been incorporated with a capital of \$40,000, to produce electricity for light, heat and power purposes. The provisional directors include W. D. McKee, D. C. Macdonald and H. A. Stonehouse, Wallaceburg, Ont.

The Canadian Shredded Wheat Co., Toronto, Ont., have been incorporated with a capital of \$100,000, to manufacture foods, etc. The provisional directors include J. Henderson, J. Hewitt, and D. F. Fasken, Toronto.

The Toronto Pressed Steel Co., Toronto Junction, Ont., have been incorporated with a capital of \$100,000, to manufacture railway supplies, contractors supplies, etc. The provisional directors include J. R. L. Starr, J. H. Spence and T. E. Wilson, Toronto.

The Keenan Woodenware Mfg. Co., Owen Sound, Ont., have been incorporated with a capital of \$100,000, to manufacture woodenware, etc. The provisional directors include J. E. Keenan, J. C. Keenan and W. P. Keenan, Owen Sound, Ont.

The French River and Nipissing Navigation Co., Sturgeon Falls, Ont., have been incorporated with a capital of \$25,000, to construct and navigate boats, vessels, scows, etc. The provisional directors include J. A. Clark, J. W. Hendrie, Sturgeon Falls, and J. M. Harris, Hamilton, Ont.

The Eureka Planter Co., Limited, Woodstock, Ont., have been incorporated with a capital of \$10,000, to acquire the business of the Eureka Planter Co., and to manufacture agricultural implements, etc. The provisional directors include J. A. Straith, S. B. Best and C. N. Choate, Windsor, Ont.

The Hamilton Incubator Co., Hamilton, Ont., have been incorporated with a capital of \$10,000, to manufacture farm implements, incubators, etc. The provisional directors include D. H. Fletcher, G. M. Jones, Hamilton, and J. Fletcher, Mount Albion, Ont.

The Boranza Creek Gold Mining Co., Toronto, have been incorporated with a capital of \$1,750,000, to carry on a mining business. The provisional directors include J. Payne, R. Credicott and A. Foster, Toronto.

The Hamilton Cataract Power, Light & Traction Co., have recently started the two 5,000-kilowatt Westinghouse generators in their DeCew Falls Power Station in Ontario. Power is supplied from Welland Canal feeders, tapped in about 14 miles above the power station, and at the station the water has a head of 267 feet. The generators are of the two-bearing type, direct connected to Escher-Wyss water-wheels, and run at a speed of 286 r.p.m. They generate 3-phase current at a frequency of 66 cycles, and a pressure of 2,400 volts. The power is

transmitted to the city of Hamilton, Ont., where it is used for lighting, street railway and manufacturing purposes. A reserve steam-driven station is located at Hamilton, which contains two 1,000-kilowatt Westinghouse generators. The entire station at high tension apparatus are of Westinghouse design. The company have two separate three-phase transmission lines to Hamilton, a distance of about 35 miles. The high tension apparatus is designed for a pressure of 40,000 volts, but will be operated for a time at 20,000 volts. Mr. Wm. C. Hawkins is general manager of the Hamilton Cataract Power, Light & Traction Co., and is also engineer in charge of the installation.

Messrs. S. McNairn & Co., Limited, Toronto, have been incorporated with a capital of \$150,000, to acquire the business of S. McNairn and to carry on a general warehousing and storage business. The provisional directors include J. C. Stroyan, T. L. Carruthers and W. F. Morley, Toronto.

The Acme Mfg. Co., Toronto, have been incorporated with a capital of \$40,000, to manufacture weighing scales, machinery, engines, boilers, etc. The provisional directors include J. T. Eastwood, N. Murphy and E. E. Wallace, Toronto.

The Canada Tin Plate & Sheet Steel Co., Morrisburg, Ont., have been incorporated with a capital of \$1,500,000, to manufacture iron, steel, tin, etc. The provisional directors include N. D. Lewis, Cardiff, Wales, J. A. Meldrum and W. D. Cavendish, Toronto.

The Buffalo & Leamington Oil & Gas Co., Windsor, Ont., have been incorporated with a capital of \$100,000, to produce petroleum oil, natural gas, salt, etc. The provisional directors include E. Wigle, Leamington, Ont., C. L. Meyer, Pelee, Ont., and L. J. Gemmill, Perth, Ont.

The Inland Revenue Department, Ottawa, are inviting tenders for the supply of wood naphtha for three years, to be used in the manufacture of methylated spirits.

The Department of Public Works, Ottawa, are inviting tenders for the postal pneumatic tube systems for Montreal and Toronto as follows:—For laying and jointing in the City of Montreal 4,000 lineal feet of double line of smooth-bored cast iron piping, to be supplied by the Government, and for furnishing, installing and erecting all the necessary special castings, elbows, and fittings, including the terminal receiving and transmitting machinery and carriers. Also for laying and jointing in the City of Toronto 18,000 lineal feet of double line of smooth-bored cast iron piping, to be supplied by the Government, and for furnishing, installing, and erecting all the necessary special castings, elbows, and fittings, including the terminal receiving and transmitting machinery and carriers.

R. Cameron, Almonte, Ont., has been awarded the contract for the erection of a public building at Hawkesbury, Ont., at a cost of about \$12,000.

The Department of Railways and Canals, Ottawa, are inviting tenders for the building and equipping with machinery of a steel gate lifter for the Williamsburg Canals.

The Hotel Royal, at Bobcaygeon, Ont., was destroyed by fire January 12. Loss about \$3,000.

It is stated that negotiations are under way between the officials of the Grand Trunk Pacific Railway and the representatives of the Lake Superior Corporation, and if they go through successfully the first big rail orders for the new trans-continental line will be booked by the Algoma Steel Co. of the "Soo" mill.

The congregation of the Dovercourt Presbyterian Church, Toronto, will erect a new church building. For further particulars apply to G. T. Graham, Toronto.

The Phoebe Street school building, Toronto, was destroyed by fire January 13. Loss about \$15,000.

Schoolhouse No. 4, near Rymal Station, Ont., was destroyed by fire January 12. Loss about \$3,000.

The Irving Umbrella Co.'s premises, Toronto, were damaged by fire January 12. Loss about \$1,000.

The Bishop Fur Co.'s plant at Sandwich, Ont., was destroyed by fire January 8. Loss about \$25,000.

The plant of the Saugeen Mineral Water Co., at Southampton, Ont., was destroyed by fire January 9.

Messrs. Reid Bros. billiard table factory at Toronto, was damaged by fire January 6. Loss about \$5,000.

Wm. Wade's apple storage at Brighton, Ont., was destroyed by fire January 7. Loss about \$10,000.

The London Brass Works Co.'s moulding shop at London, Ont., was destroyed by fire a few days ago. Loss about \$3,000.

Messrs. Nelson & Bros.' hardware establishment at Windsor, Ont., was destroyed by fire January 10. Loss about \$60,000.

Messrs. Gardner & Co.'s hardware store at Woodstock, Ont., was destroyed by fire January 10. Loss about \$30,000.

Messrs. Dawson & Riley's storehouse at Niagara Falls, Ont., was destroyed by fire January 6. Loss about \$1,500.

The Bank of Hamilton, with head office in Hamilton, Ont., will open another branch bank in Toronto at the corner of College Street and Ossington Ave.

The Burgess-Powell Drug Co., Toronto, have purchased the Yonge Street stores in the block above King Street, occupied by the Royal Shoe Co., Canadian Music Co., and E. Scheuer, jeweller, which they will remodel for their own use.

The Railway Commission, Ottawa, has issued an order approving of plans and specifications for nine bridges on the Toronto and James Bay Railway, crossing the Don River, between the fourth and fourteenth mile of its line out of Toronto.

It is proposed to enlarge the House of Commons at Ottawa.

The Fensom Elevator Co.'s works at Toronto, were destroyed by fire January 15. Loss about \$25,000.

Chief Architect David Ewart, Ottawa, will prepare plans for a vault, for the Canadian Mint at Ottawa, capable of storing \$100,000,000 in gold.

The Middlesex & Canada Railway Co., Niagara Falls, Ont., are applying to the Dominion Parliament for a charter to construct a railway from the Niagara River to London, Ont.

The St. Mary's Quarries, Limited, St. Mary's, Ont., have been incorporated with a capital of \$200,000, to quarry and manufacture stone, portland cement, bricks, etc. The provisional directors include A. Douglas, P. T. Garner and J. W. Graham, St. Mary's.

The Ontario Cigar & Tobacco Co., Kingsville, Ont., have been incorporated with a capital of \$40,000, to manufacture cigars, tobaccos, etc. The provisional directors include E. Bailey, A. Wigle and T. J. Salmoni, Kingsville.

The Manitoulin Commercial Co., Little Current, Ont., have been incorporated with a capital of \$100,000, to carry on a general shipping and forwarding business, etc. The provisional directors include B. H. Turner, T. C. Sims, Little Current, and C. L. D. Sims, Manitowaning, Ont.

The Canadian Corundum Wheel Co., Limited, Hamilton, Ont., have been incorporated with a capital of \$40,000, to manufacture corundum and emery wheels, machinery, etc. The provisional directors include L. Sherk, H. E. Sherk and G. F. Webb, Hamilton.

T. Lindsay, Limited, Ottawa, have been incorporated with a capital of \$600,000, to carry on a general departmental store business. The provisional directors include T. W. A. Lindsay, G. A. Wanless and S. G. Lindsay, Ottawa.

Messrs. A. Weller & Co., Limited, Toronto, have been incorporated with a capital of \$40,000, to acquire the business of A. Weller & Co., and to carry on the business of builders, contractors, etc. The provisional directors include Jas. Stares, Wm. Weller and Jas. Weller, Toronto.

The Wilberforce Lumber Co., Durham, Ont., have been incorporated with a capital of \$40,000, to manufacture lumber, railroad ties, shingles, etc. The provisional directors include Geo. Sparling, A. S. Hunter and D. Jamieson, Durham.

The Meikle Co., Port Arthur, Ont., have been incorporated with a capital of \$100,000, to manufacture fancy goods, china, toys, etc. The provisional directors include J. L. Meikle, A. G. Hewish and N. C. Lunan, Port Arthur.

The Stratford Mill Building Co., Limited, Stratford, Ont., have been incorporated with a capital of \$200,000, to manufacture mill machinery, boilers, engines, etc. The provisional directors include Wm. Preston, E. McL. Preston and J. B. Greig, Stratford.

The Brick Mfg. & Supply Co., London, Ont., have been incorporated with a

capital of \$40,000, to manufacture brickers' material and supplies, etc. The provisional directors include Wm. F. R. G. Wilson and Thos. Jones, London.

The Toronto Bedding Co., Toronto, have amalgamated with the Al Feather & Down Co., of Montreal, the firm name of the Ideal Bedding Limited.

Messrs. Sullivan & Langdon, Kingston, Ont., have been awarded the contract for the erection of the Canadian mill at Ottawa, at a cost of \$60,000.

The Pere Marquette Railway Co. are to erect a 1,000 foot dock at County, Ont.

The Temiskamingue & Mechi-Co., Ottawa, have been incorporated with a capital of \$100,000, to construct a dam across the southern outlet of the Temiskamingue. The provisional directors include C. B. Rowell, R. J. and R. V. Sinclair, Ottawa.

The Carlsbad Eastman's Spring Co., Ottawa, have been incorporated with a capital of \$300,000, to operate springs, and to manufacture soda water, seltzer, etc. The provisional directors include W. L. Marler, Ottawa, Foster, Knowlton, Que., and T. L. Eastman's Springs, Ont.

A by-law was passed at Chatham, Ont., granting \$41,000 for the erection of a new market building.

The waterworks at Belleville, Ont., will be improved at a cost of \$100,000.

Messrs. Henry Birks & Sons, jewellers, Montreal, have prepared plans for improvements to the Boisseau building at Toronto, which they will occupy as soon as completed.

The Canadian Corundum Wheel Co., Hamilton, Ont., are building an addition to their works in order to take up the manufacture of vitrified wheels.

The Globe Mfg. Co., Walkerville, Ont., have prepared plans for the erection of a new factory in East London, and will shortly call for tenders.

L. D. Brown, Gravenhurst, Ont., is inviting tenders for the erection of a Methodist church building at Bay of Quinte, Ont.

Messrs. Hains Bros., New York, Ont., have been awarded the contract for the construction of the Hamilton, Brantford & Brantford Railway Co.'s road, at a cost of which will be about \$500,000.

Messrs. Blonde Bros., Chatham, Ont., have been awarded the contract for the erection of the new Roman Catholic church at Stratford, Ont., at a cost of about \$20,000.

The City Council of Kingston, Ont., have granted J. M. Campbell a franchise to bring electric power from Kingston Mills to that city.

N. Balfe will erect a saw mill at Belleville, Ont., at a cost of \$3,000.

A new public school building will be erected at Alexandria, Ont., at a cost of \$8,000.

A new public school building will be erected at Walkerville, Ont., at a cost of \$50,000.

The J. D. Shier Lumber Co., Bracebridge, Ont., have been awarded the contracts for building stations on the Temiskaming & Northern Ontario Railway.

The new five-stamp mill, built by The Wm. Hamilton Mfg. Co., Peterborough, Ont., for the Star of the East Gold Mining Co., started operations a few days ago, and is doing good work. The mine is situated in Barrie Township, and is a most promising one. About 20 tons of ore have already been put through the mill, and it is expected when things are running smoothly, that the amount put through every day will be ten tons.

The company are running the mill by steam at the present time, but the intention is to adopt electricity as soon as possible. There has been built a six-inch pipe line, 4,000 feet long, the drop in which is 65 feet, and it is proposed to utilize the water power facilities, thus shown to be easily obtainable, by which to generate electricity. There are at present about 50 men working for the company.

The Ottawa City Council are applying to the legislature for authority to issue debentures to the extent of \$500,000, to purchase water power to be used for supplying power for street lighting purposes.

The Canada Middlesex Railway Co., are applying for incorporation to construct an electric railway through St. Catharines, Brantford, Woodstock and London, Ont.

The Mara's dry goods store at London, Ont., was destroyed by fire January 16. Loss about \$40,000.

Messrs. R. Anderson & Co., machinists, Toronto, will erect a new two story machine shop and will install an 8 h.p. gasoline engine for power purposes.

Among the contracts the Jones & Sons Electric Co., Toronto, are now working on are, an electric motor and electric plating dynamo for W. J. Cumstons, Winnipeg, Man., an electric generator for the Page-Hersey Iron & Tube Co., Guelph, Ont.; an electric lighting plant for the McCann Milling Co., at Brantford; two 500 light dynamos, directed to Robb engines for the W. A. Yorkray Co., Toronto. The firm have just completed the installation of a complete electric lighting plant for the Bradford Chair Co., Stratford, Ont.

The new cement pier in course of construction to extend the breakwater in connection with the Louise docks, Quebec in 1904, was damaged by floating ice January 14. Loss about \$100,000.

Wm. McDonald has given \$10,000 to the Students' Union at Montreal, to which he had already contributed \$25,000 and a site for the new building.

Wm. Davies Provision & Packing Co. will erect a building in Montreal for packing purposes.

Messrs. G. A. Holland & Sons Co., Montreal, will enlarge their departmental building.

The directors of the Canadian Pacific Railway Co., Montreal, have adopted plans for two new steamships for the

Atlantic fleet. The contracts were awarded to the Fairfield Shipbuilding Co., Glasgow, Scotland. They will be 14,500 tons, 550 feet between perpendiculars, with 65 foot beam. They will have a speed of twenty knots per hour, and will be able to carry mails between Queens-town and Rimouski in five and a half days.

The Canadian Ammunition Co., Montreal, have been incorporated with a capital of \$500,000, to manufacture cartridges, ammunition, etc. The provisional directors include L. A. Boyer, H. D. Anthier and J. E. Lareau, Montreal.

The Dominion Textile Co., Montreal, have been incorporated with a capital of \$10,000,000, to manufacture cotton, wool, yarns, shoddy, etc. The provisional directors include D. Yule, Hon. L. J. Forget, D. Williamson and G. A. Grier, Montreal.

N. G. Valiquette, Limited, Montreal, have been incorporated with a capital of \$250,000, to acquire the business of N. G. Valiquette and to manufacture furniture, rugs, tapestries, etc. The provisional directors include N. G. Valiquette, F. X. Valiquette and L. Foucher, Montreal.

Messrs. Boulter, Waugh & Co., Montreal, have been incorporated with a capital of \$500,000, to manufacture hats, garments, furs, etc. The provisional directors include Geo. Boulter, G. A. R. Boulter, Montreal, and Wm. Waugh, Westmount, Que.

The Commercial Twine Co., Limited, Montreal, have been incorporated with a capital of \$10,000, to acquire the business of the Commercial Twine Co., and to manufacture twine, cordage, etc. The provisional directors include J. R. Converse, J. Marsden and Geo. Hiam, Montreal.

The Rex Remedy Co., Montreal, have been incorporated with a capital of \$10,000, to manufacture medical and chemical preparations, etc. The provisional directors include E. C. Ott, P. F. Richardson, Montreal, and R. Brown, Ottawa.

The Leak Fur Mfg. Co., Montreal, have been incorporated with a capital of \$40,000, to manufacture hats, furs, etc. The provisional directors include H. S. Stern, J. T. Smith and R. C. McMichael, Montreal.

Gold Stock Manufacturers, Limited, Montreal, have been incorporated with a capital of \$20,000, to manufacture jewelry, etc. The provisional directors include T. J. Fisher, A. J. Hart and H. J. Ross, Montreal.

The Anglo-Canadian Leather Co., Montreal, have been incorporated with a capital of \$2,000,000, to manufacture leather, and to carry on a general tanning business. The provisional directors include C. T. Shaw, B. A. Shaw and F. C. Bush, Montreal.

The Montreal branch of the Canadian General Electric Co., have closed an important contract for the erection of a turbine power plant in Montreal for the Canada Car Co.

The Quebec & Lake Huron Railway

Co., Quebec City, are considering constructing a railway through the northern parts of Quebec and Ontario.

Montreal capitalists will erect a ten story hotel in that city at a cost of \$3,000,000. President Hays, of the Grand Trunk Pacific, is said to be one of the promoters.

Messrs. Granger Bros., book and stationery warehouse at Montreal was damaged by fire January 8. Loss about \$20,000.

The Royal Victoria Hospital at Montreal was partially destroyed by fire January 14. Loss about \$50,000. It will be rebuilt immediately.

The Railway Spring & Supply Co., Montreal, have been awarded the contract for supplying machinery for the Cornwall, Ont. shops.

The Anglo-Newfoundland Development Co., St. John's, Nfld., have been incorporated with a capital of \$5,000,000, to manufacture pulp and paper. The company will erect a plant at a cost of \$4,000,000. The provisional directors include Sir Alfred Harmsworth, London, England, Sir E. P. Morris, and Hon. A. B. Morine, St. John's, Nfld.

Nova Scotia capitalists have purchased Paul Lea's woodworking factory at Moncton, N.B., and will greatly enlarge same.

The bonus of \$250,000 offered by the City of Sydney, N.S., two years ago to any company which would start a ship-building industry in that city within three years is being sought by a company recently formed of which Mr. J. T. Burchell is president and Wm. Hayes, secretary. They propose to erect a ship-building plant capable of turning out one 15,000 ton steamer every year, and also to build a floating dry dock which will hold an 8,000 ton vessel.

Messrs. F. E. Sayre & Co.'s lumber storehouse at St. John, N.B., was destroyed by fire January 8. Loss about \$25,000.

G. H. Love, town clerk, Lunenburg, N.S., is inviting tenders for the construction of a sewerage system in that town.

H. J. McDonald, New Glasgow, N.S., has been awarded the contract to double track the Intercolonial Railway from New Glasgow to Stellarton, N.S.

Messrs. Rhodes Curry & Co., Amherst, N.S., have secured a contract from the Halifax and Southwestern Railway Co., for the building of 100 box cars, 50 flat cars and two conductor's vans, also for 2,000 car axles for the Canadian Pacific Railway Co.

The Ross business block in Sydney, N.S., was destroyed by fire January 14. Loss about \$35,000.

The New Brunswick Iron Co., have been incorporated at Fredericton, N.B., with a capital of \$1,000,000, to mine, quarry, smelt and refine iron, steel, coal, etc. The provisional directors include J. S. McLennan, Sydney, N.S., C. W. Young, St. Stephen, N.B., and L. B. Knight, St. John, N.B.

The Rosebank Lumber Co., will erect a sawmill at Newcastle, N.B.

The Somerset Brick Co., Somerset, Man., have been incorporated with a capital of \$60,000, to manufacture bricks, tiles, etc. The provisional directors include D. R. Stewart, G. E. Dixon and W. R. Robinson, Winnipeg, Man.

The Larson Lumber Co., have been licensed to manufacture lumber, etc., in Manitoba, and have appointed Messrs. Case & Chandler, Winnipeg, to be their agents.

President Mackenzie of the Canadian Northern Railway Co., has announced the decision of his company to extend their rails to Hudson's Bay from their Prince Albert branch. The announcement settles finally the possibility of the company seeking a north route to the ocean by either the much-talked-of line north from Winnipeg or in the east in Ontario. The President's statement came in answer to questions as to whether the company was doing anything in British Columbia in reference to a trans-continental system. "We are not in such a hurry to get to the coast," answered Mr. Mackenzie; "as we would rather devote our attention to a line to Hudson's Bay. It is the intention of the company to strike Hudson's Bay by a line starting from the Prince Albert branch." This decision indicates the success of the exploration party that was sent out by the company last spring into northeast Saskatchewan to explore, thence northeasterly, with a view to locating a suitable route to Hudson's Bay. It is expected that the company will begin the building of the Hudson's Bay line at some point between Melfort and Tisdale, on the Prince Albert branch. The railway will run northeasterly for a distance of about 500 miles, it is expected, while the company may also take advantage of Nelson River in completing the route. President Mackenzie announces that the building of new terminals at Winnipeg would be begun in the spring. The most important railway construction to be done would be the completion of the main line to Edmonton next summer. The completion of the Prince Albert branch in the spring is planned, and the building of a branch line from Swan River, on the Prince Albert branch, into the Swan River valley country. The company expect to have the line from Toronto to Parry Sound, Ont., about 160 miles in length, completed next fall.

The McDonald-McMillan Co., Winnipeg, Man., will increase their capital from \$150,000 to \$1,000,000.

The Pulford Drug Co., Winnipeg, Man., have changed their name to the Pulford-Leonard Drug Co.

The Central Canada Railroad & Power Co., Winnipeg, Man., are applying to the legislature of Manitoba for incorporation for the purpose of building a line of electric railway to the Winnipeg River, and developing electric power.

The House Furnishings Co., Winnipeg, Man., have been incorporated with a capital of \$400,000, to manufacture furniture, carpets, hardware, etc. The provisional directors include Wm. Grundy,

C. R. Steele and W. G. McFarlane, Winnipeg.

The Hingston-Smith Arms Co., Limited, Winnipeg, Man., have been incorporated with a capital of \$50,000, to acquire the business of Hingston-Smith Arms Co., and to manufacture fire-arms, ammunition, sporting goods, etc. The provisional directors include M. Putnam, H. Archibald and H. B. Totten, Winnipeg.

The Neepawa Theatre at Winnipeg, Man., was destroyed by fire January 12. Loss about \$50,000.

Messrs. Hoover & Co.'s overall factory at Winnipeg, Man., was destroyed by fire January 10. Loss about \$100,000.

The Rainy River Improvement Co., Winnipeg, Man., recently incorporated with a capital of \$5,000,000, will construct a concrete dam across the Rainy River at a cost of \$300,000. A paper mill and a flour mill will also be erected. Those interested are E. W. Backus, A. E. Horr and G. L. Rockwood, Minneapolis, Minn.

J. Galt, C.E., Toronto, has examined the Rosseau river, near Emerson, Man., and has reported favorably on it as a source for economical development of water power in combination with long distance electrical transmission.

Messrs. Fortin & Lemoine, Pembroke, Ont., have been awarded the contract for the erection of a public building in Prince Albert, N.W.T., at a cost of about \$900,000.

The Moose Jaw & Edmonton Railway Co., Moose Jaw, N.W.T., are applying for incorporation with power to construct a railway from a point near Moose Jaw and thence in a northwesterly direction to Edmonton, N.W.T.

The Grand Trunk Pacific Railway Co., have made an agreement with the city of Edmonton, N.W.T., making it a divisional point with shops and terminals, the city paying the company \$100,000.

The Gold Bug Mining Co., have been incorporated at Victoria, B.C., with a capital of \$250,000, to carry on a mining, milling and smelting business, etc.

The Herald Publishing Co., have been incorporated at Victoria, B.C., with a capital of \$15,000, to carry on a printing, publishing and lithographing business.

The Empire Lumber Co., will soon erect a large lumber mill at Comoplix, B.C.

The Kamloops Lumber Co., are rebuilding their mill at Kamloops, B.C., which was destroyed by fire recently.

The Elk River Lumber Co., will erect a large lumber mill at Fernie, B.C.

The Canadian Pacific Railway Co., will erect a jetty wharf at Vancouver, B.C., at a cost of \$250,000. The company will also construct tracks and trestles along the wharf-front at a cost of \$120,000.

The Thompson River Lumber Co., have been incorporated at Victoria, B.C., with a capital of \$10,000, to manufacture lumber, etc.

The Nelson Copper Syndicate, Limited,

have been incorporated at Victoria, B.C., with a capital of \$10,000, to carry on mining, milling and refining business.

The Similkameen Water-Works Co., Hedley, B.C., have been incorporated with a capital of \$10,000, to construct and operate a water-works system in the town of Hedley, B.C.

A large wharf which will accommodate ships of the largest tonnage will be erected at Esquimalt, B.C.

The Burt Mfg. Co., Akron, Ohio, has recently shipped the following:—One 12 inch exhaust head to the American Steel & Wire Co., one 24 inch exhaust head to the National Steel & Wire Co., and one gallon Cross oil filter to the National Tube Co., Keesport, Pa., making 70 exhaust heads and 154 oil filters now being made by the United States Steel Corporation. One large oil filter to the Munising Paper Co., Munising, Mich., also one to the Singer Sewing Machine Co., a 90 gallon Cross oil filter to the Atlantic Manufacturing Co., Providence, R.I., a 20 inch exhaust head to the Crane Co., Chicago, Ill., and another of the same size to the L. W. power house at San Jose, Cal., and one large Cross oil filter to the United States Coal & Coke Co., for use in their mine in West Virginia. The Burt Co. has just received a very flattering testimonial from the De Laval Steam Turbine Co. in reference to the large oil filter which they used in their exhibit at the St. Louis Exposition.

ELECTRICITY.

Electrical machinery and appliances of all kinds, electrical power plants, and other progress in the electrical industry will be noted here.

The town of Eganville, Ont., will install a new dynamo in their electric lighting plant.

The Westinghouse Electric & Mfg. Co., Pittsburg, Pa., have submitted plans to the Grand Trunk Railway Co. for substitution of electricity for steam power in the Sarina tunnel. The plans provide for the third rail for the interior of the tube and the overhead wire on the approaches. Owing to the heavy weight required the overhead system is recommended on the approaches. The plan calls for the erection of the necessary buildings on the company's property on the banks of the St. Clair River, direct over the tunnel. They also provide for an elaborate system of illumination for the great underground passage.

The Alberta Telephone Co., will install a complete telephone system through the Crow's Nest Pass district which is east of the summit.

B. E. Drew will install an electric lighting plant at Camborne, B.C.

The city of Reichenberg, Bohemia, Austria, will erect large electric works.

The municipality of Valladolid, Spain, will receive tenders to erect an electric plant for lighting the city.

Concessions for the building of electric tramways have been asked for by the town of Vigo, Spain, by the Sociedad Col-

Sanatorio de la Playa de la Malvarrosa, and by the Compania Electrica Madrilona de Traction, the last two for city tramways in Madrid. Particulars may be obtained by addressing "Direccion General de Obras Publicas," Madrid, Spain. An electric tramway will be established between Badajoz and Cuesta de Castilleja, and another will be built between Azcoita and Zumaga.

The government of Victoria, Australia, plans the construction of an electric tramway between St. Kilda and Brighton Beach, to cost \$455,000.

A large electrical central station will be erected at Stanz, on Lake Lucerne, Switzerland.

The construction of an electric plant for lighting the city of Salamanca, Spain, will be awarded by contract.

The municipality of Oberurnen, Switzerland, contemplates the erection of electric works.

Messrs. Hyde Bros. & Co., Pittsburg, Pa., have installed a battery of 2,000 h.p. of Hyde water tube boilers in the plant of the English McKenna Process Co., Birkenhead, England. Mr. Henry L. V. Hyde has been in England several months superintending the installation of the plant.

The Burt Mfg. Co., Akron, Ohio, have just made a shipment of 21 of their celebrated oil filters to their agency at Havana, Cuba. They have worked up an extensive export trade in many other countries, and recently made a shipment of nine oil filters and six exhaust heads to their agency at Sydney, Australia, 18 oil filters to their agency at St. Petersburg, Russia, three oil filters to their agency at Calcutta, India, four oil filters to Spain, two 20 inch exhaust heads to agency at London, England. These facts verify the merits of the Burt Mfg. Co.'s output.

FUEL.

Names of fuel dealers see "Coal and Coke" in Classified Index.

The fuel supply question is a most important one to Canadian manufacturers. The information published in this department will keep the readers posted on sources of production.

An approximate estimate of the year's output by the Crow's Nest Pass Co., at Fernie, B.C., has been made. It amounts to 774,000 tons of coal and 244,000 tons of coke. Of the former, 163,000 tons were exported and of the latter 106,000 tons were exported. Over a quarter of a million dollars were expended on improvements, a considerable decrease over last year, but in every other respect the figures show a marked increase over any other year. The coke export amounts to three times that of any previous year. The coal export shows a marked increase. This is due to the fact that the Great Northern Railway Co. is not being taken as much as last year, but since the building of the line at Fernie, B.C., this trade has greatly

increased and the probabilities are that next year the coal export will keep step with the coke export.

A new coal pool is being formed by 16 mining companies of Harrison, Belmont and Jefferson counties, Ohio. The pool will represent an output of about 6,000 tons of coal a day, and when formed promises to be one of the most powerful factors in the coal fields of eastern Ohio. There is a large number of mines in the Pittsburg vein district which, it has been felt a long time, were not in a position to be worked to their full capacity on account of the fact that they were compelled to sell, contract and do their general business through separate agents. There probably will be a meeting at Wheeling of the representatives of the mines that are to go into the association. At that meeting final arrangements will be effected. Several Clevelanders are interested in the project, but the majority of those interested reside in the coal field.

During the past year the International Coal & Coke Co., Coleman, Alberta, of which H. N. Galer, formerly of the Granby mines, is vice-president, was occupied in developing what are known as Nos. 2 and 4 seams. They have done about two miles of work in headings, airways and crosscuts, so that the mine is sufficiently developed at the present time to maintain an output of between 800 and 1,000 tons per day. Coke ovens of the standard bee-hive type to the number of 100 have been built. Over two miles of railway sidings have been graded and put in, connecting with the main line of the C.P. Crow's Nest railway. The mine machinery is all run by electricity with the exception of the haulage, which is provided for by a Rand drill air-compressor, which compresses to 1,000 pounds pressure. This machine is located in the powerhouse, and supplies the air to an air locomotive, which hauls the coal from inside the mine to the tippie. An 11 foot Capell fan has been installed. This is driven by a 150 h.p. motor. The tippie building contains two screens and two 40 foot picking tables, which are run by a 25 h.p. motor. As the coal comes off the table it drops into a storage bin that will hold 2,000 tons of coal. The coal is loaded into railway cars through shoots from this bin. An Ottumwa box car loader, with a capacity for loading 150 tons per hour, loads the railway cars. The coal that falls through the screens drops into a slack bin, which will hold 1,000 tons.

The output of the Dominion Coal Co.'s mines at Glace Bay, N.S., for the month of December was 199,466 tons. The output for the year was as follows:—Dominion No. 1, 1,415,192; Dominion No. 2, 634,624; Dominion No. 3, 347,264; Caledonia, 519,457; Reserve, 768,256; Hub, 143,922; Dominion No. 6, 193,152. Total for 1904, 3,023,522 tons. Total shipments, 2,980,037 tons. Shipments were, of course, considerably curtailed in December by the close of navigation in the St. Lawrence. In various collieries hard work is being very actively prosecuted, to give abundance of room, in anticipation of a very large output when navigation opens.

OPPORTUNITIES.

Manufacturers and others in need of machinery, supplies, etc., of any kind are requested to consult our advertising columns, and if they cannot find just what they want, if they will send us particulars we will make their wants known free of cost, and in this way secure the attention of those who may be able to supply them. No charge for publishing what is wanted nor for giving information. When writing to enquirers kindly mention The Canadian Manufacturer.

The Bulgarian Government will expend \$868,500 for the purchase of 20 locomotives, 550 freight cars, 60 passenger cars, and 10 mail cars.

The Italian Government is about to make large additions to the rolling stock (locomotives and cars) of the State railroads.

The Roumanian Government will soon begin the construction of a railroad line from Valea Caprei to Turn-Severin.

An electric power station for the Danube Canal will be built. Application for information should be made to the Danube Commission, No. 1 Kaiser Ferdinandplatz, Vienna, Austria.

The department of the Belgian State railroads will call for tenders for the delivery of 1,000 freight cars of 15 tons capacity each, 700 freight cars of 10 tons capacity each, 100 baggage cars, and 1,200 coal cars.

The Mining & Furnace Co., Elba, intend building a large steel works, to cost about \$1,500,000, on the island of Elba.

The contract for the upper structure of the railroad bridge across the North Sea Canal at Zaandam, Netherlands, will be awarded by the directors of the Netherlands State railways at Amsterdam; estimated cost, \$293,170.

J. H. Hampson, City of Mexico, has received the concession for building a railroad from Rancho del Guarda to Canada de Nepanupa, in the Federal District.

The Dutch minister for the colonies at The Hague, Netherlands, will soon award contracts for a large amount of materials for railroad use, also the ironwork for railroad bridges, iron tubing, etc.

The Russian railway department has decided to purchase a number of automobiles to facilitate the transport of freight between the different stations at St. Petersburg.

Iron storage sheds are to be erected at the new wharves at Antwerp, Belgium, estimated cost, \$48,080.

The governmental construction bureau of Serbia at Belgrade will contract for a large quantity of telephone materials, cement, plates, etc.

The directors of the city tramways, Anschutzgasse 15, Vienna, Austria, will purchase 3,000 car-wheel-tires.

J. G. Ternel, president of the Oaxaca & Ejutla Railway, Oaxaca, Mexico, has been granted a concession for the erection of a smelting plant. It is proposed to have a furnace of 100 tons daily capacity, costing \$100,000.

The Government monopoly of Greece will receive proposals for the erection of a factory at Athens with a capacity to turn out 2,500,000 boxes of matches per month.

I. Gutte, F. G. Braue, H. Hacke, H. Eickhoff and S. Sprout of San Francisco, Cal., have organized the Culiacan Electric Co., with a capital of \$300,000, for the purpose of building an electric-lighting plant at Culiacan, Sinaloa, Mexico.

PUBLICATIONS.

The publishers of The Canadian Manufacturer solicit in advance, if possible, catalogues, circulars, and other industrial publications issued by manufacturers. We wish to review such literature, and bring the principal points to the attention of our readers.

Messrs. F. H. Hopkins & Co., Montreal, manufacturers of railway, mining and contractors' supplies, successors to Late James Cooper, have sent us a copy of their useful and handsome calendar for 1905. It shows illustrations of, a saddle tank locomotive, a pressed bowl wheel scraper, a steam shovel dump car, a Wells light and a fine view of a Marion shovel in operation.

The Westinghouse Electric & Mfg. Co., Pittsburgh, Pa., have just published Circular No. 1096, relating to oil switches and oil circuit-breakers which they are distributing to the trade.

The Penberthy Injector Co., Windsor, Ont., have issued attractive circulars relating to their automatic injectors, short stop sight feed oiler and the screw top plain brass oiler manufactured by them.

The Borden & Selleck Co., Chicago, Ill., engineers, designers and builders of coal yards and coal handling machinery, have sent us copy of their booklet No. 8, relating to such machinery. It contains a number of illustrations of conveying and elevating machinery and also many approving letters from firms using their machinery.

The Pennsylvania Fire Brick Co., Beech Creek, Pa., manufacturers of brick and tile of all shapes and for all purposes, have sent us the usual handy desk pad, on the cover of which is a calendar for four months of 1905 and on top of each

page there is a memo alluding to their products.

The Canada Foundry Co., Toronto, who have recently acquired the sole right in Canada to manufacture Curtis trucks, have just issued Bulletin No. 25, relating to and illustrating same.

The McCullough-Dalzell Crucible Co., Pittsburg, Pa., manufacturers of crucibles, stoppers, etc., have very kindly sent us a real crucible on a stand which will answer the purpose of a match safe.

An illustrated souvenir entitled Preston, the busy manufacturing, health resort and electric railway town of Ontario has been published by Thomas H. Arntfield, containing very excellent views of the residences, public buildings, hotels, parks and prominent citizens of the town, together with a history of the place and an account of its industries. Prominent among these is the works of the Canadian Office and School Furniture Co.

Positive Rotary Pumps, Ltd., 23 Northumberland Ave., London W., England, have sent us literature relating to the patent rotary pumps made by them. They are described as positive acting, simple, compact and adjustable for wear, and are adapted for all purposes where an efficient and reliable pump is required.

The publishers, Messrs. John Dougall & Son, Montreal, have sent us a copy of their World Wide cartoon edition for 1904, which is both interesting and instructive. The cartoons give a most humorous and effective review of the world's events of the past year. World Wide is a weekly reprint of articles from leading journals and reviews reflecting the current thought of the world.

The Blacksmith and Wheelwright, 27 Park Place, New York, present a handsome souvenir number on the occasion of the twenty-fifth anniversary of its publication. A feature of our contemporary is a "Roll of Honor" constituting a list of advertisers whose business announcements have appeared in it for ten years or over.

The initial number of the Buffalo Manufacturer has reached us. It is published under the auspices of the Manufacturer's Club of Buffalo, N. Y., of which Mr. W. H. Andrews is president, and Millard F. Bowen is secretary. This new journalistic venture is one of the outcomes of

the invigorated policy of the Club. Innovation that it is hoped, will prove to be both far-reaching and important seems to be in close touch with that valued and esteemed contemporary, Philadelphia Manufacturer.

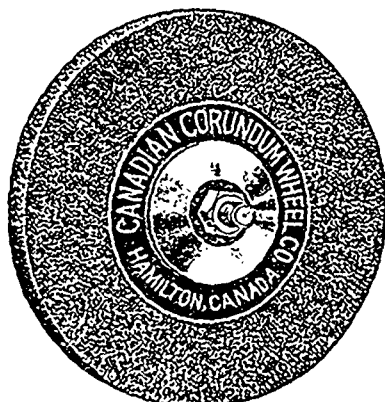
The J. C. McLaren Belting Co., Montreal, with branch works at Toronto, Winnipeg, Man., and Vancouver, B. C., have sent us their handsome calendar for 1905, relating to Oak extra tan belting manufactured by them. On the back of this calendar is some valuable information for users of all kinds of belting.

PERSONALS.

Mr. C. H. Vogel, mill and hydro-engineer, of Ottawa, was in this city last week en route to British Columbia and other points on the Pacific coast to examine a number of water power pulpwood properties, and to direct development. Mr. Vogel has designed and supervised the construction of a number of pulp mills and water developments both in Canada and United States.

Almost every important manufacturing and business house operating in Canada, finds, sooner or later, the need of having offices or warerooms in Toronto. The latest new-comer is The Wire Fence Co., Walkerville, Ont., are opening an Ontario Headquarters in the new Millichamp-Coyle Building, 84 Wellington Street West. From this office and warerooms the Canadian Department will be operated. Mr. Dyer, the General Sales Manager, in charge.

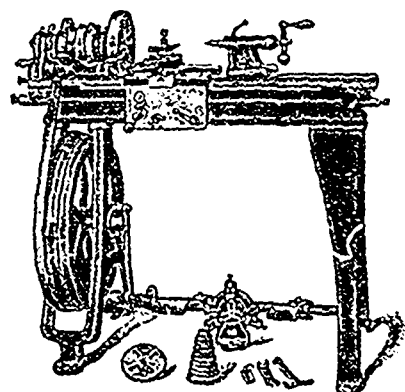
In the year 1874, Mr. J. D. Covert, a very modest way established himself in Cleveland, Ohio, for the manufacture of tools. Five years later, Mr. H. Prentiss, joined him as partner. For years this partnership went on untroubled and was known to the business world as the "Cleveland Twist Co." During this period by good management and with constant improvement producing tools of the highest quality the business prospered, until today the product is found wherever civilization exists. The immense factory, built up as increased business demanded



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equipped with special and modern machinery and appliances, further attests the result of successful business methods. After thirty years of constant activity, Mr. Cox has merged his concern into a tool company, known as "The Cleveland Twist Drill Co." While Mr. Cox will be relieved of active duties, he will retain his large holdings and also serve in the capacity of vice-president and director. The other officers in the company are: Mr. F. F. Prentiss, president and general manager; Mr. E. G. Buckley, secretary; Mr. Geo. F. Kast, treasurer. Notwithstanding that this change has taken place, the personnel of the company remains intact, and the guiding spirit of the past will be maintained in the future.

The Cassella Color Co., 182 Front St., New York, have sent us a copy of a formal notification from their principal office in Frankfurt, Germany, of the transformation of the firm of Leopold Cassella & Co. into a limited liability company. The firm was first established in 1828. The new company will be conducted on the same principles as before by Dr. Arthur Weinburg and Consul-General Carl Weinberg.

The Bristol Co., Waterbury, Conn., informs that they have received the following notice from the Universal Exhibition, St. Louis, 1904:—"Pursuant to the rules and regulations governing the system of awards, formal public announcement is hereby made that a gold medal has been finally awarded

you on your exhibit of 'Recording Instruments' in Group 71. A Medal and Diploma for this award will be issued by the Exposition Co., as soon as ready."

Mr. K. L. Aitken, Consulting Electrical Engineer, 164 Bay St., Toronto, lately connected with the Electrical Supervision Society has taken over that business.

The annual meeting of the Central Canada Exhibition Association was held January 10, at Ottawa. It was decided to hold this year's fair from September 8 to 16, the week following the Toronto Industrial. Mr. Wm. Hutchison was re-elected president.

Mr. Reginald Aubrey Fessenden, a distinguished Canadian electrical engineer, who has won great success in the United States and who is at present resident in Washington, D.C., has been appointed to the Municipal Power Commission of Ontario. He takes the place of Mr. Ross, of Messrs. Ross & Holgate, Montreal, who retired in consequence of his firm being given the contract to report on the scheme.

James Lefell & Co., Springfield, Ohio, manufacturers of the Sampson turbine, have placed contracts for material with which to greatly enlarge their plant. The improvements will include an addition to the factory building, with a complement of modern tools and equipment. The output of the factory is being

sent to all parts of the world, and the company are now building a 2,000 h.p. water wheel for the Japanese government. This is to replace a wheel shipped to the order of the Japanese government some time ago, but which was sunk in transit by the Russians.

On January 6, the city of Pittsburg, through its Director of Public Works, E. M. Bigelow, awarded a contract for 5,000 water meters, ranging in size from 3/4 inches to 6 inches, inclusive, to the Pittsburg Meter Co., East Pittsburg, Pa. This large order will be filled with the well known Keystone Water Meter. It is the intention of the city of Pittsburg to meter every water consumer in the near future, which will require in the neighborhood of 75,000 meters, so that the contract which has just been placed really represents but a small portion of the city's prospective purchases of meters. This initial contract represents a monetary outlay of between \$50,000 and \$60,000.

CALIFORNIA EXCURSIONS.

The Chicago, Union Pacific and North Western Line runs through first-class Pullman and Tourist sleeping cars to points in California and Oregon. Personally conducted excursions from Chicago every week. Lowest rates. Choice of routes. Finest scenery. Special attention given to family parties. For maps, illustrated folders and rates, address, B. H. Bennett, General Agent, 2 East King Street, Toronto, Ont.

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the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

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Write for our 100 page illustrated catalogue. Every dealer should have a copy for reference.

EXTENSION OF THE CHICAGO DRAINAGE CANAL.

The work of extending the Chicago Drainage Canal in connection with the further development of power is now well in progress. The plans provide for an extension of the channel now in use southward for a distance of about 10,700 feet to the site selected for the power-house and the excavation of a tailrace 6,800 feet long from this point to a junction with the original Section 17 of the canal. The so-called extension will be constructed with concrete walls and earth and rock embankment, and the tailrace is to be 160 feet wide and deep enough to afford a minimum depth of water of 22 feet. Section 17 is a wide channel, and the minimum depth of water thereon, until it enters the upper basin at Joliet, will be 10 feet.

The mean head for power development resulting from this improvement will be 32 feet, and the net horse-power figured on an efficiency of 75 per cent. and a flow of 600,000 cubic feet per minute will be 27,000 h.p. The power equipment will be housed in a structure of concrete and brick construction, and will have ten turbine chambers, three for exciter units and seven for power units. The power units are designed to pass 100,000

cubic feet at eight-tenths discharge. They consist of turbines on horizontal axes capable of generating 6,500 h.p. at full gate under 34 feet of head at 150 r.p.m. Each power unit is to drive one 3,750 k.w., three-phase, 2,200-volt generator. The ultimate discharge of the channel will, under present plans, reach 800,000 cubic feet per minute.

In the working plant considerable use is made of compressed air. There are at present 32 No. 3½ Little Giant Rand drills, four track channelers and a number of pumps all operated with compressed air; and the plant includes two Rand Imperial type 10 compressors, each having a capacity of about 2,000 cubic feet, and delivering through a system of air piping which aggregates in length 10 miles. There are four 70-ton shovels in use, having 3-yard dippers, and seven rock drills are worked in front of each shovel. The average depth of the holes drilled is 14 feet, and the average performance of each drill per shift of 10 hours is 125 lineal feet.

The remainder of the contractor's plant includes two stone crushers having 8,000 cubic yards daily capacity, two portable concrete mixers, fourteen 14-ton locomotives, 150 dump cars and 15 miles of track, two

hoisting engines, and 15 suction and two centrifugal pumps. In the power plant there are two 40-h.p. boilers, one 80 h.p. boiler, and one 110 h.p. boiler, and an electric light plant. The camp consists of a colony of eleven buildings and there is a machine and blacksmith shop. Altogether about 500 men are employed.

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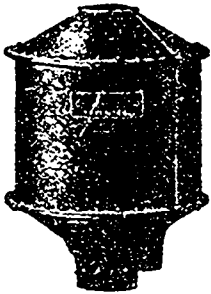
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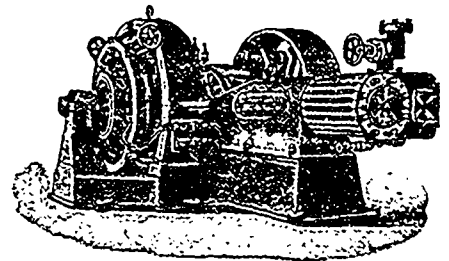
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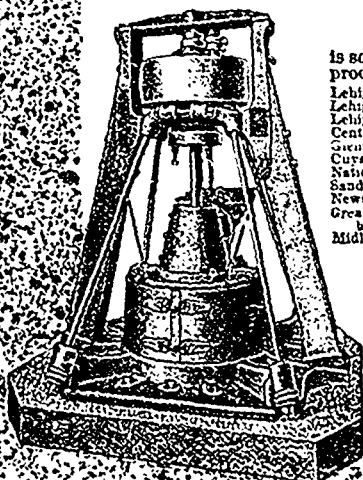
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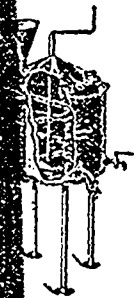
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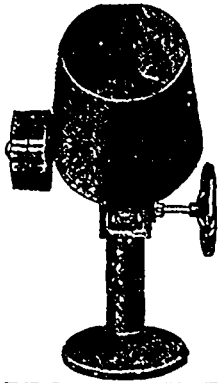
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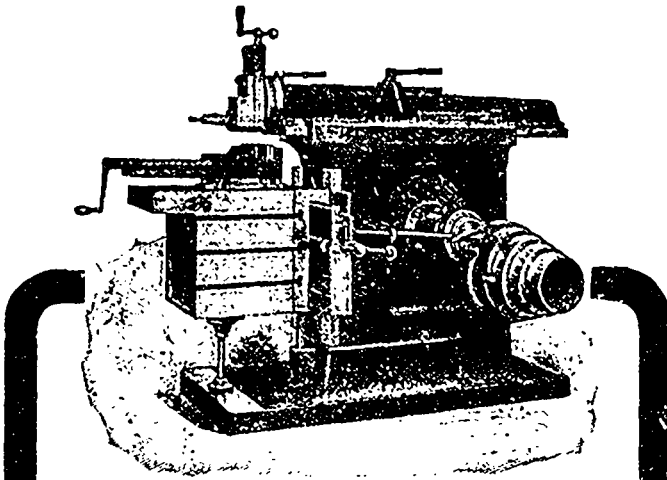


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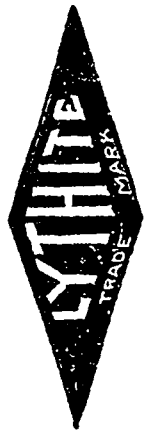
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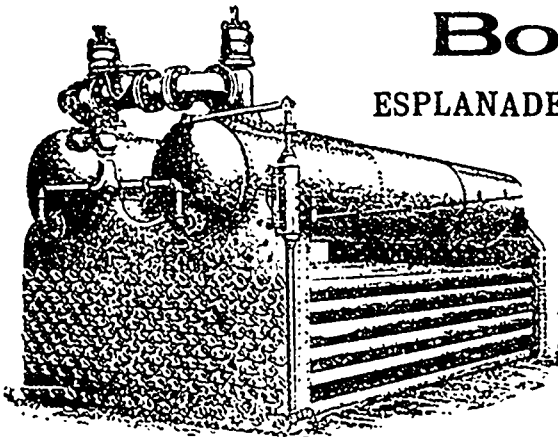
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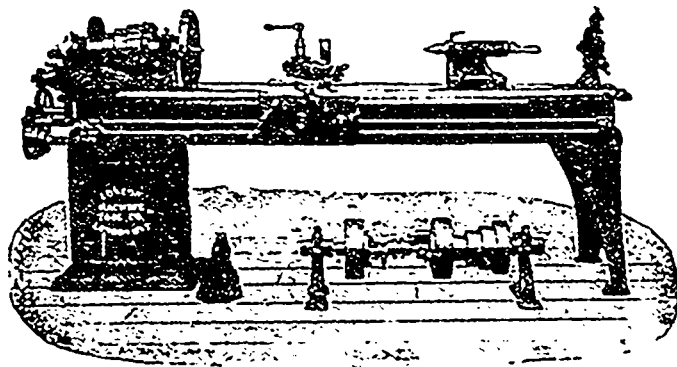
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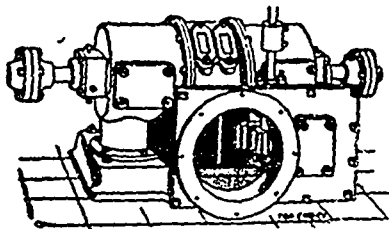
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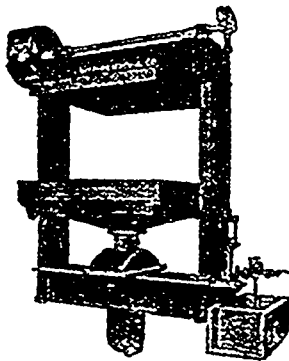
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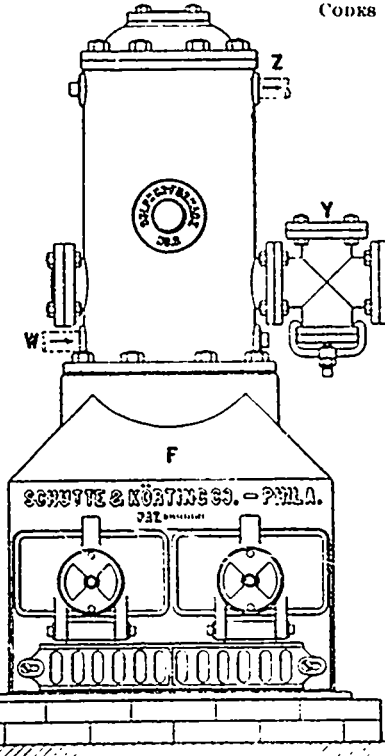
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Rice Lewis & Son, Toronto.
Williams, A. R. Machinery Co., Toronto.

Air Compressors

Allis-Chalmers-Bullock, Limited, Montreal.
American Steam Pump Co., Battle Creek, Mich.
Canada Foundry Co., Toronto.
Canadian Rand Drill Co., Sherbrooke, Que.
Corbett R. B., Brooklyn, N.Y.
Darling Bros., Montreal.

Aluminum

Northern Aluminum Co., Pittsburg, Pa.
Syracuse Smelting Works, Montreal.

Angles, Beams and Girders

Bourne-Fuller Co., Cleveland, Ohio.
Canada Foundry Co., Toronto.
Hopkins, F. H. & Co. Montreal.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.

Aniline Colors and Dyewood Extracts

Bellhouse, Dillon & Co., Montreal.
Benson, W. T. & Co., Montreal.
Brunner, Mond & Co., Northwich, England.
Canada Chemical Mfg. Co., London, Ont.
Cassella Color Co., New York City.
Geigy Aniline & Extract Co., New York City.
McArthur, Cornelius & Co., Montreal.
Nicholls Chemical Co., Montreal.
Winn & Holland, Montreal.

Annealing Muffles and Furnaces (Wire)

Leslie, A. C. & Co., Montreal.
Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Antimony

Syracuse Smelting Works, Montreal.

Anvils and Vises

Hopkins, F. H. & Co., Montreal.
Leslie, A. C. & Co., Montreal.
Rice Lewis & Son, Toronto.

Architects

Edwards, R. J., Toronto.
Parke, R. J., Toronto.
Vogel, C. H., Ottawa.

Automatic Gear Cutting Machines

Becker-Bramard Milling Machine Co., Hyde Park, Mass.

Axles

Hopkins, F. H. & Co., Montreal.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.

Babbitt Metal

Petrie, H. W., Toronto.
Pittsburgh Shafting Co., Detroit, Mich.
Syracuse Smelting Works, Montreal.

Banks

Bank of Hamilton, Hamilton, Ont.

Bar Iron and Steel

Bourne-Fuller Co., Cleveland, Ohio.
Hopkins, F. H. & Co., Montreal.
Leslie, A. C. & Co., Montreal.
Rice Lewis & Son, Toronto.

Belt Dressing

McLaren, J. C. Belting Co., Montreal and Toronto.
Petrie, H. W., Toronto.
Rossendale Belting Co., Toronto.
Williams, A. R. Machinery Co., Toronto.

Belt Fasteners

Bristol Co., Waterbury, Conn.
McLaren, D. K., Montreal and Toronto.
McLaren, J. C. Belting Co., Montreal and Toronto.
Petrie, H. W., Toronto.
Rossendale Belting Co., Toronto.
Williams, A. R. Machinery Co., Toronto.

Belting (Cotton)

Dominion Belting Co., Hamilton, Ont.
Fleming, W. A. & Co., Montreal.
Grey, Wm. & J. G., Toronto.
McLaren, D. K., Montreal and Toronto.
McLaren, J. C. Belting Co., Montreal and Toronto.
Petrie, H. W., Toronto.
Pittsburgh Shafting Co., Detroit, Mich.
Rossendale Belting Co., Toronto.

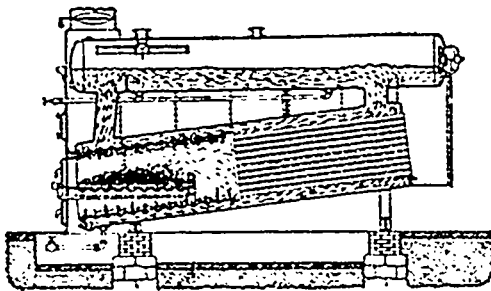
Belting (Leather)

Fleming, W. A. & Co., Montreal.
Grey, Wm. & J. G., Toronto.
McLaren, D. K., Montreal and Toronto.
McLaren, J. C. Belting Co., Montreal and Toronto.
Petrie, H. W., Toronto.
Pittsburgh Shafting Co., Detroit, Mich.
Rice Lewis & Son, Toronto.
Sadler & Haworth, Montreal and Toronto.
Williams, A. R. Machinery Co., Toronto.

Belting (Rubber)

Grey, Wm. & J. G., Toronto.
Gutta Percha & Rubber Mfg. Co., Toronto.
McLaren, D. K., Montreal and Toronto.
Petrie, H. W., Toronto.
Pittsburgh Shafting Co., Detroit, Mich.

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Your coal bill is a large item in your expense account and if it could be reduced ten per cent. it would mean a large addition to your net profit.

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WATSON JACK & COMPANY, Bell Telephone Bldg., Montreal
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Belting and Supplies

Bristol Co., Waterbury, Conn.
 Dominion Belting Co., Hamilton, Ont.
 Manning, W. A. & Co., Montreal.
 Pease, Wm. & J. G., Toronto.
 Percha & Rubber Mfg. Co., Toronto.
 Grey Mfg. Co., Columbus, Ohio.
 Larson, D. K., Montreal and Toronto.
 Larson, J. C. Belting Co., Montreal and Toronto.
 Rice, H. W., Toronto.
 Pittsburgh Shafting Co., Detroit, Mich.
 Lewis & Son, Toronto.
 Rosendale Belting Co., Toronto.
 Williams, A. R. Machinery Co., Toronto.

Blast Furnace Brick

Dunbar Fire Brick Co., Cleveland, Ohio.
 Dunbar Fire Brick Co., Pittsburgh, Pa.
 Hamilton Facing Mill Co., Hamilton, Ont.
 Harrison-Walker Refractories Co., Pittsburgh, Pa.
 Pennsylvania Fire Brick Co., Lock Haven, Pa.
 Stowe-Hammond Fire Brick Co., Boliver, Pa.
 Stowe-Fuller Co., Cleveland, Ohio.

Blowers

Sachsen Heating & Ventilating Co., Galt, Ont.
 Sheldon & Sheldon, Galt, Ont.
 Steverant, B. F. Co., Boston, Mass.

Boiler Compounds

Canada Chemical Mfg. Co., London, Ont.
 Geo. W. Co., Philadelphia, Pa.
 Slough, D., Montreal.

Boiler Inspection

Boiler Inspection & Insurance Co., Toronto.
 Canadian Casuality & Boiler Insurance Co., Toronto.

BOILERS (See Engines and Boilers)

Brass Founders

Hamilton Brass Mfg. Co., Hamilton, Ont.
 Howes, Geo. B. Wire, Iron & Brass Works Co., Toronto.
 McInnon Dash & Metal Works Co., St. Catharines, Ont.
 Berthy Injector Co., Windsor, Ont.

Brick and Bricklaying Machinery

Allis-Chalmers-Bullock, Limited, Montreal.

Building and Paving Brick

Dunbar Fire Brick Co., Cleveland, Ohio.
 Dunbar Fire Brick Co., Pittsburgh, Pa.
 Hamilton Facing Mill Co., Hamilton, Ont.
 Harrison-Walker Refractories Co., Pittsburgh, Pa.
 Pennsylvania Fire Brick Co., Lock Haven, Pa.
 Stowe-Hammond Fire Brick Co., Boliver, Pa.
 Stowe-Fuller Co., Cleveland, Ohio.

Building Iron and Steel

Bourne-Fuller Co., Cleveland, Ohio.
 Canada Foundry Co., Toronto.
 Rosendale Metal & Fireproofing Co., Toronto.

Bullders' Materials

Alford Mfg. Co., Hillsboro, Ont.
 Canada Foundry Co., Toronto.
 Canadian Otis Elevator Co., Toronto.
 Rosendale Metal & Fireproofing Co., Toronto.
 Gresham, John J., Toronto.
 Hopkins, F. H. & Co., Montreal.
 Howes, Geo. B. Wire, Iron & Brass Works, Toronto.
 Machine Roofing Co., Toronto.
 Owen Sound Portland Cement Co., Owen Sound, Ont.
 Pittsburgh Shafting Co., Detroit, Mich.
 Lewis & Son, Toronto.
 Sheldon & Sheldon, Galt, Ont.

Cables

Canadian Wire Rope Co., Montreal.
 Manning, B. Wire Co., Hamilton, Ont.
 Pease, Eugene F. Electrical Works, Montreal.
 Cable Co., Montreal.

Canada Plates

A. C. & Co., Montreal.
 Nova Scotia Steel & Coal Co., New Glasgow, N.S.

Canoes

Peterborough Canoe Co., Peterborough, Ont.

Gaps

Pittsburgh-Dalzell Crucible Co., Pittsburg, Pa.

Card Clothing

Larson, D. K., Montreal and Toronto.
 Larson, J. C. Belting Co., Montreal and Toronto.

Oast Iron Pipe

Canada Foundry Co., Toronto.
 Brown-Thomson Pipe & Foundry Co., Hamilton, Ont.
 Lewis & Son, Toronto.
 Canada Pipe Foundry Co., Montreal.
 McDougall, John, Caledonian Iron Works Co., Montreal.

Castings (Iron and Brass)

Buhl Malleable Co., Detroit, Mich.
 Greer, Wm. & J. G., Toronto.
 Kerr Engine Co., Walkerville, Ont.
 McDougall, John, Caledonian Iron Works Co., Montreal.

Cement Machinery

Allis-Chalmers-Bullock, Limited, Montreal
 Bradley Pulverizer Co., Boston, Mass
 Greer, Wm. & J. G., Toronto.
 McDougall, John, Caledonian Iron Works Co., Montreal.

Chain Making Machinery (Welded Coll Chain)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Channels

Bourne-Fuller Co., Cleveland, Ohio.
 Canada Foundry Co., Toronto.
 Leslie, A. C. & Co., Montreal.
 Nova Scotia Steel & Coal Co., New Glasgow, N.S.

Charcoal Pig Iron

Canada Iron Furnace Co., Montreal.
 McDougall, John, Caledonian Iron Works Co., Montreal.

Chemists

Archbold, Dr. Geo., Prescott, Ont.
 Heys, Thomas & Son, Toronto.

Clay Working Machinery

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Coal and Coke

Bourne-Fuller Co., Cleveland, Ohio.
 Boynton, F. M., Inc., Buffalo, N.Y. and Pittsburg, Pa.
 Brownlee, J., Galt, Ont.
 Burton, Beidler & Phillips Co., Cleveland, Ohio
 Ferguson, J. D., Hamilton, Ont.
 Hoffman, Jules G., Detroit, Mich.
 Milnes, James H. & Co., Toronto.
 Myler, Thos Sons, Hamilton, Ont.
 Pittsburgh Coal Co., Pittsburgh, Pa.
 Rochester & Pittsburg Coal & Iron Co., Buffalo, N.Y.
 Shawmut Coal & Coke Co., St. Mary's, Pa.
 Shepard, Charles G., Buffalo, N.Y.
 Shipman, O. W. Co., Detroit, Mich.
 Wick, H. K. & Co., Buffalo, N.Y.
 Wilson H. T. Coal Co., Detroit, Mich.

Coal Cutting Machines

Allis-Chalmers-Bullock, Limited, Montreal.
 Canadian Road Drill Co., Sherbrooke, Que.
 Jeffrey Mfg. Co., Columbus Ohio.

Coal Tipples

Jeffrey Mfg. Co., Columbus, Ohio.

Coll Chains

Greening, B. Wire Co., Hamilton, Ont.
 Leslie, A. C. & Co., Montreal.

Coke Oven Brick

Dunbar Fire Brick Co., Pittsburgh, Pa.
 Stowe-Fuller Co., Cleveland, Ohio.

Collection Agency

Petrie, H. D., Hamilton, Ont.

Concrete Mixers

Hopkins, F. H. & Co., Montreal

Contractors' Machinery

Allis-Chalmers-Bullock, Limited, Montreal.
 Gresham, John J., Toronto.
 Hopkins, F. H. & Co., Montreal.
 McDougall, John, Caledonian Iron Works Co., Montreal.

Contractor's Plants

Allis-Chalmers-Bullock, Limited, Montreal.
 Hopkins, F. H. & Co., Montreal.
 Petrie, H. W., Toronto.
 Von der Osten, E. & Co., Toronto.
 Williams, A. R. Machinery Co., Toronto.

Convoing Machinery

Allis-Chalmers-Bullock, Limited, Montreal.
 Babcock & Wilcox, Limited, Montreal.
 Borden & Sellock Co., Chicago, Ill.
 Buhl Malleable Co., Detroit, Mich.
 Canada Foundry Co., Toronto.
 Greer, Wm. & J. G., Toronto.
 Jeffrey Mfg. Co., Columbus, Ohio.
 Link-Belt Engineering Co., Philadelphia, Pa.
 McDougall, John, Caledonian Iron Works Co., Montreal.

Perrin, William R. & Co., Limited, Toronto.
 Pittsburgh Shafting Co., Detroit, Mich.
 Rosendale Belting Co., Toronto.

Copper Materials

Greening, B. Wire Co., Hamilton, Ont.
 Phillips, Eugene F. Electrical Works, Montreal.
 Syracuse Smelting Works, Montreal.
 Wire & Cable Co., Montreal.

Correspondence Schools

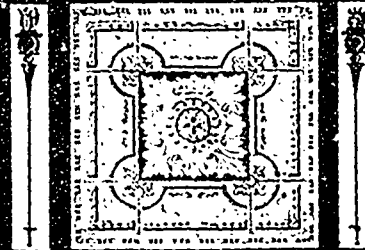
International Correspondence Schools, Scranton, Pa., and Toronto.

Corundum

Canada Corundum Co., Toronto.
 Corundum Wheels
 Canadian Corundum Wheel Co., Hamilton, Ont.
 Rice Lewis & Son, Toronto.

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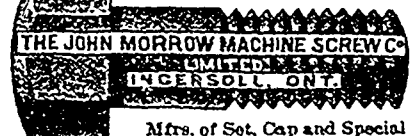


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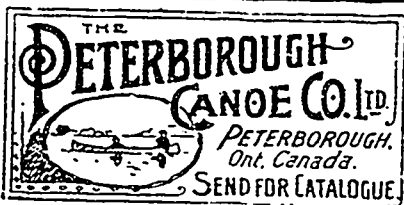
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- 2-Snow Compound duplex, 14 x 20 x 12 x 16.
- 2-Worthington Compound " 14 x 20 x 10 x 15
- 2-Worthington duplex Tank, 10 x 14 x 10
- 2-Worthington duplex, 12 x 7 x 10.
- 6-Duplex Boiler Feed, 6 x 4 x 6.
- 12- " " " " 4 x 2 1/2 x 4.
- 2-Cameron Sinking Pumps, No. 9.
- 3- " " " " No. 11.

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Covers

McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Crayons

Lowell Crayon Co., Lowell, Mass.

Crucibles

Dixon, Joseph, Crucible Co., Jersey City, N.Y.
McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.
Syracuse Smelting Works, Montreal

Crucible Caps

McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Crucible Covers

McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Cutter Grinding Machines

Becker-Braunard Milling Machine Co., Hyde Park,
Mass.

Decalcomania

Meyerhold Co., Chicago, Ill.

Detective Agency

Dewar Detective Agency, St. Louis, Mo.

Dies (Socket, Sewer Pipe and Tile)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Directories

Kelly's Directories, Limited, Toronto.

Draw Benches (Wire)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Drills

Allis-Chalmers-Bullock, Limited, Montreal
Barnes, B. F. Co., Rockford, Ill.
Canada Machinery Co., Sarnia, Ont.
Canadian Westinghouse Co., Ltd., Hamilton, Ont.
London Machine Tool Co., London, Ont.
Petrie H. W., Toronto
Pittsburgh Shafting Co., Detroit, Mich.

Drills (Pneumatic and Rock)

Allis-Chalmers-Bullock, Limited, Montreal.
Canadian Rand Drill Co., Sherbrooke, Que.
Jeffrey Mfg. Co., Columbus, Ohio.

Drills (Twist)

Cleveland Twist Drill Co., Cleveland, Ohio.
Pittsburg Shutting Co., Detroit, Mich.

Drop Forgings

Globe Machine & Stamping Co., Cleveland, Ohio.

Drop Forging Dies

Globe Machine & Stamping Co., Cleveland, Ohio.

Dry Kiln Apparatus

Sheldon & Sheldon, Galt, Ont.

Sturtevant, B. F. Co., Boston, Mass.

Dust and Shavings Separators

Sheldon & Sheldon, Galt, Ont.

Sturtevant, B. F. Co., Boston, Mass.

Dye Stuffs and Chemicals

Bellhouse, Dillon & Co., Montreal
Benson, W. T. & Co., Montreal
Brunner, Mond & Co., Northwich, England.
Canada Chemical Mfg. Co., London, Ont.
Cassella Color Co., New York City.
Geary Aniline & Extract Co., New York City
McArthur, Cornille & Co., Montreal
Nichols Chemical Co., Montreal
Winn & Holland, Montreal

DYNAMOS (See Motors and Dynamios)

Electric Motors and Transformers

Allis-Chalmers-Bullock, Limited, Montreal.
Packard Electric Co., St. Catharines, Ont.

Electric Mine Locomotives

Canadian General Electric Co., Toronto.
Canadian Westinghouse Co., Ltd., Hamilton, Ont.
Jeffrey Mfg. Co., Columbus, Ohio.

Electrical Repairs

Volta Electric Repair Works, Toronto.

Electrical Supplies

Allis-Chalmers-Bullock, Limited, Montreal.
Bristol Co., Waterbury, Conn.
Canadian General Electric Co., Toronto.
Canadian Westinghouse Co., Ltd., Hamilton, Ont.
Electrical Construction Co., London, Ont.
Forman, John, Montreal.
Jones & Moore Electric Co., Toronto
Packard Electric Co., St. Catharines, Ont.
Toronto & Hamilton Electric Co., Hamilton, Ont.
United Electric Co., Toronto.
Worth & Martin, Toronto.

Elevators and Conveyors

Allis-Chalmers-Bullock, Limited, Montreal.
Buhl Malleable Co., Detroit, Mich.
Canadian Otis Elevator Co., Toronto

Darling Bros., Montreal.
Groby, Wm. & J. G., Toronto.
Jeffrey Mfg. Co., Columbus, Ohio.
Link-Bolt Engineering Co., Philadelphia, Pa.

Elevator Insurance

Canadian Casualty & Boiler Insurance Co., Ltd.

Emery and Emery Wheels

Canadian Corundum Wheel Co., Hamilton, Ont.
Forman, John, Montreal.
Petrie, H. W., Toronto.

Engineers (Chemical)

Heys, Thomas & Son, Toronto.
Hunt Robert W. & Co., Chicago, Ill.

Engineers (Civil)

Delano-Osborn Engineering Co., Toronto.
Parke, R. J., Toronto.
Vogel, C. H., Ottawa.

Engineers (Consulting)

Aitken, K. L., Toronto
Delano-Osborn Engineering Co., Toronto
Electrical Construction Co., London, Ont.
Hunt, Robert W. & Co., Chicago, Ill.
Marion & Marion, Montreal.
Parke, R. J., Toronto.
Ferris, William R. & Co., Limited, Toronto.
Simpson, T. T., Deschenes, Que.
Vogel, C. H., Ottawa.
Volta Electric Repair Works, Toronto.
Von der Osten, E. & Co., Toronto.

Engineers (Contracting)

Babcock & Wilcox, Limited, Montreal
Canada Foundry Co., Toronto
Darling Bros., Montreal.
Electrical Construction Co., London, Ont.
McDougall, John, Caledonian Iron Works Co., Montreal.
Robb Engineering Co., Amherst, N.S.

Engineers (Electrical)

Aitken, K. L., Toronto.
Allis-Chalmers-Bullock, Limited, Montreal
Canadian General Electric Co., Toronto
Canadian Westinghouse Co., Ltd., Hamilton
Crocker-Wheeler Co., St. Catharines, Ont.
Delano-Osborn Engineering Co., Toronto
Electric Engineering & Supply Co., Montreal
Electrical Construction Co., London, Ont.
Jones & Moore Electric Co., Toronto.
Marion & Marion, Montreal.
Toronto & Hamilton Electric Co., Hamilton, Ont.
United Electric Co., Toronto.
Volta Electric Repair Works, Toronto.
Worth & Martin, Toronto.

Engineers (Mechanical)

Allis-Chalmers-Bullock, Limited, Montreal
Babcock & Wilcox, Limited, Montreal
Borden & Selleck Co., Chicago, Ill.
Buhl Malleable Co., Detroit, Mich.
Darling Bros., Montreal.
Delano-Osborn Engineering Co., Toronto
Electrical Construction Co., London, Ont.
Greay, Wm. & J. G., Toronto.
McDougall, John, Caledonian Iron Works Co., Montreal.
Hunt, Robert W. & Co., Chicago, Ill.
Kerr Engine Co., Wakeville, Ont.
Marion & Marion, Montreal.
Robb Engineering Co., Amherst, N.S.
Sheldon & Sheldon, Galt, Ont.

Engineers (Mill and Hydraulic)

Buhl Malleable Co., Detroit, Mich.
Delano-Osborn Engineering Co., Toronto
Hawksworth, Alfred, Montreal.
Vogel, C. H., Ottawa.

Engineers (Mining)

Buhl Malleable Co., Detroit, Mich.
Heys, Thomas & Son, Toronto.
Mills, S. D., Toronto.

Engineers (Municipal)

Von der Osten, E. & Co., Toronto.

Engineers and Contractors

Buhl Malleable Co., Detroit, Mich.
Jeffrey Mfg. Co., Columbus, Ohio.

Engines and Boilers

Allis-Chalmers-Bullock, Limited, Montreal
Babcock & Wilcox, Limited, Montreal.
Bertram Engine Works Co., Toronto.
Canada Foundry Co., Toronto.
Canadian Heine Safety Boiler Co., Toronto
Corbett, R. B., Brooklyn, N.Y.
Goldie & McCulloch Co., Galt, Ont.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
Hopkins, F. H. & Co., Montreal.
McDougall, John, Caledonian Iron Works Co., Montreal.
McEachern Heating & Ventilating Co., Galt
Petrie, H. W., Toronto.
Pittsburgh Shafting Co., Detroit, Mich.
Robb Engineering Co., Amherst, N.S.
Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.
Williams, A. R. Machinery Co., Toronto

Engravers

Canadian Manufacturer, Toronto.
Jones, J. L. Engraving Co., Toronto.

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Exhaust Fans
Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.

Exhaust Heads
Birt Mfg. Co., Akron, Ohio.
Darling Bros., Montreal.

Explorer and Geologist
Byans, Horace F., Ashcroft, B.C.

Factory Sites
Central Ontario Power Co., Peterboro, Ont.

Feed Water Heaters
Bazook & Wilcox, Limited, Montreal.
Darling Bros., Montreal.
McDougall, John, Caledonian Iron Works Co., Montreal.

Files
Spence, R. & Co., Hamilton, Ont.

Financial
Bradstreet's, New York City.
Dun, R. G. & Co., Toronto.
Noy & Postlethwaite, Toronto.
Petrie, H. D., Hamilton, Ont.

Filters (Oil)
Bazook & Wilcox, Limited, Montreal.
Birt Mfg. Co., Akron, Ohio.
Darling Bros., Montreal.
McDougall, John, Caledonian Iron Works Co., Montreal.
Wain, William R. & Co. Limited, Toronto.

Filters and Filtering Systems (Water)
Bazook & Wilcox, Limited, Montreal.
McDougall, John, Caledonian Iron Works Co., Montreal.

Fire Brick and Clay
Dover Fire Brick Co., Cleveland, Ohio.
Dunbar Fire Brick Co., Pittsburgh, Pa.
Hamilton Facing Mill Co., Hamilton, Ont.
Harrison-Walker Refractories Co., Pittsburgh, Pa.
Pennsylvania Fire Brick Co., Look Haven.
Reese-Hammond Fire Brick Co., Boliver, Pa.
Ryall Fuller Co., Cleveland, Ohio.

Fire Escapes
Darling Bros., Montreal.
McDowds, Geo. B., Wire, Iron & Brass Works, Toronto.

Flour Mill Machinery
Galt & McCulloch Co., Galt, Ont.
Greer, Wm. & J. G., Toronto.

Forges and Blowers
Canada Foundry Co., Toronto.
McEachren Heating & Ventilating Co., Galt, Ont.
Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.

Founders
Canada Foundry Co., Toronto.
Cory & Co., Galt, Ont.
Gardner-Townson Pipe & Foundry Co., Hamilton, Ont.
Galt & McCulloch Co., Galt, Ont.
Greer, Wm. & J. G., Toronto.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
McDougall, John, Caledonian Iron Works Co., Montreal.

Foundry Facings and Supplies
Hamilton Facing Mill Co., Hamilton, Ont.

Fuel Economizers
Bazook & Wilcox, Limited, Montreal.
Sturtevant, B. F. Co., Hyde Park, Mass.

Furniture (Lodge, Opera and School)
Canadian Office & School Furniture Co., Preston, Ont.

Galvanizing
Birt Wind Engine & Pump Co., Toronto.

Galvanizing and Tinning Machinery and Furnaces (Wire)
Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Gas and Gasoline Engines
Galt & McCulloch Co., Galt, Ont.
T. A. & Co., Montreal.

Gauges (Recording Pressure)
Co., Waterbury, Conn.

Gauges (Steam)
Steam Pump Co., Battle Creek, Mich.
Penberthy Injector Co., Windsor, Ont.
H. W., Toronto.
A. R. Machinery Co., Toronto.

Gauges (Water)
Bazook & Wilcox, Limited, Montreal.
Penberthy Injector Co., Windsor, Ont.

Generators

Allis-Chalmers-Bullock, Limited, Montreal
Canadian General Electric Co., Toronto
Canadian Westinghouse Co., Ltd., Hamilton, Ont.
Electrical Construction Co., London, Ont.
Forsman, John, Montreal.
Jeffrey Mfg. Co., Columbus, Ohio.

Jones & Moore Electric Co., Toronto
Phillips, Eugene F., Electrical Works, Montreal
Toronto & Hamilton Electric Co., Hamilton, Ont.
Volta Electric Repair Works, Toronto.

Gloves, Mittens and Moccasins

Storey, W. H. & Son, Acton, Ont.

Glue Heaters

Advance Machinery Co., Toledo, Ohio.
Greer, Wm. & J. G., Toronto.

Glue Room Equipment

Advance Machinery Co., Toledo, Ohio.

Government Notices

Factory Inspectors.
Minister of Agriculture.

Graphite

Dixon, Jos., Crucible Co., Jersey City, N.J.
McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Grease Cups

Penberthy Injector Co., Windsor, Ont.

Grinding Machinery

Canadian Corundum Wheel Co., Hamilton, Ont.
Greer, Wm. & J. G., Toronto.

Hardware

Butterfield & Co., Rock Island, Que.
Cleveland Twist Drill Co., Cleveland, Ohio.
Gartshore, John J., Toronto.
Globe Machine & Stamping Co., Cleveland, Ohio.
Hopkins, F. H. & Co., Montreal.
Morrow, John, Machine Screw Co., Ingersoll, Ont.
Rice Lewis & Son, Toronto.
Ryall Machine Screw Co., Montreal.

Heating and Ventilating Apparatus

Darling Bros., Montreal.
McEachren Heating & Ventilating Co., Galt, Ont.
Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.

Hoisting Engines

Bertram Engine Works Co., Toronto.

Hoists (Chain and Pneumatic)

Allis-Chalmers-Bullock, Limited, Montreal.
Canadian Rand Drill Co., Sherbrooke, Que.
Hopkins, F. H. & Co., Montreal.

Hose (Fire and Pneumatic)

Gutta Percha & Rubber Mfg. Co., Toronto.
McLaren, J. C., Belting Co., Montreal and Toronto.

Hydrants

Kerr Engine Co., Walkerville, Ont.
McDougall, John, Caledonian Iron Works Co., Montreal.

Hydraulic Accumulators

McDougall, John, Caledonian Iron Works Co., Montreal.

Hydraulic Machinery

Canada Foundry Co., Toronto.
Darling Bros., Montreal.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
McDougall, John, Caledonian Iron Works Co., Montreal.
Perrin, William R. & Co., Limited Toronto
Petrie H. W., Toronto
Wilson, J. C. & Co., Glenora, Ont.

Industrial Plants

Von der Osten, E. & Co., Toronto.

Insulated Wires and Cables

Phillips, Eugene F., Electrical Works, Montreal.
Wire & Cable Co., Montreal.

Iron and Steel Specialties

Armstrong Mfg. Co., Bridgeport, Conn.
Bourne-Fuller Co., Cleveland, Ohio.
Brown & Co., Paris, Ont.
Buhl Malleable Co., Detroit, Mich.
Canada Foundry Co., Toronto.
Cleveland Twist Drill Co., Cleveland, Ohio.
Leslie, A. C. & Co., Montreal.
London Rolling Mill Co., London, Ont.
Lyssagt, John, Limited, Bristol, England and Montreal.
Meadows, Geo. B., Wire, Iron & Brass Works Co., Toronto.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Petrie, H. W., Toronto.
Pittsburgh Shafting Co., Detroit, Mich.
Rice Lewis & Son, Toronto.
Rochester & Pittsburg Coal & Iron Co., Buffalo, N.Y.
Ryall Machine Screw Co., Montreal.

Injectors

Canada Foundry Co., Toronto.
Hamilton Brass Mfg. Co., Hamilton, Ont.
Penberthy Injector Co., Windsor, Ont.
Williams, A. R. Machinery Co., Toronto.

Iron and Steel Inspection

Hunt, R. W. & Co., Chicago, Ill.

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JAMES KNAPP REEVE, Proprietor,
 Deposit, N.Y.

CLASSIFIED INDEX.

(CONTINUED).

Lamps—Electric

Allis-Chalmers-Bullock, Limited, Montreal
 Canadian General Electric Co., Toronto.
 Canadian Westinghouse Co., Ltd., Hamilton, Ont.
 Forman, John, Montreal.
 Packard Electric Co., St. Catharines, Ont.
 Sunbenn Incandescent Lamp Co., Toronto and St.
 Catharines, Ont.

Lathes

Barnes, B. F. Co., Rockford, Ill.
 Canada Machinery Co., Sarnia, Ont.
 Cowdrey, C. H. Machine Works, Fitchburg, Mass.
 London Machine Tool Co., London, Ont.
 Petrie, H. W., Toronto.
 Williams, A. R. & Co., Toronto.

Lathes (Wood-working)

Goldie & McCulloch Co., Galt, Ont.
 Petrie, H. W., Toronto.
 Williams, A. R. Machinery Co., Toronto.

Lubricators

Penberthy Injector Co., Windsor, Ont.

Machinists

Bertram Engine Works Co., Toronto.
 Buhl Malleable Co., Detroit, Mich.
 Goldie & McCulloch Co., Galt, Ont.
 Greycy, Wm. & J. G., Toronto.
 London Machine Tool Co., London, Ont.
 Worth & Martin, Toronto.

Machinists' Supplies

Armstrong Mfg. Co., Bridgeport, Conn.
 Buhl Malleable Co., Detroit, Mich.
 Butterfield & Co., Rock Island, Que.
 Canada Machinery Co., Sarnia, Ont.
 Cleveland Twist Drill Co., Cleveland, Ohio.
 Goldie & McCulloch Co., Galt, Ont.
 Gutta Percha & Rubber Mfg. Co., Toronto
 Hopkins, F. H. & Co., Montreal.
 Jeffrey Mfg. Co., Columbus, Ohio.
 London Machine Tool Co., London, Ont.
 Morrow, John, Machine Screw Co., Ingersoll, Ont.
 Petrie, H. W., Toronto.
 Pittsburgh Shafting Co., Detroit, Mich.
 Ryall Machine Screw Co., Montreal.
 Worth & Martin, Toronto.

Machine Tools

Barnes, B. F. Co., Rockford, Ill.
 Becker-Brainard Milling Machine Co., Hyde Park
 Mass.
 Canada Machinery Co., Sarnia, Ont.
 Cleveland Twist Drill Co., Cleveland, Ohio.
 Cowdrey, C. H. Machine Works, Fitchburg, Mass.
 Darling Bros., Montreal.
 London Machine Tool Co., London, Ont.
 Petrie H. W., Toronto.

Machinery Repairs

Bertram Engine Works Co., Toronto
 Greycy, Wm. & J. G., Toronto.

Malleable Iron Castings

Buhl Malleable Co., Detroit, Mich.
 McKinnon Dash & Metal Works, Co., St. Catharines,
 Ont.
 Smith's Falls Malleable Castings Co., Smith's Falls,
 Ont.

**Marine and Stationary Engines and
 Boilers**

Allis-Chalmers-Bullock, Limited, Montreal.
 Bertram Engine Works Co., Toronto.

Mechanical Draft

Babcock & Wilcox, Limited, Montreal.
 McEachren Heating & Ventilating Co., Galt, Ont
 Sheldon & Sheldon, Galt, Ont.
 Sturtevant, B. F. Co., Boston, Mass.

Metal Gates

Page Wire Fence Co., Walkerville, Ont.

Metal Stamping

Globe Machine & Stamping Co., Cleveland, Ohio.

Metallurgists

Mills, S. D., Toronto.

Mill Machinery and Supplies

Allis-Chalmers-Bullock, Limited, Montreal.
 Armstrong Mfg. Co., Bridgeport, Conn.
 Becker-Brainard Milling Machine Co., Hyde Park,
 Mass.

Buhl Malleable Co., Detroit, Mich.
 Cleveland Twist Drill Co., Cleveland, Ohio.
 Darling Bros., Montreal.
 Fleming, W. A. & Co., Montreal.
 Gartshore, John J., Toronto.
 Goldie & McCulloch Co., Galt, Ont.
 Greycy, Wm. & J. G., Toronto.
 Gutta Percha & Rubber Mfg. Co., Toronto.
 Hamilton Brass Mfg. Co., Hamilton, Ont.
 Hamilton, Wm. Mfg. Co., Peterborough, Ont.
 Hawkaworth, Alfred, Montreal.
 Hay, Peter Knife Co., Galt, Ont.
 Hopkins, F. H. & Co., Montreal.
 Jeffrey Mfg. Co., Columbus, Ohio.
 London Machine Tool Co., London, Ont.
 Morrow, John, Machine Screw Co., Ingersoll, Ont.

McDougall, John, Caledonian Iron Works Co.,
 real.
 McLaron, D. K., Montreal and Toronto.
 Penberthy Injector Co., Windsor, Ont.
 Petrie, H. W., Toronto.
 Pittsburgh Shafting Co., Detroit, Mich.
 Rice Lewis & Son, Toronto.
 Robb Engineering Co., Amherst, N.S.
 Ryall Machine Screw Co., Montreal.
 Spence, R. & Co., Hamilton, Ont.
 Wilson, J. C. & Co., Glenora, Ont.

Milling Cutters and Machines

Becker-Brainard Milling Machine Co., Hyde Park,
 Mass.

Miners Lamps

Allis-Chalmers-Bullock, Limited Montreal
 Anton, John & Son, Monongahela, Pa.

Mining Machinery

Allis-Chalmers-Bullock, Limited, Montreal
 Buhl Malleable Co., Detroit, Mich.
 Canadian Rand Drill Co., Sherbrooke, Que.
 Cleveland Twist Drill Co., Cleveland, Ohio
 Corbett, R. B., Brooklyn, N.Y.
 Gartshore, John J., Toronto.
 Hamilton, Wm. Mfg. Co., Peterborough, Ont
 Hopkins, F. H. & Co., Montreal
 Jeffrey Mfg. Co., Columbus, Ohio.
 Link-Belt Engineering Co., Philadelphia, Pa.
 McDougall, John, Caledonian Iron Works Co.,
 Montreal.
 Perrin, William R. & Co., Limited, Toronto
 Petrie, H. W., Toronto.
 Williams, A. R. Machinery Co., Toronto.

Motors and Dynamoes

Allis-Chalmers-Bullock, Limited, Montreal
 Canadian General Electric Co., Toronto.
 Canadian Westinghouse Co., Ltd., Hamilton
 Corbett, R. B., Brooklyn, N.Y.
 Electrical Construction Co., London, Ont
 Forman, John, Montreal.
 Jeffrey Mfg. Co., Columbus, Ohio.
 Jones & Moore Electric Co., Toronto
 Petrie, H. W., Toronto.
 Toronto & Hamilton Electric Co., Hamilton
 United Electric Co., Toronto.
 Volta Electric Repair Works, Toronto

Moulding Sand

Hamilton Facing Mills Co., Hamilton, Ont

Novelty Manufacturers

Worth & Martin, Toronto.

Nozzles

McCullough-Dalzell Crucible Co., Pittsburg
 Pittsburg Crucible Works, Pittsburg, Pa.

Office and Bank Fittings

Canadian Office & School Furniture Co.,
 Ont.
 Meadows, Geo. B., Wire, Iron & Brass Works,
 ronto.

Oils and Lubricants

Dixon, Jos, Crucible Co., Jersey City, N J
 Fleming, W. A. & Co., Montreal.
 Imperial Oil Co., Petrolia, Ont.
 Queen City Oil Co., Toronto.

Oil Cloth

Dominion Oil Cloth Co., Montreal.

Oil Cups

Penberthy Injector Co., Windsor, Ont

Paints and Colors

Bellhouse, Dillon & Co., Montreal.
 Berry Bros., Walkerville, Ont.
 Fleming, W. A. & Co., Montreal.
 Geigy, Aniline & Extract Co. New York Ont
 McArthur, Corneille & Co., Montreal.

Paper Manufacturers

Barber, Wm., & Bros., Georgetown, Ont
 Toronto Paper Mfg. Co., Cornwall, Ont

Patents

Budden, Hanbury, A., Montreal.
 Fetherstonhaugh & Co., Toronto.
 Marion & Marion, Montreal.

Perforated Metals

Globe Machine & Stamping Co., Cleveland
 Greening, B. Wire Co., Hamilton, Ont

Personal Accident

Canadian Casualty & Boiler Insurance Co.,

Phosphorizers

McCullough-Dalzell Crucible Co., Pittsburg
 Pittsburg Crucible Works, Pittsburg, Pa

Pig Iron

Bourne-Fuller Co., Cleveland, Ohio.
 Canada Iron Furnace Co., Montreal
 Nova Scotia Steel & Coal Co., New Glasgow
 Shepard, Charles G., Buffalo, N.Y.
 Syracuse Smelting Works, Montreal.

Pipe (Riveted, Iron and Steel)

Babcock & Wilcox, Limited, Montreal.
 McDougall, John, Caledonian Iron Works Co.,
 real

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(CONTINUED).

Pipe Threading Machines

Armstrong Mfg. Co., Bridgeport, Conn.
Butterfield & Co., Rock Island, Que.
Foble, H. W., Toronto.
Lewis & Son, Toronto.

Pipes and Tubes

Bourne-Fuller Co., Cleveland, Ohio.
Gibbs Foundry Co., Toronto.
Schett, R. B., Brooklyn, N.Y.
Catharine-Thomson Pipe & Foundry Co., Hamilton, Ont.
Montreal Pipe Foundry Co., Montreal.
Lewis & Son, Toronto.

Plaster

Albert Mfg. Co., Hillsborough, N.B.

Plates

Bourne-Fuller Co., Cleveland, Ohio.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Lewis & Son, Toronto.

Plumbago

Hamilton Facing Mills Co., Hamilton, Ont.
McCallough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Pneumatic Tools

Allis-Chalmers-Bullock, Limited, Montreal.
Canadian Hand Drill Co., Sherbrooke, Que.

Pointer Rolls (For Rods and Wire)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Portland Cement

Owen Sound Portland Cement Co., Owen Sound, Ont.
Hudson Co., Toronto.
St. Lawrence Portland Cement Co., Montreal.

Power Plants—Equipments

Allis-Chalmers-Bullock, Limited, Montreal.
Babcock & Wilcox, Limited, Montreal.
Canadian General Electric Co., Toronto.
Canadian Westinghouse Co., Ltd., Hamilton, Ont.
Cleveland Twist Drill Co., Cleveland, Ohio.
Corbett, H. B., Brooklyn, N.Y.
Darling Bros., Montreal.
Deke-Osborn Engineering Co., Toronto.
Electrical Construction Co., London, Ont.
Goldie & McCulloch, Galt, Ont.
Gutta Percha & Rubber Mfg. Co., Toronto.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
Jeffrey Mfg. Co., Columbus, Ohio.
Jones & Moore Electric Co., Toronto.
McDougall, John, Caledonian Iron Works Co., Montreal.
Ottawa Electric Co., St. Catharines, Ont.
Turner, William R. & Co., Limited, Toronto.
Foble, H. W., Toronto.
Phillips, Eugene F., Electrical Works, Montreal.
Pittsburgh Shafting Co., Detroit, Mich.
Robt. Engineering Co., Amherst, N.S.
Stearns, R. F. Co., Boston, Mass.
Turner & Hamilton Electric Co., Hamilton, Ont.
Walker Electric Co., Toronto.
Walker, J. C. & Co., Glenora, Ont.

Pipes (Tile, Sewer Pipe, Nozzles and Sleeves)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Pulleys

Darling Bros., Montreal.
Goldie & McCulloch Co., Galt, Ont.
Greer, Wm. & J. G., Toronto.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
Jeffrey Mfg. Co., Columbus, Ohio.
McDougall, John, Caledonian Iron Works Co., Montreal.
Walker, J. C. & Co., Glenora, Ont.
Walker, J. C., Belting Co., Montreal and Toronto.
Foble, H. W., Toronto.
Pittsburgh Shafting Co., Detroit, Mich.
Walker, J. C. & Co., Glenora, Ont.

Pumps and Pumping Machinery

Allis-Chalmers-Bullock, Limited, Montreal.
Bourne-Fuller Co., Toronto.
Corbett, R. B., Brooklyn, N.Y.
Darling Bros., Montreal.
Pump Co., Downsville, Pa.
Goldie & McCulloch Co., Galt, Ont.
Engine Co., Walkerville, Ont.
McDougall, John, Caledonian Iron Works Co., Montreal.
Walker, J. C. & Co., Glenora, Ont.
Walker, J. C., Wind Engine & Pump Co., Toronto.
Foble, H. W., Toronto.

Punches and Shears

Hamilton Machinery Co., Sarnia, Ont.
Machine & Stamping Co., Cleveland, Ohio.
Foble, H. W., Toronto.

Purifiers

Babcock & Wilcox, Limited, Montreal.
Goldie & McCulloch Co., Galt, Ont.
McDougall, John, Caledonian Iron Works Co., Montreal.

Purifying and Softening Systems (Water)

Babcock & Wilcox, Limited, Montreal.
Darling Bros., Montreal.
McDougall, John, Caledonian Iron Works Co., Montreal.

Railroads

Chicago & North-Western Ry., Toronto & St. Paul, Minn.

Railway Supplies

Algoma Steel Co., Sault Ste. Marie, Ont.
Allis-Chalmers-Bullock, Limited, Montreal.
Gartshore, John I., Toronto.
Greening, R. Wire Co., Hamilton, Ont.
Gutta Percha & Rubber Mfg. Co., Toronto.
Hopkins, F. H. & Co., Montreal.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Phillips, Eugene F., Electrical Works, Montreal.

Reamers

Butterfield & Co., Rock Island, Que.
Cleveland Twist Drill Co., Cleveland, Ohio.

Rivets

Bourne-Fuller Co., Cleveland, Ohio.

Rock and Ore Crushers

Allis-Chalmers-Bullock, Limited, Montreal.
Bradley Pulverizer Co., Boston, Mass.

Roller Bearings

Pittsburgh Shafting Co., Detroit, Mich.

Rolling Mill Engineers

Bourne-Fuller Co., Cleveland, Ohio.

Roofing

Bourne-Fuller Co., Cleveland, Ohio.
Metallic Roofing Co., Toronto.

Rubber Goods

Gutta Percha & Rubber Mfg. Co., Toronto.
Pittsburgh Shafting Co., Detroit, Mich.

Rubber Packing

Gutta Percha & Rubber Mfg. Co., Toronto.

Rubber Washing Tubs

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Rural Mail Boxes

Globe Machine & Stamping Co., Cleveland, Ohio.

Safes and Vaults

Goldie & McCulloch Co., Galt, Ont.

Screws

Morrow, John, Machine Screw Co., Ingersoll, Ont.
Ryall Machine Screw Co., Montreal.

Screw Plates

Armstrong Mfg. Co., Bridgeport, Conn.
Butterfield & Co., Rock Island, Que.

Shafting

Allis-Chalmers-Bullock, Limited, Montreal.
Bourne-Fuller Co., Cleveland, Ohio.
Goldie & McCulloch Co., Galt, Ont.
Greer, Wm. & J. G., Toronto.
Jeffrey Mfg. Co., Columbus, Ohio.
McDougall, John, Caledonian Iron Works Co., Montreal.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Petrie, H. W., Toronto.
Pittsburgh Shafting Co., Detroit, Mich.

Shapers and Carvers

Advance Machinery Co., Toledo, Ohio.

Shear Knives

Hay, Peter Knife Co., Galt, Ont.

Sheets (Iron and Steel)

Bourne-Fuller Co., Cleveland, Ohio.
Leslie, A. C. & Co., Montreal.
Lysaght, John, Limited, Bristol, England and Montreal.

Sheet Metal Goods

Globe Machine & Stamping Co., Cleveland, Ohio.
Metallic Roofing Co., Toronto.

Sheet Metal Stamping

Globe Machine & Stamping Co., Cleveland, Ohio.
Metallic Roofing Co., Toronto.
Ryall Machine Screw Works, Montreal.

Ship Builders

Bertram Engine Works Co., Toronto.
Rainage Edward, Toronto.

Smoke Stacks

Hamilton, Wm. Mfg. Co., Peterborough, Ont.
McDougall, John, Caledonian Iron Works Co., Montreal.

Solder

Globe Machine & Stamping Co., Cleveland, Ohio.
Syracuse Smelting Co., Montreal.

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(CONTINUED).

Special Machinery

Allis-Chalmers-Bullock, Limited, Montreal.
Globe Machine & Stamping Co., Cleveland, Ohio.

Speed Recorders

Bristol Co., Waterbury, Conn.

Sprinkler Insurance

Canadian Casualty & Boiler Insurance Co., Toronto.

Stamps and Stencils

Globe Machine & Stamping Co., Cleveland, Ohio.

Steam Pumps

Allis-Chalmers-Bullock, Limited, Montreal.
American Steam Pump Co., Battle Creek, Mich.
Canada Foundry Co., Toronto.
Darling Bros., Montreal.
Goldie & McCulloch Co., Galt, Ont.
McDougall, John, Caledonian Iron Works Co., Montreal.
Petrie, H. W., Toronto.
Pittsburgh Shafting Co., Detroit, Mich.
Williams, A. R. Machinery Co., Toronto.

Steam Separators

Babcock & Wilcox, Limited, Montreal.
Darling Bros., Montreal.
McEachron Heating & Ventilating Co., Galt, Ont.

Steam Specialties

Darling Bros., Montreal.
McEachron Heating & Ventilating Co., Galt, Ont.
Penberthy Injector Co., Windsor, Ont.
Sheldon & Sheldon, Galt, Ont.

Steam Valves

American Steam Pump Co., Battle Creek, Mich.
Babcock & Wilcox, Limited, Montreal.
Darling Bros., Montreal.
Kerr Engine Co., Walkerville, Ont.
Petrie, H. W., Toronto.
Williams, A. R. Machinery Co., Toronto.

Steel and Composite Ships

Bertram Engine Works Co., Toronto.

Steel Rails

Algoma Steel Co., Sault Ste. Marie, Ont.
Drummond, McCall & Co., Montreal and Toronto.
Gartshore, John J., Toronto.
Hopkins, F. H. & Co., Montreal.

Steel Shafting

Darling Bros., Montreal.
Goldie & McCulloch Co., Galt, Ont.
Greay, Wm. & J. G., Toronto.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
Leslie, A. C. & Co., Montreal.
McDougall, John, Caledonian Iron Works Co., Montreal.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Pittsburgh Shafting Co., Detroit, Mich.
Wilson, J. C. & Co., Glenora, Ont.

Stocks and Dies

Armstrong Mfg. Co., Bridgeport, Conn.
Butterfield & Co., Rock Island, Que.
Petrie, H. W., Toronto.
Rice Lewis & Son, Toronto.
Worth & Martin, Toronto.

Stoppers

McCullough-Dalsell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Structural Steel

Bourne-Fuller Co., Cleveland, Ohio.
Canada Foundry Co., Toronto.
Hopkins, F. H. & Co., Montreal.

Sulphur Furnace

Schutte & Koerting Co., Philadelphia, Pa.

Suspension Furnaces

Continental Iron Works Co., New York City.

Tanks (Oil and Water)

Canada Foundry Co., Toronto.
Corbett, R. B., Brooklyn, N.Y.
Goldie & McCulloch Co., Galt, Ont.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
McDougall, John, Caledonian Iron Works Co., Montreal.
Ontario Wind Engine & Pump Co., Toronto.

Taps and Dies

Butterfield & Co., Rock Island, Que.
Cleveland Twist Drill Co., Cleveland, Ohio.
Globe Machine & Stamping Co., Cleveland, Ohio.

Tees

Bourne-Fuller Co., Cleveland, Ohio.
Canada Foundry Co., Toronto.

Textile Manufacturers

Dominion Oil Cloth Co., Montreal.
Smith Mfg. Co., Toronto.
Storey, W. H. & Sons, Acton, Ont.

Textile Supplies

Greay, Wm. & J. G., Toronto.
McLaren, J. C. Belting Co., Montreal and Toronto.

Thermometers (Recording)

Bristol Co., Waterbury, Conn.

Tin

Leslie, A. C. & Co., Montreal.
Syracuse Smelting Works, Montreal.

Tool Grinders

Barnes, R. F. Co., Rockford, Ill.

Tool Steel

Bourne-Fuller Co., Cleveland, Ohio.
Hopkins, F. H. & Co., Montreal.
Leslie, A. C. & Co., Montreal.

Transfer Ornaments

Meyercord Co., Chicago, Ill.

Trucks

Corbett, R. B., Brooklyn, N.Y.
Greay, Wm. & J. G., Toronto.
Hopkins, F. H. & Co., Montreal.
McDougall, John, Caledonian Iron Works Co., Montreal.
Sheldon & Sheldon, Galt, Ont.

Trucks (Railway)

Canada Foundry Co., Toronto.

Trucks (Wire Mill Supplies)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Tubs (Cleaning and Coating Wire)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Tugs

Bertram Engine Works Co., Toronto.

Tumbling Barrels

Globe Machine & Stamping Co., Cleveland, Ohio.

Turbines

Canada Foundry Co., Toronto.
Greay, Wm. & J. G., Toronto.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
Wilson, J. C. & Co., Glenora, Ont.

Typewriters and Supplies

United Typewriter Co., Toronto.

Valves

American Steam Pump Co., Battle Creek, Mich.
Babcock & Wilcox, Limited, Montreal.
Canada Foundry Co., Toronto.
Hamilton Brass Mfg. Co., Hamilton, Ont.
Kerr Engine Co., Walkerville, Ont.
Petrie, H. W., Toronto.
Williams, A. R. Machinery Co., Toronto.

Valves (Rubber)

Gutta Percha & Rubber Mfg. Co., Toronto.

Varnishes

Berry Bros., Walkerville, Ont.

Ventilators

Darling Bros., Montreal.
Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.

Wagon and Carriage Wood Work

Hore, F. W. & Son, Hamilton, Ont.

Washers or Hollenders (Cleaning Rubber)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Water Power Development

Vogel, C. H., Ottawa.

Water Purifying Chemicals

Canada Chemical Mfg. Co., London, Ont.
Lord, Geo. W. Co., Philadelphia, Pa.
Sleeth, D., Montreal.

Windmills

Ontario Wind Engine & Pump Co., Toronto.

Wire Mill Supplies

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Wire and Wire Rope

Dominion Wire Rope Co., Montreal.
Greening, B. Wire Co., Hamilton, Ont.
Leslie, A. C. & Co., Montreal.
Phillips, Eugene F., Electrical Works, Montreal.
Pittsburgh Shafting Co., Detroit, Mich.
Wire & Cable Co., Montreal.

Wire Rope Fittings

Dominion Wire Rope Co., Montreal.

Wire Cloth

Greening, B. Wire Co., Hamilton, Ont.

Wire Drawing Machinery

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Wire Fencing and Netting

Page Wire Fence Co., Walkerville, Ont.

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Advance Machinery Co., Toledo, Ohio.
Canada Machinery Co., Sarnia, Ont.
Cowdroy, C. H., Machine Works, Fitchburg, Mass.
Goldie & McCulloch Co., Galt, Ont.
London Machine Tool Co., London, Ont.
Petrie, H. W., Toronto.
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Steptoe, John Shaper Co., Cincinnati, Ohio.
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