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THE QUEEN CITY OIL CO.

SAMUEL ROGERS, President.

TORONTO.

OIL AND REFINED

CANADIAN MANUFACTURER
AND INDUSTRIAL WORLD
DEVOTED TO THE MANUFACTURING INTEREST OF THE DOMINION

Vol. 44.

TORONTO, FEBRUARY 21, 1902.

No. 4.

Woven Hair BELTING

The best driving belt obtainable.
COMPLETE STOCK.

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320 to 326 St. James St.
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For all TEXTILE PURPOSES

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Dominion Dyewood and Chemical Company,
TORONTO

Dominion Oil Cloth Co., Limited

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OIL-CLOTHS
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Carriage Oil-Cloth,
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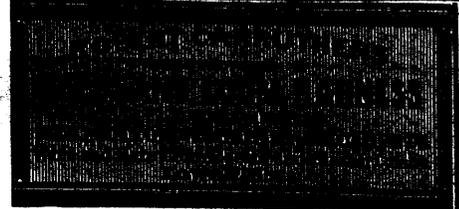
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ALSO LIGHT GREY IRON CASTINGS.
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OTTAWA

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High Grade Charcoal Pig Iron for Special
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Montreal, Radnor and Three Rivers

Manufacturers of the well-known

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Suitable for Car Wheels, Cylinders and Fine Castings,
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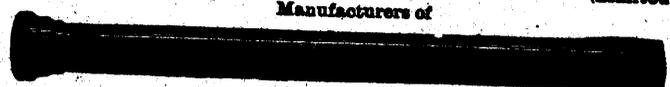
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MACHINE TOOLS

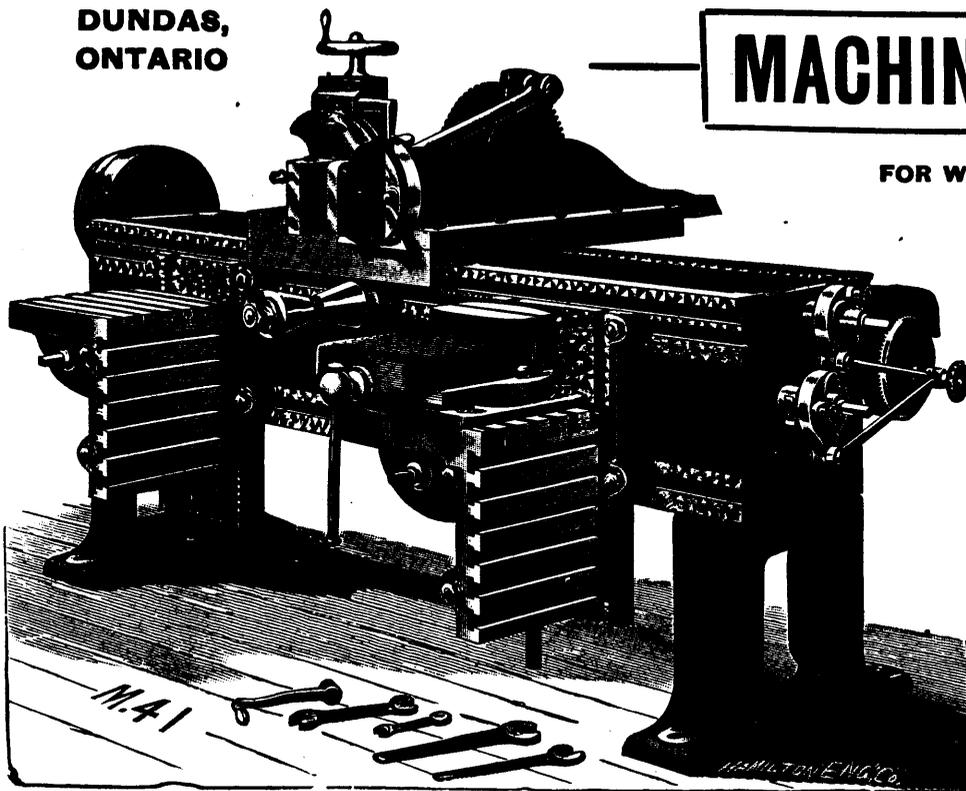
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321 St. James St.**



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MANUFACTURERS OF

BRIGHT COMPRESSED STEEL SHAFTING

FROM $\frac{1}{2}$ TO 6 INCHES IN DIAMETER. GUARANTEED STRAIGHT AND TRUE TO WITHIN $\frac{1}{16}$ OF AN INCH.

Spring, Reeled Machinery, Tire, Toe Caulk, Sleigh Shoe, Angles, Special Sections and all Merchant Bar Steel. Sheet Steel up to 48 inches wide.

RAILWAY AND ELECTRIC RAILWAY CAR AXLES

FISH PLATES, SPIKES AND TRACK BOLTS

Tee Rails, 12, 18, 24 and 28 lbs. per yard

..HEAVY FORGINGS A SPECIALTY..

"FERRONA" PIG IRON, For Foundry Use.

Works—NEW GLASGOW, N.S., and FERRONA, N.S.

Head Office—NEW GLASGOW, NOVA SCOTIA

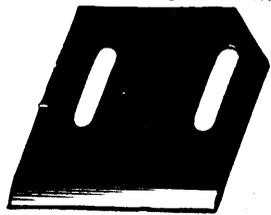
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GALT, ONT.

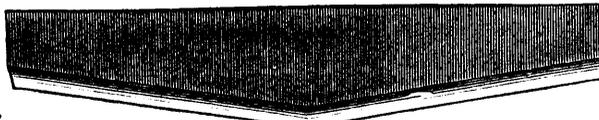
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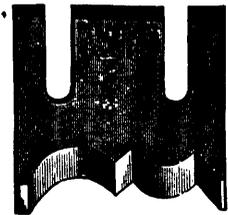
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Steel Bridges for Railways and Highways,
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Steel Roofs, Girders, Beams, Columns for Buildings.

A large Stock of ROLLED STEEL BEAMS, JOISTS, GIRDERS, CHANNELS, ANGLES, TEES, Z BARS and PLATES

Tables, giving Sizes and Strength of Rolled Beams on application.

ALWAYS ON HAND IN LENGTHS TO THIRTY-FIVE FEET.

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48% and 58% (Light and Heavy)

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35% to 37% (Hardwood Casks)

CAUSTIC SODA

60% to 77%



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DOUBLE STRENGTH

BICARBONATE SODA

ABSOLUTELY PURE

Also for Mineral Water Manufacturers.

The Wellington Mills, *LONDON, ENG.*
GENUINE EMERY

Oakey's Flexible Twilled Emery Cloth.
Oakey's Flint Paper and Glass Paper.
Oakey's Emery Paper, Black Lead, Etc.

Prize Medal and Highest Award Philadelphia, 1876, for Superiority of Quality, Skilful Manufacture, Sharpness, Durability, and Uniformity of Grain.

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Warp Yarns of all descriptions, in Skein, Chain or on Beams.
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Yarns of all kinds for Manufacturers' use.

Twines, Lampwicks, Webbing, Etc.

Dyeing of all Colors, including **GENUINE FAST BLACK.**

Canada Foundry Company, Limited
Engineers, Founders and Machinists

STRUCTURAL STEEL AND IRON WORK

BEAMS, CHANNELS, ANGLES AND PLATES
ALWAYS IN STOCK.

GAS AND WATERWORKS SUPPLIES

Cast Iron Gas and Water Pipe,
Valves, Hydrants, Valve Boxes,
Special Castings of Every Description.

Head Office, - 14 to 16 King Street East, Toronto.

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MANUFACTURERS OF THE
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Calcined Plaster

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TORONTO.

Galvanizing

DONE FOR THE TRADE.

GET OUR PRICES.



For IRON FENCING,
BANK and OFFICE RAIL-
INGS and all kinds
of IRONWORK

Address:

Toronto Fence & Ornamental Iron Works
99 Queen St. East, Toronto.

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Manufacturers of

Square and Hexagon

HOT PRESSED NUTS.

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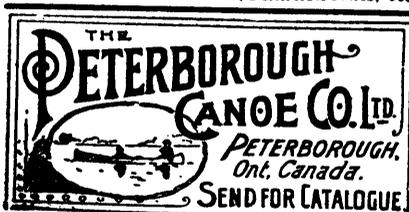


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THE JOHN MORROW MACHINE SCREW CO.

INGERSOLL, ONT.

Mfrs. of Set, Cap and Special
Screws, Studs, Finished Nuts, etc.



Why you should Install a Webster Feed Water Heater

Because

It will keep your Boilers perfectly clean.

It is the Greatest Money Saver about a Plant.

It Heats the feed water at all times, 206-212
degrees.

It is made to fit any Location. It is simple
and complete.

It is the most Accessible for Cleaning.

It is especially adapted for large Heating
Systems.

It is the Best for the ordinary Power Plant,
and is made of the very best materials
throughout.

A Postal
will bring
you our
Catalogue,
send for it.

DARLING BROS. Sole Manufacturers,
RELIANCE WORKS,
Montreal.

A. KLIPSTEIN & CO.

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Anilines, Dyestuffs & Chemicals

DELIVERY MADE AT NEW YORK, MONTREAL OR HAMILTON.

WRIGHT & DALLYN, AGENTS,
HAMILTON, ONT.

ENGINES SHIPPED PROMPTLY

We have under construction all sizes of
Engines from 7 h.p. to 125 h.p.

Some of the sizes are ready to ship, and any
of them can be completed in ten days from re-
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They are suitable for Electric Stations, Fac-
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Larger sizes, either simple or compound, built
to order on short notice.

ROBB ENGINEERING CO. Limited

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(American Branch of Leopold Cassella & Co.)

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DYE STUFFS

New York, 182-184 Front Street.

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Philadelphia, 126-128 South Front St.

Providence, 64 Exchange Place.

Atlanta, 47 North Pryor Street.

Montreal, D'Youville Square.

"C.R.C." Star



RED RUBBER PACKING

A HIGH GRADE PACKING

"THE BEST IS CHEAPEST"

Applies to your work and this packing.

"TIME IS MONEY"

No time lost re-packing joint; specially adapted for high pressure.

See the Trade Mark on every piece.

FOR SALE BY THE TRADE

AND

The **Canadian Rubber Co.**

MONTREAL

TORONTO

WINNIPEG

WE GUARANTEE the "ROSSENDALE," M.A.Y. WOVEN

You run no risk. Return at our expense if not satisfactory. These belts are twice the strength of leather, more durable, 30% cheaper.

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R. H. BUCHANAN & CO., 692 CRAIG ST., MONTREAL

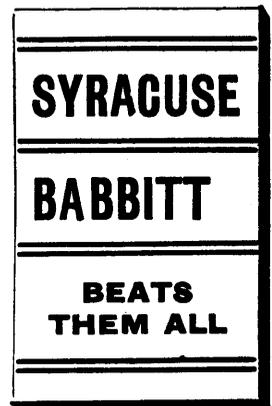
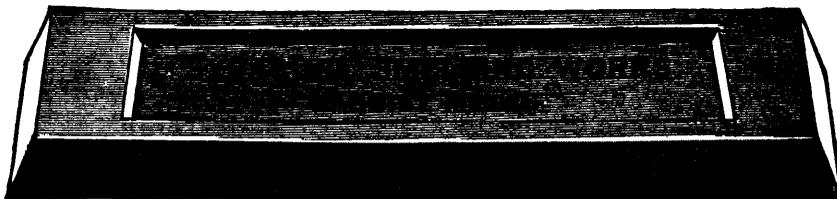
F. E. DIXON & CO., - Agents 30 Wellington St. East, Toronto.

THE BEST IS NONE TOO GOOD.

The largest machinery builders in Canada and United States use our Babbitt Metal. Is this not sufficient proof of its superiority over other anti-friction metals? If the largest users are satisfied with our Babbitt Metals, why should it not suit you? We can furnish you with numbers of testimonials.

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**PIG TIN, ANTIMONY
INGOT COPPER
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IRON AND STEEL
SCRAP**



Manufacturers of

**BABBITT METALS, SOLDER
TYPE METALS
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ALL OTHER WHITE METAL MIXTURES**

SYRACUSE SMELTING WORKS

WILLIAM AND ST. THOMAS STREETS, - - MONTREAL

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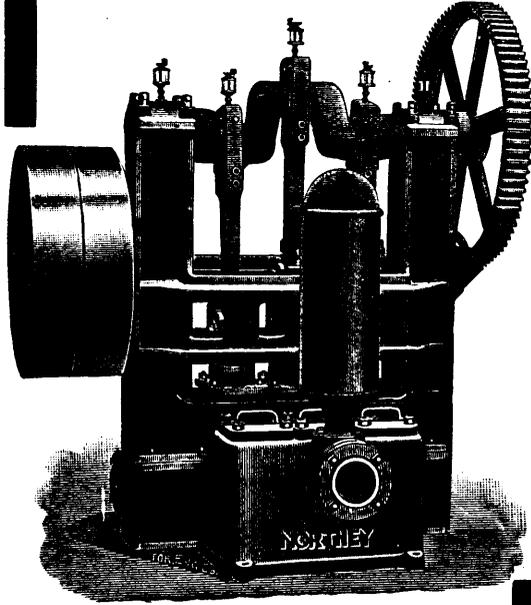
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TRIPLEX POWER PUMP**

is a high class serviceable machine; it offers the best means of applying either steam, water or electrical power for pumping purposes. A special feature is the use of three cranks 120 degrees apart—ensuring a practically constant delivery. This pump, for Boiler Feeding, etc., and especially in connection with an electric motor, gives excellent results.

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Pumping Machinery

"For all Duties"



Many manufacturers who are users of Pumping Machinery pay coal bills that are from 10% to 50% higher than they should be, because their pumps are old and leaky, do not give the service they should, and waste steam. Would it not pay you to look into this matter? We can advise you what you can do most profitably with your present plant—discard it or repair it. Our business is the making of Pumps for all services—we do it on a large scale, and we are experts in our line. Write for Specifications and Catalogues.

We manufacture also the
Northey Gas and Gasoline Engine
a handy and economical motor.

THE Northey Company Limited, Toronto

SEND FOR ILLUSTRATED BOOKLET 1000 KING ST. SUBWAY

TO MANUFACTURERS! Do You Publish Catalogues and Circulars? Advertise in Trade Journals?

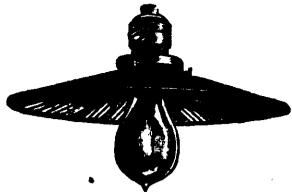
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Photo Engravings, Wood Cuts, Electrotypes, Zine Etchings

Or anything that you may desire, **FIRST-CLASS** in every particular, at Prices that Defy Competition. Ask for Estimates.

THE CANADIAN MANUFACTURER PUBLISHING CO., LIMITED, - TORONTO

RODERICK J. PARKE, CONSULTING ENGINEER TO MANUFACTURERS—Competent and impartial advice on Industrial Electrical Systems of Lighting, Power Distribution, Heating and Welding, Etc. Plans, Specifications, Tests, Reports, Valuations.



Reflectors, Shades, Lamps

We Stock a Large Variety of **SHADES** and **REFLECTORS** in

ALUMINUM, MIRROR, CELLULOID, PAPER, PORCELAIN,
FOR FACTORY AND OFFICE.

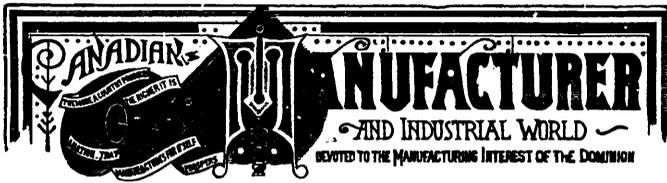
Imperial Lamps and Helios Upton Enclosed Arcs Give **BEST LIGHT** with **LEAST CURRENT**

ELBRIDGE Sparking Dynamos, SAMSON Batteries and IMPERIAL Salts, for Gas or Oil Engines.

Write us about Lighting your Factory or Office.

JOHN FORMAN, 708 and 710 Craig St., MONTREAL

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ESTABLISHED IN 1890.

PUBLISHED ON THE FIRST AND THIRD FRIDAYS OF EACH MONTH

The Canadian Manufacturer Publishing Co., Limited.

McKinnon Building, Cor. Melinda and Jordan Sts., Toronto.
Cable address: "CANAMAN." Western Union Telegraphic Code used.

MESSRS. DAVISON & CO.,

164 Federal Street, Boston, Mass.
AGENTS FOR UNITED STATES.

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J. J. CASSIDEY, Editor and Manager

AUSTRALIA AND BRITISH WEST INDIES TRADE.

The most interesting address delivered by Hon. Dr. Montague at a banquet of the Canadian Manufacturers' Association held at Hamilton, Ont., a few days ago, in which he spoke of the possibilities of Canadian trade with Australia; and the fact that a commissioner delegated by the Association is now making a tour of the British West Indies with a view to discovering the extent of the possibilities of trade with those Islands, are, very deservedly, creating much interest on the part of our manufacturers who produce more goods than they can conveniently dispose of at home.

Some light may be thrown upon the possibilities of trade with these countries by showing the varieties and values of Canadian products sold there, and with this object we have collected the facts from the Trade and Navigation Returns for 1901. For statistical purposes, the Blue Book classifies under the name "Australia" all the Australasian colonies, and under the classification "British West Indies" is included all the West India Islands under the British flag. Considering that most of the steamers which ply to the West Indies extend their voyages to Demerara, for the purposes of this article we have included British Guiana with British West Indies. The Blue Book classifies our exports according to their source of origin; and, doing this, we discover that in the year 1901 our exports of domestic products to Australia and to British Guiana and West Indies were:

The mine, including asbestos, coal, gold, gypsum, oil, salt, sand and gravel, stone and n.e.s.:

Australia	\$987
British West Indies and British Guiana	60,861

The fisheries, including codfish, mackerel, halibut, herring, other sea fish, oysters, lobsters, salmon, all other fish, fish oil and n.e.s.:

Australia	\$187,484
British West Indies and British Guiana	1,153,499

The forest, including ashes, pine, lumber (deals and deal ends), laths, pickets, planks and boards, scantling, shingles, shooks, staves, all other lumber n.e.s., masts and spars, poles, all other n.e.s.:

Australia	\$371,841
British West Indies and British Guiana	220,907

Animals and their produce, including horses, cattle, swine, sheep, poultry, butter, cheese, eggs, furs, grease; meats (bacon, beef, hams, mutton, pork, poultry, game, tongues, etc.), tallow, all other n.e.s.:

The Canadian Manufacturer

Reaches all the Blast Furnaces, Iron and Steel Works, Rolling Mills, Manufacturers of Iron and Wood-Working Machinery, Steam Engines and Boilers, Pumping and Mining Machinery, Electric Machinery and Appliances, Machinery Dealers and Steam Fitters' Supplies, all Hardware Dealers, Cotton, Woolen, Knitting and Yarn Mills, Pulp and Paper Mills, etc., in Canada.

Australia	\$29,418
British West Indies and British Guiana	107,150

Agricultural products, including fruits and berries (fresh, dried and preserved), grain and products of—(barley, beans, oats, peas, wheat, bran), flour of wheat, oatmeal and all other meal, hay, hops, clover seed, trees, shrubs and plants, vegetables (canned or preserved), potatoes, turnips, all other vegetables, and other articles n.e.s.:

Australia	\$220,518
British West Indies and British Guiana	566,631

But what is of more particular interest to manufacturers are these items classified as "manufactures," our exports of which were as follows:

Articles.	Australia.	B.W. Indies & B. Guiana.
Agricultural Implements	\$437,217	\$80
Books, maps, etc.	5,875	20,076
Biscuit and bread	12	6,172
Bricks .....	.....	95
Carriages	2,550	890
Carriages, parts of	3,364	82
Carts	990	50
Wagons	140	.....
Bicycles	252,283	155
Bicycles, parts of	51,138	.....
Other vehicles	1,085	10
Cement .....	.....	3
Clay, manufactures of .....	.....	70
Clothing and wearing apparel	21,731	6,609
Cordage, rope and twine	2,026	16,169
Cotton fabrics	209,480	503
Cottons, other	25,254	1,343
Drugs, etc., n.e.s.	23,104	17,490
Dyestuffs .....	.....	453
Electrotypes	1,240	.....
Explosives	2,789	.....
Glass and glassware	292	21
Household effects, n.e.s.	2,024	1,230
India rubber goods	56,938	229
Iron and Steel—Stoves	156	496
Castings, n.e.s.	3,801	12
Machinery, n.e.s.	54,755	10,956
Sewing machines	251	.....
Hardware, n.e.s.	11,037	765
Steel	4,470	2,755
Lamps and lanterns .....	.....	27
Leather, sole and upper	114	190
Boots and shoes	11,471	14,836
Harness and saddlery	1,823	719
Leather, other	276	.....
Lime	40	6
Liquors, ale and beer .....	.....	337
Whiskey	15,299	6,775
Wines .....	.....	216
Liquors, n.e.s. ....	.....	379

Articles.	B.W. Indies & B. Guiana.	
	Australia.	
Metals	\$365	\$14
Musical instruments—Organs	26,595	623
Pianos	41,889	550
All other	471	20
Oakum .....	.....	4
Oil, n.e.s.	2,571	481
Photographs	25	16
Soaps .....	.....	9,237
Stone, ornamental and building .....	.....	517
Sugar, n.e.s. ....	.....	184
Tar .....	.....	125
Tin, manufactures of	469	75
Tobacco	17	3,221
Wall paper	4,148	5
Barrels, empty .....	.....	50
Furniture, household	20,352	3,197
Door sash and blinds	44	42
Matches and splints .....	.....	1,034
Mouldings, etc.	585	7
Woodenware	1,658	295
Wood pulp	11,063	.....
Other articles of wood, n.e.s.	53,725	6,641
Woolens	1,377	961
Unenumerated	118,884	31,062
Miscellaneous	10	83
Total	\$1,487,273	\$145,653

Recapitulation of sources and values :

Manufactures	B.W. Indies & B. Guiana.	
	Australia.	
The mine	\$1,487,273	\$145,653
The fisheries	987	60,861
The forest	187,484	1,153,499
Animals and their products	371,841	220,907
Agricultural products	29,418	107,150
	220,518	566,631
	\$2,297,451	\$2,254,701

A noticeable feature of this showing is that while the values of Canadian exports to Australia and to British West Indies and British Guiana are substantially equal, the value of exports of manufactures to Australia is ten times as large as the value of exports to our neighboring British West India markets.

CANADA'S TROPICAL TRADE.

At the request of THE CANADIAN MANUFACTURER, Mr. George Johnson, Dominion Statistician, has prepared for us the following statistical article in which is analyzed Canada's trade with the tropical islands of this hemisphere and with the continent of South America, which contains some useful hints regarding the peculiar value to each other of the trade between regions in the Temperate Zones and the Tropics. Mr. Johnson enumerates and analyzes his points as follows :

1. During the years 1895-1901 our export and import trade with the British West Indies decreased \$1,286,682 compared with the seven years 1873-1879, and decreased \$1,697,082 compared with the seven years 1883-1889.

2. Our trade with the Spanish West Indies shows an increase of \$329,045 in 1895-1901 compared with 1873-1879 and a decrease of \$4,247,205 compared with 1883-1889.

3. With the French West Indies our trade shows a decrease in the seven years 1895-1901 of \$872,750 compared with the seven years 1883-1889, and of \$1,958,070 compared with the seven years 1873-1879. This particular trade has gone down till it is (1901) less than one-tenth the amount in 1883. It is dwindling into the little end of nothing.

4. Our trade with the other West Indies, which was \$695,335 less in the seven years of the 1883-1889 period than in the 1873-1879 period, picked up during the last period of seven years 1895-1901, and reached within \$33,930 of its value in the 1873-1879 period.

5. Our trade with South American countries (including British Honduras), which increased from \$7,500,000 in 1873-1879 period to \$18,663,166 in the 1883-1889 period, decreased to \$16,366,077 in 1895-1901. The increase in 1883-1889 was \$11,162,440 over 1873-1879, and it was, in 1895-1901, \$8,865,351 over 1873-1879.

6. Taking totals, the total direct business with the countries named was :

In the seven years, 1873-1879	\$45,414,785
" " 1883-1889	59,783,120
" " 1895-1901	51,330,491

The trade in 1883-1889 was 31.6 per cent. over that of 1873-1879, and in 1895-1901 it was 14.1 per cent. less than that of 1883-1889.

7. In order to see just where the shoe pinches I have prepared the following tables :

	Total trade 1895-1901.	The total trade less or more than In 1883-1889.		In 1873-1879.	
		Less.	More.	Less.	More.
British West Indies	\$18,857,504	\$1,697,082		\$1,286,682	
Spanish Indies	14,795,921	4,247,205			\$329,045
French Indies	245,271	872,750		1,958,070	
Other Indies	1,065,726		\$661,505	33,930	
South America	16,366,077	2,297,089			8,865,351

It will be seen that there has been a decrease in every case but one in the 1895-1901 period compared with the 1883-1889 period and that the total decrease amounts to \$8,452,621.

8. To trace still further the character of this declining trade with the British West Indies, we may separate it into exports and import as follows :

In the seven years, 1895-1901	Exports from Canada.		Imports into Canada.	
" " 1883-1889	\$11,858,455	\$6,999,049		
" " 1873-1879	10,615,465	9,939,121		
	14,499,462	5,644,724		

In this case our exports in the 1895-1901 period were more than in the 1883-1889 period, and less than in the 1873-1879 period, while our imports, though less than in the 1883-1889 period, are more than in the 1873-1879 period.

Our exports, which suffered a severe decline in 1883-1889 compared with 1873-1879, recovered somewhat in the last seven years, while our imports, which showed a large increase in 1883-1889, decreased in the 1895-1901 period by nearly three million dollars.

9. The subsidy to the steamship line plying between Canada and the West Indies and South America, which began in 1890 with a vote of \$50,000, has had the effect of staying the decline in the case of our exports. It has not had the effect of developing business on the import side of the account.

10. Our trade with Spanish West Indies was as follows :

In the seven years, 1895-1901	Exports from Canada.		Imports into Canada.	
" " 1883-1889	\$7,972,986	\$6,822,935		
" " 1873-1879	6,383,000	12,660,126		
	8,679,222	5,787,664		

In the case of the Spanish West Indies, Cuba and Porto Rico the statistics show that the exports went down in the 1883-1889 period compared with the 1873-1879 period, and experienced a revival in the 1895-1901 period, but not sufficient to carry them to the figures of 1873-1879. The imports from the Spanish West Indies in 1883-1889 took a leap forward as compared with 1873-1879, but sunk back to almost their old figures in 1895-1901.

11. The figures in the French West Indies trade indicate a drying up of business. It was as follows :

In the seven years, 1895-1901	Exports from Canada.		Imports into Canada.	
" " 1883-1889	\$225,201	\$20,070		
" " 1873-1879	972,675	146,246		
	1,970,961	232,380		

Here the drop has been continuous and has affected both imports and exports; the imports having decreased in 1895-1901 compared with 1873-1879 by 91 per cent., and the exports by nearly 90 per cent.

12. In the case of the other West Indies, the figures are:

	Exports from Canada.	Imports into Canada.
In the seven years, 1895-1901....	\$969,704	\$96,022
“ “ 1883-1889....	352,003	52,218
“ “ 1873-1879....	942,345	157,511

In this instance the exports fell in the intermediate period 1883-1889, and rose again in the 1895-1901 period, going some \$27,000 above the 1873-1879 period, and \$618,000 over the period 1883-1889. The imports followed the same rule in their fall in the intermediate period, and rising in the last period but not reaching the figures of 1873-1879.

13. There remains still to be analyzed the trade of Canada with the South American countries. This stands as follows:

	Exports from Canada.	Imports into Canada.
In the seven years, 1895-1901....	\$10,066,897	\$6,299,180
“ “ 1883-1889....	9,773,168	8,929,998
“ “ 1873-1879....	6,019,842	1,480,884

In this case the export trade from this country shows constant though not equal growth. In the second period the increase was 37 per cent. over the 1873-1879 period, and in the third period 1895-1901 the increase was 21 per cent.

The imports into Canada showed a large growth in the 1883-1889 period and a very considerable diminution in the third period compared with the second.

14. Taking the total exports from Canada to the sections of this hemisphere with which we are dealing, the figures stand:

	Exports.	Imports.
In the seven years, 1895-1901....	\$30,939,243	\$20,237,256
“ “ 1883-1889....	28,056,311	31,987,709
“ “ 1873-1879....	32,111,632	13,303,153

The export trade under the stimulus of \$981,843 of subsidies, is still over a million dollars below the total of the 1873-1879 period, though it is three million dollars more than it was in the intermediate period.

The import trade is nearly seven million dollars over the figures of 1873-1879, but it is nearly twelve million dollars below the figures of 1883-1889.

The stimulus given to our export trade is undoubted and promises fairly enough to be beneficial in the future.

15. In the period 1873-1879 the balance of trade was in our favor by \$18,808,659.

In the period 1883-1889 the balance was against us by \$3,931,398.

In the period 1895-1901 the balance was in our favor by \$10,701,987.

In the first period the favorable balance was 42 per cent. of the whole trade, and in the third period it was 20.8 per cent. In the intermediate period the unfavorable balance was 7 per cent.

The conclusion to be drawn is that the subsidy given by the Dominion Government may fairly be cited as having stayed a falling trade, and has in ten years almost placed it upon its early state of prosperity.

AUSTRALIAN TRADE.

In view of the interest aroused over the question of Canadian trade with Australia owing to the adoption of a tariff of a protective character by the Commonwealth, it is interesting to observe the trend of commerce between the

Dominion and New South Wales during the last three years. In 1898 New South Wales imported goods to the value of £131,692 from Canada, and her exports to this country amounted to £86,964. The following year the imports from Canada dropped to £92,710, but the exports advanced to £111,789. In 1900 the imports increased to £114,321, while the exports fell to £66,403. The following are some of the leading imports for the three years:

	1898.	1899.	1900.
Plows.....	£2,073	£1,455	.....
Other agricultural implements..	926	3,617	£5,694
Apparel.....	1,001	1,871	9,247
Bicycles.....	24,780	12,723	17,585
Boots, shoes.....	491	231	3,078
Carriages.....	454	433	1,304
Carriage materials.....	224	672	1,947
Drapery.....	4,714	3,633	11,878
Furniture.....	1,714	161	402
Fish, preserved.....	4,787	3,171	3,660
Fish, fresh.....	62	501	1,609
Flour.....	54,327	27,292	15,715
Hardware.....	131	411	278
Cabinet organs.....	511	872	1,175
Pianos.....	1,132	3,541	1,347
Agricultural machinery.....	11,865	19,206	18,713
Other machinery.....	51	1,853	4,767
Timber, rough.....	11,641	3,123	4,024
Cheese.....	3	165	1,605

In his remarks upon these trade returns, Mr. J. S. Larke, Commercial agent to Australia, says:—"From these figures the trend of the Canadian trade can be seen. Leaving out the item of flour, the trade in other articles was nearly 50 per cent. greater than in any previous year. It shows a marked development in the general trade with this colony. The good harvest in 1899-1900 and the over import of United States flour in 1899 affected the sales from Canada, and reduced the importations to nearly half of those of 1898. The total importations from Australia only amounted to £28,232, of which more than one-half came from Canada. In 1899 the importations from Canada were only one-third of those from the United States. There is still a demand for Manitoba flour, which will continue unless a high duty is placed upon it.

"Apparently the trade in plows with Canada ceased last year. Actually it was larger than in other years. A portion were entered as 'other agricultural implements,' but the great bulk was credited to the United States. They were sold to a United States firm who does the business here. The importations of bicycles from abroad shows a small increase, the major portion of which was from Canada. The importations of boots and shoes were, in 1900, £343,295, and in 1901 £464,691, the United States taking about one-half of the increase. The Canadian trade shows a notable gain, but still our share of the trade is very much below what we should do. In the accessories of the trade, such as parts, blacking, polishes, etc., we as yet do practically nothing.

"Carriages and carriage materials show fair improvement, but are yet small in extent. The new tariff will probably decrease the business of importing carriages and increase the demand for materials and parts.

"The trade for Canada in drapery, which includes cottons, shows a very good advance—an advance that can be maintained if the same efforts used two years ago are renewed and continued.

"The figures for furniture show a slight increase over 1900, but are not in the slightest degree any indication of the business done. The large share of the chair trade falls to Canada, but it is hoped that pending arrangements may materially increase the business in other lists.

"Last year there was a revival of the trade in frozen salmon. I have dealt with the business in a former report. Until the steps suggested in that report are taken there is not likely to be a very large trade developed. In pressed fish there was a small decrease in the total importations, but a small increase in those from Canada.

"In 1900 the importations of hard wheat flour were from the United States £80,844, from Canada £27,292. Last year they were from the United States £11,476, from Canada £16,715. The Canadian trade is doing very well in view of the declining demand. With a probable duty in view it is not likely that the trade will increase unless Australia should be subjected to the general drought which produced so serious a shortage in her wheat returns as she had three and four years ago. No attempt has yet been made to introduce other foodstuffs, save oatmeal, the trade in which ceased this year. It is likely to be renewed next year with a good future before it. The market for a limited quantity of split peas has not been utilized, the attempt to get certain exportations having failed. Renewed efforts will be made and may be successful.

"India rubber goods is a line that has a promising future. The figures in the returns are no indication of the business done. The agent of one manufacturer states that his sales here last year amounted to £5,000. Some mistakes have been made on the part of one or two shippers which have hindered trade, but they are not likely to recur. Good orders have been forwarded this year.

"But one Canadian firm in musical instruments is making a business here, and it reports trade good in pianos and organs. The trade in cabinet organs is still nearly altogether limited to churches and halls, and is not large. The demand for pianos is increasing, but the great bulk of those sold are much below the price of Canadian goods.

"The competition in agricultural machinery is keener than it was five years ago, as United States manufacturers have seen the necessity of opening branches and doing business directly. The Canadian trade in this State, as the figures show, is holding its own very well nevertheless.

"The Canadian trade in paints and varnishes has nearly ceased. The manufacturers of other countries advertise largely and have their own branches. Canadians do not advertise, and the attempt has been to do the business through agents only. The agents make a vigorous attempt for a little time, but, finding it difficult to make progress in the absence of advertisements, give up the work. The Canadian goods are of excellent quality, but it will require some money and the skill of men who know the paints to get a firm foothold."

OPPORTUNITIES FOR TRADE IN BRITISH WEST INDIES.

Mr. J. Allen Jones, of Barbados, B.W.I., who was recently in Toronto, suggests that Canadian manufacturers who desire a profitable and steady market, should make a winter trip to the British West Indies. "Weather conditions in the West Indies at this time of the year," he said, "are delightful, and a visit to all of the islands can be made at very small cost. If manufacturers would only make the tour they would be amply repaid from pleasure and business standpoints. They do not know what a splendid market they are ignoring, and can only awake to the fact by personal observation. It seems almost a hopeless task for merchants from the West Indies visiting Canada to convince your business men of the opportunities awaiting them in the islands, which have a regular and efficient steamboat service the year round from Halifax, N.S., and the business men of which have a most

kindly feeling toward Canada and all things Canadian. I have in mind a manufacturer in Guelph, who two winters ago made a tour of the islands primarily for his health, and who then realized that there was a good market for his wares. To-day his trade with the British West Indies is increasing steadily, and the returns are most satisfactory. If one could only persuade a few Canadian merchants to make a similar journey they would soon be taking their fair share of the markets now largely controlled by Americans, but which might be held by Canadians and could easily be won by them. It is a fact, I believe, and a most regrettable one, that only one Canadian firm to-day has an established representative making regular tours of the islands, while American and English companies are consistently represented by energetic drummers. New markets are not won by those who rest content with what they hold." Mr. Jones said that the chief export of Barbados to Canada was molasses, but the merchants of the island, though anxious to obtain a fair return trade of Canadian manufactures and produce, had, as yet, little prospect of that hope being fulfilled. Reference was made to the desire of a number of American manufacturers for an agreement whereby goods might be shipped in bond from United States ports via Port of Spain, Trinidad, to Venezuela, and other South American countries. Such an agreement, Mr. Jones said, was a matter which the Administration of Trinidad had full power to make. It would in no way effect Canadian shippers to Trinidad, or the trade of that island with Venezuela, which was now picking up again after the setback resulting from the bad feeling caused some years ago by the British Venezuelan boundary dispute. Canadians and British merchants and producers were all on an equality so far as the tariff of the islands was concerned, and Canadians should at once begin to win the markets of the islands. It would be an easier task now than a few years hence, when, if allowed to progress without Canadian competition, the Americans would have a paramount hold.

TRINIDAD TRADE.

The Department of Trade and Commerce has received a report from Mr. Edgar Tripp, Canadian agent for Trinidad and Tobago, in which he speaks of the great boon the regular call of the Canadian steamers has proved to Trinidad's small dependency, Tobago, which is now placed for the first time in steam communication without transshipment for supplies with customers in the Dominion. The trade is not very large at present, but it is growing, and Canada, being the first in the field so far as the northern continent is concerned, should reap whatever advantage may be ultimately gained from that fact. Mr. Tripp noticed in a report from Mr. Larke, the Canadian agent for Australasia, that printing paper from the Dominion was selling to advantage there. There is also, Mr. Tripp states, a market for the same material in Trinidad, which might be tried. In 1900 £8,011 was imported, of which £2,749 came from the United Kingdom and £2,623 from France. Mr. Tripp thinks there is also an opening for Canadian live stock if the trade was vigorously pushed. Imports from Canada for the quarter ending September 30 were in almost every item much in advance of those for the corresponding three months in 1900. Butter, cheese, fish, flour, timber and manufactures all show in the improvement.

BRITISH TRADE.

Alluding to the fact that Premier Ross had said that his Government would make a grant of \$5,000 a year for five years for opening a sample-room in London for the display of

Canadian products, The Globe points out that for many years Great Britain will offer a practically unlimited market for our food and certain other products. We now hold the cheese market, and our exports of bacon, butter, wheat and other products have increased remarkably in the last few years. Here are a few items referred to by Mr. Sifton in recent speeches: In 1896 we exported of eggs \$807,086 worth, in 1901 \$1,691,640 worth, or just about double; of butter in 1896 \$1,052,000 worth, in 1901 \$3,295,000 worth; of cheese, in 1896 \$13,956,571, in 1901 \$20,696,951; bacon, hams and pork, in 1896 \$4,446,884, in 1901 \$11,829,820. Yet, what we have done is very little in comparison with what we may do. On the one side are forty millions of people, producing far less food than they require, and importing enormous quantities. On the other side are territories capable, if developed, of supplying all the needs of Great Britain. The growth in wheat production has been wonderful. Ten years ago the wheat production of the Territories outside of Manitoba was almost a negligible quantity. To-day it is more than the production of Manitoba was at that time; while Manitoba's production has increased more than fourfold.

It would seem to be wise for us, says The Globe, not to sit waiting for the British Parliament to do something for us, but to use the means at our own command. We ought to compel our own railways to give fair play to our own farmers and shippers. Even if we had a preference in the British market its effect could be nullified by the railway companies if we continue to allow them to discriminate against Canadians. Mr. A. F. MacLaren, M.P., at the Western Dairymen's convention said that during the season of 1899 the transportation of Canadian cheese, butter, bacon, apples and cattle cost \$1,000,000 more than would have been charged to American shippers. The excess on cheese was \$3.50 per ton, on butter \$4 per ton, on bacon and hams \$4 per ton. The rate on cattle from Chicago to Montreal is only 25 cents per hundred pounds, while from the Counties of Bruce, Huron and Grey it is 33 cents. The steamboat companies are equally unfair in their treatment of Canadian shippers. If we had a preference in the British market, have we any guarantee that the railway and steamboat companies would not pocket the difference in price, if any? At all events, it is well for us to promote the trade with Great Britain by all the means which are within our reach.

If boards of trade and other commercial organizations existed in every important city and town in Canada, and if they were constituent parts of a Dominion Board of Trade, such a board would have it in its power to command the attention of both the Dominion and Provincial Governments that would quickly bring the transportation companies to terms and secure rates which would enable all classes of Canadian producers to obtain satisfactory returns from their sales to the Mother Country and other parts of the world. There is a strong disposition on the part of all our Governments to assist in promoting such trade, but it could be greatly accelerated through the intelligent efforts of a Dominion Board of Trade.

LORD STRATHCONA AND CANADIAN TRADE.

Lord Strathcona, High Commissioner for Canada, in London; under date of January 25, wrote the following letter to the editor of Commercial Intelligence, London, re Canadian trade:

Sir,—It is with some satisfaction that I venture to draw a little more attention than perhaps it has already received to the following notification which appeared in the Press a few days ago:

"During the year just closed Canada reached the highest mark in her progress hitherto attained. Compared with ten years ago, her exports have just doubled, having increased from \$98,000,000 to \$196,000,000, while her imports have grown from \$119,000,000 to \$190,000,000. The public deposits in the banks now amount to \$407,000,000."

An analysis of the figures indicates that the export trade of the United Kingdom with Canada is expanding under the preferential tariff, and that the natural products and manufactures of Canada are being imported in largely increasing quantities in the United Kingdom. Satisfactory as the figures are, however, the United Kingdom will no doubt secure a large share of the import trade of Canada; and, on the other hand, the imports into the United Kingdom from Canada form a very small percentage of the requirements of the country, and are capable of much expansion.

Nothing would give Canadians greater satisfaction than a further increase in British as compared with other imports; and they are naturally inclined to the opinion that, as they become better known, the products of Canada and the colonies, all things being equal, will be regarded with greater favor in the United Kingdom than similar products from foreign countries, which are now imported in large quantities.

The manner in which this increased trade is to be brought about on both sides has been the subject of much discussion. I am convinced, however, that a great deal can be done by the dissemination of more knowledge of the various products of Canada—of the mine, the forests, the fisheries, the farms and dairies, the manufactories, etc.—and by the circulation of the other information that is necessary to bring about the development of trade. Similar particulars relating to the imports of Canada, the Customs tariff, and other data of the kind, if more widely known, would also help to develop British exports to the Dominion.

I therefore venture to ask you to give me the opportunity of stating that as High Commissioner for Canada I invite correspondence on all these matters. Business directories and trade journals, information about all branches of Canadian commerce, the names of the leading exporters and importers of the Dominion, and in fact much that is necessary to stimulate more extensive commercial relations between the two countries, is available in my Department. I hope that the publicity which, with your permission, this letter will secure, may be attended with the best possible results; and that it will help to promote the increase of inter-Imperial trade.

EDITORIAL NOTES.

In page 34 of this issue mention is made of several Orders in Council promulgated by the Dominion Government, by which a number of articles are transferred from the dutiable to the free list, and consist of what may be called "raw materials," not produced in Canada, but necessary in Canadian factories in making finished products.

Last week in the Dominion House of Commons, Mr. John Charlton gave notice that he would introduce a resolution as follows:—"That this House is of the opinion that Canadian import duties should be arranged upon the principle of reciprocity in trade conditions, so far as may be consistent with Canadian interests; that a rebate of not less than 40 per cent. of amount of duties imposed should be made upon dutiable imports from nations or countries admitting Canadian natural products into their markets free of duty; and that the scale of Canadian duties should be sufficiently high to avoid inflicting injury upon Canadian interests in cases where a rebate of 40 per cent. or more shall be made under the conditions aforesaid."

A number of the larger Canadian manufacturers of wools are preparing exhaustive lines of their products for exhibition in the Parliament Buildings at Ottawa, for the enlightenment of the Government and Members of Parliament, intended to

show the high and excellent quality of goods made by them. In many cases these goods are indistinguishable from the best imported goods. This exhibit will be on view for about two weeks, during which time some of the manufacturers will be present to explain the situation and impress upon the Government the necessity of adequate tariff protection to their industry.

An influential delegation of Ontario manufacturers of cement, waited on Premier Ross a few days ago with the request that the Government insert a provision in all charters granted to companies proposing constructive enterprises, compelling the contractors to use Portland cement of Canadian manufacture. Mr. Haney, the chief speaker, said, as a contractor, that the Canadian product was of standard excellence, but the industry needed encouragement, since American manufacturers use Canada as a slaughter market. Mr. Rathbun pointed out that the industry was a promising one; that the Canadian output this year would reach 750,000 barrels. The Premier promised consideration, and informed the deputation that Canadian cement would be used in the construction of the power plant at Niagara Falls.

Last week Mr. J. O. Thorn, of the Metallic Roofing Co., and chairman of the Toronto section of the Canadian Manufacturers' Association, headed a large delegation of local manufacturers in a visit to Hon. Mr. Ross and the other Ministers of the Ontario Government, to urge support for that clause in the City of Toronto's bill, now before the legislature, vesting in municipal councils the power to grant exemptions from taxation in whole or in part, to manufacturing establishments. Mr. Thorn presented a memorandum which said in part:

Through the Bell by-law manufacturers in Toronto have enjoyed for the past ten years exemption on their plant and machinery, but the Provincial law now in force is about to deprive them of this, and thus place them at a disadvantage in comparison with those located in other places. The theory of the present law of personality taxation apparently is that all capital invested in manufacturing shall be taxed for municipal purposes, and taxed, not like any other investments, on its income or profits, but on the principal. This would mean, roughly speaking, that those using their capital in manufacturing must pay a municipal tax equal to 2 per cent. thereof each year.

Manufacturing business in this province could not possibly bear such a burden, and the rigorous enforcement of such a law would drive outside the limits of the province such factories as could be moved, and would absolutely extinguish a large proportion of those remaining. We believe that the most effectual remedy will be found in the restoration to Municipal Councils of the right of exemption, and our appeal is made largely in behalf of our Ontario cities, whose growth as industrial and manufacturing centres will be seriously affected by the recent change in legislation."

Mr. Thorn said the present law of exemption would expire in December next, and all that was asked was an assurance of renewal. The deputation represented 300 manufacturers, employing 40,000 hands. The law requiring a two-thirds vote of the ratepayers, while workable in small municipalities, was impracticable in a city like Toronto.

The Premier said there was much force in what had been said, and he would carefully consider the matter.

Another tariff concession to the United States has been made by the Dominion Government. An Order-in-Council has been passed striking off 40 per cent. of the duty on ordinary grades of printing paper. This is a development of that free trade section of the tariff which empowers the Government to deprive of the benefit of Customs duty any domestic industry in which a number of manufacturers are

joined in an agreement to abstain from price-cutting. Ostensibly this clause is aimed at "combines," but its penalties fall with equal damage upon manufacturers who stand aloof from every appearance of a "combine." Its real office is to serve as a free trade valve that may be opened upon any industry at a moment's notice, for what industry is there in which there is not more or less adherence to a scale of prices? Of the total output of Canadian paper mills not 50 per cent. is made by manufacturers belonging to the Paper Makers' Association. One of the largest producers of printing paper in Canada, the Laurentide Pulp & Paper Co., does not belong to this body. Must it and others equally innocent of entering into a compact to uphold prices be punished by the transfer of a large part of its home market to the United States manufacturers? If it is culpable to belong to the Canadian Paper Makers' Association it cannot be a crime not to belong to it. Yet the Canadian paper manufacturers who stand outside of it are mulcted along with those who are members of it.—The Mail and Empire.

The value of the imports of printing paper into Canada in 1901 was as follows:

Great Britain	\$102,616
Belgium	940
France	237
Germany	575
United States	251,718
Total	\$356,086

The directors of the Industrial Exhibition are busy these days with schemes for the new buildings to be erected at the fair grounds with the money which the city is to supply. It is the opinion among the members that a general scheme be adopted to be followed out for years to come in the rearrangement of the buildings on the grounds. Park Commissioner Chambers has given a great deal of attention to the rearrangement of the buildings and his ideas are more than likely to be adopted. Mr. Chambers believes that the drives and roadways should be enlarged and better arranged for driving. His idea is to erect the new main building on the site now occupied by agricultural hall. There would be plenty of room and could be built right back to the new machinery hall. By placing the chief building there Mr. Chambers argues that the congestion which occurs so frequently around the present main building, and those buildings surrounding it, would be greatly relieved.

A return has been issued by Mr. J. J. Fenton, the Victorian Government Statist, showing that the population of the Australian Commonwealth, including half-castes and aboriginals, is 3,775,128. The total is made up as follows:—New South Wales, 1,356,090; Victoria, 1,201,178; Queensland, 498,129; South Australia, 363,157; West Australia, 184,099; Tasmania, 172,475.

The question of preferential treatment for British goods in the conquered Boer territories is already being discussed in Great Britain. If an opportunity permits, the matter will be submitted to the consideration of Parliament, as a Conservative member has given notice to call attention to the desirability of granting the manufacturers of the United Kingdom who are paying for the establishment of a settled government in the Transvaal and the Orange River Colony, opportunities for trade superior to those offered to the manufacturers of foreign countries.

A hotel in Nassau, N.P., is equipped with a steam pleasure launch, in the bottom of which is 28 square feet of plate glass. Prior to this innovation the only way for tourists to see the

wonders of marine plant life in those waters was through buckets with glass bottoms. The manager conceived the idea of a large boat with power and a large space with plate glass bottom, which would enable the tourists to get a better view of plant life, which is very rare in many of the bays surrounding the island. Rowboats with glass bottoms are already in use on the Pacific coast.

The manufacturers of sewer pipe have perfected an arrangement which will place the entire trade of the United States in the hands of dealers who will be recognized as manufacturers' agents, and will sell their stock on the commission plan. These agencies are to be established in New England, New York, Pennsylvania, Ohio and throughout the West in selected districts. The price list is to be uniform all over the country, and will be regulated by the manufacturers, who have formed a general association, and will hold meetings at regular intervals.

A New Jersey tile manufacturer is filling an order for the mosaic flooring for the government building in Newcastle, Australia. The mosaics will fill a car and will reach Australia in about three months' time. The shipment will contain several hundred thousands of mosaics, some of which are as small as a quarter of an inch square.

At the annual meeting of the Ontario Lumbermen's Association, held in Toronto, February 12, the following officers were elected for 1902:—President, John Waldie, Toronto; First Vice-President, Robert Watt, Warton; Second Vice-President, N. Dymont, Barrie; Secretary-Treasurer, W. B. Tindall, Toronto; Board of Management—Messrs. J. T. Coulon, Thorold; W. L. White, jr., Midland; John Bertram, W. A. Charlton, J. B. Miller, Robt. Laidlaw, C. Beck and R. Watt.

In his address to the members, speaking of reciprocity with the United States, Mr. Waldie said:

We do not think the interests of this country are forwarded by negotiations with the United States looking to a renewal of any kind of reciprocity treaty, nor by discussion about the "balance of trade." We serve our best interests by pressing our own Provincial and Dominion Governments to legislate for Canada alone, and it would be unwise for a member of this association to speak of any legislation that we are promoting as retaliatory. Let us act, not talk, and we as lumbermen will continue to saw wood and keep our axes sharp. In concluding, he expressed the view that the Dominion Government should put wood products on the dutiable list, so that in a period of depression (and to offset the American cut on through rates from the south) a tariff would act as a hindrance, and thus prevent Canada from becoming a slaughter market. While the theories of protection and free trade may be discussed academically, this country asks for legislation to suit the conditions that exist here. It is not a matter of theory, it is a matter of deciding what is going to presently promote the welfare of the country.

The revised official figures published of British dairy imports show that Canada continues easily first in cheese, sending to Great Britain in 1901 three times as much as the United States, which has second place, Canada sending £3,697,780 and the United States £1,274,061. Denmark is easily first in butter, supplying 43 per cent. of British imports; Australia second, Siberia third. Canadian and American supplies are erratic, though Canada sent £1,008,002, against the United States £689,164.

The Goldie & McCulloch Co., Galt, Ont., iron founders, engineers, machinists, mill builders, etc., and manufacturers

of safes, vaults, vault doors, etc., inform us that hereafter the word "Canada" will appear prominently upon all machines and machinery which they send out of their shops. This is to emphasize the fact that Canadian users of machinery—such as they make—have no necessity to import such articles under the impression that they cannot be obtained at home. This is a step in the right direction; and in our opinion the word "Canada" or "Made in Canada" should appear as prominently as possible, and wherever possible, upon every article made in this country.

The Canadian Manufacturers' Association has been considering how to divert to Canada the tide of British emigration still flowing so strongly to the United States, and evolved one practical suggestion. Mr. James P. Murray proposed that the different Canadian Boards of Trade should unite in sending representative men from each Province to Britain, "to meet there the representatives of other bodies, point out the advantages that Canada has to offer, and thus promote immigration." It was proposed that the Canadian Government should render some assistance. Now, we of the Canadian Gazette are the very last to throw cold water upon any method which will enlarge and quicken the points of contact between the people of Britain and Canada. It is a matter upon which we often comment, and we have ourselves put forward several suggestions. Let us have all the enlightened and well-informed talk of Canada in Britain that can be secured. But we fear that such delegations of Canadian business men will of themselves do little to people Canadian vacant lands. Emigration propaganda is, after all, very much of a business, and it must be managed by those who know how the business can best be done. The association will be doing good work if they get behind Canadian members of Parliament and lead them to encourage the Ministry to put this population question in the forefront of their thoughts.—Canadian Gazette, London, England.

A special general meeting of the Toronto Board of Trade was held a few days ago for the purpose of considering a notice of motion which had been made re the imposition of a duty on wheat by the British Government. It had been reported that that Government, finding it requisite to levy additional taxes to meet the heavy expenditure entailed by the war in South Africa, and the large additions to the navy necessary to protect British interests in all parts of the world; therefore in the opinion of the Board, any tax placed on wheat or flour should not be levied on the products of the Empire, or if the Imperial necessities should demand its universal application, the products of the Colonies should receive preferential treatment similar to that now extended by Canada to Great Britain. The effective portion of the resolution which was passed reads as follows:

In view of the position so strongly urged by this Board for many years, for a preferential treatment of the different products of the Empire exchanged therein, and Canada having granted a tariff preference on the products of Great Britain when imported into this country, one of the results being that Germany has discriminated in her tariff against us by imposing practically prohibitory duties on our cereals, thus closing a valuable market to our farmers, and Canada with other British possessions having shown her desire to strengthen the bonds which unite all British people by her participation in the war in South Africa; therefore, be it resolved, that in the opinion of this Board any tax placed by Great Britain upon products similar to those produced in this country should be so levied as to grant a preference to the products produced within the Empire.

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 in 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, belting, 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.

A large refinery will be opened by the Canadian Copper Co., at Copper Cliff, Ont.

The Union Abattoir Co., Montreal, will erect a \$100,000 abattoir at Point St. Charles, Que.

The planing factory of Laird Bros., Dresden, Ont., was destroyed by fire February 4. Loss about \$25,000.

The Saginaw Lumber & Salt Co., Windsor, Ont., will erect a large salt factory close to their lumber mills, and will manufacture salt for the Canadian trade.

Stewart & Co., Strathroy, Ont., have received a grant of \$8,000 from Collingwood, Ont., to erect a flour mill there.

The Lake of the Woods Milling Co., Keewatin, Ont., recently shipped 500 tons of flour to Sydney, N.S.W.

The St. John Milling Co., St. John, N.B., has been incorporated with a capital of \$14,000, to take over the milling business of W. H. Fowler. The incorporators include W. H. Fowler, G. A. Kimball and F. A. Peters, all of St. John.

The Lake of the Woods Milling Co., Keewatin, Ont., recently received an order from the British War Office for 12,500 barrels of Keewatin flour to be shipped to South Africa.

The Dominion Government will build a lighthouse at Cape Traverse, on the St. Lawrence river, at a cost of about \$75,000.

The receipts of the Toronto Railway Co. have begun the year well, as shown by the following statement for January, and the four preceding Januaries:—

	Gross Receipts.	Percentage.
1902.....	\$137,770.00	\$11,021.60
1901.....	122,132.50	9,770.60
1900.....	114,719.00	9,177.50
1899.....	96,029.90	7,682.39
1898.....	87,501.91	7,000.15

Messrs. G. F. Stephens & Co., Winnipeg, Man., have commenced the manufacture of paints, putty, etc., in a very thoroughly equipped building.

The lumber cut in the Ottawa valley in 1901, is placed at 611,000,000 feet, as against 588,000,000 feet in 1900, an increase of 23,000,000 feet.

The sash and door factory of H. Fauteux, Montreal, was destroyed by fire February 13. Loss about \$6,000.

Messrs. Ennis & Co., Hamilton, Ont., have been incorporated with a capital of \$100,000, to manufacture pianos, organs, etc. The provisional directors include C. L. Ennis, Alexander Glass, jr., and William Ainslie, all of Hamilton.

At the annual meeting of the Ontario Lumbermen's Association held in Toronto last week, the secretary, Mr. Tindall, in his report, showed that the mills in the northwestern part of Ontario, embracing Georgian Bay, northern division of the Grand Trunk Railway to Callendar, and in the Canadian

Pacific Railway region from North Bay to Rat Portage, turned out 466,000,000 feet of white pine lumber, as compared with 476,000,000 feet last year, and 351,000,000 feet in the year preceding. The decrease last year was due to the output of one or two of the mills being seriously affected by fire, while several operators did not saw as much as anticipated. The stocks on hand December 31 totalled 181,000,000 feet, showing a decrease of 35,000,000 feet, as compared with last year. Of this amount 29,000,000 feet has been disposed of, and there are still 152,000,000 feet unsold. The lumber production of Michigan, Wisconsin and Minnesota in 1901 showed a decrease from that of the previous year of 112,881,000 feet, while the stocks of lumber stored at the mills also show a decrease for the same period of something like 529,229,000 feet. The stocks on hand are the lowest since 1894, though the requirements of the market, both for distributing and manufacturing purposes, practically remain the same, and there can only be one effect, namely, firm or increased prices.

Mr. Thomas Malone, Three Rivers, Que., has been awarded the Government contract for the harbor improvements at Three Rivers, which are to cost \$750,000. Mr. Malone has recently returned from New York, where he went to purchase a suction dredge having a capacity of 60,000 yards per day, and a modern pile driver.

For the first time a return is made of the electric railways of the Dominion, in the annual report of the Department of Railways. These total 675 miles of tracks. The paid-up capital of the companies is \$39,076,016; gross earnings, \$5,768,283; working expenses, \$3,435,163; net earnings, \$2,333,120. The city street railways report the following number of passengers carried during the year: Montreal, 45,833,652; Toronto, 37,620,583; Ottawa, 7,469,304; Quebec, 3,715,675; Hamilton, 3,693,677; Winnipeg, 3,196,489; Halifax, 2,968,811; St. John, 1,710,223.

The Canadian Pacific Railway Co., will expend about \$1,500,000 on new shops to be built in Montreal. Electricity will form a considerable portion of the motive power.

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At the recent annual meeting of the Fort William, Ont., Board of Trade, the president drew attention to the fact that the Canadian Pacific Railway has agreed to spend \$500,000 at that place this year. Referring to the harbor business for the year he stated that in all 964 vessels, with a registered tonnage of 1,160,264 tons and crews of 22,390 men had reported and cleared at the customs house; coal to the amount of 1,250,000 tons had been received and 692,527 tons of freight handled. The quantity of wheat taken into the elevators was 16,876,899.50 bushels. The customs collections at the port for the year amounted to \$124,000.

For the year ending June 30, 1901, \$4,699,680 was expended upon public works in Canada, or nearly \$1,000,000 in excess of the expenditure of the previous year. Harbors, dredging and bridges took \$2,670,146; public buildings, \$1,303,411; telegraphs, \$532,626; miscellaneous, salaries, etc., \$193,495. The revenue from public works was \$112,675, an increase of \$33,594 over the previous fiscal year. The department has under control 5,640 miles of telegraph and cables, and during the year a number of very powerful dredges were added to the existing Government fleet. In the annual report the department lays stress upon the fact that the first attempt at a practical use of the Marconi wireless system was made by it and with great success. During the year the sum of \$432,557 was expended upon the ship canal between

Montreal and Quebec. The channel is now 350 feet wide and about 26 feet in depth, and will be widened to 500 feet and deepened to 30 feet. The expenditure on Toronto Harbor improvements was \$40,836, and on the diversion of the Don river \$368. The total expenditure to June 30 last was \$1,194,891, including dredging. The south end of the west pier that had settled has been brought up to a proper level and two-thirds of the planking laid. Some 76,878 cubic yards of sand have been dredged from the channel approaches and bar south of the east pier.

M. P. Davis, Ottawa, proprietor of the Sheik's Island Power Plant had a conference with the members of the Cornwall, Ont., Town Council a few days ago, and presented a scheme for the securing of new industries for Cornwall to be operated by electric power from Mr. Davis' plant at Mille Roches. Mr. Davis stated he could supply 600 h.p. at ten days' notice, in a slightly longer period 1,200 h.p., and in a few months 4,000 h.p. from his plant.

The Enterprise Specialty Co., Toronto, has been incorporated with a capital of \$40,000, to manufacture renovators, furniture polish, etc. The provisional directors include J. W. Fitzgerald, W. R. Williams and H. W. Steep, all of Toronto.

The Lloyd Mfg. Co., Kentville, N.S., manufacturers of saw mill and pump-making machinery, will enlarge their works this year.

The American Steam Gauge & Valve Mfg. Co., Boston, Mass., have sent us their 1902 office calendar, on which is shown some of the valves, gauges and indicators manufactured by them. The company manufactures the American Thompson improved indicators, Ideal reducing wheels, pantographs and plantimeters; steam, vacuum, hydraulic, test recording, locomotive water gauges for all purposes; marine, locomotive and portable, steam heating and hydraulic patent pop safety valves, etc.

The firm name of Messrs. A. R. Williams & Co., 320 St. James street, Montreal, who now conduct the same business. This concern have been long and favorably known to the trade as dealers in machinery and machinery supplies, and outfitters for railway shops, machine shops, planing mills, saw mills, pulp and paper mills, etc.; and as Canadian selling agents for many of the largest manufacturing concerns both in Canada and United States.

The International Lumber Co., Sault Ste. Marie, Ont., has been incorporated with a capital of \$100,000, to manufacture timber, lumber, etc. The provisional directors include F. H. Clergue, B. J. Clergue, both of Sault St. Marie; and E. L. Stewart, Bangor, Me.

The Cosmos Cotton Co., will apply for incorporation with a capital of \$500,000. Mr. George Burgay, Yarmouth, N.S., signs the notice.



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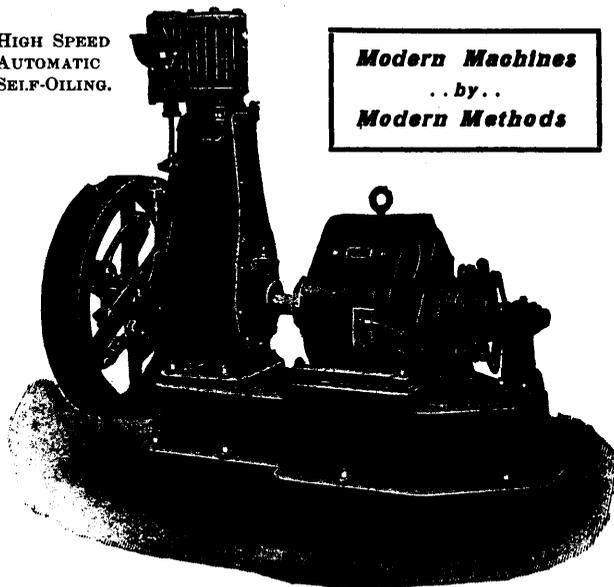
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410 Temple Bldg. TORONTO. Merchants Bank Bldg., MONTREAL.

Messrs. Deering Bros., Chicago, Ill., are looking for a suitable site on which to erect their branch factory in Canada. Six new buildings will be required—three 390x70 feet, two 260x70 feet, and one 195x70 feet—a large power house, a site of twenty-five acres, with more land available if needed, and convenience as to transportation facilities. The location has not yet been decided on, but it will probably be either Kingston, Ont., or Montreal.

Inspector Geo. C. Robb, Toronto, has notified City Engineer Rust that some of the boilers at the main pumping station of the water works are unsafe, and recommends that the eight which comprise batteries Nos. 1 and 2 be taken out, and replaced by new ones of 160 lbs. pressure. The new boilers will cost about \$15,000.

The Westinghouse Mfg. Co., Pittsburg, Pa., has received the contract to supply the electrical equipment for the large Portland cement factory, which is being erected at Durham, Ont.

The Oshawa Canning Co., Oshawa, Ont., has been incorporated with a capital of \$100,000, to manufacture canned fruits, vegetables, meats, etc. The provisional directors include M. F. Smith and J. S. Beaton, both of Oshawa; and C. A. Smith, Port Hope, Ont.

The Crown Whitewear Co., Toronto, has been incorporated with a capital of \$100,000, to manufacture whitewear, etc. The provisional directors include A. C. Rogers, T. C. Hallam and George Kappelle.

The Richmond County Electric Co., Richmond, Que., has received the contract for the bridge to be built over the Black river, near Ulverton, Que., at an estimated cost of \$2,500.

The McQuay Tanning Co., Owen Sound, Ont., will erect buildings and plant at a cost of about \$12,000, and \$20,000 will be spent for raw material at the outset. The plant will have a capacity of more than a million pounds of finished leather a year.

The Cataract Power Co., Hamilton, Ont., will increase its capital stock by \$50,000 for the purpose of extending the Radial Railway from Burlington to Oakville.

A company, comprising most of the members of the James Pender Wire Nail Co., St. John, N.B., will be organized with a capital of \$500,000, to manufacture steel and wire. The head office of the company will be at Sydney, N.S.

The Rolland Paper Co., St. Jerome, Que., are not only manufacturers of high-grade papers, but they maintain upon their staff a high-grade poet to sing the praises thereof. The latest effusion of the poet runs as follows: "In verse we write to let you know, that Earncliffe Bond, at the Paris show, took Grand Prix away from the world at large; and this paper is sold at a moderate charge. Its brother, Superfine Linen Record, of fame, doth each sheet this water-mark contain; be sure your ledgers are all made of this, and your choice will not be far amiss."

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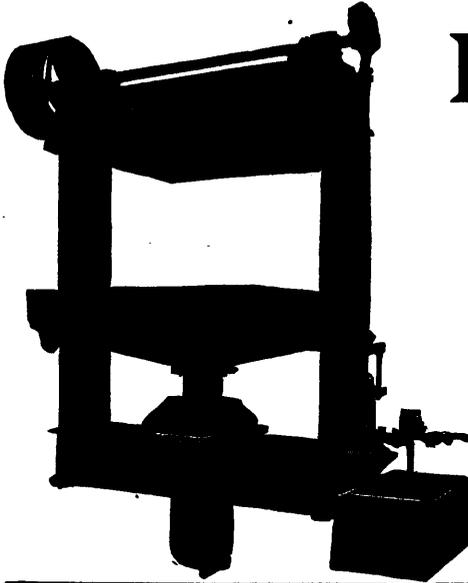
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TORONTO, - CANADA

Mr. William Whyte, assistant to the President of the Canadian Pacific Railway Co., states that there would be difficulty in establishing a line of steamers between Vancouver and Siberia while the present high tariff was maintained by Russia on United States goods. The Canadian trade in itself was as yet not sufficient to warrant the establishment of such a line. An agent of the Canadian Pacific is now at Vladivostock, the Siberian port of entry, collecting information as to the cost of carrying Canadian goods to that port and from there to the main Siberian points of consumption. This information will be made public, together with data as to the price at which various articles can be sold in that country. Mr. Whyte thinks that the present Russian tariff against the United States will be permanent.

A statement made at Ottawa to the effect that the Bertram Engine Works Co., Toronto, had imported steel plates from France, which had been objected to by the Government steamboat inspector as being of less tension than those required by the British Lloyds, is characterized by Mr. John Bertram, the head of the company, as entirely false. Mr. Bertram states that no plates were imported by his company from France, the source of supply being always Great Britain and the United States, and that

the only actual point at issue is the question of the interpretation of the regulations of the act respecting steamboat inspection. Mr. Bertram denies emphatically that his company has any complaint regarding discrimination, and the representatives of the company have interviewed the Government simply for the purpose of securing a ruling regarding a point in the law.

The J. A. Gowdey Reed & Harness Mfg. Co., Providence, R.I., manufacturers of all kinds of loom reeds for silk, cotton, wool and linen weaving, including lease reeds, metal reeds, reeds for carpet weaving and for wire weaving, etc., inform us that their concern was established in 1834, some sixty-eight years ago. "We intend," they say, "to give our customers the very best materials and workmanship, and prompt delivery of orders. We guarantee satisfaction to our customers, and they are to be the sole judges." Most of the employes of the Gowdey Co. have been in that employ many long years, some of them as long as 50 years. They always carry in stock large quantities of materials, and have as large capacity for output as any similar concern in the United States. They invite correspondence.

The Packard Electric Co., St. Catharines, Ont., announce that they have secured the exclusive Canadian manufac-

turing and selling rights for the well-known Hylo turn-down electric lamp, further particulars regarding which they will give on application.

The Hudson's Bay Co. will erect a lumber and flour mill at Vermillion, N.W.T. In connection with the mill an electric light plant will be supplied by a 60 h.p. Corliss engine.

The Canadian Pacific Railway propose to commence the construction early this spring of two new elevators at Fort William, Ont., one to be built on the tank system, will have a capacity of a million and a half bushels, with the improved hopper bottoms to facilitate the handling of the grain. The other will be a half-million bushel cleaning elevator, to handle dirty or wet grain. Both elevators are expected to be ready for next year's crop.

The Snowflake Elevator Co., Snowflake, Man., is applying for incorporation with a capital stock of \$5,000. The applicants include J. F. Drew, R. A. Garrett and A. Maxwell, all of Snowflake.

The Farmers' Elevator Co., Virden, Man., is applying for incorporation, with a capital of \$6,250. The applicants include J. W. Scallion, H. W. Dayton and J. A. Blakeman, all of Virden.

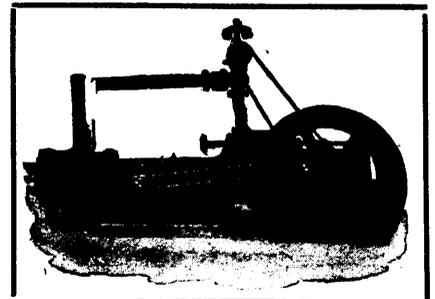
A grist mill will be built at Dauphin, Man., by S. Gable.

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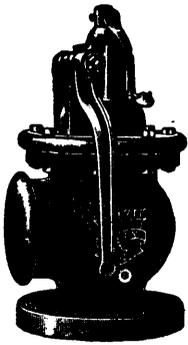
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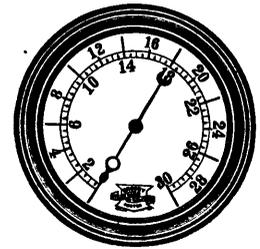
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ONLY GOOD GAGE



The Blanche River Pulp & Paper Co., which is applying for an extension of the agreement for a pulp concession from the Ontario Government, is reported to have purchased the power on the Quebec side of the Ottawa river, three and a half miles above Mattawa, at a cost of about \$25,000.

The Brompton Pulp & Paper Co., Brompton Falls, Que., have spent about \$170,000 in building operations. All this is by way of foundation work, the mills not having yet been begun.

The Wapella Farmers' Elevator Co., Wapella, N.W.T., will erect a new 35,000 bushel elevator, at an estimated cost of \$5,350.

Chaleurs Bay Mills, D'Israeli, Que., has applied for incorporation with a capital of \$150,000, to manufacture pulp and paper. The applicants include John

Champoux and David Champoux, both of D'Israeli, and J. E. Marrett, Portland, Me.

The Farmers' Electric Water & Telephone Co., Cardston, N.W.T., has been incorporated with a capital of \$50,000.

The Beauharnois Light, Heat & Power Co., Beauharnois, Que., has applied for incorporation. The applicants include J. B. Robert and W. H. Robert, both of Beauharnois, and E. B. Greenshields, Montreal.

La Compagnie du Telephone de Montmorency, has applied to have name changed to La Compagnie de Telephone Provinciale, and to increase the capital to \$300,000.

The Hodgson Iron & Tube Co., Montreal, has been incorporated with a capital of \$200,000, to manufacture iron, steel and metal. The incorporators include

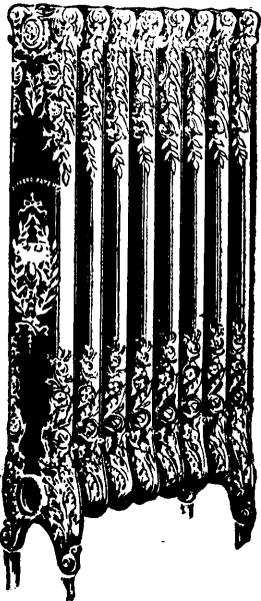
J. C. Hodgson, C. J. Hodgson and W. P. Sharp, all of Montreal.

The Dominion Coal Co., Sydney, N.S., has received repeat orders from France. Dominion coal is also finding a way into the markets of South America.

The T. Eaton Co., Toronto, will enlarge their mantle and whitewear factory by adding two storeys and employ 250 more hands.

J. G. King, Fort William, Ont., is in Minneapolis, Minn., purchasing machinery for the new cleaning elevator to be built at the former place.

The Ontario Bureau of Mines has received advises that a larger copper smelting plant, with capacity to handle 800 tons of ore a day, will soon be erected in the vicinity of Bruce Mines, on the north shore of Lake Huron. The works will employ about 800 men.



WARM UP YOUR

Buildings

WITH

“Safford Radiators”

They are the triumph of the century.
In demand the world over.

Made in countless sizes and every possible shape, and in a variety of styles, plain and ornamental, sufficient to suit the most exacting.

Send for Catalogue on
up-to-date Heating.

THE DOMINION RADIATOR CO., Limited,

TORONTO

HEAD OFFICE, - - DUFFERIN STREET

THE BEST PIPE THREADING and CUTTING-OFF MACHINES

Are Made by the **ARMSTRONG MFG. CO., BRIDGEPORT, CONN.**

Also Manufacturers of a FULL LINE of **ADJUSTABLE STOCKS and DIES** and Water, Gas and Steam Fitters' Tools.

Send for Catalogue 27.

Factory: BRIDGEPORT, CONN.

New York Office: 139 CENTRE STREET.

The man who whispers down a well about the goods he has to sell, don't reap the gleaming, golden dollars like him who climbs a tree and hollers.

The Richmond Conduit & Mfg. Co., Toronto, has been incorporated with a capital of \$40,000. The provisional directors include C. D. Richmond, R. R. Bongard and E. W. Niles.

The Dominion Wire Mfg. Co., Montreal, has increased the capital stock from \$150,000 to \$1,000,000.

The Sleeper Engine Co., Montreal, has applied for incorporation with a capital of \$250,000, to manufacture engines and boilers, etc. The provisional directors include J. A. Jacobs, E. A. Mahon and F. H. Sleeper, all of Montreal.

Dickinson & Sons' tannery, Woodstock, N.B., was destroyed by fire February 5. Loss about \$600.

THE WEBSTER SYSTEM.

Messrs. Darling Bros., proprietors of the Reliance Works, Montreal, manufacturers of electric, hydraulic power and hand elevators, etc., and sole agents for Canada for the Webster system of steam heating, have sent us particulars of the Webster system of low pressure steam circulation for heating purposes, which they describe as follows:

The Webster system of steam circulation for heating purposes is admirably adapted to the following special duties: Direct radiation, indirect radiation, direct-indirect, blast coils or blower stacks, dry kilns, paper machines, slashers, dry-

ing cylinders, etc., either singly or in systems or groups.

In addition to the above, the Webster system can be successfully and economically applied to a great variety of manufacturing processes by making slight modifications in its working details.

Distinctive features of the Webster system: (1) Absence of back pressure on motive engines when exhaust steam is utilized; (2) a perfect drainage of supply pipe systems preliminary to an equally perfect drainage of radiating surface, without the loss of steam; (3) a continuous automatic drainage of condensation and the prevention of any accumulations of water; (4) a positive and consequently effective steam circulation; (5) perfect control of circulation with power to vary it at will; (6) removal of air and gases from heat surfaces and feed water; (7) power to separately modulate temperature in any part of the heating surface; (8) the return of condensation from points somewhat below the line of drip or drainage mains when necessary.

While it must be conceded that some of these conditions have been dealt with more or less successfully in various heating systems, an apparatus that fails to establish its capacity to deal successfully with them in their entirety must be regarded as deficient and consequently incomplete.

No heating system employing a single pipe for the double duty of supply and return can meet these various requirements successfully. The same may be said of any system which disposes of the air and gases, but which fails to deal

successfully with the waters of condensation; or of one establishing a partial suction in a coil or radiator in a manner obstructive to the free drainage of the condensation; or by any apparatus requiring more than a single valve on a coil or radiator for its regulation by unskilled persons, or by any system incapable of lifting the drainage from a point somewhat lower than that for final disposition.

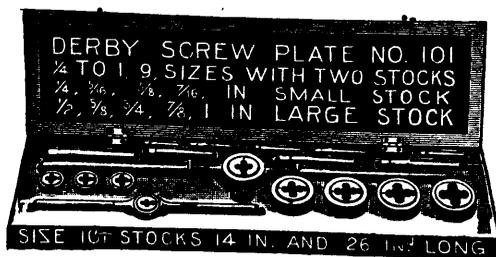
Messrs. Darling Bros. inform us that they have recently installed the Webster system of heating in the following public buildings, factories, churches, etc., in Canada, as follows: New Grand Trunk office building, Montreal; Merchants' Bank Building, Montreal; the factories of the Dominion Cotton Mills Co. at Montreal and Magog, Que.; Dominion Wire Rope factory at Lachine, Que.; Church of Ste. Anne, at Beaufre, Que.; Penman Mfg. Co., Paris, Ont.; George McLagan Furniture Co., Stratford, Ont.; Dodge Mfg. Co's works at Toronto Junction, Ont., and in the new King Edward million dollar hotel, Toronto.

Messrs. Darling Bros. will take pleasure in sending descriptive catalogues regarding the Webster system to any of our readers who may request them.

ONTARIO LUMBER OUTPUT.

The output of pine logs in the lumber woods of Ontario, according to estimates received by the Department of Crown Lands from the timber inspectors, will be 808,000,000 feet, board measure. This is the largest for some years. Last year the quantity was estimated at 700,000,000

The universal satisfaction given by our **DERBY and REECE SCREW PLATES**, cutting from 1/16 to 1/2 inch, including all the machine screw sizes, has created a demand for a plate made on the same principle, to cut bolts to 1 inch in diameter. To meet this demand we have brought out these sizes.



BICYCLE SCREW PLATES, REECE SCREW PLATES, DERBY SCREW PLATES, BLACKSMITH'S STOCKS AND DIES, BLACKSMITH'S IMPROVED SCREW PLATES, HAND TAPS, MACHINE TAPS, PIPE TAPS, EVERY KIND OF TAPS AND DIES.



BUTTERFIELD & CO., - Rock Island, Que.

RICE LEWIS & SON, LIMITED, Hardware and Metal

MACHINIST TOOLS, PIPE FITTINGS,

Bar Iron, Steel, Boiler Plate Tubes COMPLETE STOCK OF STOCKS AND DIES. PIPE VICES.

STILLSON AND TRIMO WRENCHES.

STEAM PIPE.

CORNER KING AND VICTORIA STREETS, - - - TORONTO.

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THE GEE ELECTRICAL ENGINEERING CO.

11 COLBORNE STREET, TORONTO.

LIMITED

WE have a Factory equipped with the very latest and best machines for the building of

Dynamos, Motors,

AND ALL.....
ELECTRICAL
APPLIANCES

We have every facility for repairing. We guarantee all our work. We keep a large staff of competent electricians and wiremen, and are in a position to do Electrical Work of every description. We wire Residences, Business Houses, Factories, etc. We have on hand a large stock of

ESTIMATES AND PLANS SUBMITTED.

Electrical Fittings, Arc Lamps, Telephone Bells, Etc.

feet, but was actually 631,000,000 feet, the difference being doubtless due in part to the scare occasioned by smallpox. The chief increases this year are 50,000,000 in each of the Webbwood and Sault Ste. Marie districts. The cut of square timber this year is estimated at 965,000 cubic feet. The wages in the lumber woods range from \$25 to \$30 per month with board, which is higher than usual. The cut in the various districts this year is estimated as follows:—

Pine logs —	Feet, B.M.
Parry Sound.....	168,000,000
Pembroke.....	113,000,000
Webbwood.....	139,000,000
Sault Ste. Marie.....	110,000,000
Sudbury.....	100,000,000
Arnprior and Whitney.....	66,000,000

Rat Portage.....	35,000,000
Peterboro'.....	46,000,000
Biscotasing.....	15,000,000
Port Arthur.....	16,000,000
Square timber—	Cubic feet.
Biscotasing.....	165,000
Parry Sound.....	200,000
Sault Ste. Marie.....	100,000
Pembroke.....	500,000

THE C. P. R. SHOPS AT MONTREAL.

The workshops, which the Canadian Pacific Railway purpose erecting in the East end, will be the largest in America, and consequently, in the world. Details have not yet even been considered, but the object of the executive is concentration, and hereby economy in supervision

and construction. The entire scheme may yet go before the Board of Directors.

It may be authoritatively stated, however, that it is the intention to build every locomotive and car for the company's service at the new shops at Hochelaga. That is to say, that all existing erecting shops, with the exception of the Carlton Junction car shops, will be removed to Montreal.

Of such magnitude is the undertaking, involving the expenditure of millions, that in all probability expert engineering advice outside of the company's engineering staff will be consulted, both from Canada and the United States.

The area selected by the company is splendidly suited for such works, being a level plateau, with stone, sand and

COWAN & CO.

GALT, - ONT.

Wood-Working
Machinery

Patent Feed
Water Heaters
and Purifiers

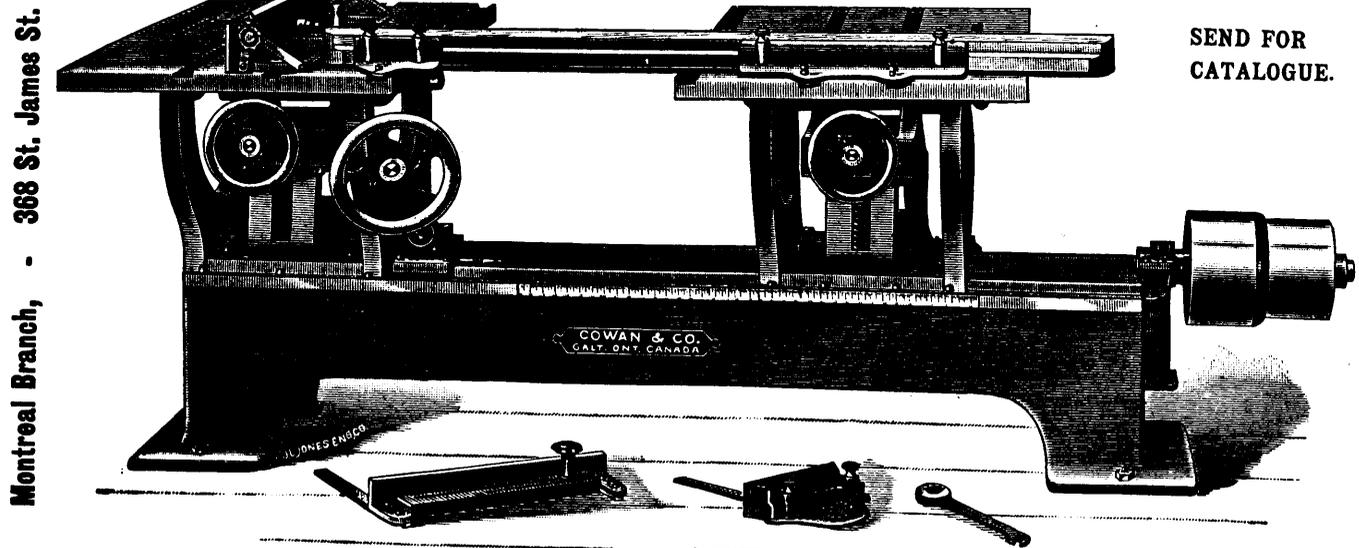
Engines
Boilers

AND

SAW MILL
MACHINERY,

Etc., Etc.

SEND FOR
CATALOGUE.



NEW IMPROVED PATENT RIP AND CROSS-CUT SAW.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

Montreal Branch, - 368 St. James St.

blue clay foundations. It is said it will cost the company in the vicinity of \$750,000, as the land will average about five cents a square foot.

The works will, it is understood, give employment to 7,000 men.—Star.

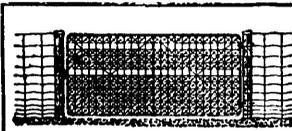
ELECTRIC POWER FOR TORONTO.

The Legislation Committee of the Toronto City Council has unanimously adopted the following resolution, introduced by Ald. Spence:—

That the City Solicitor be instructed to immediately make application to the Provincial Legislature for the enactment of legislation empowering the Municipal Corporation of the City of Toronto to purchase electric energy at any place not more than one hundred and fifty miles distant from the said city, and to secure any right of way and establish any poles, wires, or other plant or appliances necessary to bring such energy to Toronto and there distribute it. And to raise loans and borrow moneys on debentures issued on the credit of the city for the purpose of carrying out the said undertaking, and any other powers necessary to enable the Corporation of the City of Toronto to acquire, bring to Toronto, and distribute electric energy from any point within the distance aforesaid.

And that a special committee be appointed to assist the City Solicitor in his efforts to procure the said legislation, and that said committee be instructed to invoke the co-operation of the Board of Trade, the Manufacturers' Association, the representatives of Toronto in the Provincial Legislature and Dominion Parliament, and any other persons likely to aid in securing said legislation, and completing arrangements for the carrying out of the proposed enterprise.

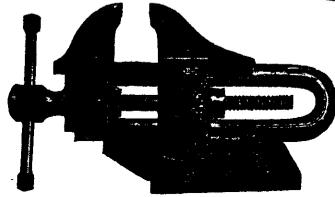
Ald. Spence declared that the producers of electric power were more willing to supply energy direct to cities than to power companies in the cities. The explanation of this was that the companies endeavored to keep up the charges, rather than increase the consumption of electric energy, in order to make as much profit as possible. Electric energy at the cost of production and transmission would, he declared, work wonders. Among other things, it would reduce the cost of operating water works, and make



PAGE METAL GATES are so low in price no one can afford to use wooden ones. Light, and yet strong enough to support a heavy man on the end while he swings around the circle without causing them to sag. They are neat in appearance, will last a lifetime. Will not sag nor get rickety. They are supplied with latches which allow them to be opened either way and are self acting. The only good metal gate that is low enough in price for general farm purposes. We also make Farm and Ornamental Fence, Poultry Netting, Nails and Staples. The Page Wire Fence Co., Limited, Walkerville, Ont. 1

WARR'S PATENT

Steel Yoke Vises



The weakness of all vises, made entirely of cast iron, is their tendency to break at the point where the strain is greatest, viz.: the junction of the front jaw with the slide or yoke.

This difficulty is completely overcome in WARR'S VISE, in which the yoke or slide is made of one piece of cold rolled wrought steel shafting cast into the front jaw.

This method of construction produces a vise that is practically unbreakable, of great strength and solidity; easy running, by virtue of the highly polished surface of the steel yoke; efficient and convenient in every particular.

The slide being narrow affords plenty of space on either side for the handling of long work perpendicularly, which cannot be done with other vises. Prices and all particulars on application. **SOLE MAKERS:—**

The JAMES SMART MFG. CO., Limited
BROCKVILLE, ONTARIO, CANADA.

"SCIOTO" FIRE BRICKS

are the best. WHY NOT USE THEM?

More extensively imported into Canada than any others made in the United States. One million now sold for Spring delivery to Ontario. Special inducements. Write to-day.

MANUFACTURED BY

THE SCIOTO FIRE BRICK COMPANY, - Sciotoville, Ohio, U.S.A.

One of the oldest firms in the States

Canadian Representative: **STANYON ENGINEERING CO., 402 McKinnon Bldg., Toronto, Ont.**

Established 1834.

Incorporated 1900.

The J. A. Gowdey Reed and Harness Mfg. Co.

Manufacturers of

LOOM REEDS FOR SILK, COTTON, WOOL AND LINEN WEAVING,

Metal Reeds a Specialty.

Reeds for Carpet Weaving.

Reeds for Wire Weaving.

40 CLIFFORD STREET, PROVIDENCE, R.I.

TRADE WITH RUSSIA

Firms desirous of getting into communication with Russian buyers or merchants; or who wish to buy Russian products on the best possible terms; or who are willing to appoint agents for the sale of their goods in Russia, are invited to send particulars of their requirements for insertion in

The Anglo-Russian Trade Messenger,
10 Bolshaya Dvorianskaya Street, Moscow, Russia.

THE ANGLO-RUSSIAN TRADE MESSENGER is the sole commercial paper published in Russia, devoted to the interests of the Anglo-Russian trade. It circulates amongst the best firms all over Russia and Siberia.

Circulars and Catalogues Translated, Printed and Distributed AT VERY CHEAP RATES.



Capacity 3-32 to 1 1/2 inches.

Style "K"

The "NEW YANKEE"

Drill Grinder

SAVES 50 PER CENT. OF TIME IN ADJUSTMENTS

COMPLETELY SELF-CONTAINED

OUR machines require no wrench, measuring instruments or gauge saws. We have entirely done away with them. Any amount of clearance desired can be obtained instantly. Drills can be ground to do more and better work. Send for Catalogue showing 10 styles, and full explanation of machines grinding from No. 60 to 5 inches.

JOHN LUMSDEN & CO., 375 St. James St. MONTREAL

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COAL JAS. H. MILNES & CO. COKE

WHOLESALE DEALERS IN
Best Grades of STEAM COALS.
Best Grades of BLACKSMITHS' COALS.
Best Grades of FOUNDRY COKES.
 Shipments made direct from Mines to any point in
 Canada. Write for quotations.

Head Office: 78 QUEEN ST. EAST

TORONTO.

Docks: Esplanade, Foot of Yonge

Ont., the present one of Dawson & Reilly, and some smaller ones.

The Canadian Niagara Power Co. are preparing for the proposed power transmission line from there to Toronto and cities en route, and will probably be ready to supply power for the transmission by October 1st next, temporarily getting the electric current from the power plant of the Niagara Power Co. on the American side until the Canadian works are completed. A bank of eleven transformers has been ordered from the Canadian General Electric Co.

The contract just awarded to Messrs. Dawson & Reilly is an important one. It provides for a wheel pit which will be 175 feet long, running parallel to the river, 160 feet deep and 20 feet wide. The intake canal will be 600 feet wide where it comes in from the river, and 14 feet deep. The water from the river will be brought direct to the penstocks in the wheel pit. The first installation of power provides for three 10,000 h.p. turbines and dynamos. The information is also given by Mr. Rankine that the company has received a number of enquiries for power on the Canadian Niagara frontier.

THE STURTEVANT EXHAUST HEAD.

The B. F. Sturtevant Co., Boston, Mass., are in receipt of a letter from the Widdicombe Furniture Co., Grand Rapids, Mich., which explains itself as follows :

Enclosed we hand you a check for exhaust head, which was applied yesterday and found to be the most efficient device for the purpose the writer has ever seen. The condition of the atmosphere this morning is one of extreme moisture, which certainly would display any spray passing out with the steam, but not a particle of moisture can be found in the air, and that even within 12 inches from the exhaust steam ; as we have to purchase our water supply the device will soon pay for itself.

The Sturtevant exhaust head is built of galvanized iron, 16 to 20 gauge in medium sizes and heavier in larger sizes. All external joints are close riveted and soldered, and the internal pipes are double braced. There are no baffle plates to rattle loose. It acts upon the only proper principle—by centrifugal force—is a perfect separator, and produces no back pressure.

TO CARBIDE MANUFACTURERS.

We observe from our rural exchanges that farmers in some parts of the country are talking of finding a substitute for coal oil in carbide. This has probably been suggested by the installation of calcium carbide plants in many country hotels, skating rinks, and other large buildings for which the intensity of its light is found suitable.

Such plants however, hardly answer the purpose of the average farmer or householder, who wants moveable lamps. Then, too, the apparatus put on the

market seems to be not quite perfected yet in its adaptability for general use. And the cost and trouble of putting in the pipes and other fixtures is a hindrance to its rapid introduction into private houses.

But carbide is used in bicycle lamps almost universally. There seems to be no reason why lamps for ordinary use should not be constructed on a similar principle. The light could be softened by the use of chimneys with milk colored glass. Such lamps would be much superior to the ordinary coal oil lamp not only in the amount of light they would give, but also in avoiding the odors and leakages of coal oil. Carbide lanterns would be much less likely to flicker badly or blow out than those now in use.

Such lamps and lanterns may already be manufactured for aught we know. If they are and if the carbide can be supplied at reasonable cost, we should advise the manufacturer to put agents in the field at once. Tens of thousands could be sold in this country this winter.—Winnipeg Tribune.

The Toronto Lithographing Co., Toronto, has purchased the business of G. T. Gorrie & Co., Toronto, manufacturers of all kinds of advertising signs and show cards. This, added to their already large plant, makes them one of the largest concerns in Canada, who, under one roof, have facilities for producing and completing everything pertaining to the graphic arts, including map engraving and book-binding, etc.



Dust and Shavings Separators

FOR WOOD REFUSE

The air carrying the refuse enters the separator at the top and whirls around inside. The shavings being heavier than the air are carried by centrifugal force to the outer shell of the separator and they then take up a spiral path for the outlet at the bottom, the air passing out of the opening at the top.

Write us for prices and particulars of Separators, Fans, Etc.

McEACHREN HEATING and VENTILATING CO., GALT, ONT., CANADA.

IN THEIR NEW FACTORY . . .

32, 34, 36, 38 and 40
 DUNDAS STREET

THE . . .

Electrical Construction Co.

OF LONDON, Limited

Beg to call the attention of their patrons to their removal to a more commodious and up-to-date factory, where, with improved facilities, they can guarantee even better attention and satisfaction than ever before.

Don't buy before getting their prices, when purchasing Dynamos, Motors, Fixtures or Supplies.

Quotations Supplied on Application.

PHONE 1103

PORTABLE REVOLVING CYLINDRICAL ELECTRIC AUTOMATIC BLUE PRINTING APPARATUS.

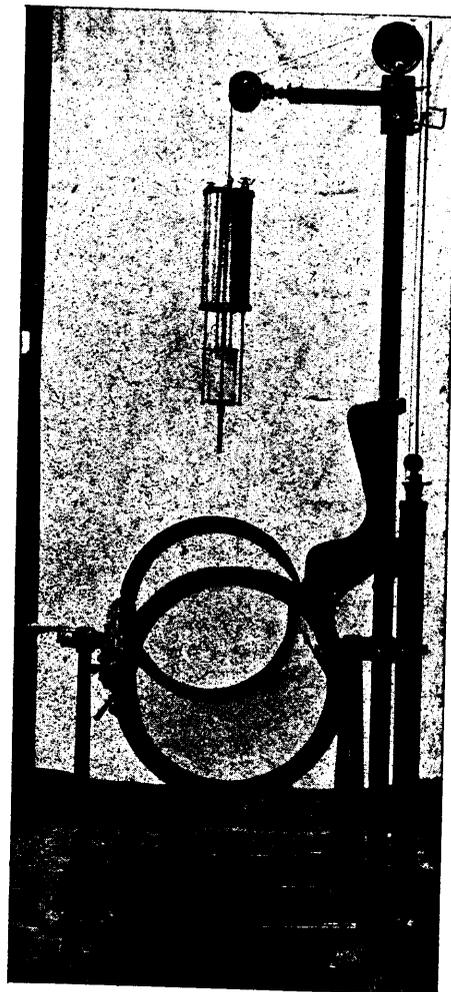
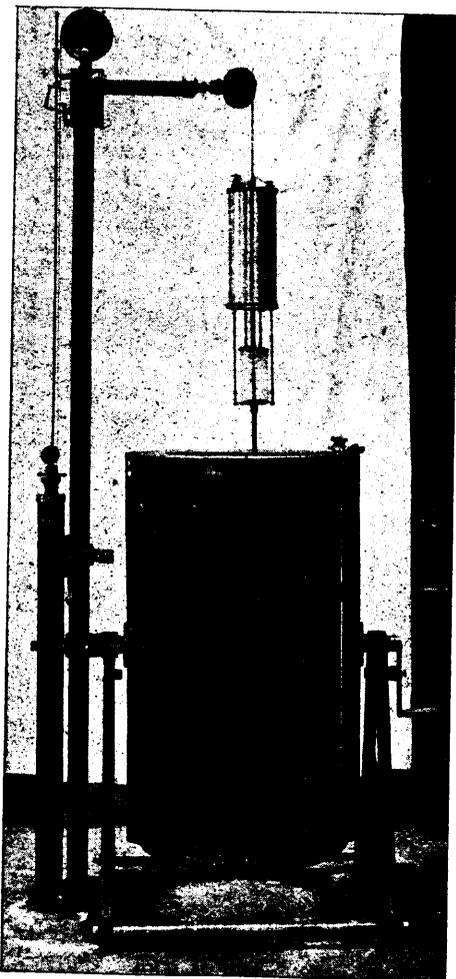
The accompanying illustrations are for the purpose of showing manufacturers, engineers and architects a simple but highly efficient electrical device for making blue prints or photographs indoors at any time of day or night, thus allowing the user to be entirely independent of sunlight.

The apparatus consists of a transparent cylinder, rotatably mounted in a portable frame, having means whereby the cylinder may be locked in either a vertical or horizontal position. The lamp is suspended by means of a standard with horizontal arm, this standard being fastened to the extension of the portable frame.

The lamp or light acting as a counter balance to the piston is gradually lowered by being attached to the piston rod, which is provided with a valve for the purpose of regulating the downward speed of the lamp, thereby getting perfect regulation for any print that the user may desire to make. The range of speed can be adjusted anywhere between five seconds and twenty minutes, depending on the degree of sensitiveness of the blue print paper used.

When the lamp or light has reached its maximum downward movement, the supply of current is automatically cut off, and the automatic cut out is held in this position until the lamp is returned to its normal position, and may be cut in at any point whereto the lamp may have been lowered by the operator.

In operating the apparatus, lock the cylinder in a horizontal position and place the tracing and sensitized paper on the outside of glass cylinder, laying the canvas over them and drawing it taut by means of the operating crank handle rotating one of the shafts, thus providing perfect contact between tracing and sensitized paper. Then turn the cylinder to opposite horizontal position so as to likewise load the other half and then return and lock in vertical position. Then turn on the current by means of the



**J. N. Callman
& Sons**

Brass Founders,

**Babbitt and
Solder**

Manufacturers

**Copper Castings
a Specialty**

**Hamilton,
ONTARIO**

**THE CANADIAN
COLORED COTTON
MILLS COMPANY.**

**Cottonades, Tickings, Denims,
Awnings, Shirtings,
Flannelettes, Gingham,
Zephyrs, Skirtings,
Dress Goods, Lawns,
Cotton Blankets,
Angolas, Yarns, etc.**

Only Wholesale Trade Supplied.

D. MORRICE, SONS & CO.

AGENTS

MONTREAL and TORONTO.



NOTICE!

MAILING LISTS.

Reliable Lists furnished of possible buyers in

**GREAT BRITAIN,
THE COLONIES AND
FOREIGN COUNTRIES**

taken from our own Directories (of which there are over 100) many of them being official. These lists comprise nearly every trade, are thoroughly up-to-date, many of them can only be obtained from us or our publications.

Publishers for over a century of "The Post Office London Directory."

HIGHEST AWARD, GOLD MEDAL, PARIS, 1900.

For further particulars, charges, etc., apply,

Kelly's Directories, Ltd., London, Eng.

(ESTABLISHED 1799).

Dominion Branch—71 Victoria St., Toronto, Ont.

W. P. DENT, - Manager.

Branches in Great Britain—Liverpool, Manchester, Birmingham, Glasgow, Leeds, Sheffield, Nottingham; also at Paris, Hamburg, New York, Bombay, Calcutta, Cape Town, Melbourne, Sydney, Dunedin, Buenos Ayres, etc.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

handle attached to rod controlling automatic switch, starting the lamp or light downward through centre of cylinder by simply releasing windlass. When paper is sufficiently exposed, return lamp to normal position and unload cylinder.

The machine is self-contained in all of its operations. An expert is not required to erect it. All machines are tested and adjusted before leaving the factory, ready to operate.

This apparatus can be placed anywhere in a room, and special attention is called to the fact that the size given for each machine is simply the printing surface of one-half of the cylinder, as each machine makes two prints at each exposure of the size mentioned in list.

It is made in standard sizes as follows:

Size No. 1	30 x 42 inches.
" 2	36 x 60 "
" 3	42 x 60 "
" 4	42 x 75 "
" 5	42 x 84 "

Larger or special sizes made to order.

This unique apparatus is manufactured by the Elliott Electric Blue Print Co., 723 Liberty street, Pittsburg, Pa., who will be pleased to give electrical data, operation of apparatus and prices on application.

The company recommend for the use of this apparatus, their specially prepared blue print paper, which has been demonstrated by actual test, to be of a most satisfactory character. Complete book of samples of this paper, or samples of

sensitized paper for testing with other makes, cheerfully furnished.

THE CANADIAN NIAGARA POWER CO.

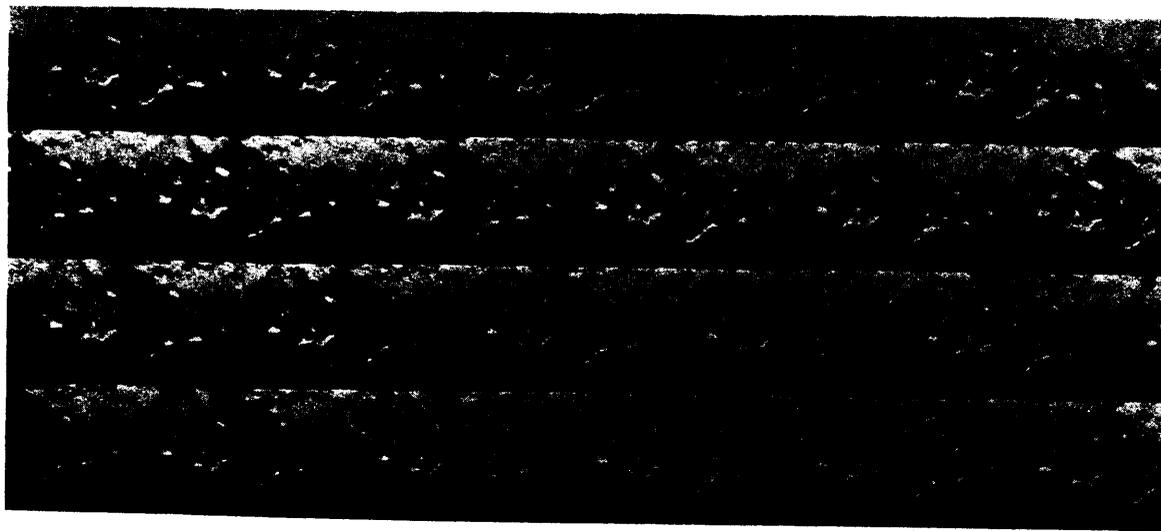
A memorandum prepared for Mr. J. W. Langmuir, Chairman of the Commissioners for the Queen Victoria Niagara Falls Park, shows the following details of work done and contracted to be done, and machinery purchased by or on behalf of the Canadian Niagara Power Co.:-

1. Conduit, cable and electrical machinery for use during construction, purchased and installed at a cost of..... \$20,664
2. Wheelpit excavation—stripping wheelpit, at cost of.... 19,150
3. Tunnel and shaft—the shaft has been completed and the tunnel driven 200 feet, under an executed contract which calls for an expenditure of.. 513,000
4. Cofferdam, materials purchased, at a cost of..... 27,000
- Contract for cofferdam (now almost complete) involves a cost of..... 23,000
5. Wheelpit and intake canal, contract awarded to firm of Canadian contractors for over 500,000
6. Bridge across canal opening, to be made of masonry, at request of Commissioners, instead of steel, to preserve

- esthetic charm of park, to cost..... \$55,000
7. Transformers, generators, exciting machinery and switchboards—contract let to Canadian General Electric Co. for nine transformers for proposed transmission to Toronto and elsewhere..... 43,200
 - Contract let also to Canadian General Electric Co., for three 10,000 e. h.p. generators, for, say..... 209,475
 - Contract authorized for exciting machinery, to cost, say.. 16,000
 - Contract also authorized for switchboard, to cost, say.... 75,000
 8. Turbines—Contracts made for plans of 10,000 h.p. turbines, the plans and license fee involving a cost of..... 10,000
 - Upon receipt of these plans the company is authorized to order three 10,000 h.p. turbines, at a cost of, say..... 130,000
 9. Lands purchased adjacent to park, and laid out for manufacturing sites and an industrial village..... 75,000
- Total..... \$1,716,489**

THE BUFFALO FORGE CO.

The Buffalo Forge Co. have adopted the system of having a congress of their "Angels of Commerce," the men who travel throughout the length and breadth of the land—of all lands—convene once



This cut illustrates a single sheet of our Fig. 825 Siding, 30 x 96 inches in size—It is a superior siding in every respect and we can supply it in Painted Steel or Galvanized Steel, with proper corner trimmings and everything necessary for a handsome and durable job. Give us particulars of your buildings (size and construction) and we will submit sample and estimate.

THE METAL SHINGLE & SIDING CO., Limited
PRESTON, - ONTARIO

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

Zanzibar Paints

Made in all Colors

Rust Proof.
Decay Proof.
Fire Proof.

FOR
Bridges, Roofs,
Factory Buildings,
Structural Iron Work,
Warehouses, Etc.

USE
Zanzibar Crucible Black

For Smoke Stacks, Boilers, Steam Pipes,
Furnace Cupolas, Etc.

Extraordinary High Fire Test.
Elastic and Durable.

Absolutely will not Blister, Peel Off or Chalk.

Manufactured by

THE ZANZIBAR PAINT CO., Limited, TORONTO,
CANADA.

a year, at the head office at Buffalo, the affair being a sort of experience meeting, at which each representative, who had been requested to prepare a paper or technical article on some equipment furnished within the year, of which he had knowledge, reads it, leading to a general discussion thereon. The choice of the subject is usually left to the individual, by which means most interesting features of widely varying natures are discussed.

At the 1902 meeting, recently held, articles upon heating and ventilating installations of different characters, and, in short, fan-system applications to a large variety of industries, were read at three sessions each day and were afterward discussed by the assembled engi-

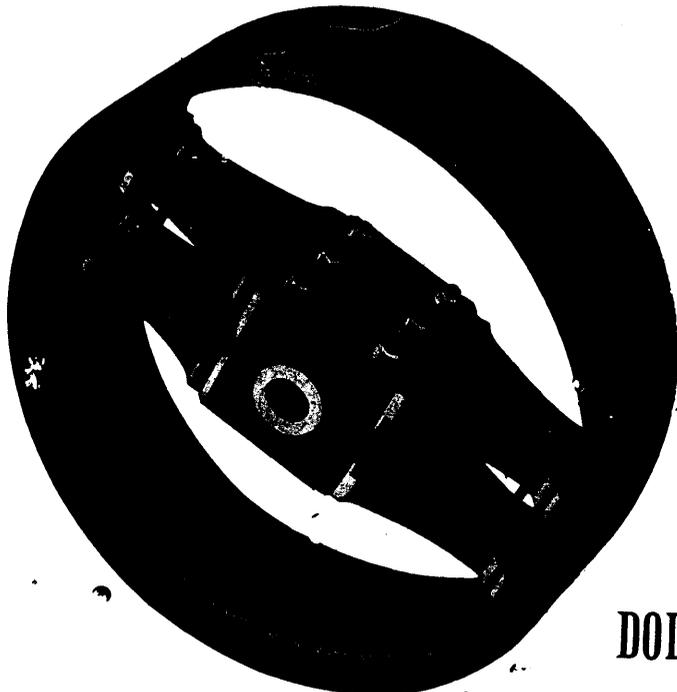
neers. The meeting was followed by a banquet.

And now the second question: Who do these men represent? Before answering this, let us take a brief glance at industrial history. Years ago, foremost men of research, who had been giving exhaustive study and experiment to the problem of ventilation, reached the common conclusion that ventilation, uniform and positive with all conditions of the weather, could be obtained only by the circulation of air moved by mechanical means. The fan at once offered the most ready solution of this problem; but, as with other machines, the original types of fan were crude and inefficient. But their use proved that the consensus of

opinion as to the only adequate means of ventilation was correct. The natural result followed. The development and perfection of the fan, and its application, have been so rapid that to-day the United States claim to lead the world in efficiency of heating and ventilating equipment. England and other countries now come to the United States for much of their apparatus for heating and ventilating their schools, their factories, their legislative buildings, their halls of audience, etc., and it is in the city of Buffalo that a large proportion of these goods are made.

To most people the name "Buffalo Forge Co." signifies manufacturers of blacksmith forges. This is a wrong

PULLEYS for FACTORIES



The **SUCCESSFUL** manufacturer to-day is no governed altogether by price. 5 per cent or 10 per cent difference in discount does not induce him to try "Something just as good." What he buys is what he **KNOWS** to be the best, and what he knows other people consider the best, and he is right.

THE DODGE STANDARD WOOD SPLIT PULLEY . . .

undoubtedly stands pre-eminently at the head in the wood pulley line. Its enormous sale is the best proof of this. The extensive works of the makers is an instructive place to visit, and Canadian manufacturers when visiting Toronto are cordially invited to go through. We have an abundance of good literature on the subject of Improved Power Transmission Machinery which we mail for the asking.

DODGE MANUFACTURING COMPANY
ENGINEERS, FOUNDERS
MACHINISTS **TORONTO**

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idea. The growth of the establishment, since it was founded twenty-one years ago, is shown by the forge department. Some time after the design of the first blacksmith portable forge was perfected, it took the company almost a week to build two forges. At the present moment 500 machines can be got out in this time, without retarding the other departments of the work, and yet these other departments are by far the more extensive.

At the present time the space devoted to the forge department is less than a fifth of the area of the whole plant, and the greatest volume of work is in heating and ventilating and drying apparatus, electric-light engines, mechanical induced and forced-draft machines, power blowers and exhaust fans. The electric light engine department is fast developing into large work. At both the Pan-American and the Omaha Exposition, the Buffalo Forge Co's electric light engine won the gold medal. So greatly has the business of the establishment increased that the present plant has been outgrown. The company is planning at this moment to erect an entirely new plant; for its present facilities, occupying an entire block of five and six storey buildings with many adjacent structures, are far inadequate.

An inspection of the buildings of the company gives an idea of the economy and utility of the fan system of circulation of air, and its many applications. One illustration of the economy and perfection of the system is to be seen in the large boiler plant. The towering chimney, such as old-fashioned establishments required for furnishing a natural draft for the boilers, is not in use. The boilers have a draft supplied by fans, and the chimney rises but a little above the roof. This artificial draft has this advantage, moreover, that it can be varied to suit the requirements of work. If there is much to be done, and a great deal of power is required, the fans work harder and the boilers have a greater draft. If the demands are less, the drafts can be automatically reduced. So, the system is so flexible that it can meet at once sudden demands for steam; it also saves coal, and it saves the cost of the high chimney.

The works are also heated by the fan system, without the use of hot air pipes. Air is drawn into big heaters where it passes over hot steam pipes, and then is poured forth in volumes to heat the rooms. The temperature is always the same, and all parts of the building are heated alike. The equable heat throughout the establishment, and the absence of great conducting pipes, will strike the attention of the visitor. Improvements are now under way in the office heating plant, which will filter the air, and will permit refrigeration to a proper degree of coolness in summer.

The Buffalo Forge Co. makes many things. A few of them have been spoken of. Among its manufactures are high-speed engines of various kinds, horizontal, vertical and marine, simple and compound; a multitude of applications of the Buffalo fan system of heating, ven-



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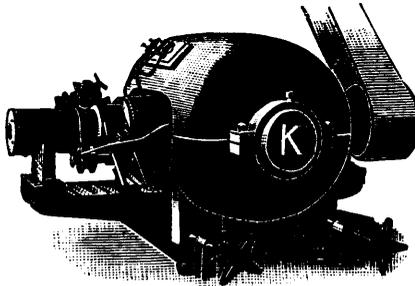
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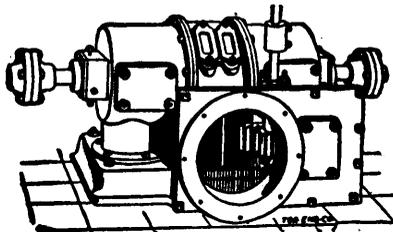


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Catalogue and Gear List mailed on application. Correspondence Solicited.

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BUILT IN 44 SIZES.

We guarantee a higher percentage of power from water used than any other wheel on the market.

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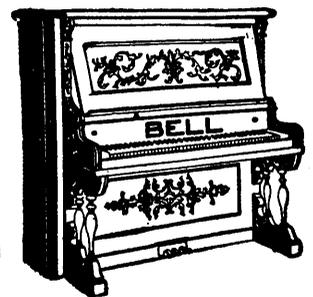
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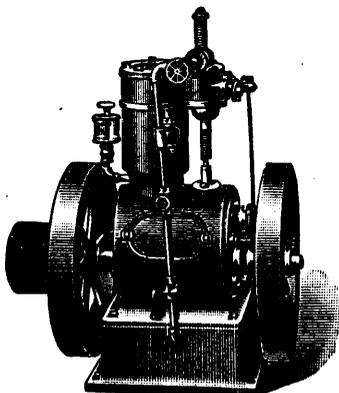
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Are beyond doubt the most complete and economic engine in the market. They are compact and perfectly under control, easily managed, get up speed immediately, thoroughly reliable, and where intermittent power is required they are just the thing.

They are built in sizes from 1 to 20 h.p., upright and horizontal, for pleasure yachts, boats, shops, farm work and any purpose where light power is required. Tell us to what use you want to put the engine, and what power you require, and we will name you prices.

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FOUNDRY EQUIPMENT

CRANES

E. A. WALLBERG, C.E.

Temple Building, TORONTO

Merchants Bank Building, MONTREAL

tilating, drying and cooling; steel-plate fans of many types; steel pressure blowers for cupola and high-pressure blast service; blowers and exhausters; planing-mill exhaust fans for carrying smoke and shavings to any point; disk wheels for ventilating, cooling and drying; the down-draft forges, which have made the company widely known, and which, by carrying smoke and gases away by down-draft suction into underground tile pipes, do away with the necessity of overhead piping; hand blowers, and portable forges of all kinds; and blacksmith drills, tire-benders and other tools.

Hanging in the office of the company is a picture of the small frame building the company first occupied when it went into business in 1880. The present size of the works, and the great variety of manufactures which the establishment produces, tell their own story.

NEW DYESTUFFS.

Phenyl Blue Black N.—This new product is dyed in the usual manner with Glauber's salt and sulphuric acid and produces a deep blue-black shade, fast to light and milling. It is chiefly to be recommended for the dyeing of piece goods, and it will also find employment in slubbing dyeing. In both cases the color is occasionally employed in combination with logwood and is then dyed according to the following well-known recipe:—For a fine deep and bloomy black, take three per cent. phenyl blue black N., four to five per cent. logwood extract, two to three per cent. copper

sulphate, two per cent. oxalic acid, and three to four per cent. copperas. Enter the goods at 100-120 degrees Faht., bring slowly to the boil, and boil for one-half to three-quarters of an hour until the bath is exhausted.

Fast Light Yellow 3G. This new brand differs from the older Fast Light Yellow G chiefly in its shade, it producing a much clearer and greener tone and is also remarkable for its particularly full shade. Like the older "G" brand, it dyes in a strongly acid bath and is possessed of the same excellent fastness to light, further, it dyes equally as level as Tartrazine. **Fast Light Yellow 3G** leaves cotton checking threads white, and is equally as well adapted for the same branches of dyeing as the older "G" brand. It is adapted for the printing of woolen fabrics, as well as for slubbing and silk printing. The color can be discharged a good white with zinc powder, tin crystals, however, not producing so good an effect.

Benzo Red 10B.—The principal advantage of this new color is its great tinctorial power at a low price. When dyed in the ordinary way with Glauber's salt and soda it produces a deep bluish red shade, possessed of a very good covering power. It is especially adapted for the production of cheap Bordeaux shades of great fastness to rubbing, and is therefore a valuable substitute for magenta. As regards its other properties, its fastness to light and acids, is superior to that of the average substantive reds, and the color is not susceptible to the action of copper. **Benzo Red 10B**

produces on half-silk goods very fine and useful shades, and on half-woolen cloth the wool is dyed somewhat yellower than the cotton. The color can be discharged well with tin crystals or zinc powder and is also well adapted for top-dyeing goods, printed with Aniline Black, as well as for slop padding colored prints.

Samples, instructions, circulars, and pattern cards may be obtained upon application to the Dominion Dyewood & Chemical Co., Toronto, sole agents in Canada for The Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany.

THE "ROSSENDALE" M.A.Y. BELTING.

The Rossendale Belting Co's representative, Mr. W. E. Pilkington, of Manchester, England, who is assisting their agents in Montreal, will leave for England immediately, to arrange for large shipments of their well-known "M.A.Y." belting. Messrs. R. H. Buchanan & Co., Montreal, who handle the "Rossendale" belting, advise us that they have had a tremendous run on their stock and find themselves unable to cope with the demand. The company's representative is making a hurried trip and hopes to have a large shipment of belting landed in Montreal in two or three weeks. We are pleased to say that the Rossendale Co. manufacture special belts for Canada, having great faith in the future of this country.

The premises of the Dominion Drug & Spice Mills Co., Montreal, were destroyed by fire February 13. Loss about \$12,000.

BLAGDEN, WAUGH & CO., 50 & 51 Lime St., London, E.C., England
Telegraphic Address, "PHENOLATE, LONDON."

TAR PRODUCTS. Refined Tar, Benzole, Solvent Naptha.

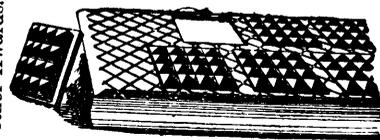
PITCH. Carboic Acid (Crude and Crystal), Picric and Cresylic Acids.
CREOSOTE. Green Oil, Pyridine.

NAPHTHALINE (CRUDE, PRESSED, CRYSTAL, SUBLIMED, MARBLES.) **CYANIDES.** PRUSSIAN OF POTASH AND SODA, PRUSSIAN BLUE.

AMMONIA (SULPHATE, NITRATE, LIQUID, MURIATE, ANHYDROUS, CARBONATE.)

Chemicals. Sulphate of Copper. Chlorates of Potash and Soda. Calcium Carbide. Acetate of Soda. Wood Naptha. Acetone, Bichromates.
CHEMICAL MANURES.

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For Public Institutions, Warehouses, Offices, etc. The Treads consist of a metallic keeper, fitted with pieces of rubber (specially prepared), which form the wearing surface, and can be renewed when worn, by anyone in a few minutes.

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B. GREENING WIRE CO.
(LIMITED)
WIRE MANUFACTURERS
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Wire Screens for Every Class of Material.

Perforated Metal of Steel, Copper, Brass, Zinc for all purposes.

Special Attention given to Miners Requirements.

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FOR
LINING AND REPAIRING
STOVES, FURNACES, RETORTS

And all work where
great heat is required.

BALE & CO., Newgate St., LONDON, ENG.
GAS PURIFICATION and GENERAL
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Are prepared to manufacture
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**SAVERY'S PATENT
SHAKE FRAMES**

FOR

Fourdriner Paper Machines,

AS DESCRIBED IN

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—ALSO—

**SAVERY'S PATENT
COMBINED**

DRYER STEAM JOINT

AND

SAFETY VALVE

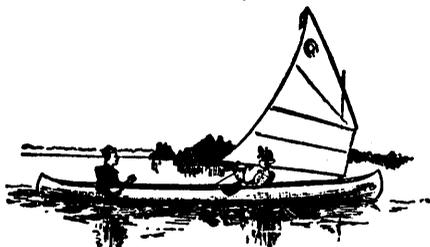
AS DESCRIBED IN

CANADIAN PATENT No. 68,093.

ABOUT 2,000 NOW IN USE.

The CANADIAN CANOE CO., Limited

PETERBOROUGH, ONT.



Manufacturers of....

CANOES AND SKIFFS. Best Quality. Lowest Prices
Send for Catalogue J.

OPPORTUNITIES.

The following enquiries have been received at the offices of the High Commissioner for Canada in London, and at the Canadian Section of the Imperial Institute, London, England.

NOTE.—Those who may wish to correspond with any of these enquirers can obtain the names and addresses by applying to THE CANADIAN MANUFACTURER, Toronto. No charge for giving information. When writing refer to the numerals opposite the enquiries.

665. A Lancashire firm importing large quantities of railway sleepers are open to hear from Canadian exporters who may wish to do business.

666. A company manufacturing spring beds wishes to hear from Canadian firm who can supply pitch pine frames finished, but to be shipped in knock-down state. Principal sizes, 5' 9"x3"x1 1/4" and 4'x3"x1 1/4".

667. An important manufacturer of straw hats is prepared to appoint first-class Canadian resident agent. Good references required.

668. A Leicester manufacturer asks to be placed in communication with Canadian firm who can furnish wood baby carriage sides and ends carved and polished.

669. A London house handling large quantities of maple, birch and oak, is open to hear from Canadian shippers of their timbers.

670. A London house desires names of Canadian producers of split peas.

671. A Midlands manufacturer is open to purchase supplies of round wood of a tough character, 1/2", 3/4", 1", 1 1/4" and 1 inch in diameter. Price by the ton c.i.f.

672. A firm representing several continental packers of preserved goods is open to undertake the agency of a first-class Canadian packer of canned goods.

673. A firm of commission merchants and forwarding agents at Florence, Italy, wish to get into communication with some first-class Canadian export houses in any line save provisions.

674. Enquiry has been received from a firm of forwarding and commission agents, mercantile brokers and bonded warehousemen at East London, Cape Colony, who wish to make connection with a Canadian manufacturing and exporting house.

675. A Manchester firm of importers and general commission agents desire to obtain an agency for a good Canadian exporter. They would be open to represent either produce or textile houses.

676. Canadian firms interested in the shipment of honey for the English market and who would like an opportunity of displaying samples in London, are invited to correspond with a gentleman who is prepared to offer facilities.

677. An importer of fruit and other produce for London market wishes to get into direct touch with Canadian shippers.

678. Enquiry is made for names and addresses of Canadian manufacturers of

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Wood Working Machinery

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Canadian Merchants and Manufacturers
desiring the names of possible
Buyers of their goods in

**Great Britain, Europe,
Australia, New Zealand,
South Africa, West Indies,
South America.**

In fact any and every country can obtain same in Kelly's "Merchants, Manufacturers and Shippers Directory of the World," the standard export medium, the 16th edition of which is about to be issued.

In addition to the Classified Trade Lists of the Importers and Exporters, Merchants and Manufacturers of the United Kingdom and all principal trading centres of the World, it gives the Customs Tariffs for every country and all classes of goods. The work contains nearly 4,000 pages, and gives more information than any other work published the world over.

A few Extracts from Letters received from British Consuls, Etc.

"I am constantly receiving letters of enquiry for information that in most cases could be obtained in your Directory."—British Consulate, Uruguay.

"The only book consulted is Kelly's Directory."—From British Consular Return, Riga.

"Many of these inquiries would have been rendered superfluous by a reference to Kelly's Directory."—Report from British Consul, Genoa.

"The Directory has been of the greatest service to me in my former Consular posts, and will, I believe, be doubly useful here."—B. C. Chicago.

"We beg to express our appreciation of the thorough and exhaustive character of the Directory, which covers exactly the fields we desire to reach."—Messrs. H. M. Anthony Co., New York.

Highest Award, Gold Medal, Paris, 1900.

For further particulars, charges for advertisements, etc., apply.

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W. F. DENT, - Manager.

Branches in Great Britain—Liverpool, Manchester, Birmingham, Glasgow, Leeds, Sheffield, Nottingham; also at Paris, Hamburg, New York, Bombay, Calcutta, Cape Town, Melbourne, Sydney, Dunedin, Buenos Ayres, etc.

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office for in-
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"GENUINE OAK" BELTING

More SOLID LEATHER to the Foot than any Belt made.

"LANCASHIRE" HAIR BELTING

FOR EXPOSED SITUATIONS

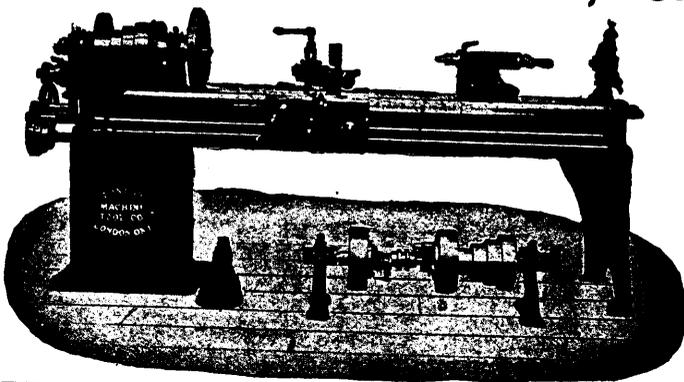
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CAST IRON PIPE

3 in. to 60 in. diameter.

For Water, Gas, Culverts and Sewers

Special Castings and all kinds of

FLEXIBLE AND FLANGE PIPE.

WATER WORKS SUPPLIES

HAMILTON, ONT.

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buggies and other similar vehicles, farm carts and wagons.

679. A correspondent at Grimsby asks for names of Canadian shippers of eggs, cheese, bacon, etc.

680. The patentees and manufacturers of hammerless guns, rifles, and every description of small arms, asks for suggestions as to placing their catalogues and price lists in Canada.

681. A general merchant in the north of England having travellers calling upon a large number of business houses is anxious to undertake buying or selling agencies for Canadian firms. He is specially interested in grain, flour, etc., silver, copper and other ores.

682. The manufacturers of chemicals for agricultural purposes, including fine riddles bone ash, desires to get into touch with actual importers of such goods into Canada.

683. A London firm importing grained split hides wishes to correspond with Canadian tanneries producing such for export.

684. The addresses of large exporters in Canada of canned and dried fruits are asked for by a provision and produce broker in Liverpool.

685. A Manchester firm desires to get into communication with importers and users of textile machinery in Canada.

686. A correspondent in the Midlands with experience of Bradford and Manchester goods, is open to act as buying or selling agent for Canadian houses in the trade.

687. An agent having an extensive experience in the grocery and confectionery trade and having facilities for doing a large agency business desires to hear from Canadian firms desiring representation.

688. The makers of horse clothing of all kinds, saddle girths, knee caps, dog sheets, body belts, etc., wish to extend their business in Canada, and ask to be referred to importers of these goods.

689. Information respecting Canadian hard woods for street paving purposes is asked for by a selling agent who has experience in placing such goods on the English market.

690. A London firm at present doing a good business in chair stock, backs, seats, legs, etc., ask for names of additional exporters of such goods in Canada.

691. A firm of west of England woolen manufacturers are looking out for a first-class agent to represent them in Canada, and also desire to get into touch with wholesale houses in the Dominion purchasing best cloths.

692. A Birmingham house exporting gas and electrical fittings is desirous of extending its business with Canada.

The Ontario Fruit Package Co., Ingersoll, Ont., has been incorporated with a capital of \$50,000, to manufacture fruit packages, etc. The provisional directors include H. M. Blackstone, Bridgewater, Mass.; G. W. Clatur, Boston, Mass.; and T. H. P. Carpenter, Hamilton, Ont.

MARKETS.

This Department of THE CANADIAN MANUFACTURER is devoted to the interests of the Hardware Trade.

THE CANADIAN MANUFACTURER is distributed to the Wholesale and Retail dealers in Hardware, to manufacturers of Agricultural Implements, of Iron and Wood-working Machinery, of Electrical Appliances, of Steam Engines and Boilers, to Engineers and Foundrymen, and to Dealers in Machinery and Steam Fitters' Supplies throughout Canada. There are more than 10,000 manufacturing concerns in Canada which use Steam as a Motive Power. We reach them all. Every recipient of this paper is a buyer of Hardware of one kind or another; and Advertisers will do well to bear this in mind.

Following are reports and observations relating to the markets of Canada and elsewhere, having reference to Hardware, Metals, Paints, Oils and such specialties as are usually handled by jobbers and dealers in such goods. Following these items will be found current market quotations on such goods, and the trade are requested to suggest to the publishers any improvements by which it is believed the quotations may be rendered as correct and valuable as possible.

TORONTO, February 21, 1902.

Indications point to one of the most successful spring seasons in all lines of trade. The past few weeks have been exceedingly dull, the result of snow storms, which blocked country roads. Among the wholesale houses there is continued activity. Spring shipments have been going forward in large volumes, and travellers' orders are coming in as freely as if there had been no trouble through the roads being drifted.

Among the dry goods men there is talk of an advance in the price of cotton. A repeat order for 5,000 pieces of grey cotton was recently refused, except at an advance of over 10 per cent., and on Saturday last two of the largest mills withdrew all quotations, which assuredly indicates an advance in the prices of their goods.

The unjust discrimination of railways was the subject of an address at a meeting of business men held in Toronto, and it was suggested that a Board of Commissioners be appointed to deal with such grievances as may from time to time arise. Farmers and men in all branches of commerce, it was agreed, should have some recourse to justice when the rates were prejudicial to their interest. It is not unlikely that the Board of Trade will be requested to take the matter up and decide whether it is advisable or not to recommend the appointment of such a commission to the Dominion authorities. Mr. Hugh Blair contended that the Ontario Government should have a say along with the Manitoba Government in the regulation of rates on the Canadian Northern, since Ontario contributed largely towards the construction of that railway.

Considerable activity is noticeable in the local share market, advances being

GALVANIZING

We are prepared to attend to all orders Promptly and Economically.

WINDMILLS, PUMPS, TANKS, Etc.

ONTARIO WIND ENGINE and PUMP CO.
LIMITED,

95 ATLANTIC AVE., TORONTO.

reported in Dominion coal, Crow's Nest coal, Dominion steel, and Nova Scotia steel. Commercial cable was the weak issue, selling down several points. The experiments with wireless telegraphy is expected to have a further effect on the stock. It is announced that the directors of the General Electric Co. would recommend an issue of new common stock to the amount of \$1,000,000, but it is understood only one-half or less of the new stock will be issued in the near future. Call loans on the local market are quoted at 5½ per cent.

Henry Clews in his New York letter says: "Some attention has been given to the remarkable expansion of loans during the past few weeks. As these are out of all proportion to ordinary mercantile demands, the only conclusion is that these loans mean preparation for important financial operations of some kind. No doubt much of the confidence with which stocks are held at first hands is due to inside knowledge of what is going on. The outlook is for easy money until preparations are in order for the April settlements. Those who are financing these deals are not likely to permit any serious disturbance in the money market which might interfere."

The metal markets are all firm. In Boston Amalgamated Copper rose 1½ to 71½, Calumet and Hecla sold at 625 to 620 and Tamarack at 250 to 252.

Dealers in hardware in the city all look forward to a big demand as soon as the weather becomes milder. The enormous amount of building which is going on not only in the city, but throughout the Province, justifies them in holding to the opinion that this season will be one of the best in the history of the trade.

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Highest Grade
for all Purposes

MAGNESIA BRICKS

For Lining Smelting, Refining and
Matte Furnaces, also
Converters Rotary Cement Kilns.

F. HYDE & CO.,

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Iron, Steel,
PIG IRON.

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DILLON & CO., 20 Cedar Street.

NOTICE.

Printers. USE PERUVIAN ASH,
a marvellous CLEANSE
for TYPE and COMPOSITION ROLLERS.

WRITE FOR PARTICULARS.

Steam Users. VULITE

is unrivalled as a
disincrustant.
ON H. M. GOVERNMENT'S LISTS.

Vulite Syndicate, Limited

40 Wilson Street, Finsbury,
London, E.C., England.

Wanted—An Active Representative for Canada



NOTICE—The following are the Factory Inspectors for the Province of Ontario:

JAS. T. BURKE, Parliament Buildings, Toronto.
JAS. R. BROWN, Parliament Buildings, Toronto.
MARGARET CARLYLE, Parliament Buildings, Toronto.

O. A. ROCQUE, Orleans, Ont.

Persons having business with any of the Inspectors will find them at the above address.

JOHN DRYDEN, Minister of Agriculture.

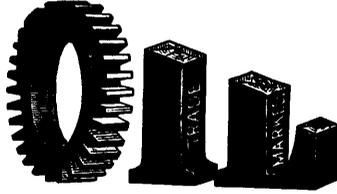
"Capitol" Cylinder

"RENOWN" ENGINE

"ATLANTIC" RED

RELIABLE WELL-KNOWN BRAND

ALL ORDERS PROMPTLY FILLED



THE QUEEN CITY OIL CO. LIMITED
SAMUEL ROGERS, Pres. TORONTO, Canada.

THE EUGENE F. PHILLIPS ELECTRICAL WORKS

MONTREAL, CANADA (LIMITED)

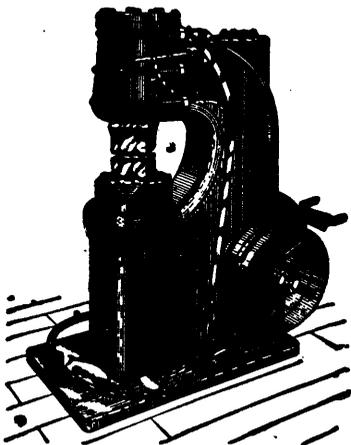
BARE and INSULATED ELECTRIC WIRE

ELECTRIC LIGHT LINE WIRE,
INCANDESCENT AND FLEXIBLE CORDS,

RAILWAY FEEDER and TROLLEY WIRE

RUBBER-COVERED, MAGNET, OFFICE AND
ANNUNCIATOR WIRES.

CABLES FOR AERIAL and UNDERGROUND USE.



The "**YEAKLEY**"
Vacuum HAMMER, Patented

Is unique and unequalled by any other
Power Hammer for its **Simplicity, Power,**
Ease in Operating and Fewness of Parts;
Nothing to Break, no Steam to Leak, no
Pipes to Freeze, no Delays, no Expense
for Repairs. SEND FOR CATALOGUE.

GEORGE BRUSH

SOLE CANADIAN MANUFACTURER,
MONTREAL

PACKARD LAMPS

Are THE BEST MADE.

MAKERS OF
HYLO LAMPS.

The Many Superior Points of the Packard Lamp should command
the Attention of the Manager of every Lighting Plant.

The very close rating—The maintenance of candle power—
Perfect Vacuum—No cracking by heat—These are a few of the
essential features that make the Packard Lamp pre-eminent.

Our Catalogue (A) tells you more as to the superiority of the Packard product.
A post card will bring it.

Sole Agents in Canada
for Scheffer Recording
Watt Meters.

THE PACKARD ELECTRIC CO., Limited,
LAMPS AND TRANSFORMERS. ST. CATHARINES, ONT.

PERSISTENCE IN ADVERTISING....

In the expansion of business now bringing profit to so many
manufacturers, advertisers who have made themselves regu-
larly prominent in past years have been notable in reaping
the rewards of persistent publicity by advertising in

The
Canadian
Manufacturer

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

BUFFALO PIG IRON MARKET.—Office
of Rogers, Brown & Co., Buffalo, N. Y.,
February 19, 1902.

The conditions surrounding the situa-
tion are identical with those noted last
week. There is a slight improvement in
transportation, but producers and con-
sumers alike are still embarrassed by the
poor service.

The available tonnage tributary to
this market for the last third or quarter
of the year is being absorbed slowly but
surely.

We quote below on the cash basis,
f.o.b. cars Toronto:

Lake Superior Charcoal	\$20 00
Standard Southern Charcoal	20 25
No. 1, X, Tonawanda Scotch	18 25
" 2, " "	17 75
" 1, " Niagara	18 25
" 2, " "	17 75
5% Silicon Mannie softener	17 25
3% Silicon Mannie softener	16 75
Connellsville 72 hour Foundry coke	5 20

BRITISH PIG IRON MARKETS.—Messrs.
Wm. Jacks & Co., 49 Leadenhall street,
London, E.C., England, under date of
February 6, 1902, quote as follows:

Since writing your last, prices of Pig
Iron have remained unchanged with
large purchases of "Cleveland Iron" for
the United States.

To-day's quotations are as follows:—
No. 1 Gartsherrie, 66/3. No. 3-Gart-
sherrie 55/6-f.o.b. Glasgow, including
dues. Nos. 1, 2 and 3, Cumberland
Hematite 63/-per ton, and to special
analysis, 69/6-per ton, refined D.T.N.
Hematite, 82 6 in small pigs, f.o.b. Liver-
pool.

TRANSFERRED TO THE FREE LIST.—A
number of Orders in Council have recent-
ly been passed by the Dominion Govern-
ment transferring to the list of articles
which may be imported into Canada free
of duty, certain articles entering into
Canadian manufactures when imported
by the manufacturers for use in their own
factories. The articles are as follows:

Hemp bleaching compound for the
manufacture of rope.

Silver tubing for the manufacture of
silverware.

Steel for the manufacture of cutlery.

Yarn of jute, flax or hemp, for the
manufacture of towels.

Steel castings in the rough, for the
manufacture of scissors and hand-shears.

All articles entering into the con-
struction and forming part of cream
separators.

In the case of the hemp-bleaching
compound, the reason for placing it on
the free list is to enable Canadian manu-
facturers to produce cordage of a lighter
color, so that they may successfully
compete with foreign manufacturers.
Heretofore degreas, which is on the free
list, has been used as a lubricant in
the manufacture of cordage in Canada,
but it was found that it spoiled the ap-
pearance of the cordage, producing too
dark a color. Hemp bleaching compound
is considered to be a much better lubri-
cant. Inasmuch as it takes the place of

degras, which was on the free list, the Government deemed it advisable to allow it to be entered free hereafter. The concession does not interfere with any Canadian interest, the compound not being manufactured here. With respect to the matter of silver tubing, the tariff provides for the free admission of silver bullion, and the cost of manufacturing tubing from bullion is infinitesimal. The tubing is not manufactured in Canada. It is chiefly used for the manufacture of napkin rings, cups, etc. Having had to pay thirty per cent. duty thereon, the Canadian manufacturer of such articles was handicapped in the home market. The steel castings in the rough, for the manufacture of scissors and hand-shears are not now produced in the country, and no Canadian interest is therefore affected. The same remarks apply to steel for the manufacture of cutlery. This steel is of a very high grade, and it has to be purchased in England. With reference to the transfer to the free list of articles which enter into the construction and form part of cream separators, it was pointed out that inasmuch as cream separators are free under the tariff, the Canadian manufacturer of such articles should be allowed to import materials which enter into their manufacture, without payment of duty. It will be obvious that this is only equitable. The order placing yarn of flax, hemp or jute, for the manufacture of towels, in the free classification is an extension of the clause, now in the free list of the tariff, which provides for the free

entry of such yarn when imported by manufacturers of carpets, rugs, mats, jute webbing, jute cloth, hammocks, twines and floor oil cloths. The yarn specified is not produced in Canada to any appreciable extent.

DRAWBACK ON STRUCTURAL MATERIAL.—Another Order in Council has been passed, providing for the payment of a drawback of the duty paid on imported materials used in manufacture of machinery, and structural iron and steel for use in the construction and equipment of factories for the manufacture of sugar from beet root. By an amendment to the tariff, made last session, provision was made for the free entry of such machinery, and structural iron and steel, and the object of this order is to place the Canadian manufacturer of these articles in as good a position as his foreign competitors. The time for the free admission of such machinery and steel expires on April 1, 1902. It is provided that the drawback regulation referred to shall apply only in respect of machinery, and structural iron and steel manufactured and sold for bona fide use in the construction and equipment of factories for the manufacture of sugar from beet root, during the time when the imported machinery, and structural iron and steel aforesaid are exempt from customs duty.

RAILWAY STATISTICS.—On June 30 last according to official returns compiled by

the Department of Railways, there were 163 steam railways in actual operation in Canada, including the two Government roads, the Intercolonial and the Prince Edward Island Railway. At the close of the fiscal year the number of miles of completed railway was 18,294, an increase of 658 miles, besides 2,710 miles of sidings. The number of miles laid with steel rails was 18,184, of which 634 miles was double track. The number of miles in operation was 18,140. The paid-up capital amounted to \$1,042,785,539, an increase of \$51,598,893. The gross earnings amounted to \$72,898,749, an increase of \$2,694,396, and the working expenses aggregated \$50,368,726, an increase of \$2,987,037, compared with those of the previous year, leaving the net earnings \$22,530,023, a decrease of \$292,642. The number of passengers carried was 18,385,722, an increase of 1,281,379, and the freight traffic amounted to 36,999,371 tons, an increase of 1,286,149 tons. The total number of miles run by trains was 53,349,394, an increase of 727,870. The accident returns show 16 passengers killed.

WANT A BOUNTY ON ARSENIC.—A memorandum received by the Ontario Bureau of Mines from Joseph James, of Actinolite, Hastings County, Ont., gives reasons why a bounty on arsenic should be granted. He says that negotiations are pending with foreign capitalists for the establishment of a large works, which will not be executed unless a bounty be granted. Should this be done there

The Whitman & Barnes Manufacturing Co.

MANUFACTURERS OF

- | | |
|----------------------------|------------------------|
| Mower Knives, | Twist Drills, |
| Reaper Knives, | Spring Keys and |
| Binder Knives, | Cotters, |
| Paper Knives, | Hammers, |
| Veneer Knives, | Hatchets, |
| Wood-working | Sledges, |
| Knives, | Masons' |
| Straw Cutter | Hammers, |
| Knives, | Wrenches, |
| Root Pulper Knives, | Thresher Teeth. |

SPECIAL WOOD-WORKING KNIVES

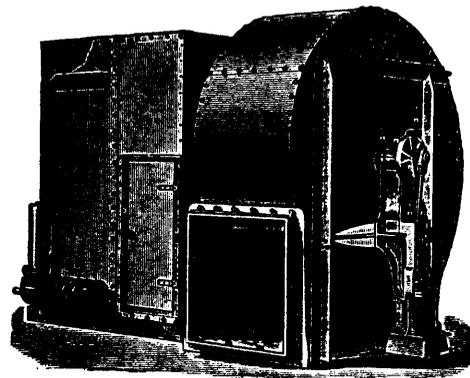
WE MAKE THE BEST AND GUARANTEE OUR GOODS

St. Catharines, Ont.

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THE STURTEVANT DRYING APPARATUS

Is Positive and Rapid



The Sturtevant Apparatus consists of a steel pipe steam heater through which a fan draws or forces the air. It can be applied for the drying of all classes of material, such as lumber, wool, cotton, grain, packing house products, etc. We furnish designs for drying rooms and beds, and design special apparatus for meeting exact requirements.

B. F. STURTEVANT CO.,

Boston, Mass.

New York. Philadelphia. Chicago. London.

193

Stanyon Engineering Co.,

402 McKinnon Bldg.

Phone, Main 2177. TORONTO, ONT

**Consulting Engineers and
...Buyers' Agents...**

When wanting Machinery or Iron and Steel products from the United States consult us.

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THE STOWE-FULLER CO.

FIRE BRICK MANUFACTURERS

ALL FURNACE MATERIAL

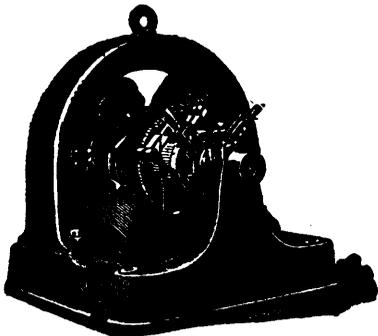
Superior Building SEND FOR
CLEVELAND, O. CATALOGUE



Trimo Giant
This Chain Pipe Wrench has interchangeable jaws. Improved method of holding and releasing chain. No locking. Send for catalog.

TRIMONT MFG. CO., Roxbury, Mass., U.S.A.

FOR SALE



50-Horse Power Induction Motor

7,200 Alternations, 400 Volts, 2-Phase.

Complete with transformers and auto-starter.

T. & H. ELECTRIC CO.,

99-103 McNab St. North,
HAMILTON.

McLachlan Electric and Gasoline Motor Co.

LIMITED

115 Bay Street, Toronto, Can.

MANUFACTURERS OF

**ELECTRIC LIGHT AND
POWER APPARATUS**

GASOLINE ENGINES

For Launches, Horseless Carriages, etc

CORRESPONDENCE SOLICITED.

would be a plant of 2,400 tons arsenic annual capacity, on which the Province would pay \$12,000 and the Dominion \$24,000 bounty. This output could be increased to 5,000 tons, on which the bounty would be \$75,000, and the annual outlay for stores, fuel, wages, etc., would be \$600,000. In the seven years for which the bounty is asked \$375,000 would be paid in bounty, and \$4,200,000 would be expended by the manufacturers. The total annual consumption of arsenic in Canada and the United States is about 6,000 tons.

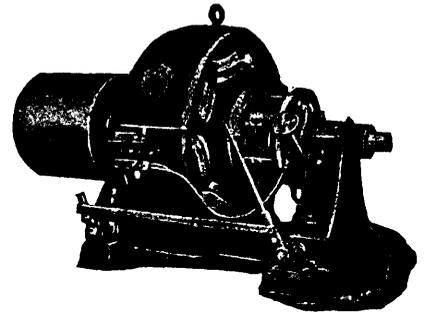
NIAGARA FALLS POWER.—Premier Ross, in moving the second reading of his bill before the Ontario Legislature this week, to confirm the agreement between the Queen Victoria Park Commissioners and the Canadian Niagara Power Co., gave a brief explanation of the main features. The agreement, he pointed out, extends the time for completion from 1902 to July, 1904, but, in return for this the company must, by the last named date have completed water connections for the development of 50,000 h.p., an outflow tunnel sufficient for not less than 100,000 h.p., and to have on or before that date actually ready for use and supply 20,000 electrical h.p., of which one-half shall be for use of Canadian consumers. The sum of \$1,500,000 must be expended or contracted to be expended on the works by July, 1903. The premier said that a considerable amount of work has been done, and the amount for this and for contracts already entered into totalled \$1,700,000. He was glad to say also that many of the contracts for the electrical supplies and work had been made with Canadian firms. The company had also invested \$75,000 in the purchase of real estate in the vicinity suitable for factory and industrial establishment sites.

DEATH OF JOHN A. PILLOW.—Mr. John A. Pillow, so long and favorably known to the iron and hardware trade of Canada, died in Montreal on Sunday last. Mr. Pillow was born in Montreal 62 years ago. In 1872 he succeeded to the old established business of T. D. Bigelow & Co., forming a partnership with Mr. Randolph Hersey, under the style of Pillow & Hersey, and which some years later was incorporated as the Pillow & Hersey Mfg. Co., that city, and of which Mr. Pillow was president at the time of his death. The rolling mills and works of the company are said to be the largest of the kind in Canada, and the most complete and up-to-date of the kind in America, giving employment to a large number of men.

WOOLENS.—While the prices of woollens remain unchanged there is considerable uncertainty owing to the efforts of the Canadian manufacturers to effect a change in the tariff at the coming session of parliament. Much pressure is being brought to bear on the Finance Minister in the direction of greater protection to the Canadian mills. Those making the better class of goods are busy and are behind in filling orders. Canadian goods

The Jones & Moore ELECTRIC CO.

ELECTRICAL CONTRACTORS



**DYNAMOS, TELEPHONES, SLOW
SPEED MOTORS, MOTORS, SUPPLIES,
DIRECT CONNECTED DYNAMOS.**

We manufacture Direct Current Machinery in all sizes and for any purpose.

**20 and 22 ADELAIDE W.,
TORONTO.**

KERR'S

"COPPER-ALLOY"

DISC VALVES

ARE THE BEST

—FOR—

HIGH STEAM

ASK YOUR DEALER

FOR THEM.

CATALOGUE SENT

ON APPLICATION.

THE KERR ENGINE CO.

LIMITED

WALKERVILLE, - ONTARIO

CHARLES F. CLARK,
President.

JARED CHITFENDEN,
Treasurer.

Established 1849.

BRADSTREET'S

Capital and Surplus, \$1,500,000

Offices Throughout the Civilized World.

EXECUTIVE OFFICES,

346 & 348 Broadway, New York City, U.S.A.

Correspondence Invited.

OFFICES IN CANADA:

Hallifax, N.S.

Hamilton, Ont.

London, Ont.

Montreal, Que.

Ottawa, Ont.

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Vancouver, B.C.

Victoria, B.C.

Winnipeg, Man.

THOMAS C. IRVING, Gen'l Manager Western Canada,
TORONTO.

JOHN A. FULTON, Gen'l Manager Eastern Canada,
MONTREAL.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

of fair quality compare very favorably with the English and compete successfully with them at the same prices. Dealers report business very quiet at present for spring delivery. In a few weeks travellers will be taking orders for next winters goods, the samples of which are now being received.—Maritime Merchant.

BUSINESS CHANGES.

FROM BRADSTREETS.

ONTARIO.

CLARKSON—R. Quance, saw mill, advertising business for sale.
 DRESDEN—Laird Bros., planing mill, burnt out.
 ET MIRA—W. O. Robertson, brick mfr., meeting of creditors.
 GALETTA—J. G. Whyte, flour mill, assigned.
 INGERSOLL—Ontario Fruit Package Co., obtained charter.
 LONDON—London Electro & Plating Co., business advertised for sale.
 J. S. Shaw, mfrs. rugs, etc., sold to J. Anderson.
 OTTAWA—Imperial Clothing Mfg. Co., offering to compromise.
 Ottawa Show Case Co., mfrs., part of assets sold.
 PETERBORO—Peterboro Peat Co., obtained charter.
 PORT ARTHUR—M. S. Kelly, planing mill, sold to R. Vigars.
 TORONTO—Adamson Moulding Co., assets to be sold by auction.
 Eastman Machine Co., obtained charter.
 George T. Gorrie, mfr. show cards, etc., sold out to The Toronto Lithographing Co.
 W. R. Johnston & Co., clothing, obtained charter.
 WINDSOR—Lake Superior Timber Co., obtained charter.
 WOOLWICH TP.—W. O. Robertson, mfr. brick, assigned.

QUEBEC.

BEAUCHARNOIS—Beaucharnois Light, Heat & Power Co., applied for charter.
 EAST TEMPLETON—McLaren & McLaren, lumber and saw mill, dissolved.
 MONTREAL—Alaskan Feather & Down Co., increasing capital stock to \$100,000.
 Ampere Electric Mfg. Co., registered.
 Canada Mill Stock Co., compromised.
 Cassella Color Co., obtained charter.
 Chapman-Dart Co., mfr. druggists, applied for charter.
 Dominion Bridge Co., increasing capital to \$1,000,000.
 Dominion Spice Mills, burnt out.
 Dominion Wire Mfg. Co., increasing capital to \$1,000,000.
 Fenlin Leather Co., registered.
 Giguere & Hetu, boot and shoe mfrs., started.
 Hodgson Iron & Tube Co., obtained charter.
 James McCready Co., boot and shoe mfrs., obtained charter.
 Mountain City Cycle Co., dissolved.
 Power, Pulp & Paper Co., applied for charter.
 R. E. T. Pringle Co., electric supplies, obtained charter.
 Sleeper Engine Co., applied for charter.
 Sunlight Gas Co., Edward Dumaresq (in trust) registered.
 Trethewey Train-Pipes-Coupling Co., applied for charter.
 QUEBEC—Bedard & Deslauriers, tanners, dissolved.
 SHERBROOKE—Chaleurs Bay Mills, applied for charter.
 WINDSOR MILLS—Laineau Mfg. Co., obtained charter.

NEW BRUNSWICK.

LOGGIEVILLE—Damery & McDonald, lumber, co-partnership registered.
 WOODSTOCK—J. D. Dickinson & Sons, tanners, etc., premises partially damaged by fire.

NOVA SCOTIA.

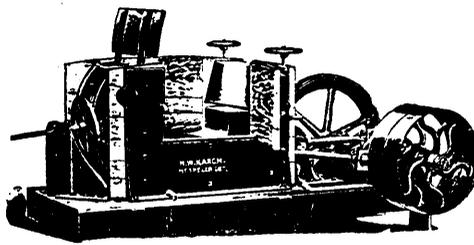
GLACE BAY—Aldred Dimock, Shand & Son, planing mill, Charles L. Stevens, appointed receiver.

MANITOBA.

BRANDON—Manitoba Pump Co., dissolved, T. N. Williamson continues.
 SNOWFLAKE—Snowflake Elevator Co., applying for incorporation.
 VIRDEN—Farmers' Elevator Co., applying for incorporation.
 WINNIPEG—Winnipeg Trunk & Box Co. (estate of), succeeded by Winnipeg Box & Packing Case Factory.

BRITISH COLUMBIA.

VERNON—Smith & McLeod, saw mill, dissolved.
 NEW WESTMINSTER—Wintermere Furniture Co., fire loss.



H. W. KARCH

HESPELER, ONT.

IRON FOUNDER and MACHINIST

Manufacturer of

WOOLEN MACHINERY,

Rotary Fulling Mills, Kieker Fulling Mills, Soaping Machines, Cloth Washers, Wool and Waste Dusters, Rag Dusters, Drum Spool Winders Reels, Spooling and Doubling Machines, Ring Twisters, Card Creels Dead Spindle Spooler for Warp or Dresser Spools, Patent Double-Acting Gig Dyeing Machines.

DIXON'S

DOES TWO THINGS

SOLID Belt Dressing.

AND DOES THEM THOROUGHLY

STOPS THE BELT FROM SLIPPING.

PLEASES THE MAN WHO USES IT.

NOTHING EQUALS IT...

SAMPLE SENT FREE. SEND FOR ONE.

JOSEPH DIXON CRUCIBLE CO.,

JERSEY CITY, N.J. U.S.A.

Toronto Elevator Co.

MILLWRIGHTS AND ELEVATOR SPECIALISTS

Estimates Given and Losses Adjusted

OUT-OF-TOWN WORK PROMPTLY ATTENDED TO.

PHONE **JOHN H. SHALES,** 1535 Manager

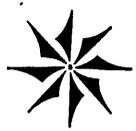
AGENTS FOR...
 Miller Bros. & Toms, Elevators
 Leitch & Turnbull Co. Limited, Elevators.
 Greening's Wire Ropes.

74 ADELAIDE ST. WEST TORONTO

PITT & SCOTT, LIMITED

Foreign Freight Contractors and Forwarders

Through Bills of Lading to all part of Europe, South Africa, Australia, ETC.



Foreign Financial Reports, Trade Lists, etc., etc.

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FURNISHED ON APPLICATION

39 BROADWAY, NEW YORK

138 Milk Street, BOSTON

AGENCIES ALL OVER THE WORLD

- CROW BARS.**—Duty 30%.
5 cents per lb.
- CRUCIBLES.**
Dixon's, 7 cents per number.
- DRILLS.**—Duty 25%.
Blacksmiths' \$6 to \$15 each.
Jardine's, \$7.50 to \$20 each.
- DYES (Aniline).**
- DYNAMITE.**
36 to 50 cents per lb.
- EMERY.**
Coarse, 7 cents per lb.
Fine, 5 cents per lb.
- EMERY CLOTH.**—Duty 25%.
Beader & Adamson, 40% discount.
- EMERY HONES.**—Duty 25%.
\$3 to \$5 per doz.
- EMERY STEELS.**—Duty 25%.
\$2 per doz.
- EMERY WHEELS.**—Duty 25%.
65% discount.
- EXPANDERS.**—Duty 30%.
Tube, Dudgeon, 33½% discount.
- FAUCETS.**—Duty 30%.
Brass, \$2.50 to \$5 per doz.
Wood, 60c. to \$1.00 per doz.
- FENCING.**
Barb Wire, \$3.05 per 100 lbs.
- FENCING (Wire).**—Duty 15%.
Galvanized, barb, f.o.b. Toronto, \$3.05.
Galvanized, plain twist, f.o.b. Toronto, \$3.05.
Galvanized, barb, f.o.b. Cleveland, \$2.82½ in less than car lots, and \$2.70 in car lots.
Mesh, 5½x10½, 20 rod rolls 55% discount, Can. list.
" 4 x8, 20 " 50 & 5% " "
" 3 x6, 20 " 55 & 5% " "
- FERRULES.**—Duty 30%.
Tool handle, 5c. & 6c. per lb.
- FILES.**—Duty 30%.
Black Diamond, 50 and 10% discount.
Globe, 70% discount.
Grobet, net.
Jowitt's, 25% discount.
Nicholson, 50 & 10% discount.
Stubbs', 15% discount.
- FITTINGS (Pipe).**—Duty 30%.
Bushings, 55% discount.
Cast Iron, 55% discount.
Cocks, 60 " "
Elbows, tees, crosses, couplings, lock nuts, return bends, 50% discount.
Flanges, 55% discount.
Nipples, 55 " "
Plugs, 55 " "
Unions, 55 " "
Wrought Iron, 50% discount.
- FLUE SCRAPERS.**—Duty 30%.
Engineers' Favorite, 40% discount.
Inglis, 20% discount.
Wire, 50 " "
- FORKS, HOES AND RAKES.**—Duty 25%.
50, 10 and 5% discount.
- FUSE.**
Blasting, Single tape, \$3.75 per M ft.
Double tape, \$5 per M ft.
- GASKETS.**—Duty 35%.
Rubber Insertion, 80 cents lb.
- GAUGE GLASSES.**—Duty 30%.
Water, 25% discount.
- GAUGES.**—Duty 30%.
Steam, 50% discount.
- GLASS.**—Duty 20%. (Window—Box Price).
Star, under 26 in., \$2.15 per 50 ft., \$4.15 per 100 ft.; 26 to 40 in., \$2.30 per 50 ft., \$4.45 per 100 ft.; 41 to 50 in., \$4.85 per 100 ft.; 51 to 60 in., \$5.15 per 100 ft.; 61 to 70 in., \$5.50 per 100 ft.; 71 to 80 in., \$6 per 100 ft.; 81 to 85 in., \$6.50 per 100 ft.
D. Diamond, under 26 in., \$6 per 100 ft.; 26 to 40 in., \$6.65 per 100 ft.; 41 to 50 in., \$7.50 per 100 ft.; 51 to 60 in., \$8.50 per 100 ft.; 71 to 80 in., \$10.50 per 100 ft.; 81 to 85 in., \$11.70 per 100 ft.; 86 to 90 in., \$14 per 100 ft.; 91 to 95 in., \$15.50 per 100 ft.; 96 to 100 in., \$18 per 100 ft.
Glass Demijohns or carboys, empty or filled, bottles, decanters, flasks, phials, glass jars, lamp chimneys, glass shades or globes, cut, pressed or moulded crystal or glass tableware, decorated or not, and blown glass tableware—Duty 30%.
- GLASS LAMP CHIMNEYS.**—Duty 30%.
Common Crimp, per doz. O, 43 cents.
" " " " A, 45 " "
" " " " B, 65 " "
" " " " C, 65 " "
Lead Glass, " " " " A, 50 " "
" " " " B, 75 " "
- FRUIT JARS.**—Duty 30%.
Standard pints, \$7.25 per gross.
quarts, \$7.75 per gross.
" half gal., \$10.00 per gross.
Imperial pints, \$7.75 per gross.
quarts, \$8.75 per gross.
" half gal., \$12.00 per gross.
- GLUE.**—Duty 25%.
Cabinet, sheet, 12 to 13 cents per lb.
Common, 8½ to 9 cents per lb.
Coopers', 19 to 20 cents per lb.
French Medal, 14 to 14½ cents per lb.
Gelatine, 22 to 30 cents per lb.
Huttner, 18 cents per lb.
Strip, 18 to 20 cents per lb.
White, extra, 18 to 20 cents per lb.
LaPage's, 25% discount.
Progressive, 25 " "
- GOVERNORS.**—Duty 25%.
Gardners', 25% discount.
- GRANITEWARE.**—Duty 35%.
Firsts, 50% discount.
- GRAIN CRADLES.**—Duty 25%.
With Scythes complete \$33 per doz.
Without scythes, \$18.50.
- GRINDSTONES.**—Duty 25%.
Large, \$1.75 per 100 lbs.
Mounted, \$3 to \$3.50 each.
Small, \$1.50 per 100 lbs.
- HALTER MOUNTINGS.**—Duty 30%.
1x1½ inch, 10c. per lb.
(Evans), 1x1½ in., doz. set packages, \$8.00 per gross.
- HALTERS.**—Duty 30%.
Leather, 1 in. strap, \$3.37½ to \$4 per doz.
Leather, 1½ in. strap, \$5.15 to \$5.20 per doz.
Rope, ½, \$9 per gross.
Rope, ¾ to 1, \$14 per gross.
Web, \$1.87 to \$2.45 per doz.
- HAMMERS.**—Duty 30%.
Blacksmiths', 10 cents per lb.
Carpenters', Madoles', \$6.40 to \$8.75 per doz.
Carpenters', Warnock's, \$4 to \$7.50 per doz.
Machinists', 22 cents per lb.
Sledge, 10 cents per lb.
Tack, 60 cents to \$1.20 per doz.
Tinners', \$4 to \$6.50 per doz.
- HANDLES.**—Duty 25%.
Axe, \$1.50 to \$2.50 per doz.
Chisel, \$3.50 to \$5 per gross.
Cross-cut saw, \$2 to \$3 per doz.
File, \$2 to \$2.50 per gross.
Hammer, 50 cents to \$2 per doz.
Pick, \$1.50 to \$2.50 per doz.
Plane, \$3.50 per gross.
- HANGERS.**—Duty 30%.
Barn Door, round groove, \$4.50 to \$6.50 per doz.
Lanes, \$6.75 to \$12 per doz.
Parlor door, \$3 to \$6 per set.
Stearns, \$5.50 to \$6.50 per doz.
- HARVEST TOOLS.**—Duty 25%.
Forks, 50 & 10% discount.
Rakes, 50 & 10 " "
Hoes, etc., 50 & 10 " "
- HATCHETS.**—Duty 30%.
Canadian, 40 to 42½% discount.
- HAY KNIVES.**—Duty 25%.
50, 10 and 5% discount.
- HINGES.**—Duty 1 cent per lb., & 25%.
Blind, Parker's, 50 & 10 to 60% discount.
Heavy T and strap, 4 in., 6½ cents per lb.
" " " " 5 in., 6½ " "
" " " " 6 in., 6½ " "
" " " " 8 in., 5½ " "
" " " " 10 in., 5½ " "
Light T and strap, 65 & 5 off.
Screw hook and hinge, 6 to 12 in., \$4.50 per 100 lbs.; 14 in. up, \$3.50.
Spring, \$12 per gross pairs.
- HOES.**—Duty 25%.
Grab, \$5 to \$6 per doz.
- HOOBS.**—Duty 30%.
Brush, \$7.50 to \$9.
Reaping, 50, 10 and 5% discount.
Chain, wrought, round or grab, \$3 & \$4.50 per doz.
Lumber Piling, \$7 to \$19 per doz.
Malleable, wardrobe, \$1.50 to \$2.50 per gross.
Wire, " " \$1.25 to \$2
- HORSE NAILS.**—Duty 30%.—See Nails
- HORSE SHOES.**—Duty 30%.
Lt. Med. & H., \$3.40 per keg.
Snow, \$3.95 per keg.
Steel, \$3.80 to \$5.25 per keg.
Toe weight steel, \$6.15 per keg.
- HOSE.**—Duty 35%.
City Standard, 70% discount.
Phoenix, 60% discount.
- INJECTORS.**—Duty 30%.
Pemberthy, 65% discount.
I. J. C., 65% discount.
- IRON.**—See Metals.
- JACKS.**—Duty %.
Lifting, 40% discount.
- KEYS.**—Duty 30%.
Carpenter, 50 cents to \$1.25 per doz.
Desk, 25 to 35 cents per doz.
Mortise Lock, 25 cents to \$1 per doz.
Padlock, 25 to 35 cents per doz.
Rim Lock, 25 cents to \$1 per doz.
- KNIVES.**—Duty 30%.
Butcher, \$2 to \$5 per doz.
Pocket, \$1 to \$5 per doz.
- KNOBS.**—Duty 30%.
Door, Bronze, \$7 to \$12 per doz.
" White Porcelain, 90 cents per doz.
" Wood, \$4.50 per doz.
- LACING.**—Duty 15%.
Belt (Raw Hide Cuts), \$1 per lb.
" (Leather Side Cuts), 75 cents per lb.
- LADDERS.**—Duty 25%.
Step, 10 cents per foot.
Rung, 10 cents per foot.
- LAND ROLLERS.**—Duty 20%.
\$12 to \$15 each.
- LANTERNS.**—Duty 30%.
Cold Blast, \$7 per doz.
Dashboard, cold blast, \$9 per doz.
Japanned, 50 cents per doz. extra.
No. 0, \$5.75 per doz.
No. 3 "Wright's", \$8.50 per doz.
Ordinary, with O burner, \$4 per doz.
- LAWN MOWERS.**—Duty 35%.
Pennsylvania, 50% discount.
Stearns, 50 " "
Woodyatt, 40 " "
- LEAD (Bar and Strip).**—Duty 25%.—See Metals.
Lead, pig.—See Metals.
- LEAD.**—Duty 5%.
Red and White, dry.—See Paints.
- LINES (Cotton).**—Duty 25%.
Chalk, \$2 to \$3.50 per gross.
Wire, clothes, \$2.50 to \$4.50 per M ft.
- LOCKS.**—Duty 30%.
Cupboard, \$1.50 per doz. up.
Desk, \$1.50 per doz. up.
Drawer, \$1 per doz. up.
Padlocks, 75 cents per doz. up.
Rim and Mortise, Peterboro, \$1.50 per doz. up.
Amer., \$1.50 per doz. up.
- MALLEABLES.**—Duty 30%. See Castings.
- MALLETS.**—Duty 30%.
Carpenters', hickory, \$1.25 to \$3.75 per doz.
Caulking, 60 cents to \$2 each.
Lignum Vitae, \$3.85 to \$5 per doz.
Tinsmiths', \$1.25 to \$1.50 per doz.
- MATTOCKS.**—Duty 30%.
Canadian, \$5.50 to \$6.50 per doz.
- MEAT CUTTERS.**—Duty 30%.
Amer., 25 to 30% discount.
German, 15% discount.
- METALS.**
Ingots.—Aluminium, 35 to 50 cents per lb.
Antimony (Cookson's), 10½ to 11 cents per lb.
" Copper, "English", 18 cents per lb.
" Bar, 25 cents per lb.
" Tin, "Lamb & Flag", 32 cents per lb.
" Straits, 32 cents per lb.
" Bar, 33 cents per lb.
" Zinc, 6 to 6½ cents per lb.; sheets, 7 cents per lb.
Babbit Metal (duty 10%).
Lewis, 7 to 10 cents per lb.
Magnolia, 25 cents per lb.
Post's Zero, 25 cents per lb.
Spoooner's Copperine, No. 2, 12½ cents per lb., finest, 25 cents per lb.
Syracuse Smelting Works, dynamo, 29 cents per lb.; special, 25 cents per lb.
Sheets, Black, Duty \$7 per ton.
" 10—\$2.65, 100 lbs.
" 12—\$2.75, " "
" 14—\$3.10, " "
Sheets, Black, Duty 5%.
" 17—\$3.10, 100 lbs.
" 18—\$3.20, " "
" 20—\$3.25, " "
" 22—\$3.30, " "
" 24—\$3.50, " "
" 26—\$3.75, " "
" 28—\$4.00, " "
Sheets, Tinned—7½ cents per lb., Base price.

METALS—Continued.

Sheets, Galvanized Iron.
 17—\$3.80 per 100 lbs.
 18—\$3.90 "
 20—\$3.90 "
 22 to 24—\$4.10 per 100 lb.
 18 to 24—\$4.50 "
 26—\$4.25 per 100 lb.
 28—\$4.50 "
 16—(Queen Head), \$3.90 per 100 lb.
 18-22-24—(Queen's Head), \$4.15 per 100 lb.
 26—\$4.40 per 100 lb.
 28—\$4.65 "

Sheets, Corrugated—Galv., \$4.50 per 100 sq. ft.
 Shafting, Bright Steel.—\$3.50 per 100 lb.
 Shingles, Galv. Iron, Ordinary, \$4.90 per sq. Medium, \$5.45 " Best, \$5.80 "
 " " Painted Steel, Ordinary, \$3.15 per sq. Medium, \$3.35 " Best, \$3.80 "

Iron (duty \$7 per ton).
 Angle.—\$2.75 per 100 lb.
 Bar (Common).—\$1.95 @ \$2.05.
 Bar. " Swedes.—\$4.50 per 100 lb.
 " Lowmoor.—\$6.50 per 100 lb.
 Refined Bar.—\$2.60 per 100 lb.
 Iron, Plinished Sheet (duty 5%)
 " A.—\$6.00 per 100.
 " B.—\$5.00 "
 Russia.—\$10.00 per 100 lb.
 Iron, Galv. Sheet, see Sheets.
 " and Corrugated, see Sheets.
 Pig Lead (duty 13%).—Domestic, \$3.75 per 100 lb.; pigs, imported, \$4.25 per 100 lb.; bars, \$5 per 100 lb.; sheets, \$5.50 per 100 lb.
 Solder bar (duty 25%).—1st, refined, 18 cents per lb.; half-and-half, 18 cents per lb.
 Iron, Pig (duty \$2.50 per net ton). \$16.50 @ \$17 per ton.
 Iron, English Horse Shoe.—\$2.85 per 100 lb.
 Iron, Band.—\$2.05 per 100 lb.
 Iron, Hoop.—\$2.90 per 100 lb.
 Beams, Steel.—\$3 per 100 lb.
 Rods.—Brass, 24 cents per lb., base price; hard sheets, 20 to 30 cents per lb.; soft sheets, 20 to 30 cents per lb.
 Rails, Small Steel.—\$3 per 100 lb.
 Steel, Cultivator.—\$4.50 per 100 lb.
 " Channel.—\$3 to \$4 per 100 lb.
 " Firths.—12 cents per lb.
 " Crescent.—9 cents per lb.
 " Cant Hook.—74 cents per lb.
 Machinery (in the rough).—\$2.25 per 100 lb.
 Machinery.—\$2.75 per 100 lb.
 Mild.—\$1.90 per 100 lb.
 Sleigh Shoe.—\$1.90 per 100 lb.
 Spring.—\$3.00 per 100.
 Tire.—\$2.05 per lb.
 Toe Caulk.—\$2.20 per 100 lb.
 Steel, Cast.—Firths, 12 cents per lb.
 Jessop's, 14 cents per lb.
 Black Diamond, 12 cents per lb.
 Silver, 15 cents per lb.
 Mushets.—55 cents per lb.
 Steel, Blister.—124 cents per lb.
 Steel, Hammer.—7 cents per lb.
 Steel, Decarbonized Sheet.—7 cents per lb., base.
 Steel, Black Sheet, Duty \$7 per ton.
 10—\$2.65, 100 lbs.
 12—\$2.75 "
 14—\$3.10 "

Sheets, Black, Duty 5%.
 17—\$3.10, 100 lbs.
 18—\$3.20 "
 20—\$3.25 "
 22—\$3.30 "
 24—\$3.50 "
 26—\$3.75 "
 28—\$4.00 "

Tank Steel Plate (duty \$7 per ton).—3-16, \$2.60 per 100 lb.
 Plates, Steel Boiler (duty 10%).—4 and larger, \$2.50 per 100 lb.
 Steel Boiler Heads (duty 10%).—\$2.60 per 100 lb.
 Canadian Plates.—All dull, 52 sheets, \$2.90; half polished, \$3.

MOPS.—\$1 per doz.
 NAIL PULLERS.—Duty 30%.
 German and American, \$1.85 to \$3.50 each.
 NAILS.—Duty, cut, 1 cent per lb.; wire, 3-5 cent per lb.
 Chair nails, 35% discount.
 Clout nails, blued, 65 and 5% discount.
 Coopers', 35% discount.
 Copper nails, 524% discount.
 Cut, 2d \$3.65; 3d, \$3.30; 4 & 5d, \$3.65; 6 & 7d, \$2.95; 8 & 9d, \$2.80; 10 & 12d, \$2.75; 16 & 20d, \$2.70; 30, 40, 50 & 60d (base), \$2.65.
 Flour barrel nails, 30% discount.
 Galvanizing, 2 cents per lb. net, extra.
 Horse (C brand), 50 & 74% discount.
 M brand, 50 & 10% discount.
 Steel cut nails, 10 cents extra.
 Trunk nails, black, 65 and 5% discount.
 Trunk nails, tinned, 65 and 10% discount.
 Wire, 2d \$3.85; 3d, \$3.50; 4 & 5d, \$3.25; 6 & 7d, \$3.15; 8 & 9d, \$3; 10 & 12d, \$2.95; 16 & 20d, \$2.90; 30, 40, 50 & 60d (base), \$2.85; fine, 3d, \$3.85.
 Wire nails in car lots, \$2.774.
 Miscellaneous wire nails, 70 & 10% discount.

NAIL SETS.—Duty 30%.
 Assorted sizes, \$1.20 per doz.

NETTING—Wire.—Duty 30%.

Galvanized, 50% discount.
 Green wire, \$1.50 per 100 sq. ft.
 Poultry, 2x2 mesh, 150 ft. roll, 55 off Canadian List.

NOZZLES.—Duty 30%.

Hose (Brass), \$3.50 to \$5 per doz.

NUTS.—Duty 1 cent per lb. & 25%.

Finished, tapped, 25% discount.
 Rough, square head, 4 cents per lb. from list.
 Rough, hexagon head, 44 cents lb. from list.
 Semi-finished, tapped, 25% discount.

OAKUM.

Navy, \$7.80 per 100 lb.
 Spun, \$9.30 per 100 lb.

OIL.—Duty 25%.

Bolled Linseed Oil bbls., 86 cents per gal.
 Cylinder Oil, from 40 cents up.
 Lard Oil, bbls., 90 cents per gal.
 Machine.
 Prime White (Can.), 14 cents per gal.
 Prime White (U.S.), 154 cents per gal.
 Raw Linseed Oil, bbls., 83 cents per gal.
 Sperm Oil, bbls., \$1.75 per gal.
 Water White (Can.), 15 cents per gal.
 Water White (U.S.), 164 cents per gal.

OILERS.—Duty 30%.

\$1 per doz. up.

PACKING.—Duty 35%.

Rubber Insertion, 60 cents per lb.
 Rubber Sheet, 22 cents per lb.

PACKING.—Duty 25%.

Asbestos, 35 cents per lb.
 Flax, 35 cents per lb.
 Hemp, 124 cents per lb.
 Jute, 8 cents per lb.

PAIS.—Duty 25%.

Galvanized Iron, \$2.50 to \$3.50 per doz.

PAINTS.—Duty 25%.

Elephant Snow White, 8 to 9 cents per lb.
 Pure White Zinc, 8 to 9 cents per lb.
 No. 1, 6 to 74 cents per lb.
 No. 2, 5 to 64 cents per lb.
 Prepared, in 1, 1 and 1-gallon tins, \$1.25 per gal.
 Barn, in barrels, 75 to 85 cents per gal.
 Canada Paint Co's Pure, \$1.25 per gal.
 Second qualities, \$1.10 per gal.
 Sherwin-Williams Paints, \$1.45 per gal.
 Toronto Lead & Color Co's Pure, \$1.25 per gal.
 Zanzibar, black, 75 cents to \$1 per gal.
 " colors, \$1.25 per gal.

PAINTS.—Duty 30%.

Copper, \$3.50 per gal.

LEAD, DRY WHITE.—Duty 5%.

Pure, in casks, \$5.75 per cwt.
 Pure, in kegs, \$6.25 per cwt.
 No. 1, in casks, \$5.50 per cwt.
 No. 1, in kegs, \$5 per cwt.

LEAD, WHITE.

Pure, \$6.37 per 100 lb.
 No. 1, pure, \$6 per 100 lb.
 No. 2, pure, \$5.624 per 100 lb.
 No. 3, pure, \$5.25 per 100 lb.
 No. 4, pure, \$4.874 per 100 lb.
 Elephant and Decorators' Pure, \$7.124 per 100 lb.
 Brandram's B.B. Genuine, \$9 per 100 lb.
 " " Decorative, \$7.55 per 100 lb.
 " " No. 1, \$6.85 per 100 lb.
 " " No. 2, \$6 per 100 lb.

LEAD, RED.—Duty 5%.

Genuine, 560 lb. casks, \$5.50 per cwt.
 Genuine, 100 lb. kegs, \$5.75 per cwt.
 No. 1, 560 lb. casks, \$5.25 per cwt.
 No. 1, 100 lb. kegs, \$5 per cwt.

COLORS (Dry).—Duty 25%.

American Oxides, \$1.75 to \$2 per 100 lb.
 Brussels Ochre, \$2 per 100 lb.
 Burnt Sienna, pure, 10 cents per lb.
 " UMBER, pure, 10 cents per lb.
 Raw, 9 cents per lb.
 Canadian Oxides, \$1.75 to \$2 per 100 lb.
 Chrome Greens, pure, 12 cents per lb.
 Chrome Yellows, pure, 18 cents per lb.
 Drop Black, pure, 9 cents per lb.
 English Oxides, \$3 to \$3.25 per 100 lb.
 English Vermillion, 80 cents.
 Fire Proof Mineral, \$1 per 100 lb.
 Genuine English Litharge, 7 cents per lb.
 Golden Ochre, 34 cents per lb.
 Mortar Color, \$1.25 per 100 lb.
 Pure Indian Red, No. 45, 90 cents per lb.
 Super Magnetic Oxides, \$2 to \$2.25 per 100 lb.
 Ultramarine Blue, in 28-lb. boxes, 8 to 24 cents per lb.
 Venetian Red (best), \$1.80 to \$1.90 per 100 lb.
 Whiting, 12 cents.
 Yellow Ochre (J.C.), bbls., \$1.35 to \$1.40 per 100 lb.
 Yellow Ochre (J.F.L.S.), bbls., \$2.75 per 100 lb.
 Yellow Ochre (Royal), \$1.10 to \$1.15 per 100 lb.

COLORS (In Oil).—Duty 25%.

25 lb. tins, Standard Quality.
 Chrome Green, 8 cents per lb.
 Chrome Yellow, 11 cents per lb.
 French Imperial Green, 104 cents per lb.
 French Ochre, 5 cents per lb.
 Golden Ochre, 6 cents per lb.
 Marine Black, 9 cents per lb.
 Marine Green, 9 cents per lb.
 Venetian Red, 5 cents per lb.

PAPER.—Duty 25%.

Brown Wrapping, 24 to 4 cents per lb.
 Manila Wrapping, No. 1, 4 cents per lb.
 " No. 2, 54 " "
 Carpet Felt, \$45 per ton.
 Plain building, 35 cents per roll.
 Tarred lining, 45 cents per roll.
 Tarred roofing, \$1.65 per 100 lbs.

PEAVEYS.—Duty 30%.

• Round and Duck bill, \$2.50 and \$13 per doz.

PIKE POLES.—Duty 30%

\$10.50 per doz.

PICKS.—Duty 30%.

\$4.50 to \$7 per doz.

PITCH.

85 cents 100 lbs.

PIPE.—Duty, \$8 per ton.

Cast Iron Soil, Medium and Heavy, 65% discount
 Light, 60% discount.

PIPE.

Brass, 25 to 35 cents per lb., base price.
 Copper, 25 cents per lb., base price.

PIPE.—Duty 30%.

Galvanized Iron.
 1, \$5.15 per 100 ft.; 1, \$5.50 per 100 ft.; 1, \$7.95 per 100 ft.; 1, \$10.80 per 100 ft.; 1, \$12.95 per 100 ft.; 2, \$17.35 per 100 ft.

PIPE, BLACK IRON.—Duty 30%.

1, \$4.65 per 100 ft.; 1, \$3.40 per 100 ft.; 1, \$3.45 per 100 ft.; 1, \$3.30 per 100 ft.; 1, \$3.75 per 100 ft.; 1, \$4.25 per 100 ft.; 1, \$4.70 per 100 ft.; 1, \$9.30 per 100 ft.; 2, \$12.75 per 100 ft.; 2, \$22.75 per 100 ft.; 3, \$30.00 per 100 ft.; 3, \$37.50 per 100 ft.; 4, \$42.75 per 100 ft.; 4, \$51.50 per 100 ft.; 5, \$57.50 per 100 ft.; 6, \$74.50 per 100 ft.

PIPE.—Duty 30%.

Wrought Iron, 1 inch, per ft. 164 cents.

PIPES.—Duty 30%.

Stove, 5 and 6 in., \$7 per 100 lengths.
 " 7 in., \$7.50 per 100 lengths.

PLANES.—Duty 30%.

Bailey's, 40% discount.
 Canadian wood, 25% discount.
 Mathieson wood, 20 "

PLUMBERS' BRASS GOODS.—Duty 30%

Check Valves, 60% discount.
 Compression Cocks, 50% discount.
 Gate Valves, 55% discount.
 Genuine Jenkins' Valves, 45 "
 Imitation Jenkins' Valves, 55 "
 Radiator Valves, 55% discount.
 Standard Angle Valves, 65% discount.
 Standard Globe Valves, 65 "
 Stop Cocks, 65% discount.

POLISH.—Duty 25%.

Liquid Stove, \$5 per gross.
 Paste, \$5 per gross.

PULLEYS.—Duty 25%.

Awning, 25 to 60 cents per doz.
 Clothes Line, 50 cents per doz.
 Dodge wood split, 50% discount.
 Sash, 25 to 27 cents per doz.

PUMP CYLINDERS.—Duty 25%.

Regular patterns, 65% discount.

PUMPS.—Duty 25%.

Cistern, 50% discount.
 Force, 50

PUNCHES (centre)—Duty 30%.

Assorted sizes, \$1.80 per doz.

PUTTY.—Duty 20%.

In bbls. (Bladders), \$2.10 per 100 lbs.
 In kegs, boxes or loose, \$2.25 per 100 lbs.
 In 25-lb. tins, \$2.35 per 100 lbs.
 In 124-lb. tins, \$2.65 per 100 lbs.
 In bulk or tins less than 100 lb., \$2.90 per 100 lbs.
 Bulk, in bbls., \$1.90 per 100 lbs.
 " in less quantity, \$2.05 per 100 lbs.

RASPS.—Duty 30%.

Blacksmiths, Woodworkers, etc., see Files.

REGISTERS.—Duty 30%.

Floor and Wall, 50% discount.

RIVET SETS.—Duty 30%.

Canadian, 35 to 374% discount.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

RIVETS AND BURRS.—Duty 30%.

Copper Rivets and Burrs, 35 & 5 off; cartoons, 1 cent per lb. extra.
Extras on Iron Rivets in 1-lb. cartoons, 1 cent per lb.
Extras on Iron Rivets in 1/2-lb. cartoons, 1 cent per lb.
Extras on Tinned or Coppered Rivets, 1/2-lb. cartoons, 1 cent per lb.
Iron Rivets, black and tinned, 60 & 10% discount.
Iron Burrs, 55% discount.

ROPE, ETC.—Duty 25%.

Cotton, 3-16 in. and larger, 16 cents per lb.
" 5-32 in., 21 cents per lb.
" 1/2 in., 22 1/2 cents per lb.
Crucible Steel Rope, 25% discount.
Galvanized Wire Rope, 25% discount.
Jute, 8 cents per lb.
Lath Yarn, 9 cents per lb.
Manila, 7-16 in. and larger, 13 1/2 cents per lb.
" 1/2 in., 14 1/2 cents per lb.
" 1/4 and 5-16 in., 15 1/2 cents per lb.
New Zealand Rope, 10 cents per lb.
Russia Deep Sea, lines 1 1/2 cents per lb.
Sisal, 7-16 in. and larger, 10 cents per lb.
" 1/2 in., 11 cents per lb.

RUBBER.

Reclaimed.

RULES.—Duty 30%.

Boxwood, 75 and 10% discount.
Ivory, 37 1/2 to 40% discount.
Lumbermans'.

SAD IRONS.—Duty 30%.

Mrs. Potts', No. 55, polished, 62 1/2 cents per set.
" No. 50, nickle-plated, 67 1/2 cents set.
"Sensible," 55 and 60 cents set.
"Toy," \$13.00 gross.

SAND AND EMERY PAPER.—Duty 25%.

B. & A. Sand, 40 & 5% discount.
Garnet, 5 to 10% advance of list.

SAP SPOUTS.—Duty 30%.

Bronzed iron, with hooks, \$9.50 per 1,000.

SASH WEIGHTS.—Duty 25%.

Sectional, \$2.75 to \$3 per 100 lb.
Solid, \$1.25 to \$2.25 per 100 lb.

SAWS.—Duty 30%.

Crosscut, Disston's, 35 to 55 cents per foot.
Hack, complete, 75 cents to \$2.75 each.
Hack, frame only, 75 cents each.
Hand, Disston's, 12 1/2% discount.
S. & D., 40% discount.
S. & D., 35 off on Nos. 2 and 3.

SCALES.—Duty 30%.

Champion, 60% discount.
Gurney's, 40
Troenmer's, 30 " Canadian list.

SCREENS.—Duty 30%.

Door, \$7.50 to \$12 doz.
Window, \$1.75 to \$2.75 doz.

SCREWS.—Duty 35%.

Bench, iron, \$4.25 to \$5.75 per doz.
" wood, \$3.25 to \$4 per doz.
Drive Screws, 87 1/2 & 10% discount.
Hexagon Cap, 45
Set, case-hardened, 60
Square Cap, 50 & 5
Wood, F. H., bright and steel, 87 1/2 & 10% discount.
" R. H., bright, 82 1/2 & 10% discount.
" F. H., brass, 80 & 10
" R. H., brass, 75 & 10
" F. H., bronze, 75
" R. H., bronze, 70

SCREWS, (Machine, Iron and Brass)—Duty 35%.

Flat head, 25% discount.
Round head, 20

SCYTHES.—Duty 25%.

Grass, \$3 to \$10.
Grain, \$12 to \$14.

SHEARS.—Duty 30%.

Tailors, 30% discount Amer. list.

SHELLS (Cartridge).—See Ammunition.**SHOT, See Ammunition.****SHOVELS AND SPADES.—Duty 35%.**

Burns', 40 and 5% discount.
Ely's, " "
Gray's, " "
Jones, " "
Steel, Snow, \$2.45 @ \$2.60 per doz.
Wood, " "

SKATES.—Duty 35%.

American Hockey.
Canadian " 40 cents to \$2.50 pair.

SNAPS.—Duty 30%.

Harness, 40% discount.

SNATHS.—Duty 25%.

Sythe, \$5.25 to \$8 per doz.

SOLDER (Plumbers').—See Metals.**SOLDERING IRONS.—Duty 30%.**

20 to 90 cents each.

SPIKES.—Duty 1/2 cent per lb.

Rail, 20% discount.
Ship, \$5 per 100 lb.

SPRINGS.—Duty 35%.

Bright Carriage, 6 1/2 per lb. net.

STAPLES.—Duty 30%.

Barb wire, \$3.75 per 100 lb.
Bed, 50% discount.
Blind, 25
Wrought iron, 75% discount.

STEEL—see Metals.**STOCKS AND DIES.—Duty 30%.**

Blacksmiths', Lightning, 25% discount.
" Green River, 25
" Reece, 30% discount.
" Jardine, 35%
Pipe, Solid, 70 & 10% discount.
" Duplex, 33 1/2% discount.
" Jarecki, 33 1/2%
" Oster, 30%
" Armstrong, 35%
Wiley & Russell's, 25% discount, Canadian list.

STONES.—Duty 30%.

Arkansas, \$1.50 per lb.
Hindustan, 6 to 7 cents per lb.
" slip, 9 cents per lb.
Labrador, 13 cents per lb.
" axe, 15 cents per lb.
Scythe, \$3.50 to \$5 per gross.
Turkey, 50 cents per lb.
Washita, 28 to 60 cents per lb.
Water-of-Ayr, 10 cents per lb.

TACKS, BRADS, etc.—Duty 35%.

Carpet tacks, blued, 80 & 15% discount.
" " tinned, 80 & 20
" " in kegs, 40% discount.
Cheese-box tacks, blued, 85 & 12 1/2% discount.
Copper tacks, 50% discount.
Cut tacks, blued, in dozens only, 80% discount.
" weights, 60% discount.
Fine finishing, 40% discount.
Leather carpet tacks, 55% discount.
Lining tacks, in papers, 10% discount.
Patent brads, 40% discount.
Picture frame points, 10% discount.
Strawberry box tacks, bulk, 75 & 10% discount.
Swedes, cut tacks, blued and tinned, in bulk, 80 & 10% discount; in dozens, 75% discount.
Swedes, upholsterers', bulk, 85, 12 1/2 & 12 1/2% dis.
" brush, blued and tinned, bulk, 70% dis.
" gimp, blued, tinned and japanned, 75 & 12 1/2% discount.
Trunk tack, black and tinned, 85% discount.
Zinc tacks, 35% discount.

TAGS.—Duty 25%.

Shipping, 50 @ 70 cents per M.

TAR.

Coal \$2.75 bbl.
Refined, \$4 per bbl.

TENTS.—Duty 30%.

Canadian list, 20% discount.

TONGS.—Duty 30%.

Ice, \$9 per doz.
Pipe, "Brown's," net.
" "Brock's," 25% discount.
" "Trimmo," 25

TRAPS.—Duty 30%.

"Hawley & Norton's," 65% discount.
"Newhouse," 45% discount.
"Victor," 75% discount.

TRUCKS.—Duty 30%.

1, \$3.75; 2, \$5; 3, \$6.75 each.
"Handy" Canadian, \$16 to \$18.

TUBES FOR BOILERS.

1 1/2, 1 1/4, 1 1/8; 2, 2 1/2, 2 1/4, 3, 3 1/2, 4
15, 12, 10 1/2, 13, 14, 14 1/2, 13 1/2, 24 1/2 ft.

TURNBUCKLES.—Duty, 1 cent per lb., 25%; 33 1/2% discount.**TURPENTINE.—Duty 5%.**

55 cents per gal.

TWINES.—Duty 25%.

Bag twine, 3-ply, 20 cents per lb.
" 4-ply, 20 cents per lb.
Binding, 12 1/2 cents per lb.
Colored, 27 cents per lb.
Cotton bag, 30 cents per lb.
Cotton, White, 20 to 30 cents per lb.
" Colored, 30 to 40
Hemp, 20 cents per lb.
Jute, 20 cents per lb.
Mattress, 45 cents per lb.
Sewing, 45 cents per lb.

TWINE—Continued.

Tarred Lath, 11 cts.
Wrapping, 22 to 27 cts.

VARNISHES.—Duty 20 cents per gal.

20% off 5-gal. lots.
Black Japan, \$2 per gal.
" No. 1, 75 cents to \$1.50 per gal.
Brown Japan, \$1.50 to \$2.50 per gal.
Carriage, No. 1, \$2 to \$3 per gal.
" body, \$4 to \$6 per gal.
" rubbing, \$2.50 to \$4 per gal.
Demar, \$2 to \$2.50 per gal.
Elastic Oak, \$1.50 to \$2.50 per gal.
Furniture Brown Japan, \$1.25 to \$2 per gal.
Furniture, extra, \$2 to \$2.50 per gal.
" No. 1, 75 cents to \$1.50 per gal.
Gold Size, Japan, \$1.50 to \$2.50 per gal.
Hard Oil Finish, \$1.50 to \$2.50 per gal.
Light Oil Finish, \$1.50 to \$2.50 per gal.
Shellac, orange, \$2 to \$2.50 per gal.
" white, \$2 to \$2.50 per gal.

VICES.—Duty 30%.

Amer., 13 1/2 cents per lb.
Brooks', 13 1/2 cents per lb.
Peter Wright's, 15 cents per lb.

WASHERS.—Duty 1/2 cent per lb., 25%.

Buggy, 75% discount.
Wrought iron, 40% discount.

WASHING MACHINES.—Duty 35%.

Re-acting square, \$51.00 per doz.
" Round, \$48.00
Rocker, \$48.00 per doz.
Popular Brands, \$30.00 to \$42.00 per doz.
Downswell, \$3.75 each.
Re-acting (Downswell), \$5 each.

WIRE.

Barbed Wire, see Fencing.
Brass Wire, (duty 10%), 50 to 50 & 2 1/2% discount.
Copper Wire, (duty 15%), 45 & 10% discount net cash 30 days, f.o.b. factory.
Smooth Steel Wire, (duty 20%), is quoted at the following net selling prices:
No. 6 to 8 gauge, \$2.90 per 100 lbs.
" 9 " 2.80
" 10 " 2.87
" 11 " 2.90
" 12 " 2.95
" 13 " 3.15
" 14 " 3.37
" 15 " 3.50
" 16 " 3.65

Other sizes of plain wire outside of Nos. 9, 10, 11, 12 and 13, and other varieties of plain wire remain at \$2.80, base, with extras as before. The prices for Nos. 9 to 13 include the charge of 10 cents for oiling. Extras net per 100 lb.: coppered wire, 60 cents; tinned wire, \$2; oiling, 10 cents; special hay-baling wire, 30 cents; spring wire, \$1; best steel wire, 75 cents; bright soft drawn, 15 cents; in 50 and 100-lb. bundles net, 10 cents; in 25-lb. bundles net, 15 cents; packed in casks or cases, 15 cents; bagging or papering, 10 cents.

Fine Steel Wire, 17 1/2 off. List of extras, in 100 lb. lots, No. 17, \$5; No. 18, \$5.50; No. 19, \$6; No. 20, \$6.65; No. 21, \$7; No. 22, \$7.30; No. 23, \$7.65; No. 24, \$8; No. 25, \$9; No. 26, \$9.50; No. 27, \$10; No. 28, \$11; No. 29, \$12; No. 30, \$13; No. 31, \$14; No. 32, \$15; No. 33, \$16; No. 34, \$17. Extras net: tinned wire, Nos. 17-25, \$2; Nos. 26-31, \$4; Nos. 32-34, \$6; coppered, 5 cents; oiling, 10 cents; in 25-lb. bundles, 15 cents; in 5 and 10-lb. bundles, 25 cents; in 1-lb. hanks, 50 cents; in 1/2-lb. hanks, 75 cents; in 1-lb. hanks, \$1; packed in casks or cases, 15 cents; bagging or papering, 10 cents.

Galvanized Wire, per 100 lb.: Nos. 6, 7, 8, \$3.50 to \$3.85; No. 9, \$2.85 to \$3.15; No. 10, \$3.60 to \$3.95; No. 11, \$3.70 to \$4.10; No. 12, \$3 to \$3.30; No. 13, \$3.10 to \$3.40; No. 14, \$4.10 to \$4.50; No. 15, \$4.60 to \$5.05; No. 16, \$4.85 to \$5.35. Base sizes, Nos. 6 to 9, \$2.57 1/2 f.o.b. Cleveland.

Clothes Line Wire, solid 7 strand, No. 17, \$4.25; No. 18, \$2.65; No. 19, \$2.35; f.o.b. Toronto, Hamilton and Montreal.

WASTE (Cotton).

Colored, \$5.50 to \$6 per 100 lb.
White, \$7.75 per 100 lbs.
" extra, \$8 per 100 lb.

WHEELBARROWS.—Duty 30%.

Garden, \$2 to \$4.50 each.
Navy, \$19 per doz.
" Iron wheel, \$22.50 per doz.
Steel tubular, \$7.50 to \$10.50 each.

WRENCHES.—Duty 30%.

Agricultural, 60% discount.
Alligator, 50
Coes', 30
P.S. & W., 30
Stillsons, 25
Trimmo, pipe, 25

WRINGERS (Clothes).—Duty 35%.

Ajax, \$66 per doz.
Canadian, \$26 to \$30 per doz.
Crescent, \$17.50 to \$20 per doz.
Leader, \$30 per doz.
Novelty, \$23 to \$27 per doz.
Popular Brands, \$16.50 to \$22 per doz.
Royal American, \$26 to \$30 per doz.
Royal Canadian, \$26 to \$30 per doz.

ZINC.—See Metals.

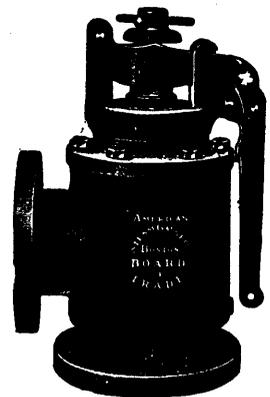
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American Steam Gauge AND VALVE MFG. COMPANY

BOSTON, MASS., U. S. A.

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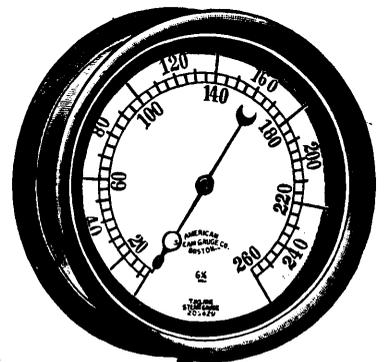
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