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...and...  
MONTREAL

...and...  
DYNAMO  
ENGINE.....

OILS

WRITE FOR PRICES  
Pipes and Core Sand.  
also Extra Fine Quality  
Seymour Pumping Supplies  
Manufacturers of

REGISTERED  
A. D. JARVILLE & CO.  
MACHINISTS' TAPS  
SEND FOR CATALOGUE.  
HEISELTER, ONT.

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

VOL. 41. TORONTO, SEPTEMBER 21, 1900. No 6.

**MAGNOLIA METAL**

ANTI-FRICTION  
Used by all the  
Leading Governments

THE BEST ANTI-FRICTION METAL  
FOR ALL MACHINERY BEARINGS

For Sale by all Dealers  
Beware of Imitations.

**MAGNOLIA METAL CO.**

Owners and  
Sole Manufacturers.

286-267 West St., New York.  
Montreal, Board of Trade Bldg.  
Chicago, 231 Dearborn St.  
London, 45 Queen Victoria St.  
Hittsburgh, 723 Liberty Ave.  
Boston, 191 High St.  
San Francisco, 32 First St.  
Philadelphia, Hale Bldg.

Magnolia Metal is still selling at the same  
price it has always sold at—No advance.

**ANILINE LIZARINES**

DOMINION DYEWOOD & CHEMICAL CO.  
TORONTO

PRODUCTS OF  
the Farbenfabriken vorm. F. Bayer & Co.

DOMINION DYEWOOD & CHEMICAL CO.  
SOLE AGENTS FOR CANADA TORONTO.

**THE STANDARD GALVANIZED IRON OF THE WORLD**

ASK YOUR JOBBER FOR IT.

**JOHN LYSAGHT, Limited**  
BRISTOL, ENG., and MONTREAL

“Every Factory in Canada should use the best Belting.” Our “EXTRA” brand.

**THE J. C. McLAREN BELTING CO.**

Factory : MONTREAL. TORONTO. VANCOUVER.

**Fensom's**

ELECTRIC  
HYDRAULIC  
STEAM  
HAND-POWER

All made of the best  
material and  
Finest workmanship.

**Elevators**

The Fensom  
Elevator  
Works....  
52, 54, 56  
Duke Street,  
Toronto, Ont.

**RUBBER GOODS OF ALL KINDS.**

**61 and 63 FRONT ST. WEST, TORONTO.**

THE...  
**Walkerville Malleable Iron Co., (Limited)**

Manufacturers of.

REFINED AIR FURNACE  
**Malleable Castings**

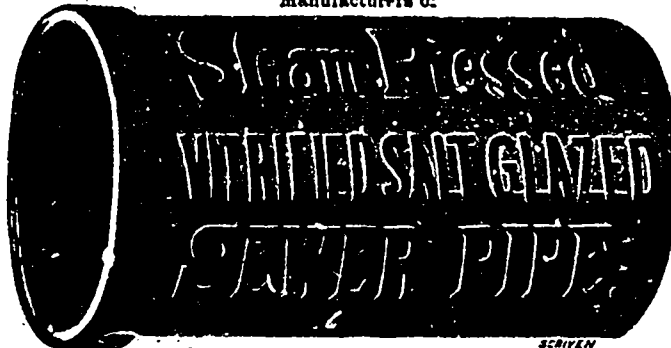
ALSO LIGHT GREY IRON CASTINGS.

WALKERVILLE, ONTARIO.

**PATENTS** Fetherstonhaugh & Co.  
TORONTO MONTREAL OTTAWA WASHINGTON

## THE CANADIAN SEWER PIPE CO.

Manufacturers of



ST. JOHN'S  
P.Q.

HAMILTON  
ONT.

TORONTO  
ONT.

## ANILINES

St. Denis Dyestuff and Chemical Co.,

(A. POIRRIER), of Paris, France.

Manufacturers of

Aniline Colors, Aniline Oil and Salt, Archil Extracts  
Cudbear, Cachou de Laval, Thiocatchines, etc.

A. Complete Assorted Stock of the above always on hand.

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Sole Agents for Canada.

164 St. James St., MONTREAL

## PORTLAND CEMENT SAMSON BRAND MAGNET BRAND

Made at SHALLOW LAKE, ONT.

Our Celebrated **SAMSON BRAND** has been before the Public for many years, and has made hosts of friends among Contractors and Municipal Corporations until it has become one of the leading Cements on the market to-day, being excelled by none. This year we have decided to place the **MAGNET** on the market, and respectfully ask consumers to give it a trial. It will, we think, do its own advertising.

The OWEN SOUND PORTLAND CEMENT CO., Limited

Correspondence invited.

Geo. S. KILBOURN, Secy-Treas.

Works, SHALLOW LAKE, Ont.

Head Office, OWEN SOUND, Ont.

New Black for Cotton

## Colonial Black

Double Strength. Unequaled for Depth of Shade.

Users of Black should investigate

Fastest Black on the Market.

**F. E. ATTEAUX & CO.,**

BOSTON, MASS., U.S.A.

CANADIAN BRANCHES:—63 Colborne Street, TORONTO.  
13 Lemoine Street, MONTREAL.

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— MANUFACTURERS OF —

Sulphuric, Nitric, and Muriatic Acids—Commercial and Chemically Pure.

Mixed Acids for Explosives.

Liquid Ammonia, Glauber Salts, Copperas, Muriate Tin

Tin Crystals, Acetic Acid, Nitrate Iron, Bisulphite

Soda, Acid Phosphate for Baking Powders

and General Chemicals, Fertilizers, etc.

LONDON, - ONTARIO.

## HAMILTON COTTON CO.,

HAMILTON, ONTARIO.

## Yarn Manufacturers, DYERS AND BLEACHERS.

Warp Yarns of all descriptions, in Skein, Chain or on Beams.

Hosiery Yarns in single or double, in Cop, Skein or Cone.

Yarns of all kinds for Manufacturers' use.

Twines, Lampwicks, Webbing, Etc.

Dyeing of all Colors, including GENUINE FAST BLACK.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

## CANADA IRON FURNACE CO., LIMITED

Montreal, Radnor and Three Rivers

Manufacturers of the well-known

"C.I.F." Three Rivers Chapeau Pig Iron

Suitable for Car Wheels, Cylinders and Fine Castings,  
where the utmost strength is required.

UNSURPASSED IN STRENGTH BY SWEDISH, RUSSIAN  
OR AMERICAN CHARCOAL IRON.

Offices: Canada Life Insurance Bldg., Montreal.

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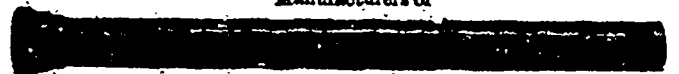
SUCCESSORS TO

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DRUMMOND-McCALL PIPE FOUNDRY CO.

(Limited)

Manufacturers of



"Specials," Hydrants, Valves, Etc.

Offices: - - - Canada Life Building,  
MONTREAL

**FOR ELECTRICAL and OTHER PLANTS**

WHERE EVEN SPEED IS REQUIRED,

**The WHEELLOCK or IDEAL STEAM ENGINES**

will give good satisfaction. THE IDEAL is a HIGH SPEED ENGINE well suited for direct connection. Write for particulars.

**The Goldie & McCulloch Co., Limited, Galt, Ont.**

**WE ALSO MAKE** GAS AND GASOLINE ENGINES, BOILERS, PUMPS, WATER WHEELS, FLOUR MILL MACHINERY, OATMEAL MILL MACHINERY, OATMEAL STEAM PAN KILNS, WOODWORKING MACHINERY, IRON PULLEYS, WOOD RIM SPLIT PULLEYS, SHAFTING, HANGERS, GEARING, FRICTION CLUTCH PULLEYS, Etc., Etc. SAFES, VAULTS and VAULT DOORS.

**THE IMPERIAL OIL COMPANY, Limited.**

Highest Awards at the World's Fair, Chicago, upon

**Lubricating, Water White Illuminating Oils,  
Paraffine Wax, Etc.**

We manufacture all grades of oils, greases, soap stocks, candles, wool stocks, leather and tanners oils, fuel gas, machinery, cylinder oils, &c. And solicit opportunity to compete against any oil on the market. Write for prices and samples.

Refineries at **SARNIA and PETROLIA, CANADA.** Merchandising Branches at:

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**Branch  
Offices  
and  
Agencies:**

Vancouver,  
B.C.,

Wm. Hamilton  
Mfg. Co.

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94 Alexander  
Avenue.

Montreal,  
321 St. James  
Street.

**John Bertram & Sons**

**DUNDAS, ONTARIO.**

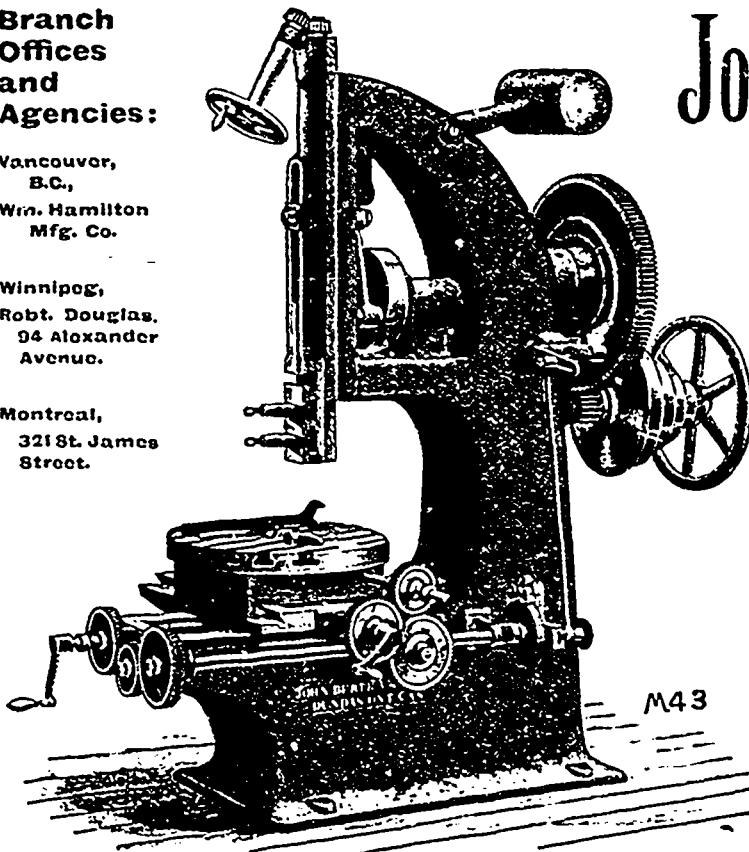
— Canada Tool Works

MANUFACTURERS AND BUILDERS OF

**METAL-WORKING  
MACHINE TOOLS**

— FOR —

Machine Shops,  
Ship Yards, Boiler Shops  
Rolling Mills,  
Locomotive and Car Shops,  
Brass Shops.



**PAPER MILL MACHINERY.**

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# THE NOVA SCOTIA STEEL CO., LIMITED

MANUFACTURERS OF

## BRIGHT COMPRESSED STEEL SHAFTHING

FROM  $\frac{1}{2}$  TO 5 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

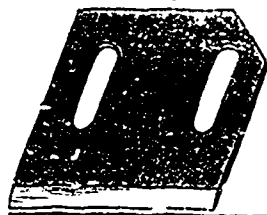
# GALT Machine Knife Works

PETER HAY,



GALT, ONT.

Manufacturers of Every Description of.....



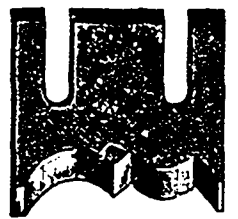
## KNIVES,

For Wood-Working, Paper Cutting and Leather-Splitting Machines

BARK KNIVES  
PULP KNIVES  
Etc., Etc.



Shear Blades, Straw Knives, Paper Knives, Etc., Etc.



Quality Guaranteed.

Special Knives Made to Order.

Send for Price List

## DOMINION BRIDGE CO., Limited,



MONTREAL AND  
LACHINE LOCKS, P.Q.

Steel Bridges for Railways and Highways,  
Steel Piers and Trestles, Steel Water Towers and Tanks,  
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.

Post Office Address,  
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TORONTO, ONT.

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**BRUNNER MOND & CO., Limited,**  
NORTHWICH, ENGLAND.

**PURE ALKALI**

48% and 58% (Light and Heavy)

**BLEACH<sup>g</sup> PWD.**

35% to 37% (Hardwood Casks)

**CAUSTIC SODA**

60% to 77%.



TRADE MARK.

Winn & Holland,  
MONTREAL,  
Sole Agents for Canada.

**SODA CRYSTALS**

Lump and Crushed. Brs. and Bags.

**CON<sup>CTD</sup> SAL SODA**

DOUBLE STRENGTH

**BICARBONATE SODA**

ABSOLUTELY PURE

Also for Mineral Water Manufacturers.

**Wm. J. MATHESON & CO., LIMITED**

NEW YORK

BOSTON

PHILADELPHIA

PROVIDENCE

CHARLOTTE, N.C.

MONTREAL, CANADA

**DYE . . .**  
**STUFFS**

**The Polson Iron Works, TORONTO CANADA.**

THE BEST EQUIPPED BOILER AND ENGINE WORKS IN CANADA.

We Manufacture—

**STEEL BOILERS**

The **BROWN AUTOMATIC ENGINE, MARINE ENGINES** (SINGLE COMPOUND AND TRIPLE), Hoisting and Mining Engines  
**STEEL STEAM VESSELS OF EVERY DESCRIPTION. STEAM YACHTS AND LAUNCHES.**

GET OUR PRICES BEFORE ORDERING.

**ESPLANADE EAST, Foot of Sherbourne St., - - Toronto, Canada**



If your Dealer Does not Keep Them Send to Us.

**CHEAPEST<sup>AND</sup> BEST**  
**Bicycle Screw Plate**

14 PAIRS DIES—22 TAPS

...A Complete Repair Shop in Itself...

**BUTTERFIELD & CO.**  
Rock Island, P.Q.

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# ALBERT MANUFACTURING CO.

MANUFACTURERS OF THE WELL-KNOWN

"HAMMER BRAND"

## Calcined Plaster

AND

### Patent Rock Wall Plaster

HILLSBOROUGH, N. B., CANADA.

## KEMP MFG. CO.

TORONTO.

### Galvanizing

DONE FOR THE TRADE.

GET OUR PRICES.



For IRON FENCING, BANK and OFFICE RAILINGS and all kinds of IRONWORK

Address:

Toronto Fence & Ornamental Iron Works 59 Queen St. East, Toronto.

## BROWN & CO.

Manufacturers of

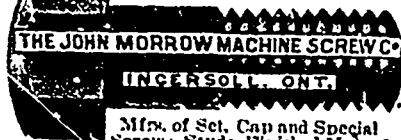
Square and Hexagon

### HOT PRESSED NUTS.

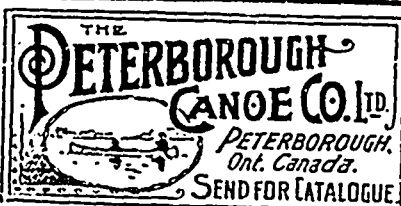
PARIS, - ONT.



Send for Catalogue and Price List to



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



## ORDERS for the Webster Feed Water Heater

are increasing every day.

The following well-known firms have recently ordered the "WEBSTER" Heater

Grand Trunk Ry. Co. (Car Shops), Montreal (1)	800 h.p. Heater.
Pillow Hecsey Mfg. Co., Montreal . . . . . (1)	1000 "
Dominion Cotton Mills Co., Montreal . . . . . (5)	200 "
Montmorency Cotton Mills, Montmorency, Que. . . . . (1)	200 "
Toronto Carpet Co., Toronto, Ont. . . . . (1)	300 "
Merchant's Bank of Canada, Montreal . . . . . (1)	150 "

Our new Catalogue explains the saving to be effected by the installation of the "Webster" Heater, and will be mailed free on application.

**DARLING BROTHERS,**  
Reliance Works, MONTREAL.

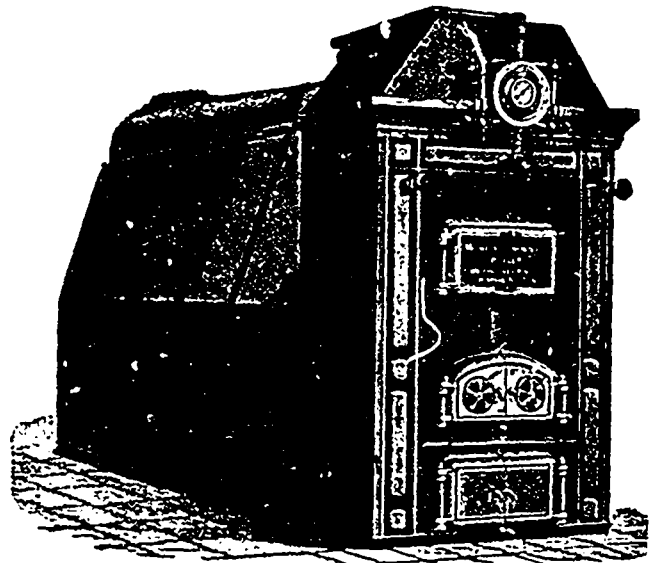
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### Anilines, Dyestuffs & Chemicals

DELIVERY MADE AT NEW YORK, MONTREAL OR HAMILTON.

AGENTS, **WRIGHT & DALLYN,** HAMILTON, ONT.

## A FUEL SAVER



This boiler is built with sheet steel case or for brick casing as desired. It is internally fired, has perfect water circulation, is a quick steamer and gives the highest economy.

Two settling chambers are provided for catching deposits of scale, and every part is accessible for cleaning.

**Robb Engineering Co. Limited,**  
AMHERST, N.S.

# CANADIAN RUBBER CO.,

OF MONTREAL,

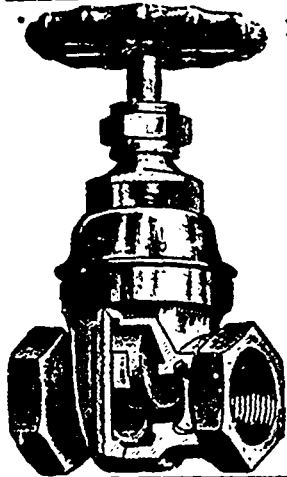
Manufacturers of High-Grade Rubber Goods  
of all Descriptions.



**BELTING, HOSE, PACKING,**  
**VALVES, BOOTS, Etc., Etc.**

Factories and Head Office, - - MONTREAL.  
Ontario Branch, - - - - TORONTO.  
Western Branch, - - - - WINNIPEG.

Orders Filled with Despatch from Head Office or Branch Warehouses.



It Pays to Buy Good Valves.

## KERR'S

Globe and Webber Straightway

## VALVES

**ARE THE VALVES TO BUY.**  
Ask Your Dealer for Them.  
Catalogue Sent on Application.

The Kerr Engine Co., Limited  
WALKERVILLE, ONT.

## 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.

Manufacturers **JOHN OAKEY & SONS, LIMITED,** Wellington Mills,  
Westminster Bridge Road, London, Eng.

Inquiries should be addressed to  
**JOHN FORMAN,** 650 CRAIG ST., MONTREAL.

# ABSOLUTELY ACCURATE

Current  
Completely  
Registered

From Less than 5 c.p. to Full Capacity. Guaranteed for Three Years.

Air Tight

Moisture  
Proof

No  
Current  
Lost

# METERS

Dust Proof

Insect  
Proof

Entire  
Revenue  
Secured

Magnetic  
Suspension

No Friction

MADE BY... **STANLEY INSTRUMENT CO.,** GREAT BARRINGTON, MASS., U.S.A.

No Wear

FOR SALE IN CANADA EXCLUSIVELY BY

# The Royal Electric Co'y

MONTREAL, QUE.

TORONTO, ONT.

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# Pumps

"FOR ALL DUTIES"

We invite enquiries from engineers in need of any description of Pumping Machinery. We manufacture over five hundred varieties and sizes of Steam and Power Pumps for stationary and marine purposes. We will be pleased to furnish plans and specifications for any special types. Our Catalogue, giving a good idea of our standard patterns, sent free to all enquirers.

## Northey Gas and Gasoline Engines

To anyone requiring a compact, thoroughly reliable engine, especially suited for users of intermittent power, we recommend our Gas and Gasoline Engine. We shall be glad to furnish estimates for Gas or Gasoline operated pumps, electric light plants, etc., etc. Explanatory Booklet free on request.

**Northey Mfg. Co., Limited,** 1000 KING ST. SUBWAY, **Toronto, Ont.**

# THE ATLANTIC REFINING CO.

TORONTO, ONTARIO

MANUFACTURERS  
AND IMPORTERS  
OF ILLUMINATING  
AND LUBRICATING

## OILS, GREASES

## and SPECIALTIES

SEE THIS SPACE NEXT ISSUE.

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CONSULTING ENGINEER TO  
Temple Bldg., - TORONTO.  
Long Distance Telephone.

MANUFACTURERS:—Competent and impartial advice on  
Industrial Electrical Systems of Lighting, Power Distribu-  
tion, Heating and Welding, Etc. Plans, Specifica-  
tions, 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

SUBSCRIPTIONS:

CANADA AND UNITED STATES, - - - \$1.00 PER YEAR.  
ALL OTHER COUNTRIES IN POSTAL UNION, EIGHT SHILLINGS  
STERLING PER YEAR, INCLUDING POSTAGE.

The Canadian Manufacturer Publishing Co., Limited.

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J. J. CASSIDY, Editor and Manager.

FRANK B. WHITE COMPANY.

The Fisher Building, CHICAGO. 150 Nassau St., NEW YORK.  
Represent the Advertising Department of THE CANADIAN  
MANUFACTURER in the United States.

CANADIAN CONSUMPTION OF DRY AND FANCY GOODS.

The following facts and figures relate to articles imported into Canada from Great Britain and from the United States for home consumption, and the values thereof, during the fiscal years ended with June 30th, 1898 and 1899. Prepared expressly for THE CANADIAN MANUFACTURER by Edgar A. Wills, Esq., Secretary of the Board of Trade of the City of Toronto:—

COTTON AND MANUFACTURES OF.

	GREAT BRITAIN.		UNITED STATES.	
	1898.	1899.	1898.	1899.
Duck—gray and white ...	\$720	\$1,696	\$45,400	\$31,437
Embroideries .....	32,670	29,506	959	11,963
Fabrics—gray, unbleached	15,073	18,570	28,951	44,718
Fabrics—white or bleached	168,531	278,051	86,986	200,908
Fabrics—printed, dyed or colored .....	1,693,758	2,282,506	642,325	771,548
Fabrics—uncolored .....	100,046	137,786	8,798	11,484
Jeans, coutilles and satcons, etc .....	1,773	3,164	85,282	89,974
Handkerchiefs .....	94,106	139,228	1,610	1,801
Hosiery, N. E. S. ....	15,400	19,564	236	3,794
Shirts .....	16,757	20,789	3,608	7,174
Sewing thread on spools ..	276,303	181,478	72,193	90,321
Sewing thread in hanks ..	204,577	253,062	63	424
Bed quilts .....	35,221	46,448	13,822	15,974
Clothing .....	114,751	133,787	166,309	172,704
Socks, stockings .....	24,617	30,303	2,145	7,756
Towels .....	24,821	29,958	1,287	2,996
Velvets and velveteens ...	195,093	193,533	15,247	22,643
Other articles .....	55,947	92,738	149,078	180,210
Crapes, all kinds .....	15,820	16,657	207	1,072
Curtains and shams .....	192,766	284,944	78,400	88,986
Embroideries .....	20,308	18,566	14,833	21,692
Fancy goods .....	1,004,770	893,029	325,527	406,621

FLAX, HEMP, JUTE AND MANUFACTURES OF.

Carpeting, matting & mats	93,103	124,843	6,423	6,621
Damask of linen .....	265,288	349,206	8,773	9,872
Handkerchiefs .....	103,704	118,744	546	1,087
Towels .....	104,403	130,337	1,083	1,455
Linens—brown & bleached	92,586	83,957	2,518	1,325
Linens, duck, canvas, etc.	288,957	403,005	6,716	7,942
Linens—thread .....	114,003	107,680	2,065	4,964
Shirts .....	4,370	3,476	1,571	897
Other articles .....	214,415	283,962	25,626	35,232
Gloves and mitts .....	193,395	220,458	27,399	37,097
Mats and rugs, all kinds ..	32,346	39,045	20,078	25,850
Pins .....	13,285	15,431	16,361	20,561

SILK AND MANUFACTURES OF.

	GREAT BRITAIN.		UNITED STATES.	
	1898.	1899.	1898.	1899.
Fabrics .....	761,809	1,040,489	78,485	120,960
Handkerchiefs .....	29,976	31,884	870	861
Clothing .....	178,474	172,180	23,937	38,149
Ribbons .....	422,644	496,048	44,964	31,585
Sewing and embroidery silk and silk twist .....	8,419	8,371	8,026	6,094
Velvets, velveteen, plush,	148,321	228,652	15,037	19,390
Other articles .....	104,095	81,854	26,345	25,722
Table cloths, all kinds ...	39,715	50,840	12,095	3,944
Umbrellas, parasols, sunshades .....	107,084	120,550	3,904	6,467

WOOLENS AND MANUFACTURES OF.

Blankets .....	30,933	30,812	3,482	8,837
Cassimeres .....	51,820	113,307	...	2,375
Cloths .....	1,045,273	1,358,162	14,042	11,594
Coatings .....	477,527	533,363	1,357	1,789
Overcoatings .....	6,402	7,970	...	...
Tweeds .....	398,986	518,664	380	1,251
Felt cloths, N. E. S. ....	13,451	6,098	24,778	31,882
Flannels .....	51,801	55,368	3,491	3,827
Knitted goods (underwear N. E. S.) .....	96,071	105,270	25,941	62,411
Shawls .....	42,632	62,682	268	691
Socks and stockings .....	443,283	582,686	1,610	18,525
Undershirts and drawers ..	24,798	39,487	6,688	21,221
Yarns .....	110,728	207,521	2,834	7,211

All fabrics composed wholly or parts of wool.	2,197,966	2,598,990	26,696	33,730
Women's and children's dress goods .....	51,677	26,483	48	536
Clothing, ready made ...	433,468	477,133	28,748	157,687
Carpets (see also carpets).	673,713	893,802	36,749	24,626
Felt pressed, all kinds ...	36,708	34,097	23,149	27,204
Other articles .....	27,597	34,465	3,964	13,234

SUNDRIES.

Boot, shoe and stay laces of any material .....	44,687	40,957	7,360	8,440
Braces or suspenders, parts of .....	25,783	30,250	31,868	40,032
Buttons .....	28,478	30,750	50,311	71,931
Carpets (see also woolen manufactures) .....	44,031	81,765	10,242	5,511
Collars and cuffs—linen or celluloid .....	44,022	44,870	9,294	114,000
Combs .....	41,441	51,323	20,617	30,245
Corsets .....	4,205	3,735	35,363	53,236

THE TORONTO INDUSTRIAL EXHIBITION ASSOCIATION.

Now that the Toronto Fair of 1900 has become a thing of the past, the daily papers of the city, without exception, and a large number of other papers also, are criticizing the management of it in severe terms, not without just cause. The unrest and dissatisfaction is general, the many things which should have been done that were left undone, and the many things which were done that should not have been accomplished being pointed out as causes thereof. Many of the complaints made are well founded, but with them we do not care now to deal, preferring to discuss the matter from a standpoint until now unoccupied save by this journal.

The two salient points of objection raised against the management of the Exposition are, the objectionable character of some of the side shows, and the lack of accommodation for manufacturers who might desire to exhibit their products. We do not now concern ourselves with the fakir features of the affair, being well satisfied that it is an evil which will not be so much in evidence hereafter. It goes without challenge that in many other respects the Fair of this year was the equal of any which preceded it, and that it was all that its best friends could expect for it. As an agricultural show there was nothing to equal it on the American continent, and the

same may be truthfully said regarding those features which looked to the amusement of visitors.

The Industrial Exhibition Association was incorporated in 1879, and in the preparation of the grounds and the erection of buildings thereon special reference was had to the requirements of manufacturers who might exhibit there, the object of the Association being, as set forth in the act of incorporation, for exhibition purposes and for the promotion of industries, arts and sciences. All of the buildings, without exception, which were erected at that time for the accommodation of exhibitors of horses, cattle, sheep, swine, etc., and also the grand stand, were demolished and removed years ago, new and fully up-to-date structures taking their places. On the other hand all of the buildings which were then built for the accommodation of manufacturers, remain substantially to-day as they were then, with the exception of Machinery Hall, which was last year destroyed by fire, a much better building now occupying its place. The requirements of the agricultural features have been fully met, while the requirements of the manufacturers have been entirely ignored. Manufacturers were quite content for years to observe improvements made at large expense in the interest of agriculture while nothing was being done for them; but when buildings used by them became leaky, rotten in their foundations, unsafe and disreputable in appearance; and when repeated remonstrances failed to bring absolutely necessary repairs and improvements, no wonder dissatisfaction and disgust were followed by loss of enthusiasm and a determination on the part of a very large number of manufacturing exhibitors to withdraw from the concern. The agricultural element had kicked and obtained what they wanted; the manufacturers had kicked without results. Why? We think we can explain why.

The initial number of representatives included in the Association, representing the various organizations which were entitled to participate in the formation of it, was sixty, distributed among twenty different bodies, among them being the Manufacturers' Association of Ontario, (which name has since been changed to Canadian Manufacturers' Association), to which was apportioned five representatives. Since the organization the number of representative bodies have been increased from twenty to thirty-five, and the representatives from sixty to ninety four. The associations, societies, etc., at present embraced in the Industrial Exhibition Association and the number of their representatives are as follows:—

Toronto City Council.....	14
Toronto Electoral District Society.....	12
Ontario Beekeepers' Association.....	1
Ontario Society of Artists.....	2
Lumbermen's Association.....	2
Educational Department of Ontario.....	2
Ontario Poultry Association.....	2
Commercial Travellers' Association.....	3
Dominion Millers' Association.....	1
Toronto Horticultural Society.....	2
Toronto Board of Trade.....	3
York County Council.....	3
Canadian Manufacturers' Association.....	5
Toronto Poultry Association.....	2
Toronto Natural History Society.....	2
Canadian Institute.....	2
Ontario College of Pharmacy.....	2
Ontario Veterinary Association.....	2
Ontario Fruit Growers' Association.....	2
Butter and Cheese Association of East Ontario.....	1

Butter and Cheese Association of West Ontario.....	2
Clydesdale Association of Canada.....	2
Shire Horse Association.....	1
Hackney Horse Association.....	1
Canadian Horse Breeders' Association.....	2
Dominion Short Horn Breeders' Association.....	2
Dominion Holstein Breeders' Association.....	2
Dominion Ayrshire Breeders' Association.....	2
Canadian Jersey Breeders' Association.....	2
Hereford Breeders' Association.....	1
Dominion Sheep Breeder's Association.....	2
Dominion Swine Breeders' Association.....	2
Toronto Gardeners' and Florists' Association.....	2
Dominion Draft Horse Breeders' Association.....	2
Dominion Cattle Breeders' Association.....	2
Toronto Educational Association.....	2
Total.....	94

The are at present eighteen members of the Board of Directors, distributed as follows:—

Toronto City Council.....	2
Toronto Electoral District Society.....	5
Toronto Horticultural Society.....	1
Toronto Board of Trade.....	2
Canadian Manufacturers' Association.....	2
Toronto Poultry Association.....	1
Ontario Veterinary Association.....	1
Ontario Fruit Growers' Association.....	1
Shire Horse Association.....	1
Dominion Short Horn Breeders' Association.....	1
Gardeners' and Florists' Association.....	1

A noticeable feature of this showing is that the whole body of manufacturers of the country is represented by only the five members apportioned to the Manufacturers' Association, but a very small percentage of the membership being exhibitors at the Fair; but at the same time it should be remembered that a very large number of manufacturers who are not members are exhibitors. This is very noticeable as regards manufacturers of agricultural implements, carriages and wagons, bicycles, electrical goods, wind power machinery, etc. Manufacturers as a class who have heretofore been exhibitors at the Fair are not at all well represented either in the Manufacturers' Association or in the Exhibition Association. In fact not one of the five representatives of the Manufacturers' Association in the Exhibition Association, including the two members upon the Exhibition Board, and not one of the principal Toronto officers, except one, made any pretence to exhibit any of their products at the recent Fair. It is, therefore, not at all remarkable that the interests of manufacturers generally are not better looked after. It is one thing to declaim at directors' luncheons and elsewhere about the importance to Canada and to Toronto of the Exhibition, accompanied with assurances of the propriety of appropriations of hundreds of thousands of dollars wherewith to lift the Fair to the high plane which it should again occupy, but manufacturers are not a dominating, nor even an influential element in the Board of Directors of the Industrial Exhibition Association.

To our mind the remedy for the existing condition of affairs lies in the hands of the manufacturers—that is, in the hands of those who have already organized themselves into associations, or guilds, or who may thus organize. Such guilds are already quite numerous, notably the piano and organ manufacturers, the furniture manufacturers, the stove makers, the foundry men, the manufacturers of agricultural implements and others. Let those in different trades who have not already done so at once organize, and let each of these organizations make separate applications for

representation in the Exhibition Association. It will not be denied them, and when thus represented let them see to it that they have fair and proportionate representation on the Board of Directors. What is the Toronto Electoral District Society that it should have twelve members in the Exhibition Association with five of them on the Board of Directors, while the whole body of manufacturers are represented by but five members and two directors? We do not object to associations of beekeepers, poultry raisers, horse doctors, fruit growers, butter and cheese makers, and horse, cattle, sheep and swine breeders having representatives in the Association, but the manufacturers should be there also, and if they are not, no blame should attach to any but themselves. This is their opportunity. Let them organize. The manufacturers should not neglect this opportunity.

#### BOOKS FOR ENLIGHTENMENT WHICH DO NOT ENLIGHTEN—A PROTEST.

Mr. Edgar A. Wills, Secretary of the Board of Trade of Toronto, has written us a letter calling attention to a peculiar feature of a publication called Commercial Relations of the United States, recently issued by the Bureau of Foreign Commerce of the Department of State at Washington, D.C. A liberal portion of the book is devoted to the Dominion of Canada, the mass of information relating thereto being of a very interesting character, but Mr. Wills finds that while the reports of American Consuls at many Canadian cities and towns are given, there are but thirteen from Ontario, the Banner Province of the Dominion, and Toronto is not mentioned. There is a most interesting and exhaustive report with relation to the City of Montreal, its trade and commerce and its municipal affairs are very fully detailed, but Toronto, which has within its bounds the second largest agricultural implement factory in the world; Toronto which has for more than twenty years maintained with ever increasing success an Industrial Exhibition not equalled on this or any other continent, and which, according to the admirable report of the Consul at London, Ont., has an average daily attendance of 75,000 persons during its ten days duration, is not mentioned. Mr. Wills also points out the fact that Toronto, too, possesses about as complete and efficient a street car service as can be found in this continent, as can be testified to by the thousands of American visitors who yearly visit the city, and that, as the statistics of the Chicago World's Fair demonstrated, this Toronto of ours is the great educational centre not only of the Province of Ontario, but of the Dominion of Canada, its display of Public School methods having rightly secured a gold medal at that Fair. Mr. Wills also alludes to the fact that Mr. Wannamaker, of Philadelphia, had stated that we have here in Toronto as perfect a system of departmental store administration as exists anywhere on the continent, one of which stores gives employment to some 3,500 hands.

Regarding Toronto as a manufacturing centre, Mr. Wills points out that it unquestionably holds close second if not first position as to all Canada, and mentions that in corroboration of this assertion, the Grand Trunk and Canadian Pacific, the two great railway lines of Canada, had reported that they handle as much freight in one day in and out of Toronto as they do into and out of Montreal in a week. This may seem a strong statement, but it must be borne in mind that Toronto has the

advantage of Montreal in that it is surrounded by well populated, flourishing districts, and that the population of Ontario is more than half that of the whole Dominion. Within the last few years the most magnificent Parliamentary Buildings in Canada have been erected in Toronto, and our civic authorities have only recently occupied a City Hall which cost some \$3,000,000, and which is, in the opinion of those competent to judge, sufficiently adequate in all respects for a city with three times the population, which is now 225,000.

It is quite evident that Mr. Wills does not intend to see Toronto ignored, or Ontario, either, without a vigorous protest.

#### PRODUCTION OF PIG IRON IN CANADA IN THE FIRST HALF OF 1900.

The Bulletin of the American Iron and Steel Association of September 15 publishes the following:

The production of pig iron in the Dominion of Canada in the first half of 1900, according to reports which have been received by the American Iron and Steel Association from every manufacturer of pig iron in the Dominion, amounted to 45,234 gross tons. The total production in the whole of 1899 amounted to 94,077 tons, against 68,755 tons in the whole of 1898. Of the production in the first half of 1900 about one-sixth was made with charcoal as fuel, the remainder being produced with coke alone.

In the first half of 1900 Canada produced both Bessemer and basic pig iron, two companies manufacturing Bessemer pig iron and one company manufacturing basic pig iron. The production of Bessemer pig iron was about one-third of the production of basic pig iron.

Neither spiegeleisen nor ferromanganese was produced in Canada during the first half of 1900, the Mineral Products Company, of Hillsboro, New Brunswick, having given up its lease of the Bridgeville Furnace, at Bridgeville, Nova Scotia. The furnace was blown out in November, 1899. This company will confine its operations to the production of manganese ore. The furnace was idle from November, 1899, to June 30, 1900.

The unsold stocks of pig iron in Canada on June 30, 1900, in the hands of manufacturers or their agents, none of which was intended for consumption by the manufacturers, and all of which was for sale, amounted to 13,672 gross tons, against 9,932 tons on December 31, 1899.

The number of completed blast furnaces in Canada on June 30, 1900, was nine, of which four were in blast and five were out of blast. On December 31, 1899, there were also four furnaces in blast and five out of blast. Of the total number of furnaces in Canada four use coke as fuel, four use charcoal, and one used charcoal and coke when last running.

We learn from the Dominion Iron and Steel Co., Limited, of Sydney, Cape Breton, Canada, that it expects to have its No. 1 blast furnace completed and ready to blow in about November 1. Its No. 2 furnace will be ready for operations early in 1901. It is not likely that its No. 3 and 4 furnaces will be completed and blown in before March 1, and May 1, 1901, respectively. The open-hearth steel furnaces of the company are expected to be completed and ready for operations by July 1, 1901.

Messrs. John McDougall & Co., of Montreal, Canada, had one of their two furnaces at Drummondville in operation for a short time during the first six months of the present year. Both furnaces were idle on June 30. The firm may blow in one of its stacks soon after the opening of the new year.

We learn from the Canada Iron Furnace Co., Limited, that it expects to have its new furnace at Midland, Ont., completed and in operation about October 1. The furnace will have a daily capacity of about 150 gross tons of foundry iron. Coke will be used for fuel.

The charcoal furnace of the Canada Iron Furnace Co., at

Radnor-Forges, in the Province of Quebec, was operated for about seventeen weeks during the first six months of 1900. The furnace was in operation on June 30 last.

Hamilton Furnace, at Hamilton, Ont., is now owned by the Hamilton Steel and Iron Co., Limited. The furnace was running during the whole of the first six months of the present year and was in operation on June 30.

The two blast furnaces of the Londonderry Iron Co., Limited, of Londonderry, Nova Scotia, were idle during the whole of the first half of 1900.

The Deseronto Iron Co., Limited, of Deseronto, Ont., had its charcoal furnace in blast for twenty-three weeks during the first half of the present year.

The blast furnace of the Nova Scotia Steel Co., Limited, at Ferrona, Nova Scotia, was in operation for twenty-six weeks during the first six months of 1900.

#### EDITORIAL NOTES.

In its August issue, published some days before the event spoken of occurred, *The Trader*, of which Mr. W. K. McNaught is editor, said:—

Mr. P. W. Ellis, who has held the office of vice-president of the Canadian Manufacturers' Association has been slated by the Nominating Committee as the next president. As the nomination is tantamount to an election, *The Trader* offers Mr. Ellis its congratulations upon his elevation to that very high and important position.

Subsequent events proved that being slated by the Nominating Committee was not tantamount to an election: for there is a discrepancy between the "slate" and the result. Why?

The annual meeting of the Canadian Furniture Manufacturers' Association held in Toronto a few days ago, was well attended, and much interest taken in discussions regarding export trade. Officers were elected for the ensuing year as follows:—President, Thomas Bell, Wingham; Vice-President, James Baird, Plattsville; Treasurer, A. H. Ellis, Ingersoll; Secretary, J. R. Shaw, Toronto. The move that had been on foot for some time looking to this Association becoming affiliated with the Canadian Manufacturers' Association did not materialize; nor does it appear that any effort was made by the Toronto Industrial Exhibition Association to have the furniture Association have representation in their body.

At their recent meeting in Toronto the Canadian Piano and Organ Manufacturers' Association elected the following officers:—President, O. Newcombe, Toronto; 1st Vice-President, R. B. Andrews, Bowmanville; 2nd Vice-President, G. Heintzman, Toronto; Secretary-Treasurer, H. H. Mason, Toronto. Notwithstanding the misunderstandings which last year existed regarding the lack of accommodations for the piano and organ manufacturers at the Toronto Fair, and also the fact that these manufacturers, the furniture manufacturers and others have complete guild organizations, it does not appear that any of them are represented in the Toronto Industrial Exhibition Association or in its Board of Directors. No wonder friction exists.

We wish we could agree with Mr. Ritchie when he recently said: "It was wonderful to note how the consumption of goods exported from this country to the colonies was growing. In Canada it was equal to £1. 5s. 7d. per head of the population, and in Australia to £5 per head, while in America

it amounted only to 4s. 9d. per head." The President of the Board of Trade, unfortunately, was wrong in his conclusions, as the *Midland Free Press* points out. In 1884 we sent Australasia goods to the value of £11. 12s. per head of her population, and in 1898 to the value of £5. 17s. per head. In 1898 Canada took less of our exports by two and a half millions sterling than she did fifteen years ago, and six millions worth more from the United States. Put in another form Canada took 41 per cent. of her imported goods from us in 1884 and 25 per cent. in 1898. On the other hand we took 50 per cent. of Canada's exports in 1884 and 63 per cent. in 1898. In regard to Australasia the case is exactly similar; those colonies took five millions worth less from us in 1898 than they did in 1884. That is to say, we sent the Australasian colonies 50 per cent. of their imported goods in 1884 and 28 per cent. in 1898. The Australasian and North American colonies combined do not take as much from us as China does. It is regrettable that these are the facts, but it is surely useless to gloss them, or in view of them, to state that the consumption of goods exported from this country to the colonies is growing.—*Commercial Intelligence*.

One of the most conspicuous features of the late Toronto Fair was the absence of exhibits of Toronto officers of the Canadian Manufacturers' Association. Some of these beautiful exhibits which were not in evidence included blank books and office appliances; gold and silver jewelry and precious stones, sterling silver ware, etc.; window shades, curtain poles, interior decorations, etc.; gold, silver and filled watch cases; bath tubs and bath room fittings and appliances; distillers and brewers copper boilers, coils, cooling apparatus, etc.; chemicals and laboratory products, etc., a notable exception being the beautiful display of carpets, rugs, etc., shown by the Toronto Carpet Mfg. Co., near the south entrance of the Main Building.

At the time when the recent war between the North and the South was in progress a certain American humorist declared that his love for and desire to perpetuate the union was so fervent that to preserve it he would be willing to sacrifice all of his wives' relations. This is of a sort with the patriotism of some manufacturers who have recently raised their voices in banquet halls and around free lunch tables telling how that the city of Toronto and also the Dominion Government should appropriate hundreds of thousands of dollars to redeem the Toronto Fair from the unfortunate condition which now prevails, and to give it an attractiveness which would induce manufacturers to tumble over themselves in making displays of their products there, while they themselves show no desire to incur any personal trouble or expense in exhibiting at the Fair. They are quite willing to have the dear public taxed to support the Fair; they use persuasive arguments to induce other manufacturers to make elaborate exhibits, and they have words of censure for those who decline to do so, that is, censure for all but themselves. Consistency is a jewel.

Some of the comments of speakers at the Director's luncheons during the recent Fair are noticeable. On one occasion, according to the reports in the daily papers, a Mr. Russell thought it would have made a great difference in the success of the Fair if the manufacturers of agricultural

# THE CANADIAN MANUFACTURER

ESTABLISHED IN 1880.

Devoted to the Development of Canadian Trade,  
Foreign and Domestic.

## THE INTERNATIONAL BUREAU OF COMMERCE

... OF CANADA ...

In connection with The Canadian Manufacturer, works to attain this end.

Any inquiry addressed to THE CANADIAN MANUFACTURER will result in placing the writer, if he so desires, in communication with Manufacturers, Buyers or Sellers of any sort of merchandise in Canada or any other country.

Merchants, Importers, Exporters, Boards of Trade, Chambers of Commerce and Commercial Organizations in any part of the world are invited to make full use of the facilities afforded by THE CANADIAN MANUFACTURER whenever they may desire information about any article produced in Canada, Tariff Law, Customs Regulations, Routes of Transportation, etc.

We especially request Canadian manufacturers to send us lists of the different lines of goods produced by them so that we may address to them special letters of inquiry as soon as information is received by us.

We have an enquiry from a merchant in Pietermaritzburg, Natal, South Africa, who desires to open up trade with Canadian manufacturers, for the names and addresses of manufacturers of and dealers in, mouldings for picture frames and interior decorations; beveled silvered plate glass, suitable for furniture makers; upholsterer's trimmings and supplies; also manufacturers of chairs and dealers in etchings, engravings, military and sporting pictures suitable for framing, etc. For particulars apply to THE CANADIAN MANUFACTURER.

### CENTRAL AMERICA.

Carpenters' Tools.  
Household Hardware.  
Bicycles.  
Paints, Oils and Varnishes.  
Rope and Twine.  
Bar Iron and Steel.  
Barb Wire and Fence Materials.  
Lumber.  
Corrugated Iron.  
Lamps.  
Stoves and Ranges.  
Cooking Utensils.  
Hardwood } Furniture.  
Italian }  
Brass and Iron Bedsteads.  
Mattresses and Pillows.  
Dress Goods.  
Blankets and Counterpanes.

Men's Clothing.  
Boots and Shoes.  
Canes and Umbrellas.  
Trunks.  
Clocks.  
Table Cutlery.  
Wrapping Paper.  
Bags and Twine.  
Blank Books.  
Books and Periodicals.  
Toys and Games.  
Flour.  
Hams, Bacon, Pork and Lard.  
Butter and Cheese.  
Canned or Bottled Goods.  
Patent Medicines.  
Toilet Articles.

### COLOMBIA.

Electrical Goods.  
Bicycles.  
Pianos.  
Piano Materials.  
Paper.

Wire (all kinds).  
Office Furniture.  
Flour.  
Writing Paper and Envelopes.  
Blank Books.

### CUBA.

Paints, Varnishes and Oils.  
Rope and Twine.  
Belting.  
Valves, Pipe Fittings, etc.  
Wrought Iron Pipe.  
Portable Forges.  
Telegraph Poles.  
Mowers and Reapers.  
Plows and Cultivators.  
Planters and Seeders.  
Threshers.  
Farming Tools.  
Windmills and Tanks.  
Building Papers.  
Bicycles.  
Carriage Hardware.  
Office Furniture and Safes.  
Wrapping Paper.

Bags and Twine.  
Flour.  
Hams, Bacon, Pork and Lard.  
Butter.  
Canned and Bottled Goods.  
Belting, Leather.  
Barb Wire and Fence Materials.  
Cotton Diapers.  
Drills.  
Calicoes.  
Handkerchiefs.  
Dress Goods.  
Sheetings, Shirts, etc.  
Table Linen and Towels.  
Hosiery and Underwear.  
Prints, Ginghams, etc.  
Blankets and Counterpanes.  
Millinery.

Bacon, Hams, Pork and Lard.  
Wines and Spirits.  
Confectionery.  
Canned Tomatoes.  
Flour.

### FRANCE.

Butter and Cheese.  
Canned or Bottled Goods.  
Malt Liquors.  
Canned Fruit (all kinds).

### GERMANY.

Blinds.

### HOLLAND.

Refrigerators.  
Rubber Clothing.  
Pianos.  
Printing Papers.  
Writing Paper and Envelopes.  
Blank Books.  
Fishing Tackle.  
Sportsmen's Clothing.  
Games and Toys.  
Rowboats.  
Hardwood Furniture.  
Office Furniture and Safes.  
Desks.  
Office Sundries.  
Brass and Iron Bedsteads.  
Billiard and Bar Fittings.  
Letter Files.  
Writing Desks (all kinds).

### MEXICO.

Irrigating Machinery.  
Electrical Machinery.  
Wire for Electrical Purposes.  
Electric Light Fixtures.

Electric Railway Equipment.  
Telegraph and Telephone Material.  
Electrical Supplies in General.

### PORTO RICO.

Household Hardware.  
Cutlery.  
Paints, Oils and Varnishes.  
Rope and Twine.  
Shoe and Leather Machinery.  
Blasting Powder.  
Threshers.  
Farming Tools.  
Dairy Supplies.  
Barb Wire and Fence Materials.  
Harness and Saddlery.  
Carriage } Material.  
Building Papers.  
Corrugated Iron.  
Kitchen Utensils.  
Refrigerators.  
Rowboats.  
Hides and Skins.  
Sole } Leather.  
Upper }  
Bicycles.  
Cut Soles and Findings.

Hardwood } Furniture.  
Italian }  
Brass and Iron Bedsteads.  
Office Furniture and Safes.  
Billiard and Bar Fittings.  
Dress Goods.  
Stamped Cotton Fabrics.  
Cotton Fabrics (dyed before weaving).  
Jute Fabrics.  
Cassimeres.  
Boots and Shoes (all kinds).  
Clothing.  
Trunks and Travellers' Goods.  
Clocks.  
Table Cutlery.  
Printing } Paper.  
Wrapping }  
Bags and Twine.  
Blank Books.  
Printing Office and Stationers Sundries.  
Books and Periodicals.

### STRAITS SETTLEMENT.

Inkstands.  
Rulers.  
Paper Weights.  
Pocketbooks.  
Mucilage Pots.  
Stationers' Supplies (general).  
Writing Paper.  
Artists' Materials.  
Paper Fasteners and Clips.  
Penracks.

Penholders (all kinds).  
Penknives.  
File Books (all kinds).  
Copying Presses.  
Holding Paper.  
Toys and Games.  
Wrapping Paper.  
Bags and Twine.  
Blank Books.

### VENEZUELA.

Flour Mills (all sizes).

Preserve this Bulletin for Reference—it will not be Duplicated.

*If You want Information, Ask for It.*

Address,

THE CANADIAN MANUFACTURER, Toronto, Canada.

implements had exhibited. He and many others had been in the habit of purchasing their implements at the Fair, but hereafter they would not do so, but would buy of American concerns. A Mr. Bowman voiced the sentiments of Mr. Russell that the manufacturers would lose because they did not exhibit. He thought the Fair stables should be floored, (we suppose Mr. Bowman had some pigs on exhibition). In the opinion of a Mr. Clemens the manufacturers of agricultural implements would rue the day that they did not exhibit, to which Dr. Smith, the president, gave a hearty assent. Of course the exhibitors of pigs, sheep, goats, chickens, cattle horses and dogs were well satisfied with the accommodations afforded them, about the only complaint from that direction being the absence of a board floor from a stable and perhaps electric fans with which to cool the cattle, but it did not seem to occur to these gentlemen that a bull lying with a leaky roof was not just the place to exhibit agricultural or any other sort of machinery.

THE CANADIAN MANUFACTURER was in due receipt of an invitation to be present at the twenty-second annual Rhode Island clam dinner tendered to the electrical fraternity by Eugene F. Phillips, Esq., general manager of the American Electrical Works of Providence, R I at Pomham Club, near that city, on September 13, the card coming with the compliments of George H. Olney, Esq., secretary-treasurer of the Eugene F. Phillips Electrical Works of Montreal. The editor is somewhat familiar with the details and methods of procedure of a Rhode Island clam bake, and fond memories are awakened of the ozone that permeates the circumambient atmosphere of such occasions; of the stiffs that are in evidence escaping from the canvas covered heaps of delicacies smothered amid masses of steaming seagrass upon a hot rock; of the inevitable appetite begotten of the fragrance of the clams and things, irresistible for a long, long time when the fray begins, only to be quenched after a fierce and delightful struggle.

Speaking of the fact that American paper is fast supplanting British paper in the Australian market, the New York Paper Mill says:

It is evident that we have secured our present firm hold in the Australian market by means of making what the consumer wants, and shipping it to him in such a way that he receives it in good order, and in such condition as to promote his convenience. These are the methods that must be used in building up an export trade elsewhere. One of our consuls in Germany, speaking of the competition of England, Germany and the United States in the world's markets, says: "The Ger-

man manufacturers adapt themselves entirely to the ways of their customers. If we ever hope to obtain the first hold in the commercial world, we must watch and to a certain extent adopt the methods of our rivals." That means more than anything else that we must make what the consumer wants and ship it to him the way he wants it.

Which fact applies with equal force to Canadian manufacturers also.

#### OPPORTUNITIES FOR CANADIAN TRADE.

The following enquiries have been received at the offices of the High Commissioner of Canada in London, and of 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.

319. A London paper agent, who is about to visit Canada shortly desires to hear of new paper and pulp mills not represented here, especially those able to produce large quantities of "news."

320. A firm of importers of canned meats and fruit, desire to be placed in communication with Canadian exporters of such products.

321. The South African agent of a large firm of London general merchants, now in this country, is open to represent one or two first class Canadian manufacturers willing to compete in South Africa. Preference given to such firms who would keep stocks in South Africa and who have London connections.

322. An English engineering firm whose specialty is pulsometers desire to hear from a responsible firm in Canada willing to act as agent.

323. A Canadian firm manufacturing whips and lashes, desire to appoint a thoroughly reliable firm of manufacturers agents to represent them. They would also like to be placed in communication with English export commission merchants doing business in South America.

324. Parties desiring to embark in the pulp industry in the province of British Columbia are invited to communicate with a gentleman who is in a position to furnish useful information.

325. A leading Ontario firm of canners of fruit and vegetables, desire to appoint a responsible agent at Copenhagen who could push their specialities in Denmark and the adjacent countries.

326. A Nova Scotia firm exporting hay, feeds and cereals in general, desire to hear from importers of these articles.

327. A Canadian firm manufacturing "Excelsior" wood product used for stuffing purposes, mattresses, etc., desire to be placed in communication with importers of such materials.

# Transfer Ornaments, AMERICAN MADE.

TRADE MARKS, DECORATIONS, NAME PLATES, ETC.

For HARDWARE, BICYCLES, VEHICLES, POTTERY, FURNITURE, etc.

Sketches submitted free of charge. Being home makers can deliver promptly. Write us.

## THE MEYERCORD CO., Inc., CHAMBER OF COMMERCE, - CHICAGO.

Canadian Travelling Representative,  
CHAS. H. JAGGAR, Buffalo, N.Y.

Largest Makers in the World Guaranteed Decalcomania Transfers.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

## 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 those 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.

C. W. Wilson, paper manufacturer, of Montreal, and promoter of the new company to build a pulp mill at Indian Lorette, Que., has applied to the Indian agent to lease a portion of land belonging to the Indians for a term of fifty years, his intention being to build a pulp and paper mill. The various improvements will give employment to some 200 hands.

Robert Whitelaw's foundry and machine shop at Woodstock, Ont., was destroyed by fire, September 18, loss, about \$5,000. A flour mill plant under construction and about completed at the time, valued at \$2,700, was also destroyed.

Work on the largest cantilever bridge in the world has been started by the Phoenix Bridge Building Co., of Philadelphia. The contract was awarded by the Canadian Government after a long study of the plans of the various bridge building companies, and by its preference for the Phoenix Co., Philadelphia is placed in the lead in bridge building. The bridge, for which the structural material is now being made at Phoenixville, will span the St. Lawrence river at Quebec. According to the terms of the contract, it must be completed within two years. The approximate cost will be \$4,500,000. Including the approaches the bridge will be 3,000 feet long. The main span which will cover the deepest part of the St. Lawrence river, will be 1,300 feet long. About 10,000 tons of steel will be used in erecting the main span. When the size of the structure was definitely decided upon it was found necessary to build it 150 feet above tide water in order that the heavy flow of ice in winter could pass without becoming jammed. The bridge will be seventy feet wide, and

through its centre four railway tracks will be laid. On either side will be two foot-walks with a driveway between. Just underneath the centre of the bridge the St. Lawrence river is about 200 feet deep, so the caissons for the piers will have to be set many feet below tide water.

Active preparations began this week for the construction of the second water-power canal under the management of F. H. Clorgue. A party of engineers and contractors, and thirty horses arrived here on Monday, and the preliminary work began forthwith. With this vast undertaking—70,000 horse power—under construction, and every reasonable preparation made for building the street railway between the pulp mills at the west and the old Simpson residence in the eastern portion of the town, F. H. Clorgue has every one of the enterprises under way that he promised the people a few months ago he was prepared to construct. When the magnitude of these works are considered, and that their cost means the expenditure of many millions of dollars, all swinging into actual shape at one time, the vastness of the project fairly makes ordinary people's head swim at the bare contemplation of their gigantic proportions. But, let her roll! The outcome will be all right for the company and for Canada. — Sault Ste. Marie, Ont., Pioneer.

The new electric light plant in the town of Hespler will be in running order in about eight weeks, and municipal ownership advocates hereabouts will watch the experiment with considerable interest. A few months ago Hespler gave no thought to the question of civic control of the plant. It was not a subject for discussion anywhere

in the town village, and probably had not a number of progressive business men launched the project the matter would never have reached the point of materialization. Very little fuss was made in a public way while the people were being educated to believe in the possibilities of profits of public ownership. Perhaps this was due to the fact that the Reporter had very successfully in its articles favoring municipal plants blazed the way for the establishment of a civic plant in Hespler. The project has been handled in a most business-like way and we confidently expect that all expectations as to the value of the civic control of the works will be realized. Galt Reporter.

The Nott Cycle & Motor Co., St. Catharines, Ont., has been incorporated with a capital stock of \$100,000, to manufacture bicycles, tricycles, electric vehicles, etc. The provisional directors include W. G. Nott, C. W. Hoffman and J. T. Ham, all of Brantford, Ont.

At a meeting of the Lumbermen's Association of Ontario recently held in the Board of Trade rooms, Toronto, when the statistics prepared by the secretary were read, it was the unanimous conclusion that there was no present necessity to reduce prices. That the retail stocks on both sides of the line were lower than ever reached for a number of years, and that, while the demand might be delayed through political agitation, it would come later. The conclusion arrived at at a previous meeting that there was a shortage of 349,000,000 was more than confirmed, and it was held quite apparent that there is fully 300,000,000 of a shortage in the Georgian Bay, including Eastern Michigan points, and taking the output of the mills of Eastern Michigan. Further, it was pointed out that the demand from the English market was active and likely to increase, and that the condition was never more favorable for an advance in price than at present. This applies to the Minnesota and Wisconsin district as well as to Michigan and Ontario. Later in the meeting a very strong opinion was expressed by Mr. Beck, of Penetanguishene, with regard to what he claimed was an injustice of letting American lumber come into Canada free, while Canadian lumber was compelled to pay an import duty of two dollars.

The Merchants Shade Co., Toronto, has been incorporated with a capital stock of \$100,000 to manufacture window shades, curtain poles, etc. The provisional directors include J. W. Hamilton, Deseronto, Ont.; and R. W. Menzie, and G. H. Kilmer, both of Toronto.

## INGERSOLL-SERGEANT Rock Drills

FOR MINES, TUNNELS AND QUARRIES

PISTON INLET **Air Compressors** STRAIGHT LINE  
 DUPLEX and  
 COMPOUND.

FOR ALL DUTIES.

... COMPLETE MINE EQUIPMENT ...

JAMES COOPER MANUF'G CO., Limited, - 299 St. James St., Montreal.

Other Offices - - - ROSSLAND B.C.

RAT PORTAGE, ONT.

HALIFAX, N.S.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



The exhibit of the Garfield Oil Co., in the Main Building at the Exposition was one of the most popular there. This company has established a branch at Windsor, Ont., and, in the last eight months, has shown conclusively to the Canadian trade, by the high and uniform quality of its products, that it can be depended upon to supply their needs in the most satisfactory manner. The company's salesmen are experienced, courteous, appreciative and thoroughly acquainted with the trade in Canada. Manufacturers and others looking for the best in this line will do well to correspond with the Garfield Oil Co., Cleveland, Ohio, or Windsor, Ont.

The Northrop Loom Works, of Canada, whose plant and head offices are at Valleyfield, Que., inform us that for the greater convenience of their customers they have established a branch warehouse and office at 296 St. James street, Montreal. This concern are now making a specialty of small steel castings, and are also manufacturers of iron and brass founders work generally.

What appears likely to prove a very extensive new field of usefulness has been found for carborundum, the new abrasive manufactured at Niagara Falls, N.Y. This consists in applying wheels or cylinders made of carborundum to rice hulling, for a recent invention of a Cincinnati man promises to revolutionize the cost of preparing rice for the market. The carborundum cylinder that will be used in the first machine is sixteen inches in diameter and thirty-six inches long. It is cast in a ring upon a cast iron cylinder. The wheel is made of very fine grit, and the surface contains corrugations of sufficient depth and sharpness to cut the hull of the grain without injuring the kernel. If this first wheel proves to be all that is expected, other wheels of similar pattern will be turned out at once to meet the requirements of the trade.

The township of Aberdeen has a body of copper bearing quartz 130 feet wide, seventy-five feet high and  $1\frac{1}{2}$  miles long, and it carries the seal of F. H. Clergue.—Sault Ste. Marie, Pioneer.

The erection of coke ovens at Sydney, C.B., mines by the Nova Scotia Steel Co. has commenced.

The Mineral Products Co., Moncton, N.B., will establish smelting works in St. John to handle the manganese product of

New Brunswick, where that mineral abounds.

The Alaska Treadwell Gold Mining Co., of Douglas Island, Alaska, operating the largest stamp mills in the world, have placed their third order with The Burt Mfg. Co., of Akron, Ohio, for oil filters.

In another page will be found the advertisement of an old established manufacturing firm in British Columbia who desire commercial connection with one or more manufacturers of standard lines suitable for the grocery trade. Hitherto they have confined their attention to selling their own products, which are now well and favorably known throughout the Pacific province. They have recently largely increased their capacity for production and handling their business, which enables them to add other lines not interfering with their own, which can be looked after by their salesmen, as these salesmen cover very thoroughly all of British Columbia, they can, if desirable, sell to either the wholesale or the retail trade. For further information refer to the advertisement.

Messrs. D. Campbell Davies & Co., commission agents for mill, mine and smelter supplies, Durango, Mexico, inform us that they have perfected a system of obtaining advance information from all the mining companies of note in Mexico, Central and South America, where mining machinery and supplies are needed, they are able to place orders on a commission basis at very small expense to manufacturers. They therefore desire to secure the agencies of manufacturers of such lines, and invite correspondence.

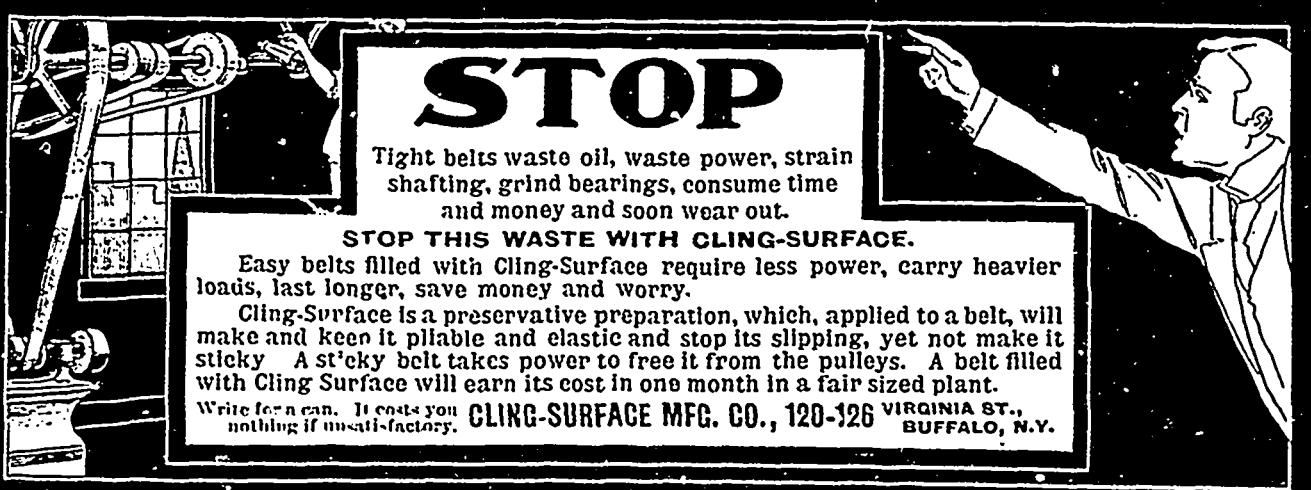
A convention of salesmen of the Magnolia Metal Co., at which twenty-five gentlemen from all parts of the United States and Canada were present, was held at the Murray Hill Hotel, New York, on September 6, 7, 8 and 10; and all subjects appertaining to the sale of Magnolia Metal were discussed, the greatest interest in the Company's business being manifested. Reports for all concerned showed that the Company's business had never, during the past fifteen years, been so prosperous as during the last year and a half, and that the prospects for the future are far better than ever before. The sentiments of the twenty-five men as to the coming Presidential Election were overwhelmingly in favor of the

re-election of President McKinley, only one man in the entire lot being suspected of allegiance to Mr. Bryan. The utmost enthusiasm was shown by all the men for Magnolia Metal and for the future of the business, and the affair wound up by the presentation of a loving cup to Mr. E. C. Miller, the Vice-president and General Manager of the Company. Cables and telegrams from the conference were sent to the London, Paris, Berlin, St. Petersburg and San Francisco offices of the Company, and to a number of absent salesmen who could not be present.

The Jury of Award at the Paris Exposition have granted the Bristol Company of Waterbury, Conn., a silver medal for their exhibit of recording electric instruments and have also given honorary mention for their recording steam and pressure gauges.

It is interesting to know that the practice relating to patents and trade marks, in Japan, is becoming settled and receiving the attention it should. A patent law has been recently passed there permitting foreigners to patent their inventions in Japan for periods of five, ten or fifteen years as the inventor may elect. The rights of inventors are fully protected, as there are proceedings provided for re-issues, disclaimers and interferences. It is important to note that if an invention has been published in Japan prior to the application for a patent there, it cannot then be patented. As Japan is now beginning to favorably compete with the leading countries of the world, inventors should be alive to protecting their interests in that country. The full text of the law can be examined at the office of Egerton R. Case, solicitor of patents, Temple Building, Toronto.

The factory buildings of the Pittsburg Reduction Co. at Shawinigan Falls are now far advanced towards completion, and will soon be ready to receive a large number of mill operatives. In addition to the Pittsburg Reduction Co. and the Belgo-Canadian Pulp & Paper Corporation, it is highly probable that the third of the four large manufacturing concerns which have contracted for land for mill buildings and power to operate the same will commence work at Shawinigan Falls this season. This satisfactory condition of affairs is certain to assure steady employment and good wages to all people in that part of the province of Quebec.



# STOP

Tight belts waste oil, waste power, strain shafting, grind bearings, consume time and money and soon wear out.

STOP THIS WASTE WITH CLING-SURFACE.

Easy belts filled with Cling-Surface require less power, carry heavier loads, last longer, save money and worry.

Cling-Surface is a preservative preparation, which, applied to a belt, will make and keep it pliable and elastic and stop its slipping, yet not make it sticky. A sticky belt takes power to free it from the pulleys. A belt filled with Cling Surface will earn its cost in one month in a fair sized plant.

Write for a can. It costs you nothing if unsatisfactory. **CLING-SURFACE MFG. CO., 120-126 VIRGINIA ST., BUFFALO, N.Y.**

Papers transferring the property of the General Mining Association, Cape Breton, to the Nova Scotia Steel Co. have been finally executed. The cash consideration for the properties was \$1,500,000. The properties include not merely the coal areas, but the mine equipments, real estate, buildings, machinery, etc. The mining areas cover twenty-one square miles. The real estate apart from the mining areas, amounts to nearly 8,000 acres and includes 109 different properties.

A large elevator is being erected at Renfrew, Ont., by A. A. Wright.

A new flour mill is being erected by James Lister, York Mills, N.B., at Harvey Station, N.B.

Martin & Warnock are replacing their mill on the Richmond Road, at Ottawa, which was destroyed in the big fire, with a new building of brick, 80 x 50 feet, and four stories high. The plant will include also an elevator with a capacity of 100,000 bushels, as fireproof as possible. The new mill will have an output of 200 barrels a day, a larger capacity than that of the one destroyed in the fire. There will also be an up-to-date auxiliary mill, for the manufacture of oatmeal, with a daily capacity of 150 barrels. About \$55,000 will be invested in the building and fitting up of the mills and elevator, which will be completed in October.

The Ham & Nott Mfg. Co., Brantford, Ont., has increased its capital stock from \$20,000 to \$50,000.

The Sanford Mfg. Co., Hamilton, Ont., are rapidly completing an order for 11,000 military overcoats sent by the Indian Office. They are for the British soldiers fighting in China. The material is Canadian frieze. The last consignment must leave Hamilton

on September 27 for Vancouver, B.C., to catch the C.P.R. steamer leaving on October 9 for the Orient. The cases, which number 220, each with contents weighing 525 pounds, are addressed to the transport officer at Wei Hai Wei, via Shanghai. The company have already shipped away 20,000 of the 30,000 suits, tunics and trousers ordered for the South African troops.

New elevators have been erected in Manitoba this season at Melbourne, Treherne, Rothwell, McTavish, Elm Creek, Carievale, Pierson, Crandell, Poplar Point, Rosser and Indian Head.

W. D. Moshier's shingle and saw mill at Lion's Head, Ont., was destroyed by fire September 12; loss about \$3,000.

It was recently announced that the Canadian Government had signed a contract with the Manchester, N.H., Locomotive Works for eight locomotives for the Intercolonial Railway. This was in addition to the ten locomotives ordered from the Richmond Locomotive Works, of Richmond, Va. Now it appears that the Kingston Locomotive Works are going to close down and about 400 men will be thrown out of employment, although the works would have continued in operation if they could have secured the orders for the locomotives which Mr. Blair purchased in the United States. A Kingston despatch states that when the Kingston works asked the Minister of Railways for specifications in respect to the locomotives required for the Intercolonial Railway a reply was received from his department that nothing would be done in the matter of choosing the locomotives until the Minister returned, and when the Minister did return he made no answer to the communication of the Kingston works. It

is evident that Mr. Blair did not even try to ascertain whether he could get the locomotives made in Canada, but was determined to give the contracts to American concerns. —Montreal Star.

The contract for the engine and boiler for Hespeler's new municipal electric light plant has been awarded to the Goldie-McCulloch Co., Galt, Ont. We are also able to announce to-day that the General Electric Light Co. will get the contract for the electrical part of the plant, whose total approximate cost will be \$9,000. The installation of the plant is expected to be in operation by October 15. The alterations of the building which are necessary to accommodate the plant have been commenced. The council will prepare a statement for publication, giving rates for lighting, so that the work of installing lights in private residences and public buildings can at once be proceeded with. Judging from the estimates furnished by the various companies, who tendered on the plant, Hespeler is buying its outfit at a rock bottom price, a condition of affairs due to the very able manner in which Reeve Brodie and the members of the council have handled the matter and brought the negotiations to a successful issue. —Galt Reporter.

S. Alix, of Rapid de L'Orignal, on the Lievre River, Que., says that certain Valleyfield parties are negotiating with him to purchase a site and water power he owns, in order to erect thereon pulp and paper mills. Rapid de L'Orignal is about ninety miles up the Lievre from Buckingham, Que.

The Burt Mfg. Co., Akron, Ohio, manufacturers of the Cross oil filters, have just received a duplicate order from the Carnegie Steel Co.

# W. A. FLEMING & CO.

MILL SUPPLIES

CAMEL BRAND BELTING

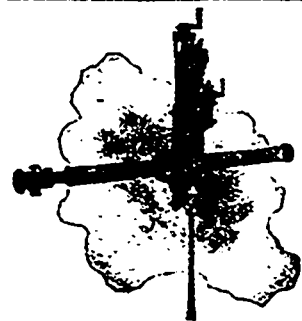
HOSE of all kinds

DRIVING ROPE

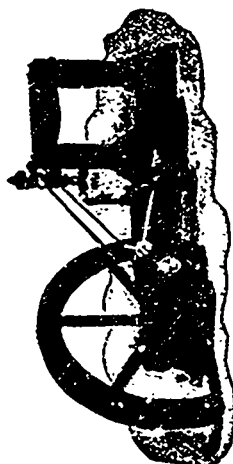
BELTING of all kinds



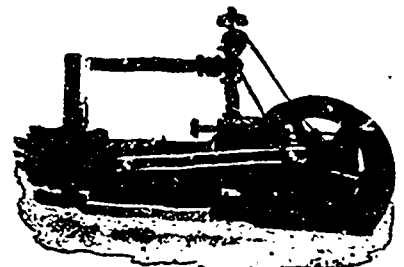
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**MINING  
MACHINERY**

The Canadian  
Rand Drill Co.

MONTREAL.  
SHERBROOKE,  
HALIFAX, N.S.  
TORONTO, ONT.  
RAT PORTAGE, ONT.  
ROSSLAND, B.C.  
GREENWOOD, B.C.  
NELSON, B.C.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# CRUSHERS--ROLLS

Roll Jaw Fine Crushers Reduce Large Rocks at once to Gravel and Sand. Centrifugal Rolls. Cost half and do three times as much as Common Rolls of equal dimensions, and do finer work.

SEND FOR CIRCULAR.

STURTEVANT MILL CO., 104 Clayton St., BOSTON, MASS.

The sash and door factory of Bronlette & Aumont, Montreal, was damaged by fire a few days ago to the extent of about \$18,000.

Messrs. Charles Campbell and F. P. McColl, St. John, N.B., are forming a company with \$1,000,000 capital stock, to take over and operate the granite quarries in St. George and Spruce Islands in that vicinity.

A large deposit of lithographic stone, said to be of pure and valuable quality, has been discovered on Burnt Island, Lake Temiscamungie, Ont.

The Kinleith Paper Co. is a new paper making concern who are about starting a factory at St. Catharines, Ont.

The Spokesman-Review, of Spokane, Washington, in speaking of the Granby smelter, in British Columbia, says: The smelter is working to perfection, and not a hitch has occurred to mar its success. But one furnace has been blown in, it being expected to get the other working soon. The ore furnace's capacity is 250 tons daily, but nearly 275 tons is being put through owing to the self-fluxing character of the ore. The ore being operated on comes from the old Ironsides mine, and the resultant matte runs from forty-five to fifty per cent. in copper.

The Separate School Board, of Toronto, have decided to erect a new school on Bond street, at a cost of \$18,000.

The Quebec Terminal Co. is applying for incorporation to carry on the business of grain dealing, elevating and shipping, with chief place of business at the city of Quebec, and a capital of \$150,000.

The contract for erecting the Imperial Starch Co.'s factory at Prescott, Ont., has been let to Wilson Bros., of Kingston, the amount of the contract being about \$45,000.

A by-law was passed at Medicine Hat, N.W.T., to raise \$40,000 for water works for the town.

The Northern Pacific Railway will erect a new station at Hartney, Man.

A great honor has been conferred on the Canadian Office & School Furniture Co., Preston, Ont., by the award at the Paris Exposition of a Silver Medal for school desks. The exhibit was made at the instance of the Government to supplement the educational display. The silver medal is the highest award which could be given by the judges, and the fact that a Canadian firm has secured it is a matter of congratulation.

The desks shown by the firm have attracted general attention, and in consequence, a number of applications for price-lists and samples have been received from all parts of the world.

The Garfield Oil Co. was awarded the Bronze Medal by the Directors of the Toronto Exposition. Their exhibit included an exceptionally fine and complete line of samples of lubricating and other oils, including Zanzibar Anti-Rust Paint and Black Beauty Leather Oil. It is noticeable that this company does not handle anything but their own products and not a confusing lot of specialties which would naturally indicate that more care and attention is given to their regular line and the production of strictly high grade goods.

The Consolidated Pulp & Paper Co., Toronto, has been incorporated with a capital stock of \$500,000, to manufacture pulp, paper, etc. The provisional directors include J. M. Poole, W. C. Mackay and E. L. Young, all of Toronto.

Thomas Kennedy and associates are forming a company with a capital stock of \$125,000 to establish a two-set woolen mill at Nelson, B.C.

## BLACK IS BLACK

Extra C is our best grade. We cannot make anything better than the best. You cannot buy anything better, try where you will. When you buy, see that our Trade Mark and grade are stamped on it and quality will be there.

**D. K. McLAREN**

Mfr. "GENUINE OAK" BELTING

88 Bay St., TORONTO

Factory, MONTREAL



Manufacturers of  
Cotton, Jute, Hemp and Flax,  
Twines and Cordage,  
Mill Banding and Driving Ropes,  
Chalk and Fishing Lines,  
Seine Twine, Hammocks, Tannis,  
Cricket and Fly Nets,  
Cotton Rope and Clothes Lines,  
Plough Lines, etc.

HUTCHISON, SHURLY & DERRETT,  
1078 Bloor St. West, TORONTO.

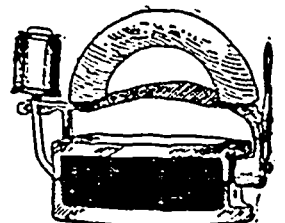
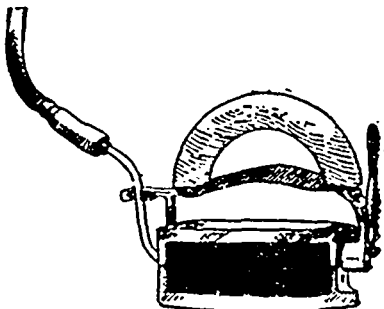
## ONE AGENT ONLY IN EACH TOWN WANTED

WRITE US FOR PARTICULARS ABOUT

**"PERFECTION"**

**Self-Heating Sad Iron**

Something New. Sells Well.



The EDWARDS SAD IRON CO., Confederation Life Building, Toronto, Canada.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

The yacht *Viola*, which left here some two weeks ago with a party of Westerners on board to inspect timber limits and other natural resources of the north coast, returned to port on Sunday and left for Toronto yesterday. A gentleman on board, when interviewed by a Daily Telegraph reporter, was decidedly reticent about giving information regarding their mission, but acknowledged that their trip was a very successful one, and stated that within a very short time extensive operations in the manufacture of pulp and other industries would be started. Among those who were on the yacht were Messrs. E. R. Rolph, William Clarke, L. J. Cosgrove, and T. Meney, of Toronto.—Quebec Telegraph, Sept. 5.

Niagara power is now being used to operate the old Niagara Central Railroad, between Niagara Falls, Ont., and St. Catharines. A sub-station has been built about two miles out from Niagara Falls, Ont., and the current from there is supplied for the operation of the line, the power used being transmitted from the big power house in Niagara Falls, N.Y.

The Magnolia Metal Co., sole owners and manufacturers of Magnolia metal, Magnolia lined and solid journal bearings, etc., whose head office is at 266 West Street, New York

City, and who maintain branch offices abroad in Montreal, London, Paris, Berlin and St. Petersburg, and also in Chicago, Boston, Pittsburg and San Francisco, have just established another office in the Hale Building, Philadelphia. The intrinsic excellence of Magnolia metal is the one great cause of its popularity. It is reliable.

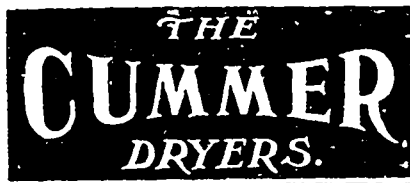
The Ontario Button Co., Berlin, Ont., has passed into the hands of Mr. W. Mitchell, of that place, who will remove the plant to Warsaw, N.Y.

Following is a list of patents recently granted to inventors through the agency of Messrs. Marion & Maron, Patent Attorneys, Montreal.—James Young Walker, Rossland, B.C., improvements in candlesticks; Miss A. A. Colfer, Montreal, Que., eraser attachment for typewriters; Hervo Dyas de Saint Cyr, Montreal, Que., horse shoe; Albert Almon, Sydney, N.S., ventilation system for houses; Edmund Conway, Quebec, Que., car fender.

The B. F. Sturtevant Co., Boston, Mass., through their special Canadian representative, Mr. J. C. Grant, of Montreal, inform us that they have recently been supplying considerable ventilating, exhaust and blowing machinery, some of the orders being as follows:—Four large fans with direct connected steam engines for the Dominion Coal

Co. for use in their mines in Cape Breton, N.S.; two large fans for induced draft to be used in connection with burning spent tanbark for Shaw, Cassels & Co., one for their tannery works at Bracebridge, Ont., and the other for their works at Huntsville, Ont.; one large fan for mechanical draft for the woolen mills of Dick, Kidout & Co., at Coburg, Ont.; one large mechanical draft fan with steam engine attached for Canadian Pacific Ry. shops at Port Arthur, Ont., and three special fans and heaters for drying wheat for same railway at same place; ten large ventilating fans for the mills of the Montreal Cotton Co., at Valleyfield, Que.; an entire equipment of apparatus for the new works of the McLaughlin Carriage Co., at Oshawa, Ont., including twenty down draft forges and blowers, the operation of which removes all smoke from the shops. The company have also installed a large fan operating on the induced draft principle for the soap works of John Taylor & Co., Toronto. This fan takes the place at a very much lower cost of a brick chimney costing some \$7,000.

F. W. Hore & Son, Hamilton, Ont., have been incorporated with a capital stock of \$100,000, to manufacture carriage, waggon and sleigh woodwork, and acquire business now carried on under firm name of F. W. Hore's Sons.



# FOR Mechanically Drying Everything

THE F. D. CUMMER & SON CO.,

HUNDREDS IN OPERATION.

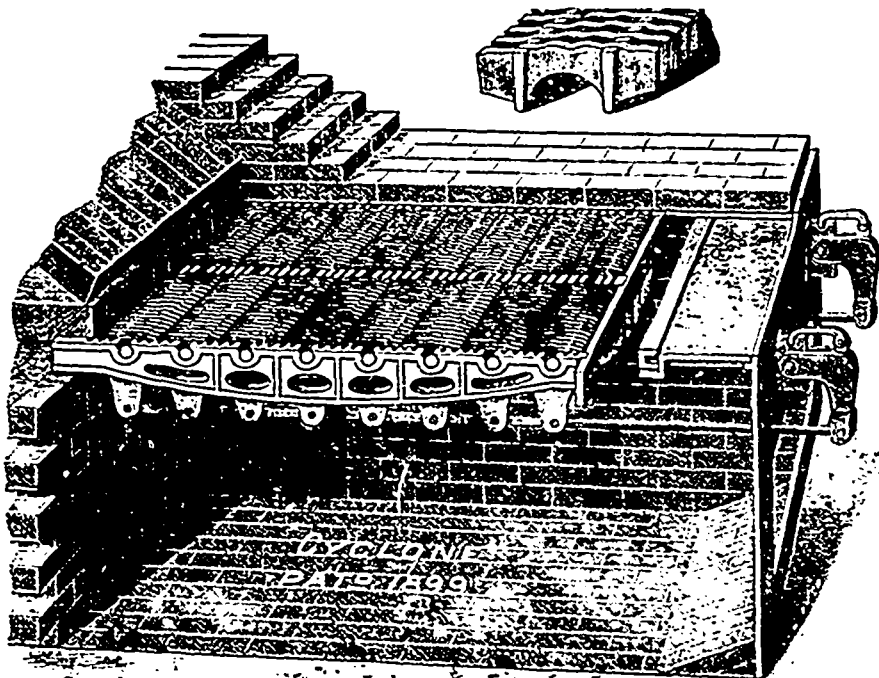
CLEVELAND, OHIO.

John R. Barbor, President.

Geo. E. Challos, Sec.-Treas.

Henry Truesdell, Bus. Man.

## THE CYCLONE GRATE BAR



### Simplicity, Durability, Economy.

**FIRST TEST** at Hamilton Asylum was reported as follows: Was taken with the Grate Bars put in by Waterous Engine Co. of Brantford.

People's Coal used.....	1,950 lbs.
Water Evaporated.....	18,100 "
Weight of ash remaining.....	552 "
Test commenced.....	at 9 a.m. April 17th.
Ended.....	at 5 p.m. "

**SECOND TEST** was made with Cyclone Grate Bar of Toronto, with the following results:

People's Coal used.....	1,850 lbs.
Water Evaporated.....	20,008 "
Weight of ash remaining.....	315 "
Test was made.....	April 24th.
Test commenced.....	at 9 a.m.
Ended.....	at 5 p.m.

These tests were made under 75 horse power Boiler in west boiler house main building.

(Sgd.) J. W. MARTER,  
Chief Engineer.

### TESTIMONIAL.

THE CYCLONE GRATE BAR Co. (Limited),  
10 King Street West, Toronto, Ont.

DEAR SIRS.—We have recently installed one set of the Cyclone Grates at one of our power stations and are highly pleased with the results thus far.  
Yours truly,

J. ROBINSON, Supt.,  
Aug. 10th, 1900, Montreal Park & Island Ry.

**W. G. BLACKGROVE,**  
Gen'l Agent for Ontario,  
Office, 10 KING ST. WEST,  
TORONTO, CAN.

Manufactured  
by...

# Cyclone Grate Bar Co. Limited,

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

Messrs. R. A. L. Gray & Co., Toronto, report that they are very busy on several electric light and power contracts. So great is the pressure of orders that they are finding it difficult to secure enough skillful mechanics such as they require for the class of work which they install. Mr. Gray reports, however, that his firm is fulfilling all orders promptly.

W. F. Scott, C.E., whose office is in the McKinnon Building, Toronto, is bringing to the attention of those interested certain special lines of work to which he has given much study, regarding which he mentions the fact that modern steel and fire-proof construction has now so largely entered into business buildings and high-class residences that there is a demand for architects schooled and experienced in that direction. He says that the time seems ripe in our larger cities for the construction of apartment houses for speculative investment, and that the suburban park idea, so successfully exploited in many cities of the United States as means of investment, must soon force itself upon the attention of local building and loan societies.

At this time Toronto most certainly affords many opportunities for development in these and other lines. Mr. Scott is a graduate of the School of Practical Science, Toronto, and has had several years experience in the offices of some of the best architects in the country, where he gave special attention to the problems of construction of such buildings as those here alluded to.

One of the most interesting exhibits at the recent Toronto Fair was an incandescent kerosene lamp burner, shown by its inventor and manufacturer, Capt. J. H. Stone, 21 Sultan St., Toronto. By means of an electric battery attached to the burner an incandescent light is obtained from kerosene or coal oil, which, at the same time prevents the emanation of any disagreeable odor. The economy effected in the use of the burner is seen in the fact that the same quantity of oil produces three times the quantity of light—that is, from a 3 wick a 12 candle power light is obtained. When the lamp has been in use for a few days a carbon will form on the wick which should not be disturbed, as it prevents the discolor-

ation or smudging of the chimney, besides it increases the quantity and quality of the light, and still more reduces the consumption of oil. One of the most valuable points in the burner is that the electric battery attachment utilizes the explosive matter in the kerosene and thereby preventing the danger of an explosion under any and all circumstances.

The receipts of the Toronto Street Railway are increasing rapidly. In the month of August the increase was \$13,562 greater than for August of last year, and \$13,631 greater than for July. During the past five years the figures for August, and the percentage accruing to the city of Toronto were :

	Receipts.	Percentage.
August, 1900 . . . . .	\$139,353 20	\$13,935 32
August, 1899 . . . . .	125,791 50	12,579 15
August, 1898 . . . . .	111,690 29	11,169 03
August, 1897 . . . . .	94,120 57	7,934 01
August, 1896 . . . . .	86,103 92	6,888 31
July, 1900 . . . . .	125,722 60	12,572 26

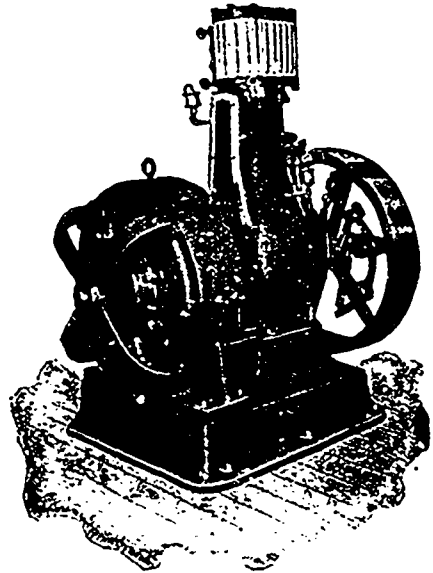
Lamb's biscuit factory in Ottawa was destroyed by fire Sept. 8, loss about \$10,000.

A witness before the United States Industrial Commission's sub committee at Chicago the other day declared that unions are the worst enemies workmen have. He was once a union man, and is now a contractor. His objection to unions was based on their "arbitrary and senseless methods." "A workman who becomes a member of a union," said the witness, "endangers the existence of his own family, for through the restrictions of the union his own son is not allowed to learn the father's trade." In speaking of the trades unions he also said that they made more tramps and more inmates of penitentiaries than any other agency, and said that the trades union was father of all trusts. There is unquestionably a proper field for trade-union efforts. They have done much to better the condition of workingmen. In these latter years, however, by unfairness, by attempting force, by being arbitrary they have done much to harm them. Chicago is suffering to-day from these labor methods to such an extent that manufacturers are being driven from the city. An example of the wild folly of some labor leaders is found in the recent threat to call out more than 100,000 machinists throughout the country because of inability to settle some local dispute in Chicago. Such a strike would end in permanent injury to organized labor. Unions are a power in the land, but they should always bear in mind that they are a minority.

# BUFFALO ENGINES

- FOR -

## LIGHTING and POWER SERVICE



Buffalo Upright Direct Connected Engine Running in Oil.  
**BUFFALO FORGE CO., Buffalo, N. Y.**  
 E. A. WALLBERG, Canadian Representative,  
 410 Temple Building, TORONTO.

## The B. GREENING WIRE CO., Limited



MANUFACTURERS OF



Lang's Patent Wire Ropes  
 For Colliery and Mining Use.

**WIRE ROPE** of every Description and for all purposes.

HAMILTON, ONT.  
 and MONTREAL, QUE.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**SYDNEY, N.S.**

The following interesting description of a visit to Sydney, Cape Breton Island, is given by a writer in the Montreal Gazette:

A day was spent in seeing the wonderful new steel and coke works which are being erected by the Sydney Steel Co. at this point. North Sydney, where the Newfoundland boat stops, is a town of between 1,500 and 2,000 inhabitants. Across the bay is Sydney proper, and here the establishment of the new works is sending that town forward with rapid strides, until it is not difficult to expect to see it, in the very near future, the largest and most important city of Nova Scotia. At the moment the leading hotel of Sydney is so crowded that for weeks before we were there, anywhere from ten to thirty or forty cots had to be placed in the drawing-rooms at night to accommodate the rush of visitors. It will be within the memory of your readers how the Sydney works were first started by the gentlemen interested in the Dominion Coal Company. The result is that the town of Sydney gave to the new steel company about five hundred acres of land and exemption from taxation for thirty years. This land is now being covered with machinery and arranged for the reception of coal and ore. The works themselves are of the most modern character. The wages being paid out in their erection is something like \$30,000 a week, and it is expected, when the works are completed, that at least 1,000,000 tons of ore will be reduced each year. To-day there is evidence of experience and skill in the laying out of the property. There are hotels or boarding houses for the workmen, and separate ones for the

mechanics. The workmen are boarded and lodged comfortably at three dollars a week, and at the higher class boarding houses, I understand, about five dollars a week; and both seem, if one can judge from appearances, of exceedingly good value to their patrons.

But in addition to the tremendous work going on in the enclosure of the Company, there is in the city itself evidence of wonderful progress. Thoroughly built stone roads, well macadamized and drained, are being pushed forward in different directions. Along Whitney Avenue we must have passed forty or fifty houses in course of erection, all neat in appearance and of considerable architectural beauty. As another evidence of the great progress of Sydney, we were pointed out the site, recently purchased by one of the banks for \$10,000, which, six months ago, it is said, had been bought for \$1,000. It looks a little like the old Winnipeg boom over again, and, like the Winnipeg boom, it is evident that there is justification in the increased values of property.

**FREIGHT AND PASSENGER ELEVATORS.**

Messrs. Darling Bros., Reliance Works, Montreal, have sent us their now illustrated catalogue having reference to the freight and passenger elevators manufactured by them. Some of the machines alluded to are a steel screw hanging elevator machine, of which three regular sizes are built, are made left and right so that they can be suspended either side of hatchway most convenient for the driving shaft; a steel screw floor elevator machine, made in all desirable

sizes, very strong and heavy, bolted to cast-iron bed plate; direct connected electric elevator, four new patterns—a good combination for any reasonable speed and capacity—with special gearing drums, etc.; standard horizontal hydraulic elevator for passenger and freight service, available for use at a pressure of from forty to one hundred pounds per square inch, simple in construction, easy to manage, not liable to accident or disorder, and does not require service of a skilled mechanic to operate it; hydraulic plunger elevator for basements or any service of moderate heights; improved hand elevator, etc. A list is given of names of twenty-four concerns in Montreal who have ninety-five of these elevators in use, and of other different concerns throughout Canada from Halifax to Vancouver who use them and testify to their excellence.

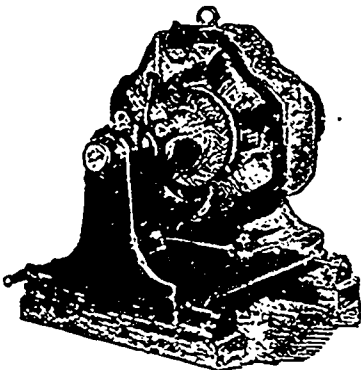
The great wall of China was built about 250 B.C., by the first emperor, as a protection against invasion by the Tartar tribes. That danger long since disappeared through the annexation of adjacent territory. The wall is not of uniform thickness or height, it traverses the northern boundary of China, extending from 3½ degrees east to 15 degrees west of Peking, having an estimated length of from 1,250 to 1,500 miles. It is carried over the highest hills and through the deepest valleys and is the most gigantic work of defence ever erected by man. In some places it is a simple rampart, in others it has a solid foundation of granite. It varies in height from fifteen to thirty feet, and its breadth is such that six horsemen may ride abreast on it. At certain places there are towers of brick rising to a height of about forty feet.

**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.

**Electrical Construction Co. of London, Limited.**



**MULTIPOLAR MOTORS & DYNAMOS**

And Direct Connected Plants for Isolated Lighting. Repair Work a Specialty.

HEAD OFFICE AND FACTORY:

90 YORK STREET, London, Canada.  
760 Main St., Winnipeg.  
42 York St., Toronto. 131 Granville St., Halifax.

**RICE LEWIS & SON, LIMITED**

**HARDWARE and METAL**

Bar iron, Steel, Boiler Plate Tubes.

**MACHINIST TOOLS, PIPE FITTINGS.**

A COMPLETE STOCK OF

**STOCKS and DIES. PIPE VICES.**

STILLSON & TRIMO

**WRENCHES.**

**STEAM PIPE.**

Cor. King and Victoria, TORONTO

**Toronto and Hamilton**

**ELECTRIC CO.**

**SECOND-HAND DYNAMOS**

IN GOOD CONDITION, WILL SELL CHEAP.

We have in stock the following Incandescent Dynamos. 110 volts:

- 200 Light Multipolar.
- 120 " Bipolar.
- 60 " Multipolar.
- 80 " Bipolar.
- 15 " Bipolar.

Write us for Prices.

**99-103 McNAB ST. NORTH, HAMILTON.**  
'Phone 958

**IMPORTANT TO FOREIGN SHIPPERS.**

The CANADIAN MANUFACTURER is in frequent requests for information regarding the shipment of goods to over-sea countries, and as we have before us a circular that covers the ground very fully, we condense from it. It is from Messrs. Pitt & Scott, 39 Broadway, New York, who maintain offices in London, Liverpool, Paris and Hamburg, and who have close connection in commercial centres throughout the world; and they are foreign freight brokers and express carriers to all parts of the world. Previous to the first of each month they issue a sheet in which is shown the names of the mail and freight steamers sailing from the port of New York for that month, which includes the day and date of sailing, the name of the steamer, the line to which it belongs, and

the port of destination; and it also gives similar information regarding the sailings of steamers from Boston and Philadelphia. This information is of the greatest possible value to those who desire it. In their circulars Messrs. Pitt & Scott give some information with which many shippers are not acquainted, but a knowledge of which is important when desiring to make shipments, which we condense as follows: They handle large freight shipments to all foreign ports or interior points at lowest current freight rate obtainable. They issue through bankable bills of lading to destination (port or island) enabling shipper to draw upon consignee for the amount of his invoice. They undertake the collection of shippers' invoices, C.O.D., anywhere abroad. They quote special low rates for extra

heavy shipments, car load lots, etc., to all parts of Europe, India, Australasia, South Africa, China and Japan. They will place the services of their various agents in all parts of the world at the disposal of shippers, and will, through them, undertake any commissions entrusted to their care. They quote low rates by weight (irrespective of measurement) by their express service to all parts abroad. For further information enquire of Pitt & Scott, 39 Broadway, New York.

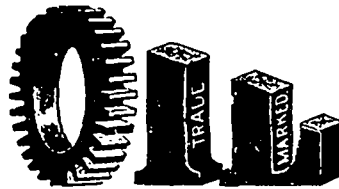
**EXTRACTION OF NICKEL.**

The Engineering and Mining Journal, of New York, publishes a technical account of some experiments which were made at the new works of the Nickel-Copper Co. of Ontario, at Hamilton, of a new process for recovering nickel and other valuable constituents from Sudbury ores. The process is the invention of Mr. H.

**"Capitol" Cylinder**

**"RENOWN" ENGINE**

**"ATLANTIC" RED**



**RELIABLE WELL-KNOWN BRANDS.**

THE... ALL ORDERS PROMPTLY FILLED

**QUEEN CITY OIL CO.**

LIMITED

SAMUEL ROGERS, President.

TORONTO, CANADA

**The Diamond Machine & Screw Co.**  
Manufacturers of TORONTO, Limited.  
**MACHINE SCREWS and BICYCLE PARTS OF EVERY DESCRIPTION.**

SEND FOR CATALOGUE AND PRICE LIST

**\$50 is Worth Saving.**  
If your oil bills are \$100 a year, we can save you half of it with a  
**Gross Oil Filter**  
And we'll demonstrate it in your own shop. If they're \$1,000 we'll save \$500. Sent on approval, and we pay the freight if not satisfactory. Catalogue 25.  
**The Burt Mfg. Co**  
Akron, Ohio, U.S.A.  
Largest Mfrs. of Oil Filters in the World.  
We also manufacture the Burt Exhaust Head.

**Dominion Oil Cloth Co.**

(LIMITED)

Manufacturers of...

**OIL-CLOTHS** of Every Description

Floor Oil-Cloth, Table Oil-Cloth, Carriage Oil-Cloth.

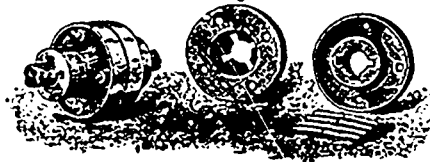
Enamelled Oil-Cloth, Stair Oil-Cloth, etc.

Office and Works

Cor. St. Catherine and Parthenais Sts  
**MONTREAL, Que.**

**Nicholson Patent Flanged Face Compression Shaft Coupling**

Is easily and quickly attached to or detached from shafting.  
Will adjust to a somewhat larger or smaller than standard size shaft.  
Has **DOUBLE** the grip of other **COMPRESSION COUPLINGS** and is the most perfect-fitting coupling made.



Saves cost of key-setting shafts, fitting keys, and refacing couplings after being keyed on shaft.  
Holds the shafts in accurate alignment with each other, the jaws being full length of coupling and extending over both shafts.  
Has a very powerful grip equally exerted from **FOUR** sides (not on two sides as with the majority of couplings).

**PRICE LIST AND DISCOUNT ON APPLICATION.**

Our New Supply Catalogue (Desk or Pocket Size), will be mailed free to anyone on application.

**WE CARRY** WOOD SPLIT PULLEYS, STEEL SHAFTING, LEATHER AND RUBBER BELTING, COUPLINGS AND SAFETY COLLARS **IN STOCK**

**THE FAIRBANKS COMPANY, 749 CRAIG STREET, MONTREAL**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

A. Frasch, who conducted the experiments, which are said to have been entirely successful and satisfactory. After having explained the process, the Engineering and Mining Journal, discussing the effect upon economic conditions in Canada, growing out of the great cheapening of production of refined nickel, says:—

The position of nickel in the metallic arts has become so important in the past few years for the manufacture of nickel-steel that the effect of this new process, which can produce the metal at a figure much below the present cost of extraction and refining, bids fair to revolutionize the present method of treatment. With nickel at a price of twenty or even twenty-five cents per pound, its use would be largely expanded, and the practicable results obtainable would open up a field of utility of much value. With regard to the present status of the production and refining of nickel matte, very nearly one half of the world's supply of nickel is derived from the Sudbury deposits, which are smelted to matte in Ontario and subsequently refined in the United States. At present the United States tariff imposes an import duty of \$120 per short ton of refined nickel, while the matte is admitted free, and as a self-protective measure, the present Legislature of Canada has enacted tariff laws which place an export duty of six cents per pound

of nickel contained on all copper-nickel matte shipped from that country to the United States. The law will become operative as soon as refined nickel is produced in merchantable quantities in the Dominion of Canada. At first sight this measure of export taxation seems a policy almost suicidal to the welfare of the Canadian nickel companies, inasmuch as the nickel refining companies of the United States would of necessity seek the development of nickel deposits in other countries in order to overcome this additional expensto to them in the cost of producing metallic nickel. On further consideration, however, the development of the Hans. A. Frasch process, which, if successful, can produce nickel at a cost much below that involved in other methods, and the control of this process by a Canadian company, rather turns the scale in favor of Canadian interests, as it places in their hands the means which will effect most seriously the nickel refiners in the United States, at least so far as their nickel production is concerned, and, while it is rather hazardous to forecast the future, instead of jeopardizing Canadian interests the new laws will doubtless be of great value to the Canadian industry unless retaliatory measures are subsequently enacted by nickel-consuming countries.

The production of nickel as given in "The Mineral Industry," Volume VIII.,

was 3,239 tons in 1898 in the United States, all but five tons from imported ores or matto. The production from now Caledonia ores, refined in Europe, was 3,608 tons. In 1889 the production in the United States was 3,611 tons, of which only ten tons was won from native ores. The production of New Caledonia has not been reported yet for last year.

**SHAWINIGAN FALLS, QUE.**

The extraordinary industrial development taking place in the St. Maurice River district is emphasized, by the fact that the Bolgo-Canadian Pulp & Paper Corporation, of which Messrs. Edmond de Vallder and Herman Cortnet of Brussels, are the

**TORONTO WOOLEN MACHINERY CO.**  
**MACHINERY WANTED and FOR SALE**

- We offer for sale, together or in part, the following machinery:
- One 18 in. Iron Frame (G. & McC.) Picker.
  - One set (D. & F.) Iron Frame.
  - 1st and 2nd Brinker 18 in. Five Workers.
  - One Condenser, 10 in., 20 Rings, 7 Rubs.
  - One 200 Spindle Jack, 2 in. gauge.
  - One Yarn Reel, 20 Spindles.
  - One Yarn Twister, 20 Spindles.
  - One 18 in. Card Grinder, Wood Frame.
  - One Spooler and Stand (D. & F.) Iron Frame, 48 Spindles.
  - One Warper, Frame Spools.
  - One Single Gear Beamer.
  - Two Crompton Looms, Pump Motion, 3 x Box, 21 Hamers.
  - One Crompton Loom Bow Jack, 1 x 1 Box, 21 Hamers.
  - One Cam Loom (D. & F.), 2 x 1 Box, 4 Hamers.
  - One 108 in. Cam Loom (D. & F.), 2 x 1 Box, 1 Hamers.
  - One Cloth Washer.
  - One Felling Mill, Crank.
  - One Hand Press and Plates.
  - One Up and Down 90 in. Gig (D. & F.)
  - One Drum Shear 36 in., 22 (Curtis & Marble).
  - One 24 in. Double Roll Card, Iron Frame (G. & McC.)
  - One Boiler, 20 H.P.
  - One Engine, 16 H.P.
  - Shafting, Pulleys, Hangers, Steam Piping, Belting, etc.
  - One Set Yarn Mill, complete.

We also are Builders of the **EMPIRE BALING PRESS** for baling paper, rags, shoddy or wool.

**TORONTO WOOLEN MACHINERY CO.**  
118 DUKE ST., TORONTO.

**THE BEST**  
**ROOF and IRON**  
**PAINT**



**ZANZIBAR**  
ROOF PAINT

ELASTIC & INDESTRUCTIBLE  
RUST PROOF  
SPARK PROOF  
WEATHER PROOF  
FOR ROOF S OF ALL KINDS  
WATER PROOF  
SOLE MANT'RS CLEVELAND, O.

USE ZANZIBAR FOR ROOFING IRONWORK  
WRITE FOR BOOKLET "A STUDY IN BLACK"

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Branch Warehouse

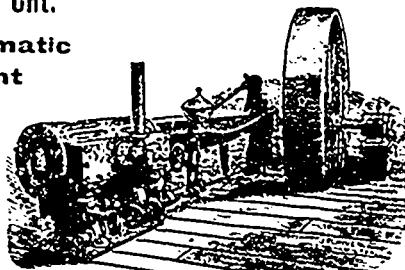
**WINDSOR, ONT.**

**THE SMART-EBY MACHINE CO.**

191 Barton Street East, Hamilton, Ont.

LIMITED,

- High Speed Engines, Brown Automatic Engines, Boilers, Rogers' Patent Shaking and Dumping Grate Bars, Pumping Machinery, Electric and Hand Power Travelling Cranes, Shafting, Pulleys, General Machinery, Etc.



Western Office—435 Ross Av., Winnipeg.

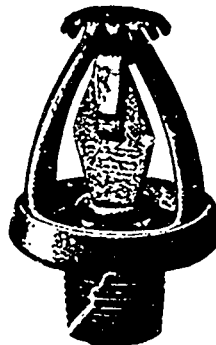
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**Protection**  
**Against Fire**

Apart from the protection it affords, it pays as an investment to use the

**GRINNELL AUTOMATIC SPRINKLER**

From 10 to 70 per cent. of cost of insurance saved by putting in a



**GRINNELL AUTOMATIC SPRINKLER EQUIPMENT**

Over 3,990 Fires—**NO FAILURES**

No charge for estimating

Endorsed by Insurance Companies

"THE GRINNELL"

**The General Fire Equipment Co.**  
72 Queen Street East,  
**TORONTO.**



principal shareholders, have just completed arrangements to establish at Shawinigan Falls a one-hundred ton ground wood pulp mill, a seventy-five ton sulphite pulp mill and a one-hundred-ton paper mill and have contracted with the Shawinigan Water & Power Co. for 15,000 horsepower of water and the necessary land for the storage of the pulp wood and for their numerous mill buildings. The Pulp & Paper Co. have also purchased over 700 square miles of heavily timbered spruce lands on the St. Maurice river, which will afford them an almost inexhaustible supply of pulpwood. The Pulp & Paper Co's. engineer, Mr. A. C. Rice of Worcester, Mass., has engaged to take the natural conditions as they are, furnish all plans and specifications, place all contracts for the development of power, erection of buildings, and the furnishing of such machinery and supplies as may be necessary to equip the mills to make the required product. The building of the pulp mills will be commenced at once, and the contract calls for the completion of the same not later than June 1, 1901, while the other mill buildings must be completed within two years from the

present time. Nearly a thousand men will be required to perform this work within the specified time in addition to which over 750 men will go into the woods this fall to secure a supply of pulp wood for the mills during the season of 1901. The factory buildings of the Pittsburg Reduction Co., who are now establishing a plant at Shawinigan Falls, are far advanced towards completion, and will soon be ready to receive a large number of permanent operatives. It is probable that the third of the four large manufacturing concerns who have contracted for land for mill building and power to operate the same will commence work at Shawinigan Falls this season. These three industries have also contracted for the use of over 30,000 horsepower, which is far more than that used at any single place in America outside of Niagara. One difficulty experienced just now in connection with these works is the scarcity of labor. Owing to the demand for workmen at Sydney, C. B., the Sault and other new manufacturing points, in addition to the general prosperity of old established manufactories, the companies at Shawinigan find it difficult to get an adequate supply of labor. The Shawinigan Water & Power Co. is therefore advertising in a number of papers in Nashua, Lowell, Fall River, and other new England manufacturing towns, calling attention to the opportunities at its works, and especially pointing out to French-Canadians the advantages of returning to their native country.

at all seasons of the year and very few of those who visit the Pan-American Exposition but will desire also to visit them. The trip from Buffalo can be made in half an hour. There are many points of view and places of interest and the visitor can plan his itinerary according to the leisure time at his disposal. If time will permit, the cataract should be viewed from both sides of the river and trips should be made the length of the Gorge, either along the cliffs above or over the trolley road which runs close to the water's edge. Perhaps the most comprehensive near-views of the Falls are those obtained on the Canadian side of the Gorge, especially that from Falls View station. Here is seen a complete panorama, embracing the rushing and turbulent currents of the upper rapids and the whole sweep of the falling waters, reaching from end to end nearly four-fifths of a mile, with the great Horseshoe Fall in the foreground separated by Goat Island from the American Fall, which is 158 feet high, and 1,881 feet wide.

In the river below plies the little steamer "The Maid of the Mist," carrying visitors close to the foot of the Falls at various points and affording splendid views of the descending waters. The State Reservation on the American side and Queen Victoria Park, across the river in Canada, are delightful observation grounds, both open for the enjoyment of the public free of any charge. To the scientific visitor the electrical power development at the Falls will be especially interesting. On the American side there are two great corporations utilizing the current of the Niagara River for developing electric power used in many industries at the Falls. The power thus generated by one of these corporations is also transmitted to Buffalo, twenty-five miles distant, for use for the electric lighting of the city, for operating a great electric trolley car system and in many important manufacturing establishments. The power thus transmitted will likewise be extensively used for the purpose of the Exposition.

Two new turbines and dynamos have been installed at the works of the Cataract Power Co., at DeCew's Falls, Ont., increasing the capacity to 9,000 h.p.



**SOUTH AFRICA.**

Messrs. Kelley's Directories Limited, (London, Eng.) beg to announce that a new edition of the **General Directory of South Africa** is now in course of preparation and desire to draw the attention of Canadian Manufacturers to the importance of the work as an advertising medium for making their goods known to buyers in South Africa. Being **THE STANDARD WORK** it reaches the very people whom manufacturers desirous of opening up or extending their export trade with South Africa, would desire to get in touch with, **THE ACTUAL BUYERS THEMSELVES.**

For further particulars, charges for advertisements, etc., apply to  
**Dominion Branch, Kelley's Directories Ltd.**  
 71 Victoria St. Toronto, Ont.  
 H. P. DEST, Manager.

**THE FALLS OF NIAGARA.**

The importance of the great Falls, Rapids and Gorge of the Niagara River as auxiliaries to the many and varied attractions of the Pan-American Exposition to be held in Buffalo, May 1 to November 1, 1901, cannot well be overestimated. In its immense flow of waters, its grand scenery and its historic lore, the Niagara is one of the most renowned rivers of the world. Its great cataract has defied the descriptive powers of poets and philosophers and baffled the delineative skill of painters and photographers. The grandeur of their environment renders the Falls perennially interesting

**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.

**SYRACUSE  
 BABBITT**

**BEATS  
 THEM  
 ALL**

Importers and Dealers in

PIG TIN  
 ANTIMONY  
 INGOT COPPER  
 ALUMINUM

NICKEL  
 BISMUTH  
 IRON AND STEEL  
 SCRAP



BABBITT METALS  
 SOLDER  
 TYPE METALS

COLUMBIA  
 PHOSPHOR TIN  
 AND ALL OTHER  
 WHITE METALS

**SYRACUSE SMELTING WORKS,**

WILLIAM and ST. THOMAS STREETS,

MONTREAL

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**IRON PRODUCTION IN CANADA.**

Canada in many respects is a duplicate of the United States. The natural products of the two countries are very much the same. With the exception of such products as are indigenous to the semi-tropical south, there are few articles produced by the United States which Canada does not also produce. The two countries find in agriculture the chief employment for their people. Each country is an exporter of agricultural products, and these form the great bulk of the total exports of the two countries respectively. In regard to minerals, the two countries are about equally resourceful, the only difference being that Canada has had less than one dollar of capital for developing her mines for every twenty spent for similar purposes in the United States. Climate

may be against us in some respects in agriculture, but climate cuts no figure in mining. Canada has as large an area as the United States, and there is every reason to believe that this country is just as rich in mineral products as is the United States. But while we are competitors of the United States in the sale of agricultural products in the

markets of Great Britain and Europe, we have done practically nothing in the way of competing with our neighbor in the manufacture and sale of the leading products of the mine. While the United States is shipping rails to Europe and Asia, while its exports of iron and steel and their products are increasing by leaps and bounds, Canada

**PATENTS,** TRADE MARKS, CAVEATS, ETC.  
**EGERTON R. CASE,**  
 Registered Solicitor of Patents. Notary Public.  
 TEMPLE BUILDING, - TORONTO, ONT.

**Lighting, Heating**  
 and **Motive Power**  
**.. BY GAS ..**

**GAS FROM WOOD** - A rich permanent Gas almost equal to that of Coal Gas, can be made by using the

**RICHE GAS GENERATOR,**  
 at a mere nominal cost per thousand cubic feet. The Generator is simple in construction, and does not require skilled labor to work it. No purifiers required. Products being a rich permanent Gas and Charcoal.

These Generators are extensively used in Europe, and are on exhibit at the Paris Exposition.

Particulars by applying to

**JAMES MILLAR NEIL**  
 GAS EXPERT,  
 7 Beaver Hall Square,  
 MONTREAL.

**The WILLIAM C. WILSON CO. Limited,**  
 24 Front Street East, Toronto,

WHO ARE AGENTS FOR THE LARGEST INDEPENDENT OIL REFINERS IN AMERICA, ARE IN RECEIPT OF NUMEROUS LETTERS WITH REFERENCE TO THEIR "SEMPER IDEM" VALVE CYLINDER OIL, OF ONE OF WHICH THE FOLLOWING IS A FACSIMILE:

ALEX. HAMILTON,  
 LAW LOG CONTRACTOR

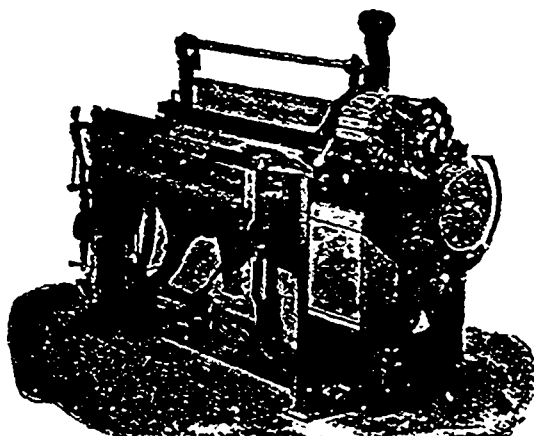
GENERAL RECEIPT

WARRICK, ONT. 21<sup>st</sup> May 1900

The William C. Wilson Co  
 24 Front St E  
 Toronto

Gentlemen  
 I have had your cylinder oil especially for the Port 3. I have used it in my Saw Mill & Rail Road Mill for my Steam Boat & it has given me other satisfactions & compares favorably with other oils which cost me much more money. I have now had a complaint from my one of my three engines as to the quality of the oil & I would not change. We made reply. It does all we expect it to do

Yours faithfully  
 Alex Hamilton  
 Warrick



THE NORTHROP LOOM.

There is only one Profitable Plan—**BUY NORTHROP LOOMS**

With them the Future is Assured.  
 They are no Experiment.

Thousands have been running in the United States, and a large number are now in Canada. Sales steadily on the increase.

"The Mills that refuse their opportunities will find their future utility serving as picturesque ruins in the landscape."

We also Manufacture the Best Warper at present Known—also Spoolers.

Write for particulars and quotations. Address

**The NORTHROP LOOM CO. OF CANADA, Ltd.**

VALLEYFIELD, P.Q.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

has hardly begun to make iron for her own needs. There is no more reason why Canada should not compete with the United States in iron and steel than in wheat, butter, cheese and pork. We have all the requisites for the economic production of iron and steel, not only in the Maritime Provinces but right here in the heart of Ontario. What we want in Canada, and especially in Ontario, is a vigorous policy looking towards the development of our iron mines and the manufacture of pig iron, steel rails and all kinds of structural iron. There is a world-wide market for such articles. Canada is not limited to her own markets. She has the world for her field. While it is becoming more and more expensive to manufacture iron in Great Britain and Europe, it ought to be the very reverse in Canada. It is not improbable that Sydney, C.B., will surpass even Alabama in the cheap production of pig iron, and there is no reason why Ontario should not have furnaces working as economically as those at Pittsburgh. It is satisfactory to notice that we have, at least, made a beginning. Pig iron is now being produced in increasing quantities at Hamilton and Deseronto, while an iron plant is being completed at Midland. Our deficiency in Ontario seems to be more in the production of ore than in the manufacture of iron. The company at Hamilton finds it necessary to import considerable

quantities of ore from the United States. This, we feel certain, will only be temporary. The Algoma Commercial Company has got well advanced in the opening up of its iron properties in Michipicoton. It is said the company is shipping 4,000 tons a week, although the mine only made its first shipment on July 12 last. The opening up of this mine will undoubtedly reduce the imports of ore from the United States, and may stop them altogether. It will be a year or two before shipments of ore can be made from the Atikokan ranges, where the supply of iron ore is said to be unlimited. Pending the development of the mines in this district and the completion of the Rainy River Railway, the owners of iron mines at other points in Ontario that are accessible to the boats and cars ought to make an effort to open up their properties and produce ore for shipment. Iron ore is a merchantable commodity to-day, and anyone who has the right article can find a market for it. The great desideratum in the development of Ontario's iron mines seems to be capital. A number

of promising mines have been opened up, but in most of them no development work has been done to ascertain the quality of ore they contain. Ontario is by no means a purely agricultural province. We hope before long to see her have a world-wide reputation as an iron producer. If the British iron manufacturers studied their own interests they would abandon the unfavorable conditions under which iron is produced in Great Britain in favor of the superior conditions that prevail in Canada. —The World.

As an instance of direct returns from advertising, The Burt Mfg. Co., Akron, Ohio, report that they are crowded with orders as the result of an illustrated notice of their Burt exhaust head, which they have only recently commenced to advertise. "Any article of merit," said Mr. Warden, manager of the Company, "can be pushed successfully through judicious advertising in the trade journals, as we have demonstrated, to our own satisfaction, at least."

CHARLES F. CLARK, President. JARED CHITTENDEN, 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:

Halifax, N.S.	Hamilton, Ont.
London, Ont.	Montreal, Que.
Ottawa, Ont.	Quebec, Que.
St. John, N.B.	Toronto, Ont.
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, TORONTO.

F. W. Hore's Sons, HAMILTON, ONT.  
Manufacturers of  
Wheels, Wheel Materials, Shafts, etc.

## AGENCIES WANTED.

An old established firm in Victoria, British Columbia, is desirous of securing the Agency in that Province for one or two manufacturers of Standard Lines suitable for the Grocery Trade. References exchanged.

Apply to B. C., Office of  
THE CANADIAN MANUFACTURER, Toronto.

## The Underwood Typewriter



Visible Writing from start to finish.

The descriptive pamphlet, or any stenographer using the Underwood Typewriter, will explain why 1,000 of these machines have been sold in Canada in one year—more than all others put together.—Visible writing and the tabulator are winners.

SOLE CANADIAN AGENTS.

Creelman Bros. Typewriter Co.,  
15 Adelaide St. East, TORONTO, ONT.

# Shafting—Hangers—Pulleys

FRICION CLUTCH PULLEYS AND COUPLINGS

Rope Transmission of Power.

HANDSOME ILLUSTRATED CATALOGUE ON APPLICATION.

DODGE MANUFACTURING CO. OF TORONTO, Limited, - - TORONTO.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**KEYSTONE LUBRICANTS.**

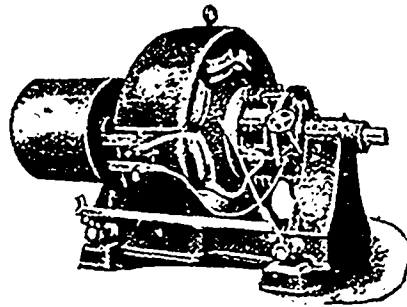
The Canada Lubricating Co., Toronto, are in receipt of a letter from Mr. J. W. Taylor, chief engineer of the steamer Persia, one of the large and popular fleet of steamers which ply between Toronto and Montreal, in which he alludes to the merits of the Keystone lubricating grease used by him on the machinery of that vessel. He says that having run a ten days test with Keystone grease, he has to report that the result was far beyond his expectations—that he had used the best greases on the market, as well as the best compound dops known to engineers, such as they usually prepare themselves and his experience has been that one pound of Keystone grease will go farther and answer a better purpose than any other grease that he has ever used. He had, at the time of writing run two trips representing 164 hours on two and a half pounds of Keystone grease.

The makers speaking of this lubricant, say:—The Keystone Brand Lubricants afford the consumer the purest, the most economical, the safest and cleanest and most efficient form of lubrication known. This lubricant, owing to its perfect consistency, requires only a small quantity to minimize friction and feeds only when the machinery is in motion. It is applicable on every kind of machinery, engines of all kinds, locomotives, steamships, passenger coaches and freight cars, refrigerating and electrical, agricultural and wood-working machinery of all classes; all special kinds of paper and pulp machinery, cotton beaters and pickers, heavy bearings of all kinds, shaftings, etc., etc. It is a perfect reducer of friction, and will cool off the hottest journal in a short while. For further information, circulars, prices, etc., enquires of the company.

**FORCED COMBUSTION.**

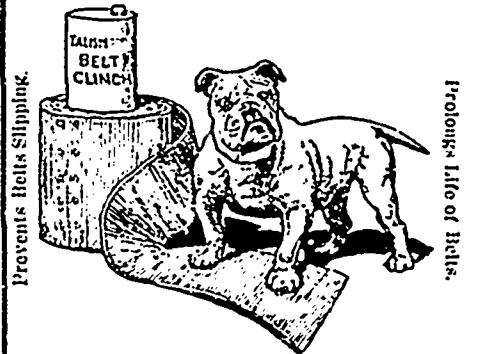
Messrs. Mills & Rowan, in their exhaustive work on Chemical Technology, make the following pertinent statements regarding the subject of mechanical draft. The principles of what is now becoming well known under the name of "forced combustion" have been repeatedly advocated during past years by those who have devoted thought and study to the subject. The position assumed by them—which is now finding favor among engineers—has been, in brief, that the air supply required for combustion in furnaces can be more economically furnished by mechanical power than by the action of chimneys; and that the mechanical method has other advantages which enable it to be preferred to the one which is older, but more imperfect. One of these advantages is the higher temperature of combustion, which is equivalent, with a boiler of good design, to an increased evaporative power of the boiler, or to increased evaporative effect for the fuel. Another advantage, which has not been fully realized in any plan as yet introduced in practical work, is that the rate of travel and escape of flame and hot products of combustion is under control. It is thus possible to cool them more completely than can be done when chimney draft is used, and this means a saving of heat which would otherwise be uselessly dissipated. Mechanical or artificial draft thus presents to us a method of economically furnishing the air supply to furnaces and producing a more efficient combustion temperature, while it also renders possible further economies due to retarding the movement and escape of hot gases, and to preliminary heating of the air supply by waste heat or otherwise.

**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.**

**TALISMANIC BELT DRESSINGS  
WILL INCREASE YOUR POWER**

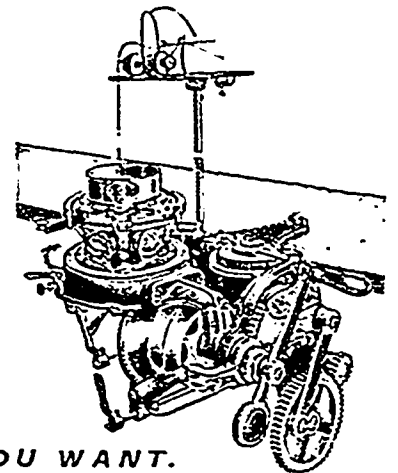


*Prevents Belts Slipping.*  
*Prolongs Life of Belts.*  
"What We're On We'll Cling To."  
**TALISMANIC BELT CLINCH—For Leather Belts  
TALISMANIC RUBBER FACING—For Rubber Belts  
TALISMANIC ROPE PRESERVER**  
**JOHN W. BOWDEN, & CO.**  
67 Adelaide St. E. Toronto, Ont.

Advertise in  
The Canadian Manufacturer.  
Send for Rates.

**RICHARD SCHOFIELD,  
TORONTO  
Sells "BRANSON THREE-QUARTER  
AUTOMATIC"  
KNITTING MACHINES**

**AND ALL OTHER KINDS OF  
Hosiery and  
Underwear MACHINERY**  
ASK US FOR WHAT YOU WANT.



**Paper Mills and Pulp Mills**

And all Users of ENDLESS FELTS get the  
Best Value by ordering from

**Hamelin & Ayers,  
LACHUTE MILLS, QUE.**

We are now prepared to make all grades, from the finest Bristol Board to the coarsest Sulphide Fibre. With our 24 looms, and all other machinery to match, we are in a position to fill all orders promptly.

When ordering state kind of Paper or Board made, and speed of machine.

You will not be asked to pay for Felts that are not satisfactory. Every Felt is tested in our factory, and is shipped with our guarantee.

**CAPACITY 1,000 SQUARE YARDS DAILY.**

ADDRESS

**HAMELIN & AYERS, Lachute Mills, Quebec, Can.**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

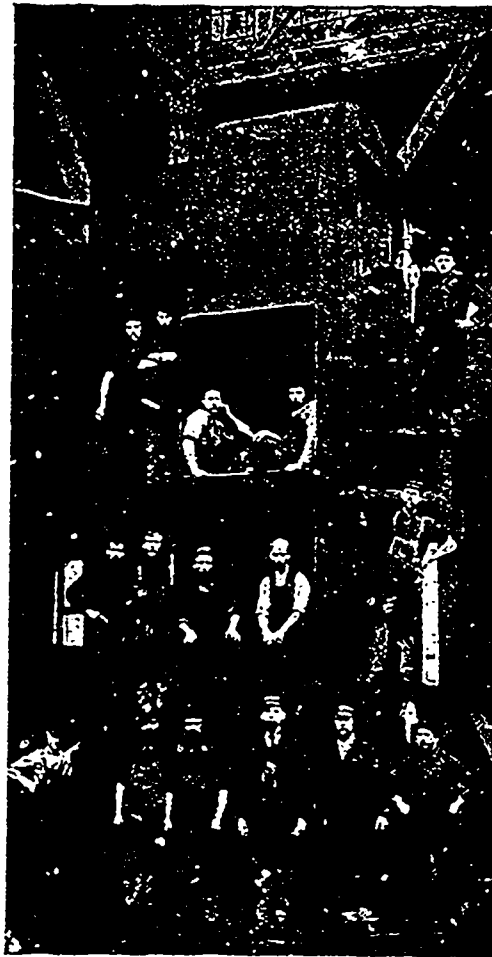
**A NOVEL MECHANICAL DRAFT FAN.**

Both the size and peculiar design of the Duplex Mechanical Draft Fan, recently built by the B. F. Sturtevant Co., of Boston, Mass., for the Oakland Transit Co., Oakland, Cal., is illustrated in the accompanying reproduction of a photograph.

The structure actually consists of two fans, the upper one having a bottom horizontal discharge, and the bottom one a top horizontal discharge which are brought together midway of the height of the fans. Upon the left hand side is provided a common supply chamber, with dampers so arranged that the gases may be turned to each fan from the boiler flue, and that the volumes admitted to each fan may be regulated by operating the dampers. Each fan wheel is eight feet in diameter, in a casing four feet wide. The entire height of the apparatus is twenty-four feet. Attached to the shaft of each fan is a connected 6x9 upright engine, provided with water-capped journal box to keep the bearings cool. Each shaft extends through both the fan wheel and the inlet casings and is supported at the outer end in another capped journal box.

From this description, it is evident that the fans were designed for use on the induced principle, that is, the gases are drawn through the fan and thence discharged into the chimney. The design contemplated the support of the entire apparatus on beams sufficiently above floor level to permit a free passage level with a common inlet connection and coupled shaft, but the conditions existing in this particular plant necessitated the arrangement shown.

As a rule, a duplex apparatus of this character is arranged with the two fans on a



above floor level to permit a free passage level with a common inlet connection and coupled shaft, but the conditions existing in this particular plant necessitated the arrangement shown.

**NEW DYESTUFFS.**

Katigen Black S. W. and T. G. are two new cotton dyestuffs which will undoubtedly play a great part in black cotton dyeing. Both brands are possessed of excellent fastness in every respect. The S. W. quality can be dyed either direct or afterwards treated with chrome, but the T. G. mark only is recommended to be after-treated with chrome; it then shows a full deep black, whilst the S. W. has a more bluish tone. Their fastness to light, alkali, acids, washing, boiling with soda, boiling with acids, crabbing and steaming is excellent, either when dyed direct or when after-treated with chrome. They are also possessed with excellent level dyeing properties. Katigen Black will no doubt become a substitute for Aniline Oxidation Black and is of equal importance for the dyeing of hanks as for pieces. They are also extremely well adapted for the dyeing of loose cotton, hosiery and haberdashery, as well as for warp dyeing.

Katigen Chrome Brown 5 G. This new product is to be considered chiefly as a combination color for the shading of other Katigen dyestuffs for the production of fashionable shades, and amongst others in conjunction with Katigen Black Brown N. it yields the excellently fast Khaki tones. When dyed direct with common salt, soda and sulphide of soda the shade produced is brown, but when afterwards treated with chrome and copper the shade is changed into a dull old gold. The color levels well. The fastness to washing and boiling is excellent, and its fastness to alkalies, acids and light is also very good.

Benzo Fast Orange S. This color is remarkable for its great brilliancy, its fine clear shade and excellent properties. It is dyed with the addition of Glauber's Salt and Soda, and falls on to the fibre well, yielding good level shades. The fastness to alkalies, acids and washing is the same as that of the other substantive Oranges. Its fastness to light is considerably better than that of Benzo Orange R. Dyed acid on wool it produces very nice shades, which are fast to milling. It is also adapted for the dyeing of half-wool and half-silk. Dyed on cotton the color can be discharged with stannous sulphocyanide or zinc powder.

Benzo Nitrol Bordeaux G. This new color is dyed with the addition of Glauber's

**McLachlan Electric & Gasoline Motor Co., LIMITED.**

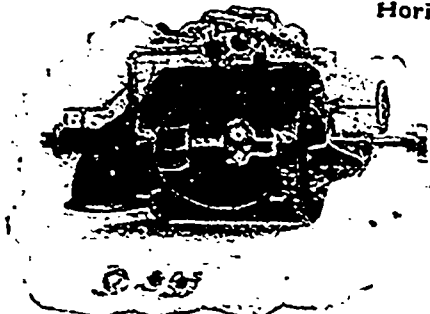
**MAKE** Gas or Gasoline Engines from 1 h.p. to 6 h.p. Stationary or Marine and Electric Motors from 1/2 h.p. up. Motor Carriages for Pleasure or Business.

94 ADELAIDE ST. WEST. TORONTO

One cent spent for a postal will bring you any information you wish.

**THE CROCKER Patent Turbine**

Horizontal Setting, with Quarter Turn Elbow.



Where the nature of the location will permit its use this type has many advantages. It is very suitable for direct connection to dynamos, and many are in operation in this class of service.

Notice how complete and compact this arrangement is, and how easily it may be installed. Can you use anything of this kind? Your inquiries will receive prompt attention.

WATER POWERS examined and Reports made. Estimates submitted for Complete Equipments.

**The JENCKES MACHINE CO.,**  
42 Lansdowne St., Sherbrooke, Que.

# 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.

Salt and Soda and developed in the usual manner with Benzo Nitrol Developer. It yields a deep bluish Bordeaux very similar to Alizarine Bordeaux on an alumina mordant, which meets with so much favor for fancy woven goods. Benzo Nitrol Bordeaux G. is very fast to washing and light and resists the action of acids and alkalis very well, indeed. This new product is especially suited for cotton yarn dyeing, weaving yarns, etc.

**Acid Blue Black 3 B.** This new product is remarkable for its excellent fastness to acids. It is dyed with the addition of Glauber's Salt and Sulphuric Acid or Acetic Acid. Acid Blue Black 3 B. produces a dark blue shade, which in deep tones has rather a violet cast, and is possessed of good fastness to alkalis; its fastness to light is also good. Its fastness to rubbing, perspiration and steaming is very good, indeed. Shades obtained with this product are distinguished for their clearness and possess the same bloomy appearance over hand as those produced with Logwood. It is also recommended for the production of cheap Navy Blues.

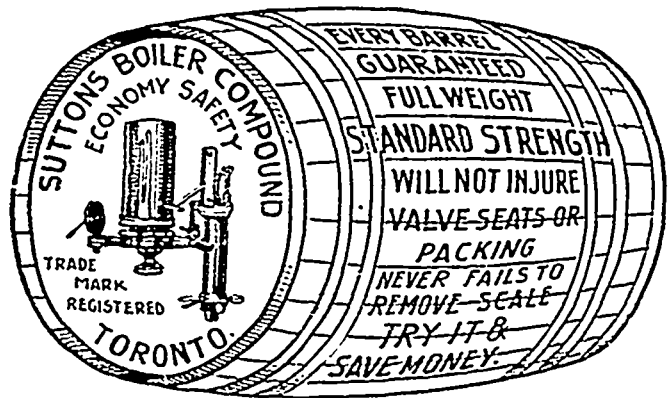
**Alizarine Sapphirole S. E.** This color, which, owing to its properties, is very popular for wool dyeing, has proved itself very valuable for the dyeing of cotton. When fixed on the fibre with the aid of alum its fastness to light is excellent, being far superior to any other product on the market. Its fastness to soaping, however, is not so good. Alizarine Sapphirole S. E. is especially adapted for dyeing curtains, checking threads in cretonne, etc.

**Fashionable Shades Fast to Light.** Since the discovery of Alizarine Sapphirole and Fast Light Yellow G. it has become possible

to produce fancy shades on ladies' dress material which meet the utmost demands as regard fastness to light. This was hitherto impossible owing to the want of a Fast Blue. Indigo Carmine, which was mostly employed, showed a great sensitiveness to light as compared with the other components employed, so that in fading the shade underwent a very disagreeable change. This is illustrated very clearly in a pattern card of a few fashionable shades on ladies' woolen dress material which have been dyed in one case with Indigo Carmine and in the

other with Alizarine Sapphirole S. E., employing in both instances the same combination colors for shading red and yellow. After a few days' exposure to sunlight the superiority of Alizarine Sapphirole will easily be seen.

Benzo Fast Scarlet 4 B. S. will meet the urgent requirements for a red cotton color fast to acids, of a similar shade to Benzo Purpurino 4 B., at the same time dyeing according to the ordinary simple method. It is extremely fast to acids, even resisting the action of mineral acids. The fastness to



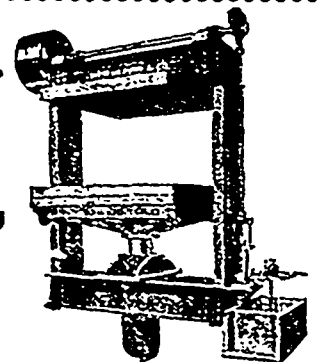
## WM. R. PERRIN & CO.

122 Church St., Toronto.

MANUFACTURERS

**Hydraulic Presses,  
Screw Presses,  
Filter Presses.**

SEND FOR CATALOGUE.



# PITT & SCOTT

ESTABLISHED 1876.

**Foreign Freight Brokers and Express Carriers** TO ALL PARTS OF THE WORLD.

THROUGH BILLS OF LADING ISSUED AND RATES QUOTED TO ALL PARTS OF EUROPE, ASIA AND OCEANICA.

SENDERS INVOICES COLLECTED AGAINST DELIVERY OF GOODS ANYWHERE ABROAD.

PITT & SCOTT, - - 39 Broadway, NEW YORK.—121 Water Street, BOSTON.

ALSO AT..... LONDON, LIVERPOOL; PARIS, HAMBURG.

AND AGENCIES EVERYWHERE ABROAD.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

washing and boiling is about the same as that of Benzo Purpurino 4 B., but its fastness to light is superior, it being at least equal to that of Geranine. Benzo Fast Scarlet 4 B. S. is also well adapted for the dyeing of half-wool and half-silk. Dyed on cotton the color can be discharged a white with stannous sulphocyanide or zinc powder.

**Leather Colors.** A new pattern card has been issued illustrating over a hundred and fifty shades on sheepskin. Some of the shades show a dull long grain and others a glazed chagrain. This new card would prove very useful to leather manufacturers, as it contains every fashionable shade at present in use, together with all necessary instructions for dyeing.

Samples, instruction circulars and any of the above new shade cards mailed gratis to interested dyers by the Dominion Dyewood & Chemical Co., Toronto, Canada, sole agents in Canada for the Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany.

The Ogilvie Milling Co. is erecting an elevator at Rosser, Man.

**A REPRESENTATIVE SCHOOL BUILDING HEATING AND VENTILATING PLANT.**

**THE SIMMONS SCHOOL, St. Louis.**

Premising the fact that for large public and industrial buildings the fan system is the approved and, indeed, the only adequate method of heating and ventilating, it becomes of interest to note the various forms which the apparatus takes to adapt itself to varying conditions. In designing such a plant many factors must be considered. The size and shape of the building and its component air spaces, the temperature to be maintained, the allowable pollution, or in other words the necessary rapidity of the fresh air supply, these with the location and arrangement of the air distributing apparatus, are a few of the essential elements. In buildings where the number of occupants is large, special care must be taken to provide an influx of fresh air sufficient in volume to prevent the harmful constituents from rising above a percentage consistent with healthful conditions. Hence it is that heating and ventilating plants installed in

school houses exhibit the utmost regard for exacting requirements.

The following general description of a school building installation may be of interest, though it refers to but one of the many forms which such apparatus may take:

The Simmons School is one of a large number of St. Louis educational institutions for which heating and ventilating plants have been built by the Buffalo Forge Co., of Buffalo, N.Y., and installed by the Cullen & Stock Heating & Ventilating Co., of St. Louis, Mo. The building is of two stories, with attic and basement, and contains thirteen main rooms and a large kindergarten. The heating and ventilating plant built according to the plans and specifications of Wm. B. Ittner, Commissioner of School Buildings, and Alvin D. Reed, Chief Engineer, may be described as a "low-pressure steam fan" or "plenum"

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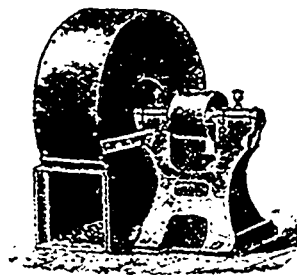
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system, with thermostatic control, and comprises essentially a fan, fan engine, tempering and heating coils, hot air or plenum chamber, horizontal air ducts, and vertical fresh air and vent flues, with the incident dampers and regulating apparatus. The plant was designed to heat each room to a temperature of seventy degrees, and the corridors to sixty-five degrees, with the tem-

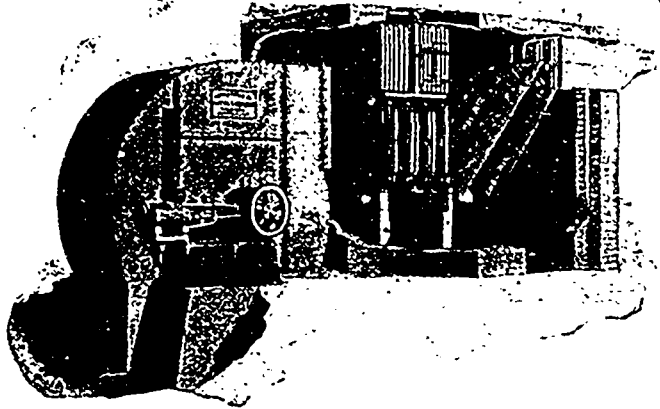
peratures for the principal's office and recitation room, the halls and basement, a total delivered air supply of thirty-one thousand four hundred cubic feet per minute.

The appended cut shows the general style of the apparatus employed for handling this volume of air. To afford the most convenient and economical distribution, the fan and heater is placed centrally in the basement.

double air chamber. Here dampers are placed, controlling the air mixture entering the various ducts. For this school the fan is a 150-mch Buffalo steel-plate, three-quarter housing, top-horizontal discharge fan, driven at about 150 revolutions by a Buffalo horizontal 16 x 10 centre-crank engine direct-connected to the fan and running under 12 pounds steam pressure.

The fan case extends 9 feet, 9½ inches above the floor line and its outlet connects with the cone of the heater by a short width of heavy canvas. The top of the heater case is 10 feet, 10 inches above the floor; the heater itself is 7½ feet high, 9 feet, 2½ inches wide, and 4 feet, 8¾ inches long, and is composed of five abutting heating coil sections, each comprising four rows of one-inch steam piping and a cast iron base with partitions and connections for live and condensed steam. The tempering coil is composed of one such section.

The temperature regulation is effected by means of a pneumatic apparatus under thermostatic control. Mixing dampers controlling the amount of hot or tempered air admitted to the rooms are placed in the air pipes at the hot room. These dampers are operated by diaphragm valves, and they, in turn, by thermostats in the various rooms, and are so arranged that fresh air at a constant volume and temperature is admitted to each room without regard to outside thermal, hydrometric or barometric conditions. Thus the working of the dampers depends upon the proportion of hot or tempered air required in the room to which the flue leads. This arrangement, together with automatically controlled by-pass dampers, renders feasible a very close temperature regulation, that is, with a variation not exceeding one



TYPE OF APPARATUS FOR SINGLE DUCT APPLICATION.  
Three-quarter Housing Fan, Left Hand Top Horizontal Discharge, Blowing Air Through and Underneath Heater into Brick Receiving Chamber, for Single Duct Supply of Hot and Tempered Air.

perature outside at zero Fahrenheit, and with a boiler pressure of twelve pounds; and also to furnish thirty cubic feet of fresh air per minute to each pupil, based on an allowance of sixty pupils to each of the thirteen class rooms, and one hundred pupils in the kindergarten, together with five thousand cubic feet additional per minute

The fresh, pure air from out of doors enters the basement through openings provided for this purpose, and is drawn either through or under the tempering coil, according to the external temperature. Passing to the fan, the air is discharged partly through the main heater coils, and partly beneath them through the tempered air by-pass, into the

AFTER AUSTRALIAN TRADE.

Mr. J. F. Monaghan, United States Consul at Chemnitz, Saxony, reports:

The German manufacturers have come to the conclusion that if they would continue to make progress in the future as they have done in the last twenty years in their export trade, they can no longer depend on the sample and display rooms in Berlin, Frankfort, Leipzig, Hamburg, and other large cities of the Empire. They begin to feel the inroads which other nations are making in the German foreign markets. They believe—and here belief is based on practical knowledge—they must, to hold their trade, transplant their sample and display rooms from German cities to the countries in which they intend to do business.

The manufacturers of the Grand Duchy of Weimar, with the Grand Duke at their head, have taken up this question and are about to establish a sample room in Sydney, New South Wales. It is claimed by the men at the head of the movement that it is impossible for any one concern to carry on this undertaking alone; that different industries must combine and make the burden as light as possible. The Bavarian commercial and industrial chambers have made a close study of this enterprise and the opportunities offered in the Australian market, and have come to the conclusion that the best way to develop their industries is to join the Weimar manufacturers.

The exporters have found by close study that the principal wants of Australia are all kinds of machines, lamps, brushes, gloves, shoes, glassware (including optical goods), photographic supplies, musical instruments of all kinds, paints and oils, candles, agricultural machines and instruments, furniture of all kinds, and beers.

This is an opportunity that Canadian manufacturers should not neglect. There is hardly an article named in the foregoing list that they cannot make as well as the Germans.

Willard Brown, assistant engineer of the Dominion Iron & Steel Co., Sydney, Cape Breton, who was located in Pittsburg for some time, looking after the construction of the machinery for the new plant, returned to Cape Breton this week. Of the furnaces that are being erected for this company the first will be put in blast within about four weeks and the second two months later. —Iron Trade Review.

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degree from the temperature at which the thermostat is set.

After passing through the mixing dampers at the hot room, the air is conveyed through ducts radiating from the plenum chamber and running along the basement coiling to the various vertical heater flues for discharge into the respective air spaces. Each of the latter has an independent connection with the main apparatus. Escape of air from the rooms is provided for by vent flues leading upward and finding outlet in the attic, which in turn communicates with the roof ventilator. These flues are placed on the warm inner walls to increase their chimney action.

The system is supplied with steam by a horizontal tubular boiler, 72 inches in diameter and 16 feet long, with twenty-six 6-inch flues. A 5-inch low pressure reducing valve is placed in the main steam-pipe leading to the coils and engine, with two by-pass valves and pipes around it.

This plant is characteristic of numerous installations by the Buffalo Forge Co., though, as before mentioned, the types and arrangement of the fan, heater and ducts vary greatly. The heating and ventilating plant here described, with its air supply constantly ample in volume and at proper temperatures automatically controlled, may be taken as typical of the latest and best practice in the art of heating and ventilating.

**HAMILTON'S ELECTRICAL RADIAL RAILWAYS.**

Mr. John Patterson, on behalf of the Cataract Power Co., has submitted a new proposition to the mayor and aldermen of Hamilton, Ont., respecting the projected electric line from that city to Galt, Ont.

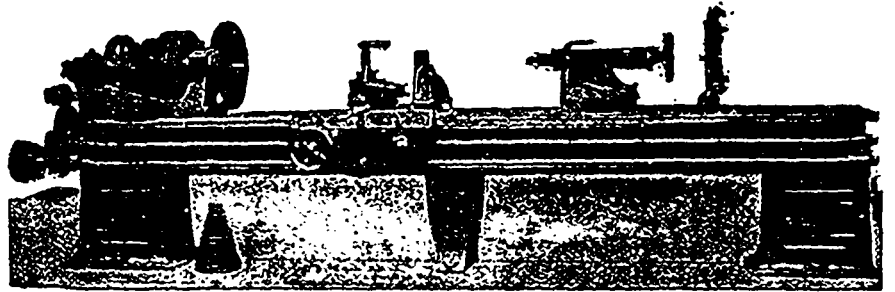
The more important parts of Mr. Patterson's letter are as follows:

If the city will give a right of way from the high-level bridge to and along Vine street for a double track railway of four feet eight and one-half inches gauge, with six feet between tracks and sufficient room for poles, etc., at the side, I and my associates will agree to build, within two years from the granting of such right of way, a first-class line of railway to Galt, etc., connecting at Galt with the Galt, Preston and Hespeler Railway, and further with the Preston and Berlin Railway, and giving daily connection

by at least twelve trips each way with Greensville, Bullock's Corners, Sheffield, Orkney, Rockton, Galt, Preston, Hespeler, Berlin, Waterloo, Doon, Blair, Freeport, etc., and bringing within an hour's ride of Hamilton fully 70,000 people. We would also construct immediately thereafter a line to Guelph, which would, on completion, reach nearly 30,000 more, and also have an hourly service all the year round. For this service we will further agree that the rates to and from these cities and towns and Hamilton shall never exceed one-third of the present rates from any of them to Toronto,

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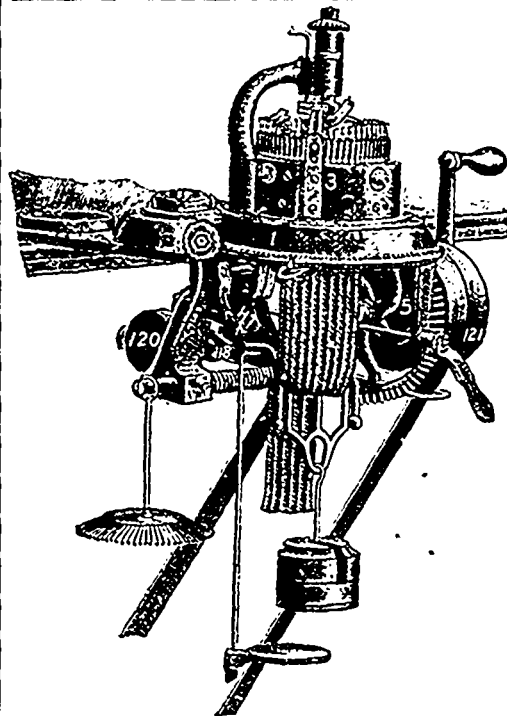
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and that the cars shall be as comfortable as any on the continent, and the speed equal to any steam railway; in other words, that the time between Hamilton and Guelph shall never exceed fifty minutes to one hour, and proportionately to Berlin.

For the route in the city, we are not tied to any particular route, except that we will ask that it must be reasonably straight, so that the motormen can see ahead sufficiently far to avoid accidents, and at the same time keep up as good a speed as will be allowed; and, while we would prefer having a right of way along the northern end of Dundurn, out of the way of picnickers

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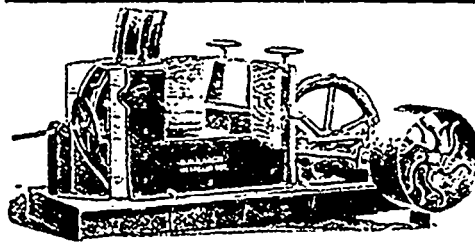
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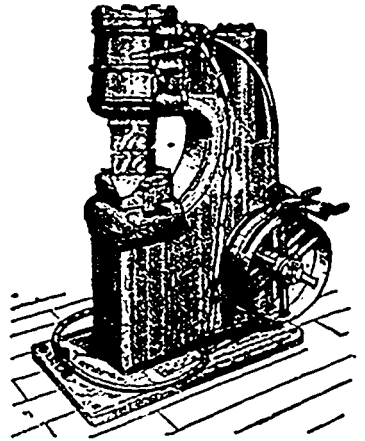
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where a better rate of speed could be maintained, we would not object to York street, if it is widened sufficiently to eliminate the element of danger, leaving that street as near Queen street as possible, and going from there to Vine street in as direct a line as can be obtained without unreasonable expense. In any route that is selected we must ask that the two tracks are together, and we cannot accept them on adjacent streets or where there are any corners to be turned obstructing the view. If this is agreed on I can guarantee the commencement of the work early next year, and its completion without any delay.

Mr. Patterson concludes as follows: As it may be thought by some of the citizens that I am asking too much from them in the foregoing, I will also make the proposition that if any other person or company wishes to take hold of the proposition and build the railways, as I have outlined them, I will turn over to them our complete surveys, franchises, etc., costing us nearly \$10,000, and will subscribe as a bonus from \$15,000 to \$25,000, besides doing all that can be done to assist in getting them the right of way spoken of or any other inducement they may desire to have granted them by the city.

**TALISMANIC BELT CLINCH.**

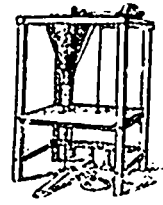
Messrs. John W. Bowden & Co., 67 Adelaide Street East, Toronto, are directing the attention of belt users to their Talismanic Belt Clinch, regarding which they say that it will prevent belts from slipping; will cause belt to adhere to pulley without straining shaft or bearing; will prevent your belt from being effected by rain or moisture; will prevent the belt from losing its life, perishing or cracking; will keep the belt pliable; will give you no lost time for tightening belts; will not open the pores of the leather and leave it spongy; will increase the returns on your invested capital; will prevent belt from stretching; will give you the full power of belts and machinery where work is done, without loss of energy in transmitting same; will increase the power fully twenty-five per cent. This article is especially intended for leather and cotton belting and the company also make Talismanic rubber facing for rubber belting. They also make Talismanic rope and cordage preserver, a special treatment for rope drivers, which prevents fraying by adhesion and absorption of moisture, prevents the stretching and contraction of ropes, and it endows the ropes with life, elasticity, resistance and endurance. For further particulars enquire as above.

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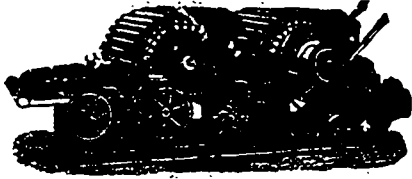
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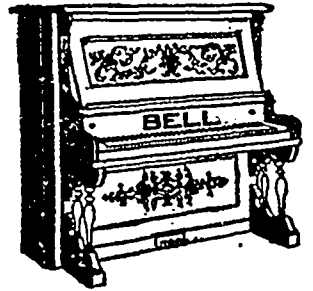
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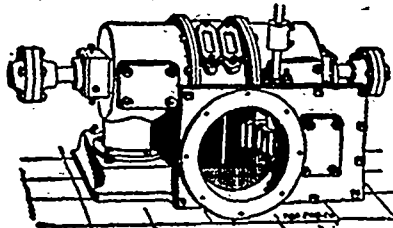
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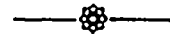
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