

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

Canadiana.org a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /  
Couverture de couleur
- Covers damaged /  
Couverture endommagée
- Covers restored and/or laminated /  
Couverture restaurée et/ou pelliculée
- Cover title missing /  
Le titre de couverture manque
- Coloured maps /  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /  
Planches et/ou illustrations en couleur
- Bound with other material /  
Relié avec d'autres documents
- Only edition available /  
Seule édition disponible
- Tight binding may cause shadows or distortion  
along interior margin / La reliure serrée peut  
causer de l'ombre ou de la distorsion le long de la  
marge intérieure.
  
- Additional comments /  
Commentaires supplémentaires:

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed /  
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /  
Qualité inégale de l'impression
  
- Includes supplementary materials /  
Comprend du matériel supplémentaire
  
- Blank leaves added during restorations may  
appear within the text. Whenever possible, these  
have been omitted from scanning / Il se peut que  
certaines pages blanches ajoutées lors d'une  
restauration apparaissent dans le texte, mais,  
lorsque cela était possible, ces pages n'ont pas  
été numérisées.

Sand to the Coarsest  
 Pipe and Core Sand.  
 Write for prices  
**MOULDING SAND**  
 and FIRE SAND,  
 also Extra Fine Quality  
**SUPPLIES**  
**Ceylon Plumbago**  
 Manufacturers of  
**HAMILTON, ONT.**  
**The Hamilton Trolley Wheel Co.,**

# AN ADIAN MANUFACTURER

AND INDUSTRIAL WORLD.

DEVOTED TO THE MANUFACTURING INTEREST OF THE DOMINION

VOL. 42.

TORONTO, JANUARY 4, 1901.

6549 No. 1.



Head Office for Canada—  
 202 St. JAMES ST., - MONTREAL.  
 TORONTO OFFICE—114 KING ST. W.  
 Send for large book, "STEAM."

DOMINION DYEWOOD & CHEMICAL CO.  
 TORONTO  
 LIZARINES  
 PRODUCTS OF  
 Die Farbenfabriken vorm. F. Bayer & Co.  
 DOMINION DYEWOOD & CHEMICAL CO.  
 TORONTO.

**SANDERSON'S**  
**...STEEL...**  
 The Oldest and Most Reliable  
 Brand on the market.  
 FULL STOCK  
 Carried at Montreal of  
**SELF-HARDENING**  
 AND  
**TEMPERING STEELS**  
**A. G. LESLIE & CO.,**  
 Canadian Agents, MONTREAL.

WHY IMPORT

# CARD CLOTHING ?

Our Prices and Quality More Satisfactory.

# THE J. C. McLAREN BELTING CO'Y

Specifications solicited. TORONTO MONTREAL.

**Fensom's**

**ELECTRIC  
 HYDRAULIC  
 STEAM  
 HAND-POWER**

All made of the best  
 material and  
 finest workmanship.

**Elevators**

The Fensom  
 Elevator  
 Works...  
 54, 56, 58  
 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**

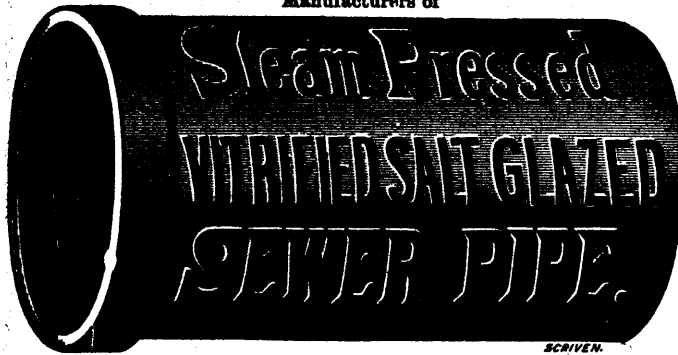
ALSO LIGHT GREY IRON CASTINGS.

WALKERVILLE, ONTARIO.

OUR  
**Universal Hand Drill**  
 INDISPENSABLE  
**A. B. JARDINE & CO.**  
 HAMILTON, ONT.

## THE CANADIAN SEWER PIPE CO.

Manufacturers of



ST. JOHNS  
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.

**W. T. Benson & Co.,**

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, Sec'y-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.

## CANADA CHEMICAL MANUFACTURING CO.

— 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 Charcoal 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.

## MONTREAL PIPE FOUNDRY CO.,

SUCCESSORS TO

(Limited)

DRUMMOND-McCALL PIPE FOUNDRY CO.

Manufacturers of

(Limited)



"Specials," Hydrants, Valves, Etc.

Offices: . . . Canada Life Building,

MONTREAL

In November, 1898, the M. Campbell Fanning Mill Co. wrote us as follows :—

Messrs. Goldie & McCulloch Co., Galt, Ont.

CHATHAM, ONT., November 30, 1898.

DEAR SIRs.—In the spring of 1895 we found it necessary to replace a high speed engine, which we had in our plant with a slow speed one, and we were then advised to purchase a Wheelock, which we did, and we are pleased to say that it is the best engine we ever ran. Very light on fuel, never out of repair, in fact, for 3½ years, she has run 313 days per year and has never cost us a \$5 bill for repairs, in fact we would not part with our Wheelock for any other make on the market, and to any person wishing to purchase an engine we will say that you cannot go astray in a Wheelock, if economy, durability, reliability and general stick-to-itiveness is taken into account as being the salient points of your purchase. Yours truly, THE M. CAMPBELL FANNING MILL CO., OF CHATHAM, LIMITED. W. S. Marshall, Sec.-Treas.

In December, 1900, the same company, in answer to our enquiry about same engine, wrote us as follows :—

GOLDIE & McCULLOCH Co., Galt, Ont.

CHATHAM, ONT., December 15, 1900.

DEAR SIRs.—In reply to yours of 15th. Since writing you November 30, 1898, re our Wheelock engine, we still have to report engine running like a top, apparently as smooth as day it was started. In 5½ years we have not paid for repairs \$1 per year. Yours truly, THE M. CAMPBELL FANNING CO., OF CHATHAM, LIMITED.

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

# 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:

HALIFAX, N. S. HAMILTON, ONT. QUEBEC, QUE. LONDON, ONT. TORONTO, ONT. WINNIPEG, MAN. ST. JOHN, N. B. GUELPH, ONT. MONTREAL, QUE. CHATHAM, ONT. PETERBORO, ONT. VANCOUVER, B. C. MONCTON, N. B. STRATFORD, ONT. KINGSTON, ONT. WINDSOR, ONT.

### Branch Offices and Agencies:

Vancouver B.C.

Wm. Hamilton Mfg. Co.

Winnipeg, Robt. Douglas, 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.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# THE NOVA SCOTIA STEEL CO., LIMITED

MANUFACTURERS OF

## BRIGHT COMPRESSED STEEL SHAFTING

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

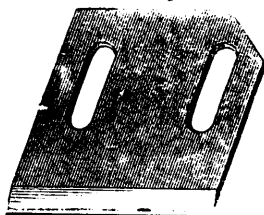
PETER HAY,



GALT, ONT.

Manufacturers of Every  
Description of.....

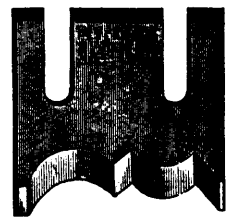
**KNIVES,** For Wood-Working, Paper  
Cutting and Leather-  
Splitting  
Machines



BARK  
KNIVES  
PULP  
KNIVES  
RAG  
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,  
MONTREAL.

**GEORGE E. EVANS,** Agent, 38 Canada Life Building  
TORONTO, ONT.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

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

**PURE ALKALI**

48% and 58% (Light and Heavy)

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

35% to 37% (Hardwood Casks)

**CAUSTIG SODA**

60% to 77%



Winn & Holland,  
MONTREAL,  
Sole Agents for Canada.

**SODA CRYSTALS**

Lump and Crushed. Brls. 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 AND BEST**

**Bicycle Screw Plate**

14 PAIRS DIES—22 TAPS

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

**BUTTERFIELD & CO.**

Rock Island, P.Q.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# 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 RAIL-  
INGS and all kinds  
of IRONWORK

Address:

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

# BROWN & CO.

Manufacturers of

Square and Hexagon

## HOT PRESSED NUTS.

PARIS, - ONT.



Send for Catalogue and Price  
List to

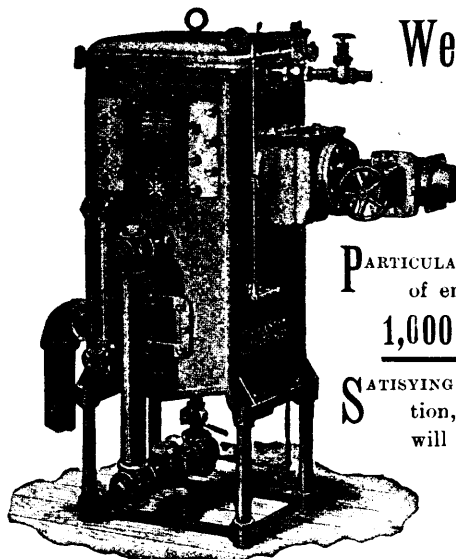


THE JOHN MORROW MACHINE SCREW CO.  
INGERSOLL, ONT.

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



THE  
**PETERBOROUGH**  
CANOE CO. LTD.  
PETERBOROUGH,  
Ont. Canada.  
SEND FOR CATALOGUE.



## Webster Feed Water Heater AND PURIFIER

BEFORE PURCHASING ELSEWHERE  
ENTERTAIN A BID FROM US.

PARTICULAR experience for ten years in this department  
of engineering, and the fact that over

**1,000 WEBSTER HEATERS** are in use, is  
self-explanatory.

SATISFYING particulars, embracing details of construc-  
tion, materials, operation and exclusive results,  
will be sent on application.

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

# A. KLIPSTEIN & CO. 122 Pearl St. New York

## Anilines, Dyestuffs & Chemicals

DELIVERY MADE AT NEW YORK, MONTREAL OR HAMILTON.

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

# Cheaper Steam

The cost of steam depends upon the cost of  
the coal necessary to produce it.

You have no control over the price of coal  
per ton, so if you want cheaper steam you must  
use less coal.

The MUMFORD STANDARD BOILER will burn  
10 to 25 per cent. less coal to the horse-power  
than a return tubular boiler.

At the present high price of coal the saving  
will soon pay for a new boiler.

## Robb Engineering Co. Limited,

AMHERST, N.S.

AGENTS:

WILLIAM MCKAY, - - - 19 McKenzie Crescent, Toronto.  
JACK & ROBERTSON, - - - 7 St. Helen Street, Montreal.

**CAPITAL WANTED. An Excellent Investment**

**WILL BEAR INVESTIGATION**

Capital Wanted in a Stock Company proposed to be formed to take over the patent right and manufacture in Canada of an article that is in constant demand in every household in the country. The enterprise will bear the closest investigation.

Full particulars on application to

**THE CANADIAN MANUFACTURER,  
TORONTO, CANADA.**

Manufacturers of  
**Phosphor  
Bronze**

**FITTINGS**

FOR

**PULP MILLS**

**Y VALVES,  
DIGESTER  
COCKS, Etc.**

**THE JAMES  
MORRISON  
BRASS MFG.  
CO., Limited**

**TORONTO.**



**RUBBER BELTING**

"Your 'Para' Rubber Belting has proved in every way quite satisfactory."

**CANADA PAPER CO.,  
Montreal.**

**THE  
CANADIAN RUBBER CO**  
**MONTREAL TORONTO  
WINNIPEG**

**Royal Paper Mills Company, Limited**

Mills -AND-  
Head  
Office:

**East Angus,  
QUE.**

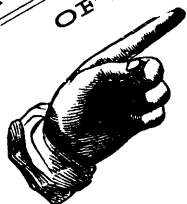


**WAREHOUSES:**

**763 Craig Street,  
MONTREAL, QUE.  
52 and 54 Front St. W.  
TORONTO, ONT.**

**F. P. BUCK, - - - PRESIDENT AND GENERAL MANAGER.**

**Manufacturers  
OF**



**Paper**

**Pulp and**

**Lumber**

Fine News, Book, Lithograph, Tub and Engine  
Sized Writing, and Colored Cover Papers.

**ROYAL CANADIAN BRAND  
Soda and Mechanical Pulp**

**SPRUCE, PINE and HARDWOOD (Dressed and  
in Rough.)  
CLAPBOARDS and SHINGLES.**

**CABLE ADDRESS—"OBBAPER," EAST ANGUS—A.B.C. and Lieber's Code.**

When writing to Advertisers kindly mention **THE CANADIAN MANUFACTURER.**



# 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

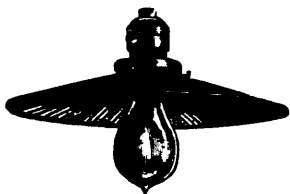
## and SPECIALTIES

SEE THIS SPACE NEXT ISSUE.

**RODERICK J. PARKE,**

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

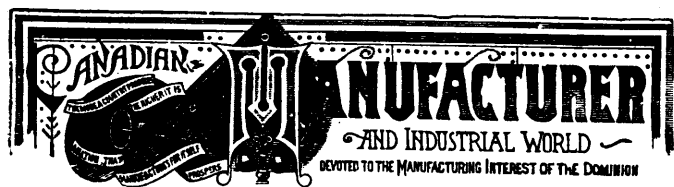
**ALUMINUM, MIRROR, CELLULOID, PAPER, PORCELAIN,**  
FOR FACTORY AND OFFICE.

**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**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



ESTABLISHED IN 1880.

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.**

McKinnon Building, Cor. Melinda and Jordan Sts., Toronto.

Cable address: "CANAMAN." Western Union Telegraphic Code used.

Index to Advertisers ..... Page 42

J. J. CASSIDY, - - - Editor and Manager.

**SOUTH AMERICAN TRADE.**

Ever since the attention of manufacturing nations have turned active attention to seeking new markets for their products, the eyes of Canadians have been looking to South Africa as a promising field for their exploitation. It is true the doors there do not stand wide open at this time, guarded as they are by armed men; but there are other doors wide open, and none more invitingly so than those of Mexico and the Central and South American countries. These countries are a rich and fertile field for Canadian manufacturing and commercial enterprise, the possibilities of which we are not fully aware; and in connection therewith we have pleasure in reproducing in part an article replete with facts regarding the resources and opportunities for trade therein contained in a brochure recently published by the South American Journal, of London. It says:—

In view of the fact that the English race has at all times been the greatest travellers of modern peoples, and that British commerce has penetrated into every corner of the world, it is remarkable to observe what an absence of knowledge generally prevails, even amongst business classes, with regard to the actual condition and prospects of the various countries of South and Central America. That this is the case, however, must be acknowledged by all who are connected with these countries.

This is still more inexplicable having regard to the circumstance that already an enormous amount of British capital, estimated at about £500,000,000, has been invested in loans, banks, railways, and numerous other undertakings and public works; and that we have always held and still retain the premier position in their markets, supplying their wants and purchasing their products to a greater extent than any other nation. It might have been supposed, therefore, that having such important interests at stake, the British people would have made themselves more thoroughly acquainted with the resources and affairs of each country, and have followed the development of them all with constant watchfulness. Much of the indifference concerning and

prejudice against those countries has probably arisen owing to the general press rarely mentioning them except in relation to some disturbance of the peace or some other calamity, almost wholly ignoring their progress during periods of tranquillity and prosperity. Hence erroneous and exaggerated notions have been formed by the public, and a very general idea subsists that they are "constantly in a state of revolution." It may be explained that Latin America, including Mexico, which is in the Northern Continent, is composed of no fewer than eighteen independent republics, which differ greatly in their conditions of advancement and civilization, so that general conclusions with respect to their affairs must be in most cases misleading and fallacious. It is true that the progress of those countries has fortunately been seriously retarded by the errors of the men who have controlled their destinies since they achieved their independence; but against this it should be taken into account that their development has been, nevertheless, more rapid and more substantial than had they remained under the domination of the old Spanish colonial regime.

From one standpoint, perhaps, this retardation is not to be regretted, since it has left open to the enterprising men of the present day a field so much the more extensive for the employment of their energies. Everyone can realize that, when countries become well known and attract special attention, competition in their markets soon becomes so keen that prices are cut down to the lowest margin of profit, and very little chance is left for people of small capital. It is the clever business man who keeps a look out for markets not yet competitively exploited, where the higher profits he can secure will more than compensate for any additional trouble or risk he may have to incur. In this sense, nowhere in the world can such favorable conditions be found than in the various countries of South and Central America.

To begin with, they surpass all others in undeveloped natural resources. South Africa, to which so much attention is now being given, does not approach them in this respect. When all the mineral treasures of the Andes and of the great Central Table Land of Brazil have been made known, people will wonder that so much wealth had been so long neglected in favor of other fields, not nearly approaching them in value. The tropical regions of South America abound in vegetable products, which, though already largely worked, produce almost nothing compared to what they might be made to yield. The same may be said with regard to the production of the agricultural and pastoral regions. For engineers and constructors of public works, no part of the world offers greater scope than do those countries whose development may be said to have as yet hardly begun; and where all classes of industrial machinery is required upon an ever increasing scale, whilst, at least, for many years to come, it is not probable that machines can be manufactured there to compete with the makers in older countries. An enormous extension of the railway systems has still to be made, and many harbor improvements will become urgently necessary as commerce increases. In electrical undertakings above all there must soon be a wonderful expansion. Though the commercial importance of Latin America is not sufficiently appreciated by the British, this is by no means the case with our rival nations, especially the Germans and the Americans, who have been making strenuous efforts to oust us from the position of commercial supremacy which we have held for so many years. In this they have succeeded to a large extent, and probably will continue to improve their position unless counteracting steps are taken by us. The ultimate reward will probably fall to those who work with most intelligence and energy. If our competitors win they will merit their success, if the English lose they will have no one to blame but themselves. In order to give a more concrete idea of the importance of those countries, we give a table setting forth their names, population, and the value of their exports and imports per annum. It must, of course, be understood that these latter figures are only approximate.

Name of Country.	Population Last Census No.	Latest Trade Returns.		Trade per head of Population.	
		Imports. £	Exports. £	Imp. £	Exp. £
Brazil .....	16,000,000	21,567,000	26,752,200	1.3	1.6
Argentine Republic .....	4,090,000	21,485,780	26,765,891	5.2	6.4
Chili .....	3,350,000	11,875,000	11,955,000	3.6	3.6
Uruguay .....	840,700	5,576,000	6,728,200	6.6	8.0
Paraguay .....	600,000	72,500	69,400	0.12	0.11
Bolivia .....	2,330,330	3,670,050	3,012,563	1.5	1.3
Peru .....	4,000,000	1,929,727	3,027,477	0.5	0.70
Ecuador .....	1,270,000	1,394,578	2,250,000	1.1	1.8
Colombia .....	4,000,000	2,500,000	2,670,000	6.0	0.60
Venezuela .....	2,323,500	2,300,400	3,516,519	1.00	1.07
Guatemala .....	1,535,000	776,133	1,098,390	0.50	0.60
Costa Rica .....	268,000	917,223	1,012,102	3.3	3.8
Salvador .....	803,534	270,000	1,080,000	0.38	1.4
Honduras .....	398,900	274,661	256,685	0.70	0.69
Nicaragua .....	420,000	573,236	636,710	1.4	1.5
Mexico .....	12,619,954	9,121,810	13,871,513	0.72	1.1
	74,848,964	£84,323,88	£104,741,840		

The countries of Latin America occupy an area of 8,215,858 square miles, or about 2.31 times the area of the whole of Europe, but have a total population of less than double that of the United Kingdom. A still closer idea of the relative sizes of the countries may be formed when it is known that Brazil alone is nearly equal in area to Europe, or, taking the area of Great Britain at 88,600 square miles and the population at 40,000,000, Brazil has about 36½ times this area, but only two-fifths of the population. The Argentine Republic is 12.6 times the area of Great Britain, but has only about a tenth of the population. Mexico is 8½ times the area of England, Scotland and Wales, with only about one-third of the population. From the figures given an approximate idea can be formed with regard to the areas and population of each of the other states compared with Great Britain. These will suffice to show what enormous scope there is for development, especially when it is known that there is proportionately much less "steppe" and desert in South America than in any of the other great continents; that its cultivable soil is unsurpassed in richness, that its river communications to the interior are unrivalled, and that even its desert regions yield enormous wealth in minerals and nitrate of soda.

To acquire a knowledge of those countries sufficiently intimate to be of business advantage is by no means facile. It has frequently been observed that events march so rapidly there that handbooks, quite accurate at the time they were written, are completely out of date in a year or two. The best plan is to study recent works of commercial geography until familiarity with their general features and products has been gained, and thereafter to follow the pages of the "South American Journal," which records from week to week all events affecting their progress and business.

### THE TORONTO INDUSTRIAL EXHIBITION.

The directors of the Toronto Industrial Exhibition Association are quite agreed among themselves as to the absolute necessity of an appropriation of \$200,000 with which to make much needed improvements on the Fair grounds, and the community is also of the opinion that such improvements should be made. There is, however, a difference of opinion between the directors and the community regarding the desirability of the former having the disbursement of the money, the community entertaining the idea that some radical changes should be made in the management of the Industrial Association before the money is placed in the hands of its directors for disbursement. Under the inspiration of Mr. McNaught, one of the representatives of the Canadian Manufacturers' Association in the Industrial Association, the executive committee of the Manufacturers' Association have

undertaken to champion the cause of the Industrial directors in that they have resolved and re-resolved to do all that can possibly be accomplished in inducing the tax-payers of Toronto to give the \$200,000. They are confronted with the fact that great dissatisfaction exists in the community towards the Industrial management and that important changes must be made in it before the money can be had, and with a sort of grandmotherly kindness beautiful to behold, the executive committee have undertaken to instruct the Industrial directors just what they should do and how it should be done to reinstate themselves in the good graces of the community, and the directors, with a graciousness admirable to behold, are glad to be instructed, and with the sweetest compliance imaginable have adopted Mr. McNaught's plan of reconstruction. It should be remembered that Mr. McNaught is not only an influential member of the executive committee of the Manufacturers' Association, but also a vice-president of the Industrial Association, largely through the grace of the directors of that Association who are members of the Toronto Electoral District Society. There is a wide difference of opinion existing in the executive committee regarding the influence of the Electoral Society in the Industrial Association. Mr. McNaught very naturally contends that the Electoral Society is a meritorious and deserving organization whose influence should not be disturbed, while Mr. Thorn, who is also a representative of the Manufacturers' Association in the Industrial Association, entertains different views and expresses them. He expresses them not only at meetings of the executive committee, but also before the special committee of the City Council, appointed to investigate the affairs of the Industrial, and it is safe to say that the most thorough analysis of the connection of the Electoral Society with the Industrial, and the influence it wields there, which has ever been brought to the attention of the public, was that presented to Alderman Denison's committee, a few days ago. It was complete and the deductions logical and conclusive.

The situation as it exists at this time may be summarized as follows:—

The future success of the Toronto Fair requires the expenditure of a large sum of money for improvements and repairs, and the erection of new buildings.

This money can only be obtained through a vote of the tax-payers of the city of Toronto.

The tax-payers are dissatisfied with the management of the Industrial, and will not vote the money until a change is made in it.

The Canadian Manufacturers' Association is pledged to assist the Industrial in obtaining the money.

In carrying out this pledge the executive committee are at variance.

Mr. McNaught thinks the management of the Industrial fairly well administered, and does not desire any interference with the Electoral Society.

Mr. Thorn thinks that an entire reorganization of the Industrial should be had, including the elimination, or at least the emasculation of the Electoral Society.

The City Council, who have a voice in the matter, is, through its special committee, investigating the whole business.

The community are enquiring why the executive committee of the Manufacturers' Association should insist upon having a finger in the pie.

## INDUSTRIAL CANADA.

Industrial Canada states that preparations are now being made for the issue of a second Canadian Trade Index as the classified directory of the membership of the Canadian Manufacturers' Association, and expresses the "trust" that the members will give careful attention to the preparation of material for it "so that it will be as accurate and valuable as it can possibly be made;" and it also urges that every member should "take care" to see that his goods are properly classified. A question which interests some of the members of the Association is whether it is not quite as essential that equally careful attention be given in the preparation of all matter appearing in Industrial Canada, to the end that its accuracy and value be not impaired. If the Index deserves careful attention in its preparation, certainly the official organ should receive similar attention. In our opinion it is of the essence of the value of the organ that not only its official declarations be made to conform to facts which may be verified, but it should also exercise a censorship over other matter appearing in it, which might otherwise be misleading and calculated to work injustice to some of the members.

Speaking of the forthcoming Index, the organ says:

Last year the Government prepared and issued several admirable books upon the resources of Canada, and these were widely distributed at the Paris Exposition. No book was, however, prepared on manufacturing, and the only publication bearing upon Canadian manufactures was the Index prepared by the Association, and there distributed.

There was no necessity for such a wild and incorrect statement being made in the organ, and in fairness to itself and to those members of the Association who prepared publications bearing directly upon Canadian manufactures, and spared no expense in exhibiting them at the Paris Fair, a correction should be made. If the organ had any knowledge of what articles were exhibited in the Canadian section of the Fair, it would have known that such a declaration was deficient in a most important element, and if it had no knowledge in the matter it should not have hazarded so unfair a statement.

This element of unreliability is also observable in the advertising business carried by the organ. In the proceedings of the last annual meeting of the Association, in making an explanation concerning its organ, we find that it was decided that advertisements be admitted into it, but only upon lines that would not admit of competition among members as to advertising space—that such advertising should be in the nature of a directory. Later, the organ, alluding to the advertising scheme, announced that "it should not be a means of competitive advertising by members, but that its value would be increased by having a classified list of businesses represented, so that wherever it went it would give a fair representation of Canadian manufactures." These declarations were very explicit, and should have been adhered to. They were of the character of a certificate to the member that no other member should be allowed to use the advertising space of the organ to his injury. The ethics of advertising admits of the advertiser saying that his wares are the best made (in his own opinion, of course), but ethics are torn to shreds when the advertiser makes statements which are impossible of verification, and upon the face intended to injure his competitor. But the organ very complaisantly

admits such advertisements. The member who does not desire to advertise his business in the organ is badly handicapped by the admission of some of the ads. which nowadays appear in Industrial Canada.

## PREFERENTIAL TRADE IN INDIA.

The United Planters' Association of Southern India, whose headquarters are at Madras, Ceylon, have sent out a circular letter bearing upon British preferential trade and tariff protection which indicates the growth of public sentiment in that direction in that country. The circular has been sent to a large number of Chambers of Commerce and other commercial bodies in various parts of the British Empire, and includes the following:—

That, considering the critical condition of the tea and coffee industries, this association do communicate with the Indian Tea Association, the Ceylon Planters' Association, the Indian Chambers of Commerce, and the leading firms of merchants and brokers interested in tea and coffee, etc., in this country, and in England and her colonies, with a view to ascertaining whether a movement in favor of a commercial combination of Great Britain and her colonies and India against the world (which would by a system of differential duties afford some protection to British-grown products and manufacturers) would receive support.

Regarding this matter the circular further says:—

This resolution may be said to have resulted chiefly from the recent revision of the French tariff in regard to imports of produce from (inter alia) India, and the British colonies and dependencies. You are doubtless aware that the French Parliament, as an act of reprisal against Brazil, voted recently a law doubling the duties on coffee, tea, and spices imported from countries not having treaties of commerce with France or not enjoying most favored nation treatment, among which are India, the British colonies and dependencies (with the exception of Canada). The French and Brazilians have made up their quarrel, but the French tariff law, which was really directed against Brazil, still exists. There appears to be reasonable grounds for hope that it will not be put into force, but if it should, the consequences would be—to use the words of Economist—that the prohibitory tariff for colonial produce would only be applied to countries, British colonies among others, for which it was not intended.

Although it is possible that the French Government may be induced to reconsider the action referred to, yet what has been already done serves as an unmistakable warning of the grave risk to which British trade is at present exposed, and the burdens it may at any time be called upon to bear.

It is felt that there is a strong and growing feeling in England and her dependencies and colonies in favor of what may be termed an Imperial Fiscal Federation for the protection of British interests as against those of the rest of the world. The association is desirous of eliciting your views on the subject, to co-operate for the purpose of submitting memorials to the Home Government and other Governments concerned, and would be glad of your advice as to the precise form such memorial should take.

## FEDERATED AUSTRALIA.

On January 1, at Sydney, N.S. W., the Earl of Hopetoun was sworn in as the first Governor-General of the federated Australian colonies, amidst scenes of pageantry such as never before had been attempted on that side of the world. Scores of thousands of people participated in the demonstration, The rejoicing of the commonwealth was intensified by a

message which Queen Victoria sent through Colonial Secretary Chamberlain, and which was read by the Earl of Hopetoun, as follows :

"The Queen commands me to express through you to the people of Australia, Her Majesty's heartfelt interest in the inauguration of the Commonwealth, and her earnest wish that under divine Providence it may ensure increased prosperity and well being to her loyal and beloved subjects in Australia."

The weather for such an occasion was not of the best, but it did not deter crowds from thronging the streets from an early hour. A procession formed of ministers, officials, judges, clergymen, members of the House of Commons, and trades unions, and all kinds of people, allegorical cars, colonial, Indian and Imperial troops and bluejackets moved toward Government House. Stands which had been erected at every available spot were thronged with sightseers. The footways were packed with enthusiastic thousands, gay summer dresses lending variety to the scene. Shortly after noon, the procession entered the park, and thousands of the public followed, swelling the multitude that had already assembled on the hills, which formed a vast amphitheatre, overlooking the pavilion which had been erected for the ceremonies connected with the inauguration.

The Governor's arrival was marked by a thousand voices singing "O God, our help in ages past," and a special prayer by the Archbishop. After his commission had been read, the Earl of Hopetoun took the oath of office and signed it at a table which had been sent by the Queen. A salute of twelve guns, the playing of the National Anthem by the massed bands, and rousing cheers re-echoing among the hills accompanied this act. The signature and swearing in of the first federal ministers followed.

The Earl of Hopetoun briefly congratulated the members of the cabinet and then read the Queen's message given above, which evoked prolonged cheering. This was followed by a second message, as follows: "Her Majesty's Government sends cordial greeting to the Commonwealth of Australia. They welcome her to her place among the nations, united under Her Majesty's sovereignty, and confidently anticipate for the new federation a future of ever-increasing prosperity and influence. They recognize in the long desired consummation of the hopes of patriotic Australians a further step in the direction of permanent unity of the British Empire, and they are satisfied that the wider powers and responsibilities henceforth secured to Australia will give a fresh opportunity for a display of that generous loyalty and devotion to the throne of the Empire which has characterized the action in the past of its several states."

Three cheers were given for the Governor-General, and another salute was fired. Ten thousand pupils of the schools sang the hymn "Australia Fair," and the proceedings were concluded by the choir singing a "Te Deum," the "Hallelujah" chorus, and "God Save the Queen." The Earl of Hopetoun was the recipient of numerous messages of congratulation.

The new century and the new era of federation were ushered in for Australia with every sign of public rejoicing.

The streets were alive with people Monday evening, and when midnight struck, bells pealed and cannon boomed a welcome to the birthday of United Australia.

The American arch, which was a distinct feature, was of

imposing design. It was surmounted by a colossal eagle and bore the mottoes, "The United States greets United Australia," and "Hail to the new-born Commonwealth."

#### CANADIAN TRADE.

An analysis of the trade and navigation returns given in the detailed statement for August, published by the Customs Department, will prove an interesting and instructive occupation. Comparing the dutiable imports for July last with those of August, we find an excess of \$533,889 in favor of the latter period. The figures for the two months were: July, \$9,015,917; August, \$9,549,806.

A glance at the imports gives one an excellent idea of the countries with which we trade, and the extent with which we do business with them. While Great Britain maintains the lead by the aid of the preferential tariff in many lines of manufactures, it is evident that the United States, in not a few instances, is the source of supply. It is notable, too, that Germany is becoming an active competitor in some lines with both Great Britain and the country to the south. In some of the finer classes of fabrics, Switzerland and France have the preference. Taking the imports for the two months, it is to be observed that of ale, beer and porter we took only \$12,964 from Great Britain and \$20,313 from the United States. The country to the south also sent us most of the hogs, horses, cattle and sheep we imported, the value being \$107,508. In the matter of books and periodicals, including fiction, the United States was the chief source of supply, furnishing us with \$66,286. Britain came next with \$29,383, and France was third with \$3,067. In boots and shoes, except rubber and leather, Germany gave us \$7,086. The United States was second with \$2,452, and China with \$235 stood above Britain, which sent only \$141. In the matter of clocks we obtained from the United States \$19,129; Great Britain, \$1,314; Germany, \$3,080, and other countries, \$2,688. Great Britain gave us almost all the \$13,490 of cloths for the manufacture of waterproof clothing. Of combs, Great Britain sent to Canada \$10,297, Germany \$5,551, United States \$4,423, and France \$2,281. Britain scored particularly in the imports of cotton manufactures. Of these she sent \$970,435, compared with \$375,560 that came from the United States. There were only two countries from which Canada imported eggs during July and August. Those were the United States and, strange to say, China. From the former we obtained 94,886 dozen, valued at \$19,565, and from the latter 4,869 dozen, valued at \$316. Canada took nearly all its supply of electric apparatus during the two months mentioned from the United States, the value of the importations being \$88,194. If express parcels offered any reliable indication of friendly intercourse between nations we should be on better terms with the United States than Great Britain, for during July and August we took parcels to the value of \$152,714 from the republic and only \$3,795 from the Motherland. Of laces, etc., we obtained \$60,496 from Great Britain, \$15,272 from France, \$8,299 from Germany and \$4,156 from the United States. Germany furnished us with the bulk of our toys and dolls, with the United States a poor second.

Canada is a fruit-growing country, yet we imported from the United States for the two months ending August, 7,722

barrels of green apples, valued at \$22,965 and 48,877 pounds of small fruits, valued at \$3,628. Of plums we took from the United States 21,496 bushels, valued at \$22,980, and 1,219,808 pounds of peaches, valued at \$30,216. The importation of canned fruit amounted to 145,817 pounds, of a value of \$8,892. The value of the importations during the two months of fruit which is produced in Canada, including canned and preserved, was \$93,293.

In manufactures of iron and steel we took from the United States \$3,150,000, as compared with only about \$520,000 from Britain. In many lines of iron and steel goods the mother country does not compete with the United States, and in others the latter country can lay them down more cheaply and supply the Canadian trade more promptly.

#### EDITORIAL NOTES.

There is now a vacancy to the Senate from Ontario, and when the Senate meets two other seats will be declared vacant owing to the absence of their former occupants for two consecutive sessions. Wealth and party service having had their innings, why not fill these seats from the ranks of agriculture? It is by far the most important interest in the country, yet in the matter of appointments to the Senate it has in the past been almost unrecognized. Questions of great importance to agriculture are constantly coming before Parliament, and a few practical farmers could render excellent service in the Upper House. There are plenty of men who have attained eminence in agriculture, for the Government to choose from.—Toronto Weekly Sun.

It is all right to introduce the farmer element into the Dominion Senate, but why not throw in a manufacturer or two as opportunity occurs?

The "Members' Business Directory" of Industrial Canada, the organ of the Canadian Manufacturers' Association, is a wonderful affair. Members are invited to place their business cards therein, under one or more headings. Only one inch space is allowed under one heading, but cards of that space are allowed under as many headings as the advertiser may be willing to pay for. The limit is regulated by the bank account of the advertiser rather than by the capacity of the organ to accept business. The manufacturer of woolens may, if he so desires, place his cards under account books, agricultural implements, asbestos, banks, belting, bicycles, billiard tables, boilers, brass goods, brushes, cheese, confectionery, cream separators, electrical supplies, engines, envelopes, furniture, grate bars, hydraulic presses, interior wood work, iron and manufactures of, jewelry, lead pipe, leather, lithographers, mineral wool, organs, packing house machinery, paints, paper, patents or anything else to the end of the alphabet. A ready reference to the industries represented in the Association is by this means possible. The advertiser may locate his ad. wherever he may desire, and say in it whatever he may desire whether it is true or not. The Directory is a great scheme.

Industrial Canada tells of the large importations of enamelled ironware into Mexico from Austria, through a Berlin firm whose name it gives, but it does not mention the fact that there are at least three large concerns in Canada who manufacture such goods, all of whom are members of the C.M.A., we allude to The McClary Mfg. Co., London, Ont.; The Kemp Mfg. Co., Toronto; and the Thos. Davidson Mfg. Co., Montreal.

In an advertisement in Industrial Canada it is announced regarding a certain trade journal that it is "the only paper in Canada circulating among hardware, paint and oil dealers, plumbers and steam fitters, millmen, machinists, foundrymen and other manufacturers." This assertion is palpably incorrect, there being quite a number of trade journals published in Canada which circulate among all the trades mentioned. The question is, is Industrial Canada to be thus used for the propagation of such mis-statements to the misinformation of its readers and injury of some of its members?

The Supreme Court of Canada, a few days ago, handed down judgment in a very interesting case, involving certain patents used on smoke consumers and mechanical stokers. The action has been pending in the Canadian courts for some two years. The American Stoker Company, of New York, sold an equipment of under-feed mechanical stokers to the Dominion Cotton Mills Company of Montreal, and the Canadian Engineering Company of Toronto, who are the owners of the Jones patents, charged the American company with infringement of patent on these machines, and sued them in the Exchequer Court. The Toronto company won, but a later judgment, bearing on section 8, of the Patent Act, went against them. The section was construed to mean that when a foreign patent lapses the Canadian patent also becomes void. This point was carried to the Supreme Court, and the decision is that the section should not be construed in that manner. This judgment in favor of the Toronto company disposes of the question of the ownership of the Jones patents and puts an end to litigation between the two companies. Both companies had engaged eminent counsel, and were determined to make it a test case. A similar action is pending in the United States, and the decision will have an important bearing on the result.

Alex. Webster, Esq., secretary of the Launceston, Tasmania, Chamber of Commerce, writing to the editor of this journal acknowledging receipt of the tariff edition of the THE CANADIAN MANUFACTURER, and speaking of the possibilities of trade between that country and this, says:—"At present there is not a large volume of trade done between Canada and these colonies, but there is no reason why, under federation, the mutual trade should not be an increasing quantity. There is a large trade done with the United States, who push business with numberless artistically illustrated catalogues, and by the appointment of agents who travel throughout the colonies. These latter are more effective than catalogues."

The British colonies all over the world imported in one year goods valued at more than \$1,000,000,000, and of this quantity \$500,000,000 came from the Mother Country. India imported \$300,000,000 of goods, \$200,000,000 coming from England; Canada imported about \$140,000,000, but only \$34,000,000 came from the United Kingdom. Australia and the Australasian Islands imported in 1899 not far from \$200,000,000, of which about \$130,000,000 came from the United Kingdom. The British West Indies imported about \$33,550,000—about \$13,610,000 from England. The African colonies imported \$130,000,000, taking \$85,000,000 from the Mother Country.

Experiments were made in Switzerland on the use of coal dust as fuel for steam boilers in 1896 at the Berne small arms factory, under the superintendence of the Swiss Society of Boilerowners. The boiler used was of the Sulzer-Cornish form and the "Mehl" grate and Wegener system of firing were both tried. The report of the society showed that the dust could be burnt smokelessly with a thermal efficiency of 20.93 per cent., and a saving in cost of steam of 15.5 per cent. The grinding of the coal to form the dust was found to be the most expensive part of the process. At the Polytechnic, at Zurich, the Wegener system was used for a time in an old boiler, but was given up, as it was feared the excessive heat produced would injure the furnaces. The boilers require to be especially adapted for dust burning. For successful results the dust must be in the form of very fine powder, and if the coal be damp it is difficult to grind. A table has been prepared based upon the results obtained at the cement works at Ehingen as compared with firing in a Ten-Brink furnace, and the cost of the former appear very favorable, as the dust firing enabled a very cheap kind of coal to be used. It appears, however, that the coal-dust firing has been subsequently given up, not, however, owing to inherent defects in the system, but because the excessive heat produced by the dust was localized so much that it caused damaged to the furnaces of the Ten-Brink boilers, which had not been specially designed for the use of dust, but merely temporarily altered for the purpose.

The National Association of Manufacturers of the United States, whose head offices are in Philadelphia, has sent us a copy of the third edition of their American Trade Index. It is published in English and French, and contains over 700 pages, neatly printed and substantially bound. It is divided into sections, Part I. containing an alphabetical list of the members of the Association and the special products manufactured by them: Part II. contains identically the same information printed in French: Part III. gives a list of the different articles produced by the members of the Association, the French name following the English name: Part IV. gives the names, in French, of the various articles enumerated in Part III.: Part V. gives the cable address of the different members, and Part VI. is devoted to advertisements of members of the Association. The Index has frequently proven its usefulness in this office in enabling us to give to our Canadian enquirers the addresses of American manufacturers who produce lines of machinery, etc., not made in this country.

The Toronto Daily Star says:—

The Industrial Exhibition Board should not seek to deceive itself into believing that the desire for a reform in the management of the Fair is confined to Mr. J. O. Thorn and a few others. Nearly everybody in the city believes that a shaking-up is necessary; many of them think that perhaps if those who at present control the Fair were given what money they need they could make the necessary improvements.

But the reform must go deeper than that. The Electoral District Society is practically a fictitious organization, yet for years the men who have to a large extent been controlling the Fair have used that society as a means for electing themselves to the Exhibition Association, and thence to the Exhibition Board. These men have no right to control the Fair that is not derived from the people. They cannot

derive that right from each other and confer it upon each other. Yet they have practically been doing this. The Electoral District Society and its important relation to the Fair has been for years an absurdity. Its members must laugh when they meet each other on the streets at thought of the privileges they enjoy through keeping alive an organization that the great mass of the people never heard of and which the old inhabitants have forgotten.

Yet in the proposed reconstruction the board suggests that this practically fictitious organization shall still have twelve memberships in the association. We fail to see upon what ground it should have any representation or why it should exist. Its one excuse for existing has been that it is the medium through which a provincial grant is made, the same as to other agricultural societies, but this grant could easily be transmitted through other hands.

The Electoral District Society is, in effect, an underground passage by which a group of men reach the Exhibition Board. That tunnel should be filled in. It is absurd to say that other people must consent to what these men do in their own interest, or "the row will damage the Fair." It is for them to avoid the row. Let the Fair pass into the hands of persons who are representative of real and not fictitious organizations.

The Russian Minister of Finance has decided to introduce the metric system on January 14th next in St. Petersburg, Moscow, and six other large cities within the Empire. The rest of the country will gradually be brought to use the metric system during the course of the next five years.

Mr. Auguste Dupuis, secretary of the Canadian Commission to the Paris Exposition, returned to Ottawa a few days ago, after five months' absence. He believes that the Canadian effort at Paris has resulted in making the Dominion and her resources better known in Europe, not only through the display of her products, but by reason of the distribution of literature. Mr. Dupuis mentions as likely to be especially productive of results, Mr. George Johnson's booklet on "The Wood Pulp of Canada." As to the information generally conveyed about Canada, its effect was referred to by an eminent German educationalist, who said: "We in Europe shall have to correct our geographies of Canada. As it is described in our text-books now in use it is the Canada of a century ago." Perhaps the most immediate impression created in Canada's favor was through the cold storage in which fruit, vegetables and dairy produce were kept in a perfect state of preservation throughout the exhibition. It was a revelation to visitors from all nations. As an instance of this Mr. Dupuis mentions that ninety barrels of apples which were ordered from Kingston, Ont., brought \$10 a barrel, and the apples retailed regularly at ten cents apiece. The fact that the freight on this shipment was but \$1.19 per barrel from Canada to Havre, a distance of 3,000 miles, as against \$1.20 per barrel from Havre to Paris, a distance of about forty miles, shows, he thought, how far Canadian transportation facilities transcended those of France. The further fact that oranges from Messina, in Sicily, can be laid down in Montreal cheaper than Algerian oranges can be placed in Paris was another proof which Mr. Dupuis did not fail to adduce while in that city, of the superior advantage which Canada enjoyed as a self-governing British colony, to those which she would be likely to have had she remained a colony of France. With the exception of the educational section, practically all the Canadian exhibits from Paris will be shown next spring at the Glasgow Fair, in which the Dominion has been allotted 8,000 feet of space.

## CAPTAINS OF INDUSTRY.

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

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

The starting of any such concern means a demand for some sort of machines, machinery, or supplies, such as steam engines and boilers, shafting, pulleys, 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, alkalis, etc. It is well worth the while of every reader of the Canadian Manufacturer to closely inspect all items under the head of Captains of Industry.

The Jones & Moore Electric Co., Toronto, have sold to the Victoria Foundry Co., Ottawa, two 25 h.p. multipolar motors wound for 500 volts direct current.

The Paper Goods Co., Toronto has been incorporated to manufacture paper goods etc. The provisional directors include L. J. Elliot and O. L. Parmenter, Racine, Wis., and L. P. Bouvier, Toronto.

The Queen City Plate Glass & Mirror Co., Toronto, has been incorporated to manufacture glass. The provisional directors include A. L. Eastmure, F. J. Lightbourne and F. J. Baigent, Toronto.

The Pacific Coal Co., Montreal, has been incorporated with a capital stock of \$4,000,000, to mine coal and other minerals. The charter members include:—Sir Wm. Van Horne and R. B. Angus, of Montreal, and E. B. Osler and W. D. Matthews of Toronto.

The Macdonald Mfg. Co., Toronto, has been incorporated with a capital stock of \$125,000, to manufacture decorated tinware, etc. The provisional directors include Wm. Tassie, A. E. Donovan and August Wulff.

The B. Greening Wire Co., Hamilton, Ont., have sent us their office calendar for 1901. Clear bold type has been used that can be seen across any ordinary sized office, using the blank spaces for advertising the goods they manufacture, such as wire rope, wire chain, wire cloth, perforated metal, etc. Three portraits are given one of Nathaniel Greening, founder of the business in England in 1799, B. Greening founder of the business in Hamilton, Ont., in 1859, and S. O. Greening, president of the present company.

The Jones & Moore Electric Co., Toronto,

are installing a direct connected incandescent dynamo on the steamer "Advance" at Collingwood Ont.

The Cramp-Ontario Steel Co., Collingwood, Ont., with a capital stock of \$5,000,000, will erect four 300-ton blast furnaces, four 30-ton open-hearth steel furnaces, blooming, structural, rail and bar mills, and a medium-sized plate mill. The town has fine facilities for shipping by land and water, and a bonus of \$115,000, has been granted, a free site on the harbor and terminals, with eighteen feet of water to the ore docks.

The Rat Portage Lumber Co., will erect a large mill at Winnipeg, Man.

The steel screw steamer Donnacona, which ran her trial trip off the Tyne on Nov. 1, was built by Messrs. Wood, Skinner & Co., of Bill Quay-on-Tyne, for the Hamilton and Fort William Navigation Co., and is intended primarily for traffic on the lakes, specially designed for that trade. She is classed with the British Registry of Shipping, and is 255 ft. long by 42 ft. 6 inches in breadth, with a moulded depth of 23 ft. 8 inches. She is designed to carry 2,650 tons on a draught of 16 ft. 5 inches, and will be able to navigate the Welland canal, which joins the lakes with the River St. Lawrence. She has triple expansion engines of about 1,000 horsepower, and on her loaded trial attained a speed of nearly ten knots. She is the second of two vessels built to the order of this company in Great Britain, and the first of her type turned out on the Tyne, being fitted either for the deep sea or lake trade. She is specially designed for carrying coal, grain, and ore between Lake Superior and Hamilton and Montreal, and, loaded to a draught

of 14 ft., will be able to navigate the canal system of Canada, which by reason of recent improvements, now affords sufficient depth of water to permit of direct navigation for vessels of that size between the lakes and the open sea. During the winter, pending the opening of navigation with the St. Lawrence, the vessel will be employed in the European trade.

The Jones & Moore Electric Co., Toronto, are doing an extensive business in private telephone plants. They are now installing systems in the premises of P. Jamieson & Co., Nesbitt & Auld, the Park Blackwell Co., and Robert Watson Co., all of Toronto.

The Lake of the Woods Milling Co., Winnipeg, Man., ship 300 to 500 tons of flour every month to Australia.

D. McLean, of Calgary, N.W.T., is erecting a 250 barrel mill and a 50,000 bushel elevator at Moose Jaw, N.W.T.

The Jones & Moore Electric Co., Toronto, have placed two of their electric motors and a number of inclosed arc lamps in the new premises of Wilson, Munroe & Cassidy, Toronto.

Port Hope, Ont., will expend \$1,000 in extending its water service.

Parry Sound, Ont., will issue debentures for \$26,500, for improving its water service and taking over the electric light system.

The Dominion Cordage & Mfg. Co., Peterborough, Ont., has been incorporated with a capital stock of \$400,000, to manufacture rope, cordage, twine, oakum, etc. The provisional directors include Adam Hall, Jos. Armstrong and G. L. Hay, all of Peterborough, Ont.

The Jones & Moore Electric Co., Toronto, have recently placed a twelve horse power motor in the Model Bakery, Toronto, this makes five of their motors now in use in this establishment.

Thomas M. Moore, superintendent of machinery and transportation exhibits at the Pan-American Exposition, has written to Mr. C. C. James, Ontario Commissioner to the Exposition, informing him that applications have already been received for more than three times the space available in the machinery department, and a still larger number of applications have been received for space in the transportation exhibit.

The Jones & Moore Electric Co., Toronto, are increasing the electric light plant of the Benjamin Mfg. Co., at Yarker, Ont., by a 300 light generator and are also installing a twenty-five horse power motor at the same works.

## 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.O.

RAT PORTAGE, ONT.

HALIFAX, N.S.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



The Wm. Hamilton Mfg. Co., Peterborough, Ont., are installing a direct connected incandescent lighting plant. The contract has been awarded to the Jones & Moore Electric Co., Toronto.

The Metallic Roofing Co., Toronto, has sent us a very beautiful pamphlet descriptive of interior decorations, manufactured by them. Several illustrations are given showing portions of finished walls and ceilings. The company received the silver medal at the Paris Exposition, which was the highest award given.

A carpet factory will be erected at St. Catharines by R. Westwork, of Guelph, Ont.

It is gratifying to note that factories employing electricity for lighting and power are now giving attention to the way in which the construction work is installed. Hitherto it has been the usual custom to pay considerable attention to the selection of the dynamo, while any construction work would pass so long as it "worked." The consequent annoyance and expense of poor light and frequent breakdowns has proved that electrical wiring must be installed carefully to ensure its successful operation.

Messrs. R. A. L. Gray & Co., electrical contractors, Toronto, report that their business of installing electric light and

power plants has more than doubled in the past year. As this firm is not connected with any manufacturer they are prepared to contract for the supply of any of the standard machines on the market.

The Robb Engineering Co., Amherst, N.S., has received an order for a 350 h.p. engine from the Crow's Nest Pass Coal Co., for its mines at Fernie, B.C.

The power house of the Listowel Electric Light Co., Listowel, Ont., is being enlarged and remodelled, and a new engine manufactured by Goldie & McCulloch Co., Galt, Ont., is being installed.

The Adamson Moulding Co's factory, Toronto, was destroyed by fire December 28. Loss about \$15,000.

The town of Wingham, Ont., has passed a by-law granting Messrs. Galt & Bullock \$17,000 to enable them to erect a brass foundry in that town, which is to be in operation by April 1, and employ a hundred hands.

The Pottawatamie River Bridge, near Owen Sound, Ont., belonging to the Grand Trunk, is being replaced by a steel girder structure ninety-eight feet long.

Victor Bélanger, a Frenchman residing in Boston, has for thirty-one years been struggling along in the face of reverse after reverse. He has, in that time, invented and patented

a number of things. He has spent time and money in experiments and in the exploitation of ideas, only to be rebuffed time after time and to be confronted by the mocking face of failure. But some time ago, Mr. Bélanger had pointed out to him one of the defects of the spinning frame by George O. Draper, one of the members of that famous New England family. Mr. Bélanger started at work systematically and the result was that, although he was three years at it, he devised a plan which makes the Carroll ring a back number in the words of Mr. Carroll himself. With the old device it is possible to make only from 7,000 to 10,000 revolutions per minute, while with the invention of Mr. Bélanger, 40,000 can be made without difficulty. That represents a speed of four miles a minute, and this invention nearly quadruples the capacity of every spinning mill in the country. The rewards have been in the measure of the achievement. A company has been formed, and it is understood that Mr. Bélanger has received \$2,500,000 in stock and a very handsome cash payment besides. Three years ago he was leading a miserable existence, half clothed and half fed, but to-day he lives in affluence.

The Canadian Oak Belting Co., Montreal, have removed their factory to Brockville, Ont.

# Transfer Ornaments, AMERICAN MADE.

Guaranteed Quality.

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,

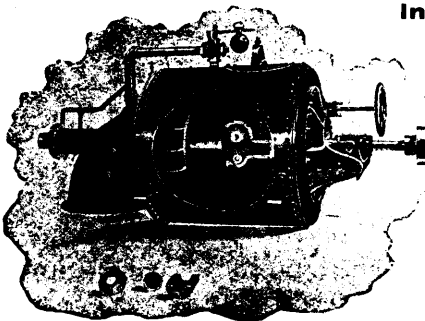
—MAIN OFFICE—

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

Largest Makers in the World Guaranteed Decalcomania Transfers.

# THE CROCKER Patent Turbine

In 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.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

The Goldie & McCulloch Co., Galt, Ont., are placing a tandem compound Wheelock engine in Shurley & Dietrich saw works at Galt, and have orders for five Ideal high speed engines from the Dominion Coal Co., Glace Bay, N.S., and two of the same type for the Kingston, Ont., Asylum. Recent sales of gas or gasoline engines have been made to Geo. McMurray, St. James Park, Ont., Robt. Mosgrove, Bluevale, Ont., A. S. Geiger, Breslau, Ont., Ed. Provost, Actonvale, Que., and others.

The rush to secure iron ore areas promises to be as great as that for coal areas in previous years. The advent of the Dominion Iron & Steel Co., has created an inclination to search for iron ore and prospectors are at work gathering all possible procurable iron ore legends of the country side. Places which years ago were known to contain more or less iron of unknown quantity are now being minutely scanned and in many instances covered by the more adventurous. Antigonish, and Guysboro counties are at present the favorite hunting ground. The New Glasgow Syndicate has selected Antigonish as its future field of profit. Lately the largest number of rights of search for iron ever taken up at one time in the Province were secured by Halifax parties supposed to be working for the Dominion Iron & Steel Co. No less a sum than \$1,440 was paid the Mines Department for forty-four rights for iron ore. The location is chiefly on the borders of Guysboro and Antigonish County. The ore found so far is chiefly specular. But iron ore is no new thing to Guysboro. From a mine near Bolyston specular ore was shipped many years ago, but as the lead was of no great thickness the work of developing was not long continued. The prospects for larger

finds are good as the Dominion Iron & Steel Co. can afford to spend more money in prospecting than private prospectors were able or willing to do.—Halifax, N.S., Mining Record.

Oven's furniture factory, Parkhill, Ont., was destroyed by fire Dec. 9.

The Jones & Moore Electric Co., Toronto, has received orders from Toronto City Dairy Co. for two 40 h.p. in direct current motors; Cordova Exploration Co., for a 600 light incandescent plant, complete with generators, marble switchboard and all construction work; and for electric motors from the following:—Murray Printing Co., Toronto, G. S. Brintnell, W. Tisech & Co., Chandler & Massey Co., Vancouver Electric Works (2), Douglas Bros., and J. Desrivieres.

The Canadian General Electric Co., Toronto, has received an order for two generators, one of 75 k.w. and one of 30 k.w. capacity, direct connected to engines for the St. Vincent de Paul penitentiary, Que.

The Jones & Moore Electric Co., Toronto, has received an order from the Canadian Carpet Co., Milton, Ont., for an incandescent light dynamo.

The Canadian General Electric Co., Toronto, has received orders from British America Corporation, Rossland, B.C., for a 100 h.p. induction motor, and from Nerlich & Co., Toronto, a lighting and power plant. The generator is a 35 k.w., direct connected to the engine.

The Edwardsburg Starch Co., Cardinal, Ont., whose factory was destroyed by fire, have rebuilt and are installing a complete electric light and power plant, consisting of two 50 k.w., S.K.C. generators, with switchboards, transformers and motors complete.

McOuat & McRae, Lachute, Que, has received an order from J. C. Wilson & Co., Glenora, Ont., for machinery for the extension to their paper mills and for the new pulp works at St. Jerome, Que.

The Robb Engineering Co., Amherst, N.S., have received an order through their English representatives for a 250 h.p. engine for Calcutta, India.

A new system of electric lighting is to be installed at Oxford, N.S., to replace the old plant, which is run by water power.

The Lynn Electrical Co., Brantford, Ont., have installed a large 500 volt multipolar dynamo and several special wound motors for the Central Peat Co., Welland, Ont.

Messrs. Blue, Fisher & Deschamps, Rossland, B.C., are erecting a sawmill at Rock Creek, B.C.

The D. F. Brown Paper Box & Paper Co., St. John., N.B., will erect a new factory.

The McClary Mfg. Co., London, Ont., will erect an addition to their factory 60x60 feet.

W. H. Frost, Smith's Falls, Ont., will erect an addition to his malleable iron works 270 feet long.

The Robb Engineering Co., Amherst, N.S., has received an order from the Atlantic Grindstone Co., Providence, R.I., for two 125 h.p. Mumford boilers, and a 250 h.p. Robb Armstrong engine.

The Windsor Turned Goods Co., Windsor, Ont., has been incorporated with a capital stock of \$150,000, to manufacture bent-goods, hubs, spokes, wheels, handles, etc. The provisional directors include Robert Pinchin and O. E. Fleming, both of Windsor, Ont., and Joseph Findlay, of Toronto.

# W. A. FLEMING & CO.

MILL SUPPLIES

CAMEL BRAND BELTING

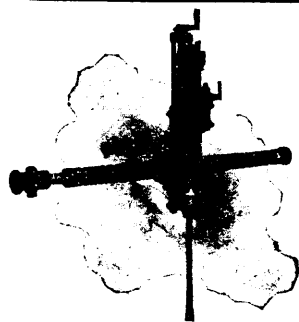
HOSE of all kinds

DRIVING ROPE

BELTING of all kinds

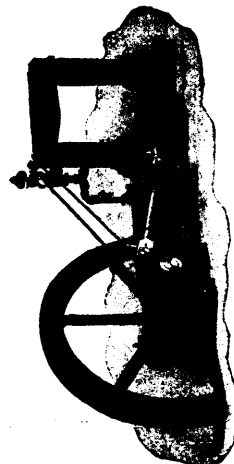


771 CRAIG STREET, MONTREAL.

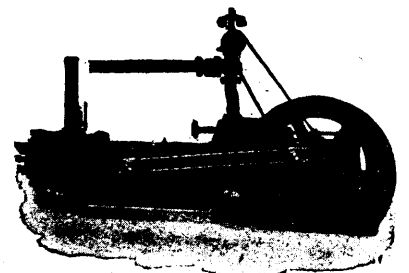


**MINING  
MACHINERY**

R  
A  
N  
D



R  
A  
N  
D



The Canadian  
Rand Drill Co.

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

# 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 Robb Engineering Co., Amherst, N.S., have received an order from the Dominion Iron & Steel Co., for a 100 h.p. Mumford standard boiler, this making the eleventh of this type shipped to the Steel Company.

The Canadian Pacific Railway will extend their line to Grand Forks, B.C.

Durham, Ont., will erect a town hall to cost \$7,000.

The Tecumseh Canning Co., Tecumseh, Ont., are asking for tenders for a large new factory building.

The Firstbrook Box Co., Toronto, propose establishing a factory at Penetanguishene, Ont., and the council of that place are asked to bonus the company to the extent of \$20,000.

The Bryan Mfg. Co., will erect a large addition to their factory at Collingwood, Ont.

The Coldbrook Rolling Mills, near St. John, N.B., were destroyed by fire December 19. Loss about \$100,000.

The Dominion Iron & Steel Co., Sydney, C.B., will increase the scope of its operations by issuing \$5,000,000 of preferred stock and will manufacture steel rails and plates. It is expected the plate and rolling mill will be ready within twelve months.

The Jacques Cartier Water & Power Co., will erect a large building in Quebec city.

The picture frame factory of Matthew Bros., Toronto, was destroyed by fire December 21. Loss about \$30,000.

The Knechtel Furniture factory, Hanover, Ont., was destroyed by fire December 20. Loss about \$120,000.

The Hanover Portland Cement Co., Hanover, Ont., has been incorporated with a capital stock of \$150,000. The provisional directors include J. S. Knechtel, J. E. Knechtel and J. H. Adams, all of Hanover, Ont.

The Hamilton, Grimsby & Beamsville Railway Co., will extend their line from Beamsville to St. Catharines, Ont.

The Canadian Pacific Railway will make large improvements at Brockville, Ont., en-

larging its buildings and wharves and extending its tracks.

The Burgess Gas Process Co., Toronto, has been incorporated with a capital stock of \$100,000, to manufacture machinery for purifying and improving gas. The provisional directors include J. A. Burgess, Bradford, Ont., C. G. Harston and Geo. Dunstan, both of Toronto.

The council of Sarnia, Ont., has passed by-laws to raise \$40,000 for sewerage and other purposes.

The ratepayers of Penetanguishene, Ont., will vote on a debenture issue for \$3,000 for water extension.

The Blanche River Pulp & Paper Co., Toronto, has been incorporated with a capital stock of \$1,000,000. The provisional directors include F. B. Chapin, Toronto, Wm. McVittie, Sudbury, Ont., and F. B. Hubbell, New York City.

The Walkerville Wagon Co., Walkerville, Ont., has been incorporated with a capital stock of \$100,000, to manufacture wagons, sleighs, etc. The provisional directors include Wm. McGregor, John Curry and W. G. Curry, all of Windsor, Ont.

The Welland County Lime Works Co., Port Colborne, Ont., has been incorporated with a capital stock of \$30,000, to manufacture lime. The provisional directors include John Reeb and J. A. Reeb, both of Wainfleet, Ont., and Eugene Reeb, of Port Colborne, Ont.

The Clark Lithographic Co., Toronto, has been incorporated with a capital stock of \$100,000, to acquire business now carried on by Barclay, Clark & Co. The provisional directors include T. J. Clark and W. J. Wallace, both of Toronto.

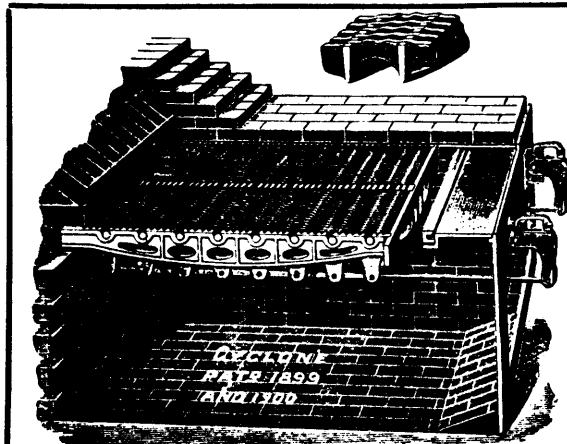
Simpson, Hall, Miller & Co., Toronto, have been incorporated with a capital stock of \$20,000, to manufacture cutlery of all kinds, etc. The provisional directors include J. E. Parker and J. W. Millard, both of Hamilton, Ont., and W. K. George, Toronto.

The report of the Vancouver, B.C., Board of Trade for 1899-1900, states that from July 1, 1899, to July 1, 1900, the Canadian Pacific

Railway Co. extended their wharves eastward 500 ft., and built a new shed 350 ft. by 75 ft., and to the west end an addition has been built with a shed of 20 ft. by 75 ft., for the Empress Line of Steamers. They have now 2,000 ft. of frontage suitable for sea-going vessels, which will be added to shortly by further dredging. They have completed the sea wall under and near the front of their wharves from end to end, nearly up to half tide. Machinery has been at work for the whole year filling behind the wharves and in front of the station, and on the ground so made nearly one mile of new sidings has been laid; the work of filling by steam shovel and train will be vigorously prosecuted so as to complete the proposed esplanade. The track immediately in rear of the main wharves has been extended eastward, on trestle, to connect with that in rear of Stimson's wharf and the City wharf, making a continuous track from end to end of the wharf frontage.

Most men nowadays accept without discussion the wonderful selling property of good advertising. Oftentimes, however, even though really wanting to help their business by this most modern method, they find they know nothing of rates, that they cannot judge the merits of rival newspapers, nor plan a good advertising campaign; and are, moreover, too much occupied with other branches of their business to be able to give the matter sufficient thought. The E. Desbarats Advertising Agency, Montreal, whose announcements are appearing in THE CANADIAN MANUFACTURER, are in business to help the would-be advertiser, to plan his campaign, prepare his advertisements, and close his contracts with the newspapers. Many years experience, during which they have handled for their customers, many thousands of dollars of advertising, enable them to give advice based on the successes and failures of others; and it might prove advantageous to any who might be thinking of helping their business by advertising to communicate with this firm.

The Harrisburg, Pa., Foundry & Machine Works have recently installed a Cross Oil Filter made by the Burt Mfg. Co., Akron, Ohio.



USE CYCLONE GRATE BARS AND PRODUCE

## CHEAPER STEAM

No individual consumer can regulate the price of coal, but you can regulate the amount of coal burned for a given power by installing Grate Bars that will produce perfect combustion. Write us for particulars.

E. J. PHILIP, Manager,

404 TEMPLE BUILDING, - - TORONTO, ONT.

PHONE 8682

## NO. 1 BAND RE-SAW.

Messrs. Cowan & Co., Galt, Ont., present in their advertisement in another page an illustration of their No. 1 Band Re-Saw, regarding which they say:

In designing this machine it has been our object to build a Re-Saw first-class in all respects, convenient and accurate in adjustment, durable, powerful and economical to operate. It was gotten up to meet the demand for a high grade tool which could be sold at a moderate cost. It is well suited to do all sorts of re-sawing, such as picture backing and veneers, where accuracy is required, as well as re-sawing panels, box boards, etc. It will re-saw beveled siding, and, in fact, will do every kind of work demanded of a first-class re-saw. Pieces as short as eight inches or less can be sawn with safety. It is especially adapted to the requirements of sash and door factories, furniture factories, planing mills, etc. Saws as thin as twenty-three gauge or thinner may be used, removing a saw kerf or less than one-twentieth of an inch. It is provided with every appliance which our experience has shown to be needed, such as our improved saw guides, which save hammering the saw; our self-centering device, which divides the surplus thickness and insures one perfect piece from scant stock, and which centres accurately to the extreme last end; devices for keeping the gum from the wheel; cross line; variable friction feed, the rate of feed being controlled by the small hand wheel shown in cut.

We call your attention to the heavy, massive frame, to which are attached the journal boxes of the main shaft, rendering the machine self-contained, and doing away with all liability of the boxes heating or getting out of line; the immense spread of the base securing an extra rigid foundation; to the length of base which supports our feed rolls; to the symmetry of design, and to the general excellence of workmanship throughout. It is easily piped to the blower, and all wearing parts are either adjustable or interchangeable. This Re-Saw, as well as all of our others, is so constructed that the saw blades, when placed on the wheels, encircle the journal boxes, thus doing away with the necessity of an outside bearing. This mode of construction admits of a much lighter and more substantial cross-head, thus giving a much more sensitive tension than could otherwise be provided, as well as enabling us to provide the most convenient cross-line yet devised.

Diameter of wheels forty-eight inches, to carry a four inch saw blade. Extreme height, eight feet eight inches. Floor space, seventy inches wide by sixty inches deep. Rates of feed, sixteen to seventy feet per minute. Size of driving pulley on machine, twenty inches. Should make 600 revolutions per minute. Width of driving belt, six inches. No loose pulley furnished unless ordered, as a tight and loose pulley are usually placed on the countershaft as required.

For further particulars address the company as above.

## IRON ORES OF NOVA SCOTIA.

Mr. George B. Cowan of Halifax, N.S., in a letter, recently published on the new iron ores of Nova Scotia, says:

Nova Scotia has ores of equal, in quantity, those of Alabama, and in quality they run over fifty per cent. metallic iron, are free from sulphur and titanium and contain about  $\frac{1}{2}$  per cent. of phosphorus. It naturally

follows that Nova Scotia will soon be heard from in the iron trade of the world. The whole northwestern side of Nova Scotia, along the Bay of Fundy, which separates it from Maine and Massachusetts, and along Northumberland straits, which lie between it and Prince Edward's island, from Yarmouth on the southwest to Cape St. George on the northwest, is an extension of the Appalachian Highlands coming up from Alabama. And it shows iron from end to end, but in no commercial quantity or on an important scale except in the extreme northwestern county—Antigonish—which terminates in Cape St. George. But here it makes up. The county is a peninsula. On one side the straits of Northumberland. On the other George Bay, which meet at Cape St. George.

The Northumberland straits are a part of the Gulf of St. Lawrence and that side of the county is known as the Gulf Shore. Running along parallel with this gulf shore, a mile and a half to two miles distant, is a range of mountains varying in height from 650 to over 1,000 feet and the core of it is taken up with a mass of verticle veins of iron ore. I saw the region last spring and went up again to see it after a good deal of development work had been done, in some cases changing the showing of four months ago, but on the whole enlarging it greatly. The veins have a general course of about south seventy degrees west—more easterly and westerly than north and south. In the gorge of Doctors Brook, which cuts these veins deeply and at right angles, in all nine veins had been opened up in a way to show their faces, walls and condition in place. The series of veins as now showing in place, are nine in number with a total of eighty-four feet. All these veins have been

traced east and west of the gorge throughout the length of the range. Summed up it is a proposition of about this size—from 50,000,000 to 75,000,000 tons per mile, for eleven miles, above sea level, with more below, the 50,000,000 based on veins already uncovered, the 75,000,000 per mile based on what is likely to be found in other veins and below sea level. Along the southern side of this range of iron and northeastward from it extending over to George Bay, and the straits of Canso, which open the way to the Atlantic, is a coal field, as yet undeveloped, but in which two large seams of coking coal are known to exist. The waters on both the gulf shore and the shores of George Bay are very bold, giving five to six fathoms anywhere at a distance of eighty to one hundred yards from the beach. A line of railway has been surveyed to connect the range with the Inter-Colonial railway, a dozen miles to the south, and piers will be built on the Gulf Shore and on George Bay for shipping ores on a large scale both to the United States and England. We have been hearing a great deal about the Belle Isle ore of Newfoundland that Mr. Whitney purchased for the Dominion Iron & Steel Works at Sydney. But the Antigonish deposit is at least twenty times as great in quantity, equally good in quality and has coal alongside. The region will make another Birmingham.

## THE HEINE SAFETY BOILER.

The Canadian Heine Safety Boiler Co., Toronto, of which Mr. J. J. Main is manager, has sent us an illustrated description of this well-known boiler, which they manufacture for the Canadian trade. We are told that the four chief points usually aimed at to

# "Capitol" Cylinder

"RENOUN" ENGINE

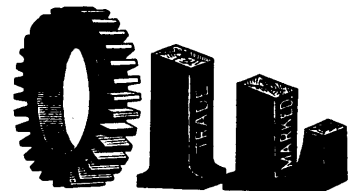
"ATLANTIC" RED

RELIABLE WELL-KNOWN BRAND

ALL ORDERS PROMPTLY FILLED

THE QUEEN CITY OIL CO. LIMITED

SAUEL ROGERS, Pres. TORONTO, Canada.



## DO YOU KNOW WHY?

You can't get any heat through your house or factory. You will probably find your boiler furnace tubes or stove front choked up with scale. A few gallons of our

## CELEBRATED SCALE SOLVENT

will remove all this and restore to you the entire heating capacity of your plant. A postcard will bring you full information. WRITE AT ONCE.

## THE WILLIAM SUTTON COMPOUND CO. Limited

186 Queen Street East, Toronto, Ont. TELEPHONE 2239.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# THE STRATFORD MILL BUILDING CO.

STRATFORD, ONT.

Manufacturers of all kinds of.....

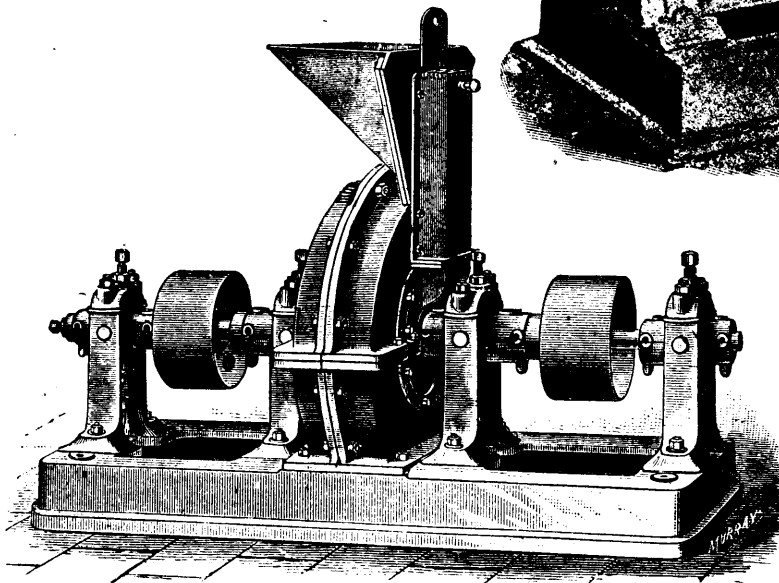
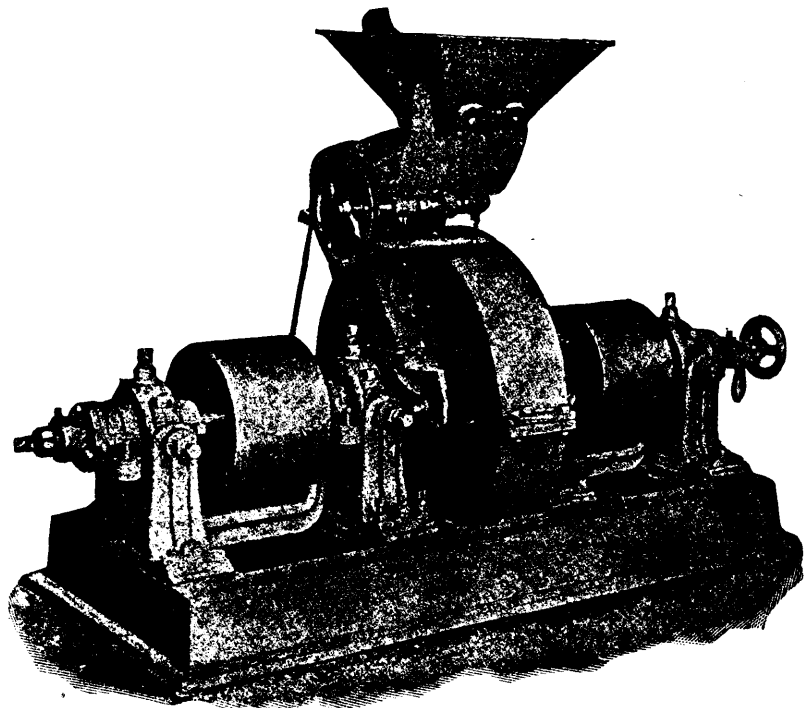
---

FLOUR MILL

---

MACHINERY,

---



**PLATE  
CHOPPERS,**

**ROLL  
CHOPPERS,**

## Brown Automatic Engines

ETC., ETC.

**THE CUMMER DRYERS.**

**FOR Mechanically Drying Everything**

**THE F. D. CUMMER & SON CO.,**

**HUNDREDS IN OPERATION.**

**CLEVELAND, OHIO.**

secure in a high grade modern boiler are safety, durability, accessibility for cleaning, and economy in use of fuel.

Alluding to the points of excellence of the Heine boiler, speaking of its safety, we are told that the gases of combustion do not reach the main shell until their heat has been largely absorbed in the water tubes. It follows that, in the event of water getting low, the tubes, which are of thin metal, and exposed to intenser heat, would naturally let go before the main shell would feel distress.

Regarding the ease in cleaning, the pipe the man handles is a long steam nozzle which passes through the hollow stay-bolts of the water leg. The steam jet sweeps the surface of the tubes. The soot either goes up with the draft or falls in the combustion chamber from whence it can be easily removed. A soot blower can be used from either end of the boiler, and every inch of the tube surface can be reached while the boiler is steaming, without opening any doors in the furnace. The tubes are reached for internal cleaning by removing the hand hole plate opposite the end of each tube. These plates close the hand holes from within the water leg, and are made tight by steam pressure and not against it by means of screw pressure as is done in other boilers.

The mud drum is a large settling tank submerged in the heated water of the shell. This tank, which is large enough to permit of slow circulation, is fed into, and deposits of mud and other impurities are therein collected by gravitation. It is surrounded by water hot enough to preprecipitate the greater part of the scale-forming salts. By the time the feed water has passed through this mud-drum it is brought to a high temperature, and the strains resulting from feeding cold water into highly heated surfaces are avoided.

The company publish a book entitled "Helios" which contains many valuable

tables of interest to engineers; also data concerning various fuels, waters, etc., besides an extended account of modern boiler ideas.

**THE DOMINION IRON & STEEL CO.**

General Manager Moxham, of the Dominion Iron & Steel Co., Sydney, N.S., has been interviewed recently concerning the possibilities of his company. Some interesting statements appear in the published account from which we take the following:

Of the four furnaces under erection the first is to be ready this month and the last one will be completed in the spring of 1901. The manufacture of steel will be begun by July 1, 1901. The four blast furnaces will, it is estimated, turn out from 1,200 to 1,400 tons daily, or from 350 to 400 tons each daily, working on Belle Island ore. This unusually large product is possible, because the Belle Island ore works kindly in the furnace. Practically the whole of the metal output will be manufactured into steel when finished. Two of the blast furnaces are almost finished, and the others well started. The coke ovens are about three-quarters complete, while the steel plant is well on the way to completion. The water works and railroad system are now ready. Work will be continued all the winter. Mr. Moxham says there was less time lost last winter than either during the spring or summer months, owing to the unusually good weather which prevailed. In answer to the question, where the bulk of the steel output would find a market. Mr. Moxham replied that the market would be practically the whole world, the United States included, so far as the expert business was concerned. The American manufacturer gets a rebate of ninety-nine per cent. of the duty on everything brought in for export purposes.

When asked how the Dominion Iron & Steel Co. would compete with manufacturers in the United States, Mr. Moxham said: "Our two closest competitors are Pittsburg and Birmingham. Theoretically, the latter is our closest competitor, but in actual practice it will be the former; and the reason is this, i.e., that Birmingham has not as yet gone far beyond the crude portion of steel manufacture, while Pittsburg has developed the industry to the utmost point of finished manufacture. If you want an exact comparison of relative advantages, I will try to give it to you. To manufacture one ton of steel in Pittsburg they have to carry two tons of ore over 230 miles of railroad and 1,000 miles of water. They have also to take two tons of coal, or its equivalent in coke, over sixty miles, and one-half ton of limestone over, say, 100 miles. Omitting the lake traffic, this is equivalent to 580 tons railroad miles; and, in addition to this, Pittsburg has to carry each ton of steel 450 miles to reach tidewater. Birmingham has the raw materials pretty well assembled, but the finished steel must be carried 600 miles before it reaches tide-water. Against both of these places Sydney has about 400 miles of sea haul on iron ore, nothing whatever on coal, and nothing on finished material, because she manufactures at tide-water. Nor is that all. Sydney is 1,000 miles nearer European ports than New York, and 3,000 miles nearer than Mobile, the shipping point for Birmingham.

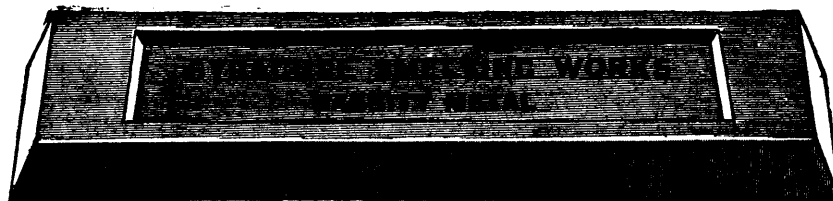
Speaking of the question of government tariffs, Mr. Moxham said: The Dominion Iron & Steel Co. could ship into the United States even for domestic use at a profit in spite of the tariff. The only thing that deters them from doing so is the consideration that more profitable markets exist elsewhere. In dollar and cents I would put Sydney's advantages at from \$5 to \$6 per ton over Pittsburg; and prob-

**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.

Importers and Dealers in

**PIG TIN, ANTIMONY  
INGOT COPPER  
ALUMINUM  
NICKEL, BISMUTH  
IRON AND STEEL  
SCRAP**



Manufacturers of

**BABBITT METALS, SOLDER  
TYPE METALS  
COLUMBIA PHOSPHOR TIN  
AND  
ALL OTHER WHITE METAL MIXTURES**

<b>SYRACUSE</b>
<b>BABBITT</b>
<b>BEATS THEM ALL</b>

**SYRACUSE SMELTING WORKS**

**WILLIAM AND ST. THOMAS STREETS, - - MONTREAL**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

ably from \$3 to \$4 on Birmingham, Ala., that is, measuring by export business in all three cases, and leaving out the question of government bounty. He was then asked what he considered a fair profit on steel, to which he replied: A perpetual guarantee of \$2 per ton profit on the product would be a handsome recompense to capital in the steel business.

Mr. Moxham says that the town of Sydney is forging ahead rapidly, but along legitimate lines. Some 800 houses have gone up within the last few months. There are banks and other public buildings. Several miles of sewers and water pipes have been laid; and in other ways, similarly, the place is developing. He states however, that the local labor will not be sufficient to fill the bill, and men will be needed from all over Canada. The chief classes of labor at present are the Italians, Newfoundlanders, Cape Bretonians, and French-Canadians. Next year there will, in all probability, be somewhere in the neighborhood of 4,000 men employed at Sydney, and between 1,000 and 1,200 at the mines, which are some 400 miles distant from the town.

#### ONTARIO BUREAU OF MINES.

The report of the Ontario Bureau of Mines for 1900, has just been published. It is the last report collated by Mr. Archibald Blue, the late director of the bureau, and the first issued by Mr. Thomas W. Gibson, his successor. The report shows expansion and prosperity during the year 1899. Under the Joint Stock Companies' Act, seventy four companies, with a share capital totalling \$87,382,994, were organized; in addition, extra provincial companies, having a total authorized capital of \$9,551,000 were licensed. The total amount of authorized capital for mining companies in Ontario, was \$46,929,389 in 1895, and at the close of 1899, it stood at \$291,757,372. The record year for the establishment of mining companies is still 1897, however. The locations sold in 1899 totalled \$75,367, a very large increase on all previous records.

Statistics of mineral production were

incomplete for the first year of the bureau's operations, but in the table which follows, a comparison is made of the values of products in 1892 and 1899:—

Products.	1892.	1899.
Building stone, rubble, etc. ....	\$880,000	\$1,041,350
Cement, natural rock	38,580	117,039
Cement, Portland ..	47,417	444,227
Lime .....	350,000	535,000
Drain Tile .....	100,000	200,246
Common Brick .....	980,000	1,313,750
Pressed brick and terra cotta .....	259,335	105,000
Paving brick .....	.....	42,550
Sewer Pipe .....	.....	138,356
Pottery .....	80,000	101,000
Petroleum products.	1,400,435	1,747,352
Natural gas .....	160,000	440,900
Carbide of calcium ..	.....	74,680
Salt .....	162,700	317,412
Gypsum .....	25,980	16,512
Graphite .....	.....	16,179
Talc .....	.....	500
Mica .....	1,500	38,000
Arsenic .....	.....	4,842
Iron ore .....	.....	30,951
Pig iron .....	.....	808,157
Nickel .....	590,902	526,104
Copper .....	232,135	176,237
Cobalt .....	3,713	.....
Gold .....	36,900	423,978
Silver .....	732	65,575
Zinc .....	.....	24,000
Totals .....	\$5,350,349	\$8,789,901

The list shows that during the eight years paving brick, sewer pipe, carbide of calcium, graphite, talc, arsenic, iron ore, pig iron, and zinc, have been introduced as new products of the mineral industry, whose aggregate value last year was \$1,140,215. Stone and clay products have increased in value by \$1,343,186, petroleum products the natural gas by \$627,821, salt by \$154,712, and mica by \$36,500. A falling off is shown in gypsum, nickel, and copper; but in the case of the two metals, this result is almost certainly due to a too low estimate of selling prices at the works. There is an increase in gold and silver of \$451,921, and of all metalliferous pro-

ducts of \$1,195,462. The aggregate increase in the value of products in 1899 over 1892, is \$3,439,552, and in 1899 over 1898, it is \$1,554,024.

Statistics of metal production for the first half of the current year (1900), afford evidence of continuing progress, in the opinion of Mr. Blue. Several gold mills have been idle, pending development of the mines, enlargement of machinery capacity, and other causes. Returns have been received from eight, which show that during the six months 22,177 tons of ore were treated. The yield was 9,983.37 ounces worth \$156,269.84 gold, and \$141.54 silver. The silver mines show a product of 12,000 tons of ore, with a yield of 85,000 ounces, valued at \$51,000. The arsenic product was 208,000 pounds, worth \$8,980. The output of zinc was only 150 tons, estimated at \$900. Seven iron mines in the eastern parts of the province report a yield of 9,608 tons, worth at the selling price at the mines \$19,532. One mine in the Michipicoten mining division, which began to produce in July, will probably show a larger output than this total for each fortnight until navigation closes.

At two blast furnaces there was smelted during the first half of the year, 50,538 tons ore and 8,155 tons mill cinder. The proportion of Ontario ore used was a little more than one-fourth of the whole, being 13,252 tons; but the second half of the year, will no doubt show better results in this respect. The quantity of pig iron produced was 32,279 tons, the value of which is \$511,209, computed at the selling price at the furnaces. Open hearth steel begins for the first time to figure in the metallic industries of the province. The production for the first six months was 945 tons, valued at \$25,515. The quantity of nickle-copper ore raised was 87,808 tons, and the quantity of roasted ore smelted, was 100,073 tons, which yielded a matte product of 12,323 tons. The estimated metallic contents of the matte is 1,925 tons nickel, valued at \$413,771, and 1,784 tons copper, valued at \$165,968. The total value of metal products for the six months was \$1,353,287, or two-thirds as much as for the whole of last year.



# DODGE

## PATENT WOOD SPLIT PULLEYS

WITH INTERCHANGEABLE BUSHING SYSTEM.

*Standard of Excellence Everywhere.*

### OVER 2,000,000 IN DAILY USE

Sales Agencies all over the World.

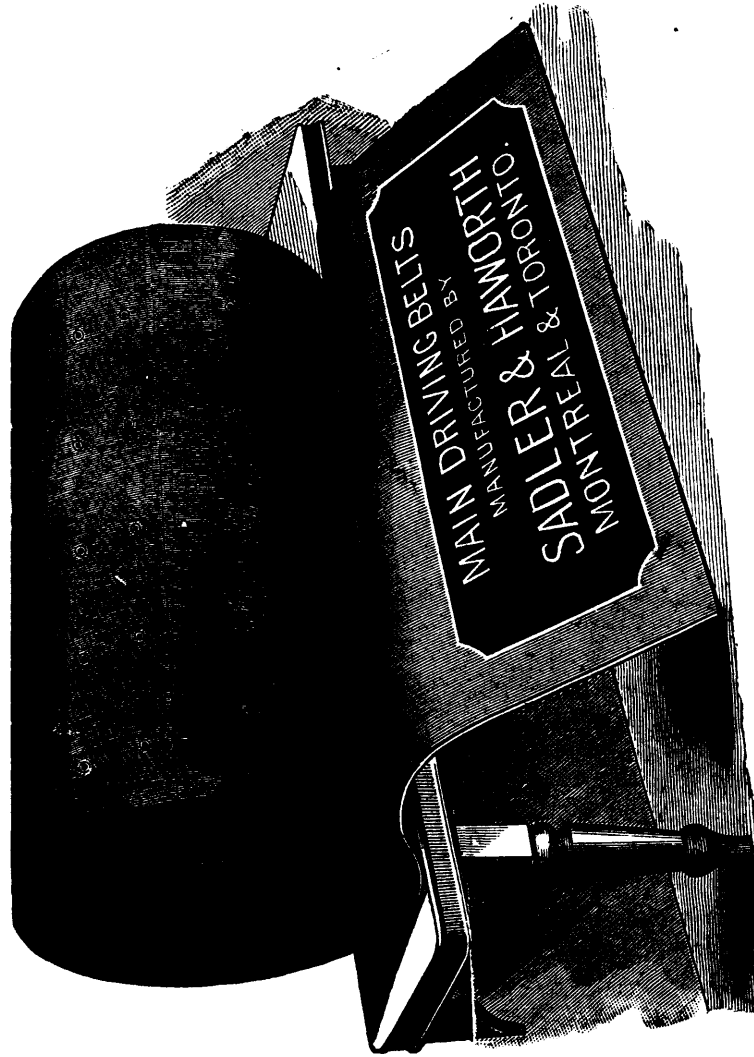
SOLE MAKERS . . .

## Dodge Mfg. Co. TORONTO ONT.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# MAIN DRIVING BELTS

BELTS MADE  
ANY THICKNESS,  
WIDTH, LENGTH,  
AND STRENGTH  
DESIRED.



OUR BELTING  
HAS BEEN TRIED  
AND PROVED TO  
MEET EVERY  
REQUIREMENT.

**SADLER & HAWORTH,**  
MANUFACTURERS,  
**MONTREAL and TORONTO.**



The report also contains special articles on the mineral industries of Ontario, and on the mines of New Ontario, Eastern Ontario, and Michipicoten, a digest of the mining laws, and various other articles of interest.

#### COPPER REFINERY.

The Orford Copper Co., which has been for years refining at its works in New Jersey, the copper nickle matte of the Canadian Copper Co., is now establishing a smelting or refining works at Coppercliffe, Ont., a few miles west of Sudbury, in the vicinity of the Canadian Copper Co.'s McArthur mine. The plant consists of a 75 h.p. engine, two 125 h.p. boilers, a dynamo, a Cameron pump, a Krupp ball

mill, a Blake crusher, brown straight-line calcining furnace, with a 70 foot stack and two cupola smelting furnaces.

The object is to calcine and smelt the copper-nickle mattes at present produced by the Canadian Copper Co., with a view of raising the metallic contents of the matte to about 80 per cent., thus by further reduction than is now done by the company making it a high-grade matte instead of one of low grade, as at present. It is also proposed to treat the basic copper matte after smelting the ore from the Orford Co.'s mine near Massey Station in the same plant, using as a flux with these ores the somewhat cupriferous silicious slags from the reconcentration of the Canadian Copper Co.'s matte.

The works will be capable of treating about double the present matte output of the Canadian Copper Co., and employ about one hundred and fifty men. The copper vein in Salter Township, near Massey Station, which the Orford company is working, is about a mile in length and varies from four to eight feet in width. The ore is chalcopyrite. The company proposes to raise two hundred tons of ore per day, about one-half of which will be sent direct to the smelter, which the company intends to construct at Massey Station, and the other one hundred tons will be concentrated to a product containing about fifteen per cent. copper.

#### THE FIRST PAPER MILL IN CANADA.

It is generally conceded that the first paper made in Canada was in a mill at St. Andrew's, Quebec, about 1803. As to the first paper made in Upper Canada, there is some doubt. Mr. James Stutt, who was foreman of Eastwood's mill on the Don river in 1830, now lives at West Flamboro. He is eighty-three years of age, and in a recent conversation with Mr. A. C. Ross, of West Flamboro, said to a Telegram reporter:—

Mr. Eastwood told me that both mills, the one on the Don, and the other at Flamboro, were built the same year. Mr. Eastwood had the machinery in first, and his was the first mill running. Mr. Crooks, seeing that Mr. Eastwood was going to get the first paper out, sent his man to Hamilton for a load of old papers, boiled them in an old pot, then rolled the paper out and put it to dry in the sun. The Government prize was given to him for the first paper made in Canada. The Government did not state how the paper was to be made, so they gave Mr. Eastwood a prize, amounting to half of that of Mr. Crooks. This was in the year 1825 or 1830, I am not sure which.

Mr. Stutt at the present time has a paper mill in Crook's Hollow at West Flamboro. It occupies the site of the old grist mill, which was at one time operated by Mr. Crooks as such. The original paper mill, known as Crooks' mill, was a frame building and stood about forty yards from the present grist mill. It was on lot 6, concession 2, of West Flamboro, the same lot on which the house of Mr. A. C. Ross stands. Mr. Stutt, although eighty-three years of age, is running his paper mill night and day. He told Mr. Ross that in 1845 a man named Helliwell, who was foreman at the Crooks mill, sent for him (Stutt) to come to Toronto

## THE... A. R. WILLIAMS MACHINERY CO.

(Limited)

Head Office, - SOHO MACHINE WORKS, TORONTO

Manufacturers of and Dealers in

High-Class Iron Tools,

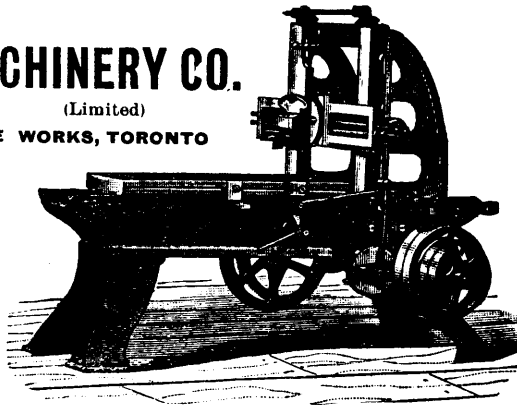
Wood-working Machinery,

Engines, Boilers,

Motors, Water Wheels,

General Machinery

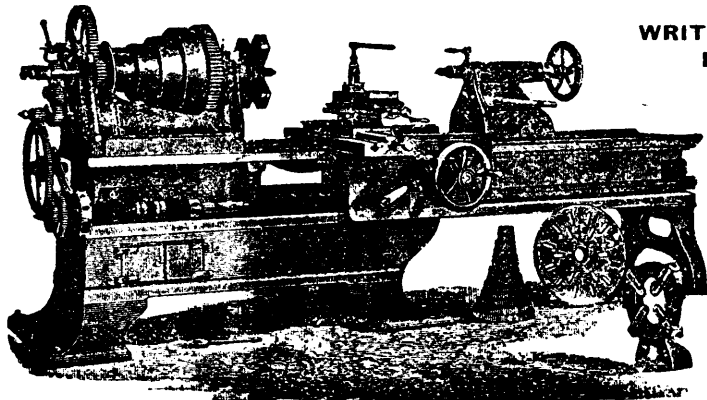
and Supplies.



WE ARE THE EXCLUSIVE  
AGENTS OF THE

McGregor-Gourlay Co. Limited, GALT, ONT.

### IRON WORKING MACHINERY.



WRITE TO US FOR  
PRICES.

#### BRANCHES

193 Colborne St.,

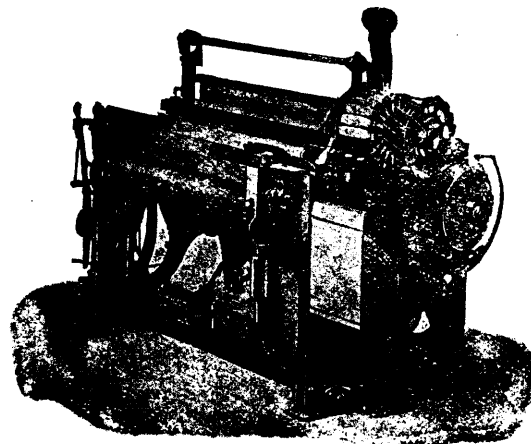
BRANTFORD

345 and 347

St. James St.,

MONTREAL

Send for Circulars,  
Referring  
to this Advt.



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.

# 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.

to fix some part of the machinery which had gone out of order. The Eastwood mill on the Don was built in 1826 and was in full operation a year later.

### A CANADIAN MINT.

For years there has been talk of the establishment of a Canadian mint. The movement principally came from British Columbia. The Hon. T. R. McInnes, when he was a senator, and not yet Lieutenant-Governor of British Columbia, made an argument in the Upper Chamber each year for a Canadian Mint. Little attention was paid to it, until the Hon. W. S. Fielding, was appointed Minister of Finance, and went carefully into the whole matter. He discovered that the establishment of a Canadian mint was advocated for material as well as sentimental reasons. It has been said, that trade follows the flag, but there are those who believe that trade follows the gold, and they say, that when gold went from the rich Yukon territory to the United States, the trade went with it.

Canada is a great and growing country, and there are many outside the Western country nowadays who think that she ought to have her mint. The Bankers' Association passed a resolution two or three years ago, in favor of a mint, but the opinion of bankers is divided on the subject. Canada has a currency based on gold, but there is little gold in actual circulation. There is also a silver currency, but the silver in use is minted in the United Kingdom. All money is redeemable in gold, but almost any banker will tell you that nineteen out of twenty persons going into a bank for money, and offered gold or notes, will take notes in preference to the gold. Therefore Mr. Fielding came to the conclusion, that for a purely Canadian mint there would not be enough work in the Dominion. Therefore the Finance Minister entered into negotiations with the Government of Great Britain, to establish in this country, a branch of the mint

of the United Kingdom. The consent of Her Majesty's Government has now been obtained, and if Canada wants to go ahead with the mint, we may make not only our own coin without limit, but also the British sovereign, which is current the world over. This outcome was virtually anticipated in Mr. Fielding's speech the other day in Montreal. During the next session of Parliament the negotiations will be brought to such a point, that Canada will be ready to go on with the mint to coin her gold to the full extent required, and keep the mint going forward in turning out British sovereigns. In this way Canada will keep the products of the rich mines of the Yukon and British Columbia.

Where the mint is to be established, is another question. British Columbia is after it hot-foot, and Winnipeg has sent a plea, on account of its central situation. On the other hand, Nova Scotia, the home of the Finance Minister, has claims which cannot be lightly brushed aside. But British Columbia is likely to be successful.

### ALUMINUM.

The Syracuse Smelting Works, Montreal, who are manufacturers of brass ingots, phosphorus tin, refined spelter, antimony, aluminum, etc., inform us that they have recently imported a large quantity of aluminum for which they are quoting special prices. They say, that this importation is probably the largest one of that article ever made into Canada.

Aluminum is now being used extensively for making all kinds of aluminum castings, as well as a flux in making iron and steel casting, and it is also used in making the best grades of "Aluminum Genuine Babbit Metal" a specialty of this company.

This company are also sole manufacturers of the "Columbia Phosphor Tin," the production of which, they inform us, is exclusively with them. It has been a study of metallurgists for many years, how best to introduce phosphorus into molten metal, and how to retain in the

metal, the largest possible quantity of the article to give it the highest possible value in the manufacture of phosphor-bronze castings. This company claim that they have attained the acme of perfection in this direction, and are now enjoying a fine trade in exporting phosphor tin to all parts of the world; and they are furnishing formulas, showing how to make any desired grade of phosphor bronze, with their Columbia tin as a flux. In working old metal, they say, there is nothing better, as it purifies the metal thoroughly. Old copper can be used as well as new, in making phosphor bronze castings. The effect of this metal in a pot of molten brass is to greatly increase its fluidity.

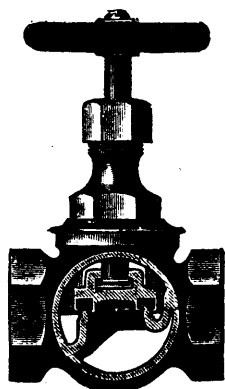
### SMOKE PREVENTION.

The General Engineering Co., Toronto, have sent us an eighty-eight page booklet, having reference to the Jones under-feed stoker, manufactured by them for the Canadian trade, they being the owners of the Canadian patent. The main object in publishing the book is, they say, to show the superiority of the mechanical stoker, as compared with the old and soon to be, obsolete method of hand firing. The advantages to steam users in the use of mechanical stokers are, economy of labor, increased effectiveness, regularity of fuel supply, and, with the Jones device, complete control over the admission of air into the furnace at all times.

Mechanical stokers of all kinds may, we are told, be placed in two classes—the "overfeed," or those which supply the fuel above the fire, and the "underfeed," of which the Jones is a type, in which the fuel is introduced below the fire, and in rising is brought to the coking condition at which the gases, as they are liberated, pass upward through the brightly blazing fire, when they are completely consumed, and complete combustion obtained.

A representation of the stoker is shown, complete and ready for installation, from which it will be seen, that it consists of

## FAIRBANKS VALVES



A. D. GLOBE.

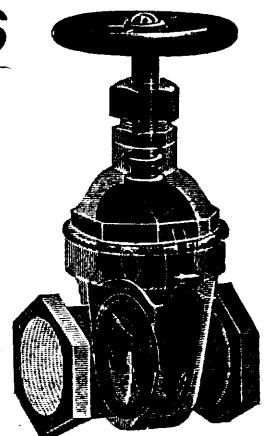
### The Globe Valve

Has enough metal to stand the strain of expansion and contraction; has the best and simplest renewable disc made; stuffing boxes all packed with "VULCABESTON."

A S H E S H O U S I S S O

### The Gate Valve

Has two renewable seat rings VULCABESTON or BRONZE, as desired; Renewable Wedge; Double seated. Made in all sizes in Brass or Iron.



A. S. GATE.

**THE FAIRBANKS COMPANY, 749 Craig St., Montreal.**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**THE BOURNE-FULLER CO.****IRON, STEEL**AND  
**PIG IRON****CLEVELAND, OHIO, U.S.A.****Shipping Tags. Invoice Tags.****DUPLICATING BOOKS**

HEAD OFFICE:

**AUTOMATIC CHECK BOOK COMPANY**

46 &amp; 48 Richmond St. W., Toronto.

We are the largest manufacturers of Shipping Tags in Canada. We make all the standard sizes and a great variety of special sizes.

Branch Office: 260 ST. JAMES ST., MONTREAL.

**The Diamond Machine Screw Co. Limited, Toronto**

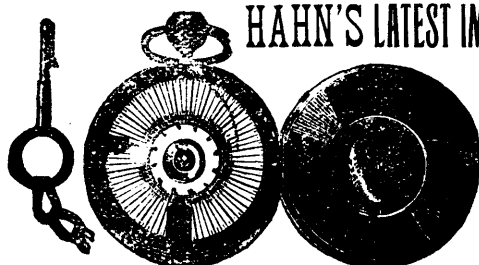
MANUFACTURERS OF

**MACHINE SCREWS and MILLED WORK**

OF EVERY DESCRIPTION

**COLD PRESSED NUTS**

SEND FOR CATALOGUE AND PRICE LIST

**HAHN'S LATEST IMPROVED WATCHMAN'S TIME DETECTOR**

This Clock is adapted for six or twelve stations, and the keys are all different, ranging from 1 to 6, and 1 to 12, instead of as in the old style Time Detectors, which mark either by holes or an impression on the dial, being the same for all stations.

For circulars, prices and further information address

**A. NANZ & CO.,** Room No. 45, Graham Building, 127 Duane St. NEW YORK

This Clock received the First Prize at World's Fair

**Zanzibar Anti-Rust Paint**

FOR

**ROOFS OF ALL KINDS  
STRUCTURAL IRON WORK  
BRIDGES, ELEVATORS, Etc.**
**A Paint** that will not Blister, Crack, or Peel off**A Paint** that is Rust, Water, and Spark Proof.**A Paint** that is GUARANTEED.**A PAINT THAT YOU WANT**

Agencies in all parts of Canada; if none in your vicinity write us direct for prices and samples.

WE ARE SOLE MANUFACTURERS

**GARFIELD OIL COMPANY**

BRANCH:

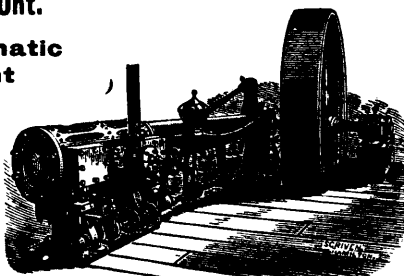
**WINDSOR, ONT.**

GENERAL OFFICES:

**CLEVELAND, O., U.S.A.****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—419 Hasting St., Vancouver, B.C.  
Winnipeg Office—435 Ross Av., Winnipeg, Man.**


a steam ram with a fuel hopper outside the furnace proper, and a retort or fuel magazine and auxiliary ram within, tuyere blocks for the admission of air being placed on either side thereof. Another illustration, in cross section, shows the magazine filled with coal, and other illustrations give different views, so that all parts of the stoker are clearly shown. The ram is actuated by steam, and is worked automatically or by opening the valve as desired.

Some of the salient features and great advantages in the use of the Jones stoker, are:—it saves fuel; it prevents the creation of smoke; it maintains uniformity of steam pressure in the boiler; it increases the capacity of the boiler, and it saves labor. It can be adapted to any type of boiler, as well as to all classes of metallurgical furnaces, roasters, dryers, etc., in fact to any furnace in which intense heat and freedom from smoke are desired.

There are a number of pages given to tabulated statements showing results of comparative tests as between hand-firing and by the Jones stoker; some of those made in Canada, being at Toronto Railway Co's power house, Toronto, on Scotch marine boilers, and Babcock & Wilcox boilers; under boilers at the power house of the Toronto Electric Light Co. in Terauley street; at the Canadian Colored Cotton Mills Co's factory, Milltown, N.B.; at the works of the Ingersoll Packing Co., Ingersoll, Ont.; at the works of the Coleman Salt Co., Seaforth, Ont. There are also a number of letters from well-known Canadian concerns, who have this stoker in use, regarding its excellence, some of the writers being: E. H. Keating, manager, Toronto Railway Co., where there are twelve in use; F. L. Wanklyn, manager Montreal Street Railway Co.; The O'Keefe Brewery Co., Toronto; The Temple Building, Toronto; The City Hall, Toronto; James Noxon, Toronto; Inspector of Asylums and Prisons, re Asylum at Grillia, Ont.; A. M. Wickens, Toronto, engineer and inspector, Department of Public Works, Ontario; C. B. Hunt, manager, The London, Ont., Electric Co., and there are others, many of them, and The General Engineering Co. invite any who are interested, to verify their statements regarding their stokers, by writing to any of these who are in a position to give their opinions of the Jones System.

**EMERY DEPOSIT.**

O. R. Sprague, a Buffalo mining expert, has reported that on the property of the Cobb Mining & Developing Co., on Dog Lake, Frontenac Co., Ont., about 400,000 tons of emery are now in sight, equally as good by actual test as the finest Turkish emery which is imported to the United States.

The company will draw as soon as sleighing commences, 500 tons into Kingston, and ship in cars to Buffalo, where the material will be ground and manufactured into emery wheels. The directors of the company contemplate erecting a mill upon their site at Dog Lake next year, to supply the European and Canadian trade. The emery is valued at \$90 per ton, crushed, wholesale.

There is evidence also of molybdenite in unlimited quantities. This is used in the manufacturing of armour plates, superseding nickel and steel, and has a market value of \$550 per ton. On the galena vein, there is a shaft sunk 30 feet deep, and as soon as a pumping outfit is ob-

# COWAN & CO.,

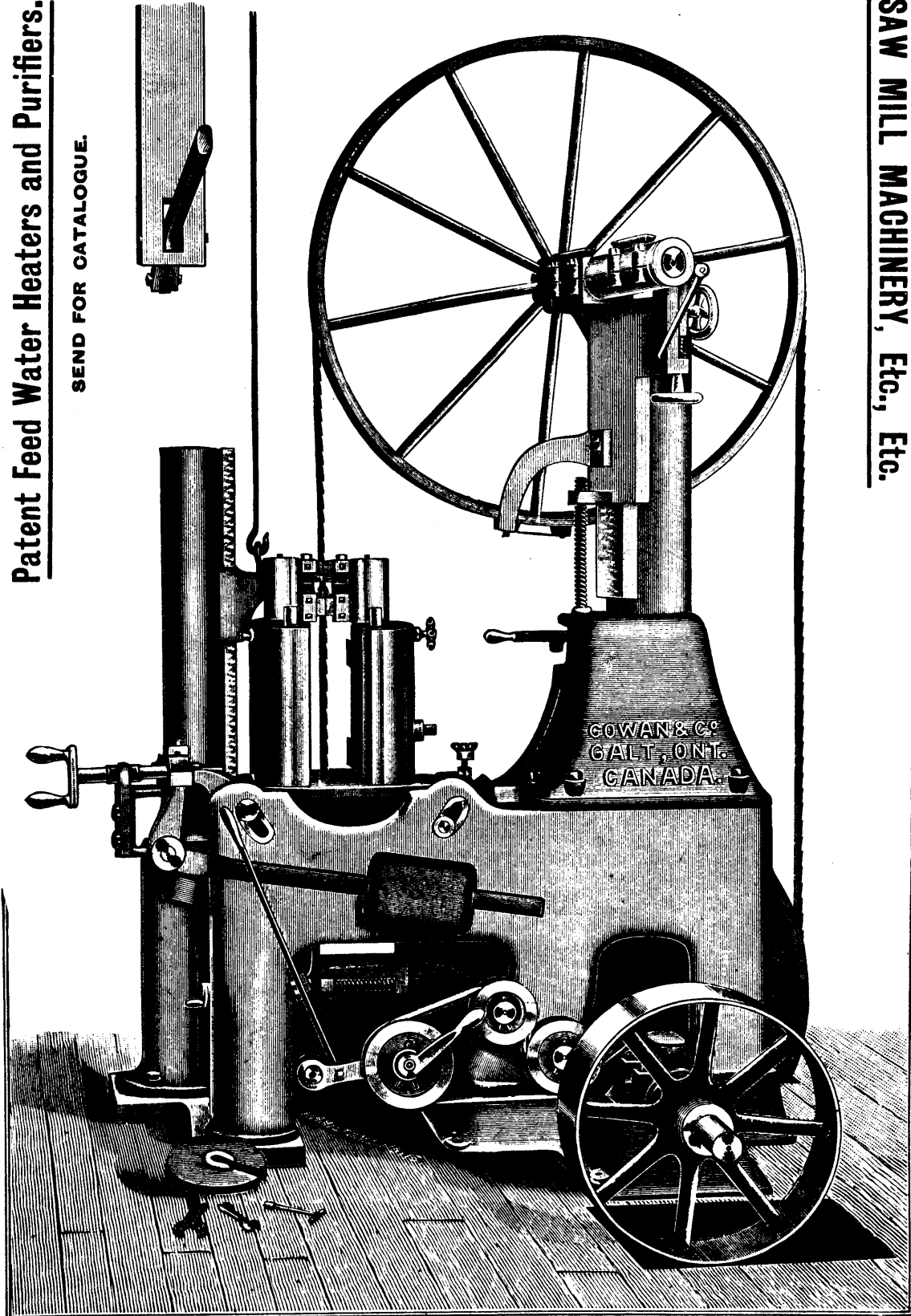
GALT,  
ONT.

MANUFACTURERS OF

**Wood-Working Machinery**

**Patent Feed Water Heaters and Purifiers.**

SEND FOR CATALOGUE.



**SAW MILL MACHINERY, Etc., Etc.**

**ENGINES and BOILERS**

**No. 1 BAND RE-SAW.**

**Diameter of Wheels, 48 in., to carry a 4 in. Saw Blade.  
Floor Space, 70 in. Wide by 60 in. deep.**

**Extreme Height, 8 ft. 8 in.  
Rates of Feed, 16 to 70 ft. per minute.**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

tained, this depth will be increased. A 25-ton smelter will be erected as soon as that quantity of ore can be mined.

**THE PRODUCTION OF ALUMINUM.**

A glance at the following table, compiled by the Iron Age, will show how the production of aluminum has progressed during the past twelve years :

UNITED STATES.	
	Metric tons.
1889	21.6
1890	29.9
1891	68.2
1892	118.1
1893	154.4
1894	250.0
1895	417.3
1896	590.9
1897	1,814.4
1898	2,358.7
1899	2,948.4
1900	4,000.0*

OTHER COUNTRIES.	
	Metric tons.
1889	70.9
1890	165.3
1891	233.4
1892	487.2
1893	716.0
1894	1,240.9
1895	1,418.2
1896	1,659.7
1897	3,394.4
1898	4,500.0*
1899	6,000.0*
1900	7,500.0*

\*Estimated production.

The aluminum industry is growing most rapidly in France and in the United States. Canada will enter the list of producing countries next year with a plant of 5,000 horse power, and will add 1,000 tons each year to the world's output. Presuming that the total amount of aluminum produced last year was used for the specific purpose of electric conductors, then the 6,000 tons of aluminum would displace 12,000 tons of copper, or a like amount of aluminum sheet would be equivalent to 20,000 tons of sheet copper were the specification for culinary and cooking utensils. These comparative figures emphasize the important position that the metal has assumed.

**THE CANADIAN FURNITURE COMBINE.**

The beginning of the new year witnesses the formal inauguration in Canada of a new business combination, to be known as the Canada Furniture Manufacturers, Limited.

Its capital stock is \$3,000,000, of which \$2,000,000 is preferred, carrying a seven per cent. cumulative dividend. There is a further provision that after a dividend of seven per cent. on both preferred and common stock and a reserve of not less than twenty-five per cent. of the net earnings has been provided, the remaining profits shall be divided equally between the two classes of stock.

The companies which have become members of the new corporation are : American Rattan Co., Walkerton. Anderson Furniture Co., Woodstock. Anthes Mfg. Co., Berlin.

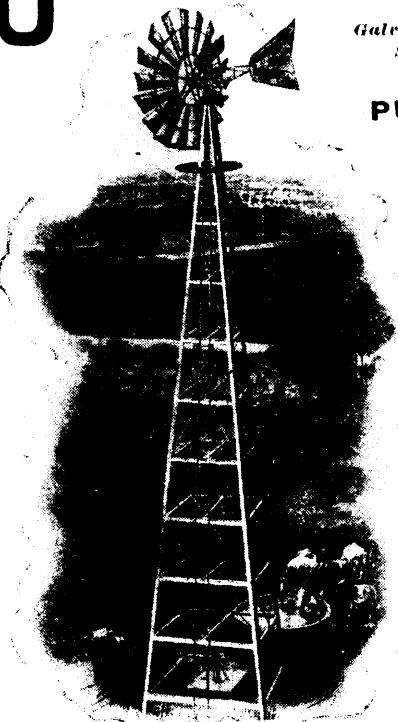
Button and Fessant, Wingham. Thos. Bell & Son, Wingham. The Union Furniture Co., Wingham. Burr Bros., Guelph. Zoeliner & Co., Mount Forest. Joe. Orr, Stratford. Lewis Halm, New Hamburg. The Simpson Co., Berlin. Schaefer, Killer & Co., Waterloo. Snyder, Roos & Co., Waterloo. Slemmon & Bros. Mfg. Co., Warton. The Hill Chair Co., Warton. The Knechtel Furniture Co., Hanover. The Furniture Manufacturers' Exporting Co., Berlin, Ont., and Liverpool, Eng. Broadfoot & Box Furniture Co., Seaforth. The Hobbs Mfg. Co., mirror plates, London.

The directors are : Hon. Samuel Merner, Berlin ; Simon Snyder, Waterloo ; W. R. Hobbs, London ; Thos. Bell, Wingham ; D. Knechtel, Hanover ; J. S. Anthes, Berlin ; Henry Cargill, M.P., Cargill ; Robt. Kilgour, Toronto.

The officers are : President, Simon Snyder, Waterloo ; Vice-President, W. R. Hobbs, London ; Secretary-Treasurer, J. R. Shaw, Toronto ; Factory Superintendent, J. S. Knechtel, Hanover.

The charter of the new company was taken out some time ago under the name of The British-American Furniture Co., Limited, and a considerable quantity of the stock was sold. Later some English capitalists became interested, and expressed a desire to invest. The sale of stock was, accordingly, discontinued in order to give them a chance to investigate. They looked into the proposition, and were so favorably

**STAR WIND MILLS**  
FOR PUMPING OR POWER PURPOSES



Galvanized Steel or Wood, all Sizes, 4 to 26 feet in Diameter.

**PUMPING MILLS**

FURNISHED WITH OR WITHOUT TANK ELEVATED IN TOWER.

**GALVANIZED Steel Towers**

Any height, either Three or four post, with substantial ladder.

**TANKS**

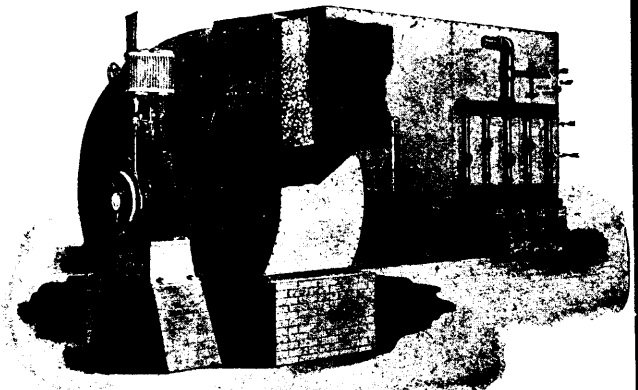
Any Capacity, Any Purpose Made in Pine, Cypress, Fir or Galvanized Steel.

Our windmills are self-regulating and self-governing, and with our Hoosier Automatic Anti-Freezing Force Pump the windmill outfit takes care of itself, night or day, in calm or storm.

"Hoosier" IRON AND "Fast Mail" PUMPS Designs and Prices Furnished. Write for Catalogue.

Address **FLINT & WALLING MFG. CO.**  
"STATION A" KENDALLVILLE, IND.

**Buffalo Fan System**  
- OF -  
**HEATING and VENTILATING**



Type of Apparatus for Single Duct Installation.

**BUFFALO FORCE COMPANY, BUFFALO, N.Y.**

CANADIAN REPRESENTATIVE:

**E. A. WALLBERG, 410 Temple Building, Toronto**

impressed that they sent to Canada two accountants for the purpose of verifying the audit already made by Canadian auditors. These gentlemen looked into the matter and found that during the period which had elapsed since the Canadian audit was made the output and profits of the factories interested had both materially increased.

Mr. W. K. Hobbs, of London, and Mr. Meldrum, of Montreal, went to England for the purpose of closing the deal, the English capitalists having expressed a willingness to put up one-third of the capital required on condition that an English charter be taken out, and also that the names be changed to that above given. The reason for this is that they desired the head office of the company to be in London, Eng., and the controlling interest on the board to be there. Those terms were strongly objected to by the Canadians interested, but might perhaps have been submitted to, as a concession was made to the effect that the control of the management of the companies interested should remain with the local board in Canada.

Arrangements for carrying out the amalgamation along these lines were almost completed when the British Government raised the income tax to a shilling in the pound, which would have meant a tax of five per cent. on the net earnings of the company, with a prospect of the tax being increased in the future. The Canadians interested felt that such a burden should not be imposed upon them and dropped the idea of securing English financial assistance, feeling sure that all the money needed could be raised in Canada. They did not wish that a Canadian industry should bear the British personality tax, especially in view of

the fact that the second audit had shown such an advance in profits.

The English name, however, was adopted for the new corporation, and the Ontario Government was petitioned for a change of name accordingly. No difficulty was encountered in this respect. The necessary financial assistance was secured in Canada, and the directors found themselves in a position to take over the above-mentioned business.

The formal transfer was made Monday, and the factories were notified to shut down temporarily for the purpose of taking stock. The new company went formally and legally into operation on the first of the year.

The amalgamation does not mean that the proprietors of the various firms interested are severing their connection with their old businesses. On the contrary, they, as individuals, retain an interest in the new corporation to the extent of \$850,000.

Two firms, Watson & Malcolm, Kincardine, Ont., and Krug Bros., Chesley, Ont., were originally included in the amalgamation, but dropped out owing to a failure to make satisfactory financial arrangements. On the other hand, the Anderson Company, of Woodstock, Ont., which was not included in the original group of factories, and which is one of the largest manufacturers of furniture in Canada, has come into the consolidation.

The object of the amalgamation is to push the export trade. The work of the different factories will be specialized so that each factory will work on a special line instead of as heretofore engaging in the manufacture of general furniture. In this way, and also by economy in the purchase of supplies, it

## Electrical Common Sense

It is poor economy to buy a good dynamo unless your wiring is properly installed.

It will not pay you to save power at your dynamo if you lose it on the way to your lamps.

Our wires are proportioned to the power they are to carry, and we put them up to stay.

As we are not connected with any manufacturer, we are prepared to install any of the standard machines on the market.

Let us quote you prices.

## R. A. L. GRAY & CO.

Electrical Contractors,

83 YORK ST., . TORONTO.

is expected that a great saving will be effected in the cost of manufacture.

The firms interested in the consolidation comprise something over seventy-five per cent. of the total furniture trade of Canada, and they have already acquired a considerable grip on the export trade. During the past year or two there have been many enquiries from South Africa and Australia,

# THE BEST PIPE THREADING and CUTTING-OFF MACHINES

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

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

Send for Catalogue 27.

Factory: BRIDGEPORT, CONN.

New York Office: 139 CENTRE STREET.

**The 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.

780 Main St., Winnipeg.

24 York St., Toronto. 134 Granville St., Halifax.

## RICE LEWIS & SON, LIMITED

### HARDWARE and METAL

Bar Iron, Steel,  
Boiler Plate Tubes.

### MACHINIST TOOLS, PIPE FITTINGS.

A COMPLETE STOCK OF

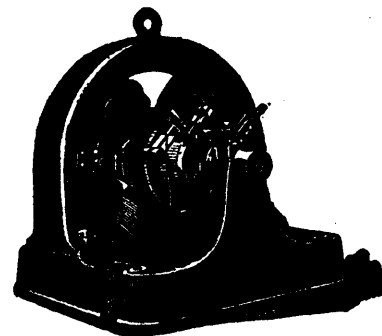
STOCKS and DIES. PIPE VICES.

STILLSON & TRIMO  
WRENCHES.

### STEAM PIPE.

Cor. King and Victoria, TORONTO

## TORONTO and HAMILTON ELECTRIC CO.



### MOTORS and DYNAMOS

COMMUTATORS REFILLED

99-103 McNAB ST. N., HAMILTON

'Phone 958

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

as well as from Great Britain and Continental Europe for Canadian factories, which the individual factories were unable to cope with, but which the new concern can readily meet.

The old managers of the factories will be to a very large extent retained. So also will the old salesmen. The earnings of the various factories during the past two years have been more than sufficient to pay twice over the dividend on the preferred stock.

The head office of the new company will be in Toronto.

## EXHIBITION REFORM

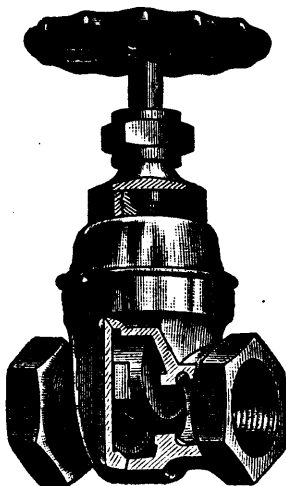
All those who desire to see the much needed improvements and reforms brought about in connection with the

### INDUSTRIAL EXHIBITION

will confer a favor by communicating their views to

J. O. THORN, *Manager,*  
THE METALLIC ROOFING Co., Limited,  
TORONTO.

## 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.

### A TRIM PASSENGER BOAT.

A small passenger vessel, but a very trim one and in every way up-to-date, is the steamer Rideau Queen, owned by the Rideau Lakes Navigation Co., Kingston, Ont. The Rideau Queen, alike to other vessels of the fleet to which she belongs, was designed and built by Mr. M. R. Davis, of Kingston, who is to build another similar vessel during the coming winter for the same company. The route followed by these vessels between Kingston and Ottawa, Ont., a distance of 126½ miles, is what is known as the Rideau canal. But it is not an ordinary canal. It is a waterway between the two cities mentioned made by connecting a large number of beautiful lakes. The actual canal is comparatively short, while the lakes afford delightful sails and scenery. The canal was constructed by the British government as a military work, at a cost of \$5,000,000, as far back as 1830. If, in the time of war, the navigation of the St. Lawrence was interrupted, this canal, in conjunction with the Ottawa river, would furnish direct communication between Montreal and the great lakes.

Dimensions of the Rideau Queen are: Length over all, 111½ feet; length on water line, 102 feet; beam over all, twenty-eight feet; draught, aft, 4½ feet; draught, forward, three feet; displacement, about 200 tons. The hull is built of oak and tamarrack (double frame) all screw-bolted throughout, with a double row of arches the full length of the steamer under decks. As the limit of draught in the canals is five feet, it was quite a difficult matter to secure in the design all that was required for an up-to-date steamer, but after a season's work the owners are more than satisfied with their vessel.

Engines are triple expansion with cylinders of 8½, 12½ and 27 inches diameter and a common stroke of fourteen inch. The high and intermediate cylinders have piston valves, with flat slide valve for the low pressure. Steam at 200 pounds pressure is supplied by a water tube boiler of eight feet width, nine feet height and nine feet length, containing 1,500 square feet of heating surface. With the engines turning 125 revolutions per minute the speed of the vessel is full twelve miles an hour.

In the arrangement of cabins, state rooms and general accommodations for passengers this vessel is as complete as the largest of the passenger steamers on the great lakes. On the main deck aft is the dining room where seventy-two people may be comfortably seated. This room is forty-one feet long, extends the full width of the vessel and is unusually well lighted. It is finished in oak and nicely decorated with plenty of hooks, racks and other conveniences. A ladies' cabin, eighty feet long, is one of the features of the vessel as regards finish and furnishings. The cabin is finished in white

with green and gold trimmings, this style prevailing quite generally in the cabins. A ladies' toilet, finished in red oak and highly polished, contains every convenience that might be desired, and forward of it is a bath room, similarly finished, and having hot and cold water connections with the best of plumbing throughout. Some seventeen or eighteen state rooms, all elegantly finished, have running water as well as a cold air pipe for a supply of fresh air, furnished by a fan from the lower part of the vessel. The fan is operated by an independent motor. The vessel is very well lighted by electricity. There are 240 lights of ten to sixteen candle power, with a few of thirty-two candle power. All are arranged in groups, which are controlled by twenty-four switches in the engine room under the eye of the engineer, who has full control of the lights. The vessel is also supplied with a full set of oil lamps for use in emergency. The vessel's smoke stack is very low. This is necessary on account of the large number of bridges on the Rideau route. On other vessels of the line an arrangement for lowering stacks is in use, but it is troublesome and expensive, and hence the lower stack in this steamer.

### TALLOW.

There appears to be a good opening for Canadian tallow in England, where the demand is very large. Inquiries have been received by the Canadian Manufacturers' Association from upwards of a dozen English importers, desiring to be put in touch with dealers in this country.

The value of imports of tallow into Canada in 1899 was as follows:

Great Britain .....	\$1,310
United States .....	559

Total..... \$1,869

The value of our exports of tallow during the same year was as under:

Great Britain.....	\$57,046
British Guiana .....	77
British West Indies .....	4
Newfoundland.....	490
Belgium .....	1,540
France .....	175
Germany.....	2,240
St. Pierre.....	218
United States .....	1,086

Total..... \$62,876

The Dominion Dyewood & Chemical Co., Toronto, has sent us a desk calendar pad for 1901, accompanied by an engraved card of the company conveying the compliments of the season. This pad, which consists of a leaf for every day in the year, is made to fit into an aluminum frame which was sent out by this company several years ago, the pads being sent out each successive year.

## B. GREENING WIRE CO.

(LIMITED)

WIRE MANUFACTURERS  
& METAL PERFORATORS

# HAMILTON & MONTREAL.

Wire Screens for Every Class of Material.

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

Special Attention given to Miners' Requirements.

## OPPORTUNITIES FOR 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.

383. A North England firm who are already engaged in the importation of eggs, cheese and butter, etc., are open to buy further supplies from Canada, who desire to be placed in communication with some large exporters in the Dominion.

384. The names of sound business firms in Canada who deal in mining materials are asked for by the manufacturers of steel wire screening for gold mining.

385. Two applications have been received for names of asbestos mine owners in Canada.

386. The manufacturers of tinned, japanned, and enamelled hollowware who have shipped several consignments of enamelled ware to Canada, are anxious to

push the business and will be glad to hear from Canadian houses interested in it.

387. The names of manufacturers of the various kinds of wood pulp and oakum are asked for by a North of England firm.

388. Enquiry is made by a Canadian correspondent for the London agents of Swedish makers of cream separators and other dairy machinery of the latest types.

389. A correspondent in Montreal asks to be furnished with the names of automobile manufacturers in great Britain desiring to be represented in Canada.

390. A Canadian firm of cordage manufacturers who make quantities of trawl twine will be glad to hear from importers of this class of goods in the United Kingdom.

**AUSTRIA.**—The United States Consul at Coburg, in a report dated December 6, states that in Austria, where everything in the shape of fuel is being carefully investigated, sawdust is impregnated with a mixture of tarry substances and heated to the proper temperature; it is then passed over a plate of iron heated by steam, from which a screw conveyor takes it to a press, where it is compressed into briquettes of the required size. The press turns out nineteen per minute, weighing two-fifths of a pound each, and measuring  $6 \times 2\frac{1}{2} \times 1\frac{1}{2}$  inches. The caloric power is about the same as that of lignite, with but four per cent. of ash. One factory produced last year over 7,000,000 briquettes, costing about 8d. per thousand, and selling at from 4s. to 4s. 2d.

H.M. Consul-General at Vienna states that in the course of the year 1901, it is proposed to open an exhibition in Vienna especially devoted to the gas, plumbing and kindred trades. A committee, including a number of prominent business men has been appointed to conduct the preliminary arrangements, and the primary object will be to organize the exhibition in such a way as to render it of interest not only to those visitors connected with the particular trades, but also to the public in general. The Consul adds that in view of the fact that a considerable amount of English capital is still invested in gas-works at Vienna, and that there may still be room for profitable enterprises in the Austrian provincial towns, etc., the coming exhibition may prove a favorable opportunity for British firms to introduce novelties to the Austrian public.

**AUSTRALIA.**—American trade with Australia is at present extending into nearly every line in which imports into the colonies are made. Commercial Intelligence reports American shipments of agricultural implements, including mowers, etc., for the year 1898 as £20,705, as compared with only £6,703 from Great Britain, £9,808 from Canada, and £140 from Germany, adding that there is a marked predilection for American agricultural machinery, in consequence of its fully meeting the require-

ments of cereal cultivation in the colony. Other lines in which American goods predominate in this market are carriages, organs, iron barbed wire, lamps and lamp-ware, machinery, tools, windmills and woodenware. The imports of machinery during 1898 were: from Great Britain, £13,452, from Germany, £5,545, and from the United States £88,520.

In spite of the fact that the Federal Protectionist Conference pledged themselves to secrecy as to the character of the recommendations they had voted to make to the Federal Parliament regarding tariff changes, Commercial Intelligence reports the following list of import duties recommended by the Conference: Plows, from £2 to £6 15s., according to price and number of furrows made at the same time; harvesting machines, £6 10s. for winnowers, £11 for strippers, and £20 for harvesters; cultivators, from £1 to £4; grain drills, £6; wool presses, £5; chaff cutters, from £1 10s. to £25, according to size and power; horse tread-mills, from £3 15s. to £8 15s., according to size and number of horses; bag fillers, £5; corn crushers, £1 10s. to £6 5s., and straw presses, from £5 to £30. All of the foregoing to be fixed duties. Duplicate parts to be taxed 50 per cent. ad valorem. For several other articles, such as tobacco, brandy, wine, vinegar, etc., the existing Victorian duties have been recommended for adoption. The foregoing may prove to be only partially correct, and in any event may not be adopted, but it is of interest as showing the policy likely to be urged upon the Federal Parliament by Colonial manufacturers.

**BELGIUM.**—The State Railways will soon be in the market for 150 second-class passenger coaches; 200 third-class, and 50 trucks at a total cost of about \$2,400,000. Orders will also shortly be placed for 2,000 freight cars of from ten to fifteen tons capacity, and a number of freight locomotives of a new type.

The Societe Belge des Ingenieurs et des Industriels, Brussels, is said to be interested in exploiting some large coal fields in Madagascar, and to be likely soon to require a considerable amount of mining machinery.

Do You Fear

# FIRE

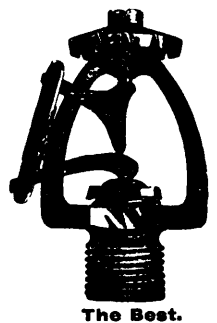
In Your  
**FACTORY?**

**MILL?**

**STORE?**

IF SO have your buildings equipped with

The International Head.



## Automatic Sprinklers

And save from 30 to 70 per cent. on your insurance rates. Insurance companies approve of our system and devices.

Write us for particulars.

**W. J. McGUIRE & CO.,**  
TORONTO and MONTREAL.

## 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.

## Protection Against Fire

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

### AUTOMATIC SPRINKLER SYSTEM

From 40 to 70 per cent. of cost of insurance saved by putting in an

**AUTOMATIC  
SPRINKLER  
EQUIPMENT**

No charge for estimating  
Endorsed by  
Insurance Companies



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



**ECONOMY****SMOKELESSNESS****CAPACITY**

.....

# The Jones Underfeed Stoker

*The Original and  
Only Successful Underfeed.*

This Stoker has been in successful operation in a great many of the up-to-date steam plants, both large and small, and next month we shall let you see what some of our oldest customers have to say.

We effect an economy of from 10 to 25 per cent., according to conditions, and we prevent smoke, as well as increase the capacity of your boilers.

If you use Coal you cannot afford to be without THE JONES STOKER. See some of the following plants:—

TORONTO RAILWAY CO.

O'KEEFE BREWERY CO.

MERCHANTS DYEING &amp; FINISHING CO.

COSGRAVE BREWERY CO.

HIGH LEVEL PUMPING STATION

ONTARIO POWER &amp; FLATS CO.

WRITE FOR OUR NEW CATALOGUE

## The General Engineering Co. of Ontario

LIMITED

NATIONAL TRUST BUILDING, TORONTO.

**BRAZIL.**—The *Moniteur Officiel du Commerce* (Paris) reports that beginning with January 1, 1901, the duties on the following articles will be raised: Pine match boxes, unfinished, 800 reis in place of 320 (the reis equals, 546 of a cent, the milreis 51.6 cents); finished, 1,000 reis, in place of 400; match sticks, 500 reis, in place of 80. Furniture is to be taxed ten per cent. additional, calculated on the total duty previously assessed; pig iron is to be taxed ten reis per kilo or twenty per cent. ad valorem, and steel fifty reis per kilo or thirty per cent. ad valorem, in place of the duties previously assessed; carded cotton, 2,000 reis, in place of 600 per kilogramme; tiles of all kinds 14,000 reis per 100, in place of 8,000.

**CHILI.**—The following extract from a report of the Imperial German Consul in Tacna, in the South American Republic of Chili, concerning the importance and development of extensive and rich sulphur deposits in that country is worth reading.

Sulphur has been mined in Chili since 1888, and the deposits have been developed to such an extent that Sicilian sulphur, which has hitherto been imported in large quantities from the neighboring province of Tarapaca, where the world's largest supply of saltpetre is found, has been gradually and almost entirely superseded by the home market. Large and partly open layers of almost pure sulphur are present in extensive stretches. The average percentage in the raw material amounts to eighty per cent. of pure sulphur. Although the material has to be transported to Tacna on mules, it there competes with the Italian article, and would soon supplant the latter if better facilities for transportation were provided.

The deposits in the province of Tacna are located around the Tacora and on the mountain of Chipiquina, two high cliffs, distant about twenty-one Spanish miles from Tacna. So far three sulphur-producing enterprises have been started. They are owned respectively by a Spaniard, a German, and a Chilian. Owing to the lack of a road, except a muleway, these producers can ship only a very limited quantity to the sea coast; yet their enterprise is highly profitable and has attracted the attention of American and German capitalists. A New York syndicate has already been started with a capital of \$5,000,000, and proposes to extend the mines which are in operation on the Tacora and Chipiquina.

The syndicate sent out a commission in 1899 composed of three mining and railroad engineers and a lawyer, who, after investigation, made proposals to the owners concerning the acquisition of their claims. The Spaniard and Chilian have accepted. The syndicate has proposed to pay the appraised value of the claims in stock or shares, to be placed on sale in the exchange markets. It contemplates the establishment of very extensive works and the building of a cable road six miles long across the mountains to San Francisco, in the province of Tacna, or to construct a railway from the mines to Tacna in order to ship the sulphur from that port in sailing vessels to New York. The syndicate calculates upon a monthly product of 10,000 tons of raw sulphur, in which case the cost of a ton would figure about \$15, delivered in New York.

It is not certain, however, that the Government will grant a license to build a road, as a license was granted to a railway company to build a road to San Francisco

# 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

## 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.

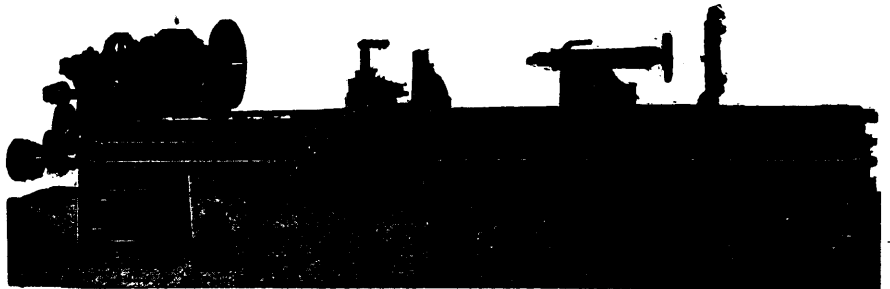
## The London Machine Tool Co., LONDON, ONT.

LATHES,  
PLANERS,  
DRILLS,  
SHAPERS,

MANUFACTURERS OF

**General Machinery**

HAMMERS,  
BULL DOZERS  
PUNCHES,  
PRESSES.

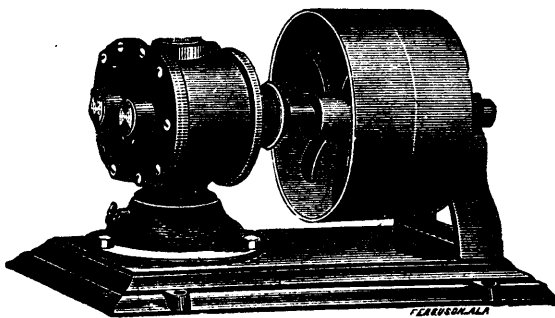


**WM. R. PERRIN & CO.,** 122 CHURCH ST., TORONTO.

WE BUILD

**Rotary Pumps**

POWER OR HAND.



MANUFACTURERS

**PACKING HOUSE MACHINERY AND PRESSES.**

# THE EUGENE F. PHILLIPS ELECTRICAL WORKS

MONTREAL, CANADA (LIMITED)

## BARE and INSULATED ELECTRIC WIRE

ELECTRIC LIGHT LINE WIRE,  
INCANDESCENT AND FLEXIBLE CORDS,

## RAILWAY FEEDER and TROLLEY WIRE

RUBBER-COVERED, MAGNET, OFFICE AND  
ANNUNCIATOR WIRES.

## CABLES FOR AERIAL and UNDERGROUND USE.

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:

Hallifax, 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.

## Thompson, Worth & Martin

ELECTRIC SUPPLIES  
NITROUS OXIDE and OXYGEN GAS

**Electrical Contractors**

SWITCHES AND SWITCH BOARDS MANUFACTURED

### Dynamos and Motors

Built and Repaired. We have a well-equipped Machine Shop, Model and Experimental Work a specialty. Inventions perfected. All work perfectly confidential. Correspondence solicited.

35 to 39 ADELAIDE ST. W., TORONTO

PHONE 8494.

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

If you would like to advertise but don't know exactly how write us for plans and prices. It's our business to take all the details of an advertising system on our shoulders. The E. Desbarats Adv. Agency, Montreal.

# What the Trade Wants

YOUR OWN PAPER  
MADE INTO

## ENVELOPES

ANY SIZE OR  
SHAPE.

WE SELL  
TO THE  
TRADE ONLY.

YOUR OWN PAPER—YOUR OWN LABEL—YOUR OWN BANDS.  
NO NEED TO BUY FOREIGN GOODS.  
OUR GOODS ARE MADE EQUAL TO THE BEST IN THE WORLD.

The Trade will find it to their advantage to get our prices.

L. P. BOUVIER, Envelope Manufacturer, 31 Lombard St., TORONTO.

## The Yeakley Vacuum Hammer.

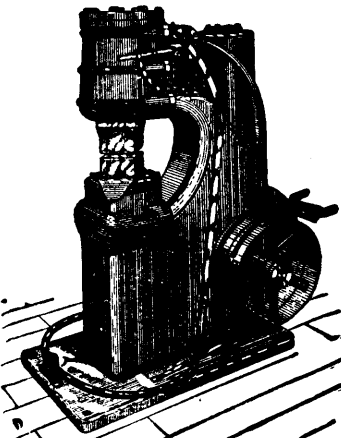
Canadian Patent November 9, 1897.

is now Manufactured and for Sale by  
the undersigned Sole Proprietors  
of the Canadian Patent:

## George Brush

EAGLE FOUNDRY,

MONTREAL.



When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

years ago. The export of sulphur to the nitre mines during the last three years has been: 1896, 1,016 tons; 1897, 1,639 tons; 1898, 2,060 tons.

COSTA RICA.—For two years, dating from November 2, 1900, the following articles may be imported into Costa Rica free of all import duty and wharfage: Iron posts, frames and perforated iron for the construction of houses; bricks, Roman cement, earthenware pipes for drains, lime and rubberoid roofing; and timber in planks, beams, joints, posts and laths for use exclusively in the city of Limon.

ECUADOR.—Beginning January 1, all import duties at present collected by the Government of Ecuador are to be increased twenty-three per cent. The charge for warehousing and transportation of cargoes imported are to be increased from the same date 100 per cent. The Executive is, however, authorized to reduce by twenty per cent. the import duties leviable under the increased schedule on imported articles of absolute necessity.

FRANCE.—Handels Museum announces that the Union of French Industrial Firms for the Prevention of Accidents to Workmen has invited tenders for an international competition for "isolating gloves," which are to serve to protect workmen engaged in electrical pursuits. They are effectually to guard the hands and the lower arm, and must be made of a material offering resistance, which does not alone bear the electrical expansion, but which also resists accidental injuries, such as may be caused by the hard copper wire. They must be capable of being worn with ease and comfort, and leave the fingers sufficient freedom to work. Whoever wishes to take part in this competition may forward to the president of the union mentioned, two pairs of gloves accompanied by an explanatory description. The testing and approval of the gloves will be undertaken by a special committee, who will report to the administrative council of the Union. The best invention will be rewarded by a prize of 1,000 frs., which sum may also eventually be distributed among several competitors.

GERMANY.—A Commission of the German Board of Trade has considered the question of the establishment of an Information Office for Foreign Commerce. In some quarters it is doubted whether such an institution can be of any real service, as a most thorough survey of foreign trade already exists, and to establish an institution which will overlap or compete with those already existing seems fruitless. Its promoters urge that the United Kingdom, United States and France having anticipated Germany in this respect, that country dare not long remain behind. The new organization is not to supersede but to complete the old one. To finance the affair it is proposed that 3,000 firms should each subscribe annually £5, the Commercial Chambers two per cent. of their receipts, from unions, from the empire, from the city of Berlin an approximate sum of £10,000 is expected. The work of the Information Office would consist in furnishing information on laws and decrees relating to trade with foreign lands, duties on each single article, regulations as to certificates of origin, agents, commercial travellers, protection of patents, information as to means of transport, cost of freight to

districts where goods are required, or from where goods may be obtained. It is especially urged that reliable information should be given as to the addresses of respectable foreign solicitors. The Foreign Office, too, ought to give every facility for intercourse with the Consular officers.

The American Vice-Consul-General at Frankfort reports that the German manufacturers of boots and shoes have recently petitioned the Reichstag to raise the tariff on imported shoes, so that leather shoes weighing over 1,500 grams (3.3 pounds) shall henceforth pay an import duty of seventy pfennigs (17 cents) per pair; those of 500 to 1,500 grams (1.1 to 3.3 pounds) 1.50 marks (36 cents); and all below 500 grams weight, two marks (48 cents). The tariff is claimed to be necessary as a protection against American shoes.

**THE ACETYLENE INDUSTRY IN GERMANY.**  
—One of the most remarkable instances of creation and rapid growth of an entirely new industry has been seen in Germany, during the last four years, in the manufacture of calcium carbide and the progress of acetylene gas lighting. Dr. Frederick Rose, British Consul at Stuttgart, gives some most interesting information on the rise, progress and present condition of the carbide and acetylene industries in Germany in a report which has just been published by the Foreign Office.

It is difficult at the present moment to give an accurate estimate of the number of acetylene installations in Germany. According to Knappich of Augsburg, it probably amounts to about 8,000, including small, medium, and large apparatus and installations, and gasworks for the lighting of small towns. In many instances it has been adopted by the German State authorities. In Bavaria alone, six railway stations will shortly be lighted by acetylene. The Imperial Post-Office has two of its Berlin branch post-offices lighted by acetylene, and has installed an apparatus with sixty jets in the Berlin head post-office. These latter instances are of some interest because acetylene was in competition with electricity.

The important questions of the construction of generators and the methods of generation have at length resolved themselves into definite proportions. It is almost unanimously agreed that the generators must be built of strong and durable materials, and that the method of generation must, above all things, exclude undue pressure and heating of the gas. For large installations of above 1,000 jets the system of generation, "carbide into water," is almost universally in use. The system of flooding carbide by water still holds its own, but the general trend of scientific opinion in Germany amongst acetylene chemists and engineers is all in favor of dropping the carbide into water.

Dr. Rose gives a number of instances of the practical use of Acetylene in industry. Acetylene gives three to four times as much lampblack as good oil-gas. It is of a deep black color and of excellent covering power. It is well adapted for printing purposes, giving a deep black clear impression, and is entirely free from tar compounds.

A new application of calcium carbide, which may become of great importance, consists in the production of pure metals from their ores by means of calcium carbide as a reducing agent. The process is very simple. In this way pure copper and lead can be procured from their respective ores, whilst several alloys can be obtained directly

## 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

### RICHÉ 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.

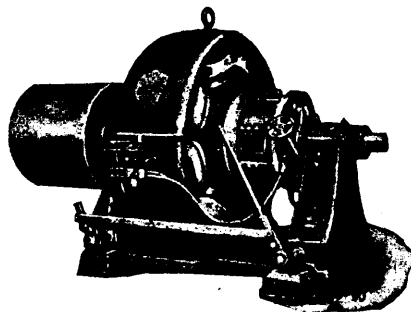
These Generators are extensively used in Europe, and are on exhibit at the Paris Exposition. Particulars by applying to

## JULES DE CLERCY, GAS EXPERT

Room 501, Carlaw Building  
30 WELLINGTON ST. WEST, TORONTO

## 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.

## JOHN J. KELLER & CO.

104 and 106 MURRAY ST.  
NEW YORK

220 Church St., Philadelphia.  
135 Pearl St., Boston.  
18 Pryor St., Atlanta, Ga.

## Aniline Colors, Dyewood Extracts, Sumac and Nutmeg Extracts.

**FAST COLORS** for Wool Dyeing,  
One Dip Cotton Colors, Novelties  
and Specialties for Calico  
Printing.

MANUFACTURED BY  
**JOHN R. GEIGY & CO.**  
BASEL, SWITZERLAND

## ROBERTS & CO., PATENT SOLICITORS

PEOPLE'S BANK BUILDING, MONTREAL.  
Twelve Years' Examiner in U. S. —No PATENT Patent Office. Write for Red Book. —No PAY.

**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.

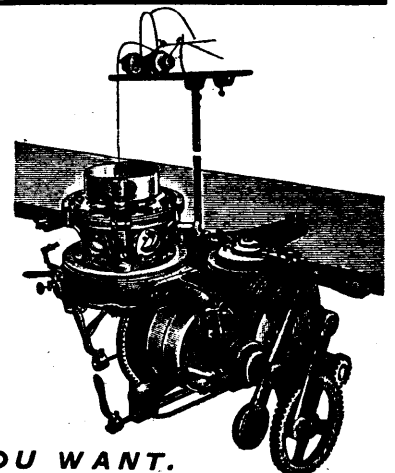
## RICHARD SCHOFIELD, TORONTO

Sells "BRANSON THREE-QUARTER  
AUTOMATIC"

## KNITTING MACHINES

AND ALL OTHER KINDS OF  
Hosiery and Underwear **MACHINERY**

ASK US FOR WHAT YOU WANT.



When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

ALEX. GARTSHORE, President. J. G. ALLAN, Sec.-Treas. JAS. THOMSON, Vice-Pres. and Gen. Mng'r.

**THE GARTSHORE-THOMSON PIPE & FOUNDRY CO. Limited**

**CAST IRON PIPE**

3 in. to 60 in. diameter.

**For Water, Gas, Culverts and Sewers**

Special Castings and all kinds of

FLEXIBLE AND FLANGE PIPE.

**WATER WORKS SUPPLIES**

**HAMILTON, ONT.**

**McLachlan Electric & Gasoline Motor Co., LIMITED. 94 ADELAIDE ST. WEST. TORONTO**

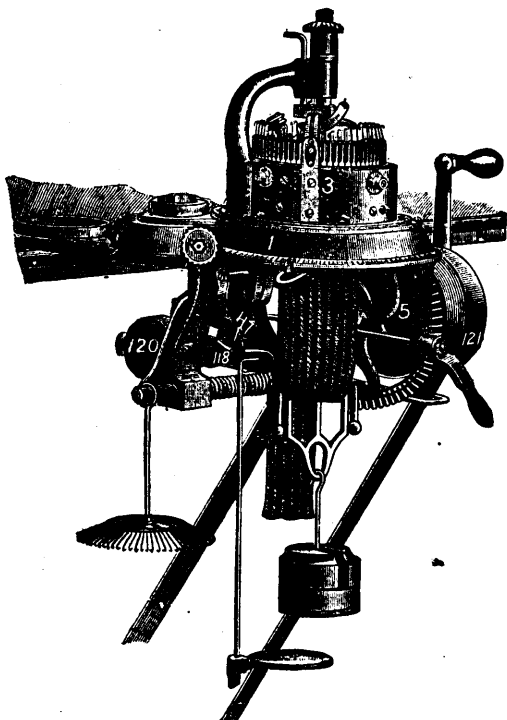
**MAKE** Gas or Gasoline Engines from 1 h.p. to 6 h.p.  
Stationary or Marine and Electric Motors from 1/2 h.p. up.  
Motor Carriages for Pleasure or Business. One cent spent for a postal will bring you any information you wish.

**The Packard Electric Co., Limited.**

**ST. CATHARINES, CANADA,**

**Makers of Lamps, Transformers**

Sole Agents for Canada for SCHEEFFER RECORDING WATT METERS, D. & W. ENCLOSED FUSES, and DIAMOND C.P. ELECTRICAL SUPPLIES.



**Seamless Hosiery KNITTING MACHINES**

We have been hard at it for nearly 1/3 of a Century.

We have had Success.

Our Customers have had Success.

Why? MERIT and SUPERIORITY in our Machines tells the story.

CATALOGUE FREE.

**CREELMAN BROS.,**

Manufacturers,

**GEORGETOWN, ONTARIO, Canada.**

from various ores containing the necessary metals. The economic aspects of the method are favorable, the metal requiring about two to five hundredweights of carbide for its production.

The relations between the iron and carbide industries are becoming more intimate since the appearance of an invention which utilizes carbide for the production of converted steel as well as for the hardening of armour-plate after Harvey's process. Acetylene for gas engines and motor-cars has probably a great future before it as 160 litres of acetylene give one h. p., as against 600 litres of coal gas.

In those cases where cheap water or other power is available, acetylene has not been able to compete seriously with electricity as an illuminant, but in the absence of favorable conditions for the generation of electricity, it has made remarkable progress in Germany, in spite of the competition of coal gas, for the lighting of small towns and villages. Dr. Rose discusses the comparative risk from fire by the use of electricity and acetylene, and shows that there is no greater element of danger in the use of acetylene for lighting and other purposes, than in the use of coal gas or petroleum.—Commercial Intelligence.

GUATEMALA.—The United States Consul at Guatemala has wired to Washington as follows on the openings for trade in that country:—

After a careful investigation among the importers of Guatemala, I find that the cheap and flashy articles attract the buyer rather than those more expensive but of quiet coloring. The articles of hose and underwear imported for local use are of the cheapest grade. For the past few months I have endeavored to ascertain the reason for the monopoly of the import trade by England, France and Germany. I find that all these countries have resident salesmen here, with display rooms in which to show their goods. This affords the dealers an opportunity to select from numberless varieties of fabrics and qualities, and by this means telegraphic orders can be sent, and the goods arrive in a reasonably short time. The representatives of the foreign houses usually make their headquarters in this city, having their warehouses stocked to supply the immediate wants of the trade. When business is quiet here, they make trips into Salvador, Honduras and Costa Rica, carrying with them all necessary samples, and supplying from their headquarters at Guatemala City. This resident system is also a protection to their houses, for, if a firm has financial difficulties, they are on the spot to protect their principals, and usually get their accounts in money or goods.

According to Mr. McNally, American Consul at Guatemala, there is an opening in the Republic for the sale of inexpensive cooking stoves. Those sold at present he thinks are rather too large or too expensive.

GREAT BRITAIN.—Dr. Ormandy, of St. Helen's, formerly master of science at the Gamble Technical Institute, has recently discovered a process by which good furnace bricks can be made from glass-works refuse. The millions of tons of refuse which have accumulated around the glass-works at St. Helen's have heretofore been treated as of no commercial value. The refuse consists mainly of spent sand, minute particles of glass, and about three per cent. of iron from the various processes, and it has hitherto been considered that the presence of the iron prevented the use of the material for the

## Toronto Woolen Machinery Co.

We now offer as a going concern the property known as

### The Vienna Woolen Mills

Consisting of the following machinery :-

- One set 48 in. Platt Cards, all clothed.
  - One 264 Spindle Bancroft Mule.
  - One 24 in. G. & Mc. Picker. One Cone Duster.
  - One Fraser's Card Grinder. One Yarn Spooler.
  - One 60 Spindle Fly Twister.
  - One 108 in. Crompton Cone Loom, 4x4 box, 4 harness.
  - Two 92 in. Faisey " " 4x4 " 24 " "
  - One 48 in. Gilbert " " 3x1 " 4 " "
  - One 48 in. " " 1x1 " 4 " "
  - One Broad Warper and Beamer.
  - One Bobbin Winder.
  - Two Broad Up and Down Gigs.
  - One Rotary Fulling Mill. One Cloth Washer.
  - One Yarn Washer.
- With Spools, Bobbins, Tools, etc., etc.

#### BUILDING No. 1.

Two and a-half Storey Frame, with stone foundation, 30x60 feet.

#### BUILDING No. 2.

Boiler and Picker House—One Storey Brick, 24x64.

A never-failing Water Power, all heat by steam and in first-class order. Good local trade has always been done.

The above can be bought cheap and on easy terms. Apply

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

**MONEY WELL SPENT.**

Any device that cuts down your expense one-half is not only a needed reform but a necessity. The



**Cross Oil Filter**

will save you 50% on your Oil bills. We have convinced thousands — why not you? Let us send you one on approval at our expense. Catalogue 26.

**The BURT MFG. CO.**  
Akron, Ohio, U.S.A.  
Largest Mfrs. of Oil Filters in the World.



### TO EXPORTERS AND IMPORTERS

The Publishers beg to draw attention to the preparation of the 15th edition of the "MERCHANTS' MANUFACTURERS' & SHIPPERS' DIRECTORY OF THE WORLD," containing classified lists of Trades and Tariffs for all countries. Highest award—Gold Medal—Paris, 1900. For further particulars, charges for advertisements, etc., apply

Dominion Branch, Kelly's Directories Ltd.  
71 Victoria St., Toronto, Ont.  
Lists of Addresses furnished for all trades—all countries.  
W. P. Dent, Manager, Head Office, London, W.C. Eng.

### WILSON & BURNIE,

FLOUR, OATMEAL,  
and COMMISSION AGENTS,  
Also at GLASGOW, SCOTLAND. LEITH.  
Advances on Consignments.

## E. B. THOMPSON, CUSTOM HOUSE BROKER

GENERAL FORWARDING  
and TICKET AGENT,

Correspondence Solicited. **38 YONGE ST., TORONTO.**

manufacture of bricks. Patents have been taken out to protect the process, and a large firm has engaged Dr. Ormandy's services. After making various experiments, the firm is now putting up an extensive plant for the manufacture of the bricks. It is claimed that the bricks will stand a great amount of heat. They are about the color of silica bricks and can be glazed.—British Trade Journal.

**NEW SOUTH WALES.**—Clifton, about thirty-five miles from Sydney, is situated on the top of a veritable mountain of coal, and were its carboniferous treasure more readily accessible it would share with auriferous Mount Morgan and argentiferous Broken Hill the credit of being among the richest mineral mountains known. The coal is at present obtained from a seam; the broad black band familiar to all voyaging along the southern coast, about six feet thick, running along the cliff about twenty feet from its base. The seam is worked from two adits, the coal being conveyed from the mine to the ship by means of a timber jetty 500 feet in length, said to be one of the boldest and most remarkable undertakings for working a mine known in any part of the world.

**NEW ZEALAND.**—One at least of our Antipodean Colonies is indisposed to allow its exertions on behalf of the Empire to remain fruitless. The strife of arms, in its case at least, is to pave the way for the arts of peace. New Zealand is now planning the establishment of a direct steamer service between its leading ports and those of South Africa, to prosecute that increased trade which the experience of the war has shown to be possible. According to the Hon. J. C. Ward, Minister for Railways and Commerce, tenders are about to be invited by the Government of New Zealand for a direct steamship service between five New Zealand and at least three South African ports. The former will include Auckland, Wellington, Lyttelton, Dunedin and Bruce, and the latter, Capetown, Durban, and Port Elizabeth, and probably East London or Beira. Without doubt, direct steamship communication will have an important effect in increasing the nascent trade interchange between the two countries, and the action of New Zealand is to be highly commended. The example set will doubtless be stimulative to Canada and other British Colonies to realize similar schemes already seriously mooted.—British & South African Export Gazette.

**RUSSIA.**—British Consul Medhurst, in his report from Moscow, says that during 1899 machinery tools were freely bought from the United Kingdom, and larger orders would undoubtedly have been given had makers been able to deliver, and had prices remained as they were at the beginning of the year, but these rose higher in the United Kingdom than they did in America and Germany, with the result that a number of orders which would have been given to the United Kingdom went to those countries.

In mill engines he has once more to note, with regret, an increase in the number of orders placed with Swiss makers who get a firmer grip of the market every year. He says he hears their work praised, especially as regards the larger sizes, smaller engines being still ordered from the United Kingdom when not made in Russia, where the local firms turn out good work.

## JOHN HOUGHTON

**Practical Machinist**

106 CHURCH ST., TORONTO.

**MODEL MAKING** A SPECIALTY.

## P

## ATENTS

PROVISIONAL PATENTS, Caveats, Etc.

**H. DIXON,**

REGISTERED ATTORNEY,  
MECHANICAL EXPERT, ETC.

124 VICTORIA STREET, TORONTO, ONT.

## PATENTS

Home and Foreign Patents Procured at Lowest Rates

Patent Rights Sold on Commission. Prompt Attention guaranteed to all business entrusted. Write for full particulars.

**THE TORONTO PATENT AGENCY, Limited,**  
Confederation Life Bldg., Toronto, Can.

## The Patent Clothboard Co., of Parry Sound, Limited,

PARRY SOUND, ONT., CANADA  
Clothboards on Lapping and Rolling Boards  
Veneers of Ash, Birch, Basswood and Elm.  
Cheese Box Bands and Rims.  
Box Shooks (Small and Fine).

## PATENTS,

TRADE MARKS, CAVEATS, ETC.

**EGERTON R. CASE,**

Registered Solicitor of Patents. Notary Public.  
Member of the Canadian Manufacturers' Association.  
TEMPLE BUILDING, TORONTO, ONT.

## THE PITTSBURG VISIBLE TYPEWRITER

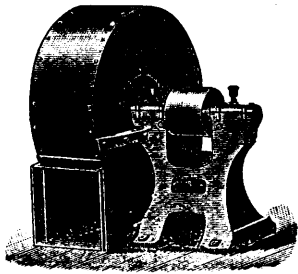
**\$85.00 INCLUDING COVER.**

Everything open—everything handy—all parts interchangeable—nothing complicated. Universal Keyboard.

The PITTSBURG VISIBLE will invoice, make out detailed reports, headings, card indexes and tabular work of all kinds, with an ease that is surprising.

Machines sent on approval.

**Canadian Typewriter Exchange,**  
45 Adelaide St. East,  
TORONTO.



## PLANING MILL STEEL PLATE EXHAUST FANS

For removal of refuse from Wood-Working Machinery.

## CYCLONE DUST SEPARATORS

Made of Galvanized Steel. All Sizes for Fans from 30 inches and up.

Estimates cheerfully given for Complete Installations of Fans, Piping, Gates, Hoods and Separators, with or without Shavings Feed Attachment to Boiler Fires.

## McEACHREN HEATING AND VENTILATING CO., GALT, - ONT.

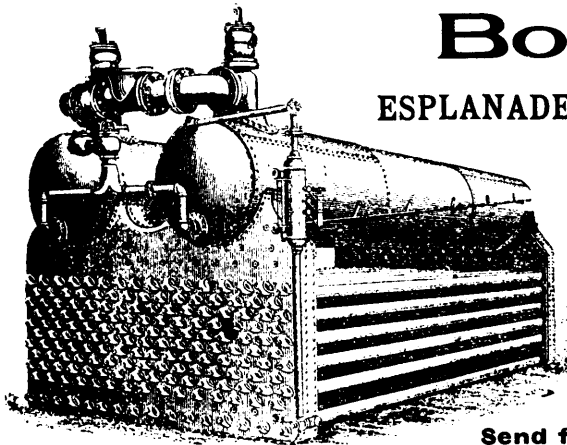
WE MAKE

Forge, Cupola and Disc Fans, Electric Fans, Heaters and Fans for Lumber and Wool Drying, etc., and for Heating of Factories.

STEAM TRAPS, OIL SEPARATORS, ETC.

## The Canadian Heine Safety Boiler Co.

JOHN J. MAIN,  
MANAGER.



ESPLANADE (Opp. Sherbourne St.)

TORONTO

HIGH-CLASS

## Water Tube Steam Boilers..

FOR ALL PRESSURES  
DUTIES AND FUEL

Send for Descriptive Catalogue

### REFERENCES :

The Toronto Electric Light Co., Limited; The T. Eaton Co., Limited; The Massey-Harris Co., Limited; The Gutta Percha Rubber & Mfg. Co.; The Wilson Publishing Co., Limited; Sunlight Soap Co., Dominion Radiator Co., Central Prison, Foresters' Temple, Toronto City Hall, Canada Bi-cult Co., Confederation Life Co. (all of Toronto, where Boilers may be seen working), also Orillia Asylum, Orillia, Ont., and LaPresse Publishing Co., Montreal.



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

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

## MATTRESS, BOOK WIRE ...and BROOM

High Grade, Double Tinned,  
Uniform Size and Temper  
Guaranteed

Fine Annealed Brush and Market Wire  
TINNED WIRE OF ALL KINDS.

SAMPLES AND QUOTATIONS  
SENT ON APPLICATION.

THE PEERLESS WIRE CO.  
HAMILTON, ONT.

Lancashire boilers are now seldom imported owing to the high duties and freights, which enable local makers to supply much cheaper than foreigners, the work turned out being good. Tubular boilers being lighter, pay less duty and freight, and are largely imported from both the United Kingdom and Germany, many also being made in Russia. The raw material required for the construction of these boilers not having risen in price in Russia as it has done in other countries, local makers have naturally a great advance over foreigners.

The bicycle trade shows a falling-off so far as British machines are concerned, but America supplies a large number of cheap machines. Well-known marks appear still to be bought by those who do not mind paying a high price for a good machine, but what was a few years ago a good trade is being ruined by competition. In order to sell, small dealers part with their cycles on the instalment system of payment, granting almost any terms, and the result is that they very often are defrauded by the purchaser, and consequently cannot pay the maker. A Rigo firm turns out a home-made cycle, and a Moscow maker purchases B.S.A. parts and puts them together there. Both these dealers undersell British machines.

An ever improving trade is being done in typewriters, smart office furniture, weighing machines, cotton gins, and hydraulic and electrical lifts, but all of the above-named come exclusively from America. Sewing machines are largely imported from Germany, but here again the Americans are active and are trying to get hold of this trade by means of a new machine especially adapted to Russian tastes, and suitable to the market.

Mr. Medhurst adds a warning as to the advisability of obtaining reliable information as to the standing and financial position of Russian buyers.

H.M. Commercial Attache in Russia reports that a notice has appeared in the "Bourse Gazette" of St. Petersburg to the effect that the Ministry of Finance has issued regulations providing that all publications printed abroad in the Russian language by hectographic, lithographic and similar processes shall be subject to the same duties as are levied on publications in Russian printed abroad by the ordinary process. Under these new regulations the publications referred to (including books, advertisements, catalogues, price lists, etc.), will be dutiable at the rate of 4 roubles 50 copecks per pound (£1 9s. 7d. per cwt.). Mr. Cooke, however, points out that as these price lists, etc., could be printed much more cheaply in Russia than abroad, this duty should be no obstacle to the circulation—which is becoming increasingly necessary—of British catalogues in the Russian language. He suggests also that such catalogues might be drawn up in German, in which case they would not be subject to duty; and German, he states, is as current in Russian business circles as Russian itself.

Burgel says there is a vast field in many a Russian town for remunerative activity, amongst these there is Riga, which within the last decades has developed most rapidly, and which by means of its advantage as a harbour, seems to be destined to become a Russian Hamburg. In the year 1870 Riga did not number 70,000 inhabitants. Now the number has increased to 300,000 at least. Within the same period the trade of Riga has nearly doubled. During the year 1897 to 1899 numerous factories have been established in Riga. The capital of the

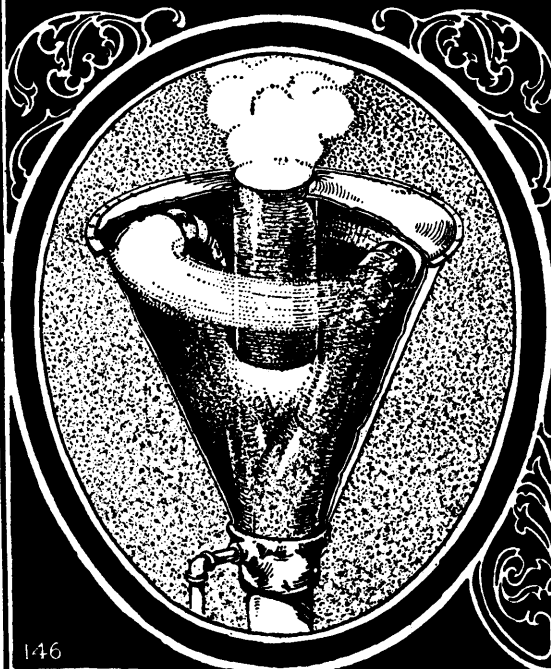


## WHIRL ROUND YOUR HEAD

A CLOSED VESSEL FILLED WITH WET STEAM. The water particles will be deposited on the farther end. Why? Simply because water is nearly 1600 times heavier than steam and is therefore thrown outward with 1600 times the centrifugal force.

Change the experiment and admit exhaust steam to the bottom of the STURTEVANT EXHAUST HEAD. It passes up the interior pipes, is discharged tangentially close to the shell, and is thereby given a vigorous whirling motion. The entrained water—likewise the oil—flies outward, strikes the cool side and trickles down to the outlet at the bottom. The steam, now perfectly dry, finds ready escape through the central opening above. The action is positive and absolute. **PERFECT SEPARATION MUST BE THE RESULT.** No spray; no rotting roofs.

## THE STURTEVANT EXHAUST HEAD



146

CONTAINS  
**NO BAFFLE PLATES**  
 PRODUCES  
**NO BACK PRESSURE**  
 INSURES  
**PERFECT SEPARATION**

**B.F. STURTEVANT & CO.**  
**BOSTON, MASS.**

NEW YORK  
 PHILADELPHIA  
 CHICAGO  
 LONDON

SEND FOR CATALOGUE No. 111. FREE.



**A. C. NEFF**  
**CHARTERED ACCOUNTANT**  
 Room 500 McKinnon Bldg.,  
 Tel. 1330. — TORONTO.  
 Audits and Investigations a Specialty.

THE.....

**Toronto Paper Manufacturing Co.,**  
**Cornwall, Ont.**

Manufacturers of Engine Sized Superfine Papers, White and Tinted Book Papers, Blue and Cream Laid and Wove Foolscaps, Account, Envelope and Lithographic Papers, etc.

**W. F. SCOTT,**  
**Architect - Engineer.**

Domestic, Devotional, Civil and Memorial Architecture.

Specialty: STEEL & FIRE-PROOF CONSTRUCTION  
 410 MCKINNON BUILDING,  
 MELINDA STREET, - TORONTO, ONT.

**Chemistry of the Arts and**  
**Manufacturers.**

**DR. GEO. ARCHBOLD,**  
 A.M., Ph.D.,

**CONSULTING CHEMIST,**

(Formerly Chief Chemist, Ordnance Dept.,  
 U.S. Navy Yard, Washington, D.C.)

Gives expert technical advice in all matters relating to chemical arts and manufactures. Thirty years practical experience in Great Britain, Europe and the United States.

409 Temple Building, Toronto, Ont.  
 TELEPHONE 8047.

**JOHN J. GARTSHORE,**  
 83 Front St. West, Toronto.

RAILWAY, TRAMWAY, and

**...Contractors' Supplies**  
 METALS and SCRAP IRON  
 Bought and Sold.

**PATENTS**

TRADE MARKS, Etc.

**HANBURY A. BUDDEN**  
 NEW YORK LIFE BUILDING,  
 MONTREAL.

**CANADIAN OFFICE & SCHOOL FURNITURE CO. LIMITED**  
 PRESTON ONT.  
 FINE BANK OFFICE, COURT HOUSE & DRUG STORE FITTINGS.  
 OFFICE, SCHOOL, CHURCH & LODGE FURNITURE.  
 SEND FOR CATALOGUE  
 TEL. 9897-108.

**WOOD ENGRAVING,**  
**PHOTO ENGRAVING,**  
**HALF TONES**

OR ANY CLASS OF ENGRAVING FOR ADVERTISING PURPOSES, CATALOGUES, MAGAZINES, &c.

**J. L. JONES ENG. CO.**  
 6-8-10  
 Adelaide St. W. **TORONTO.**

joint stock companies alone founded in that time amounts to no less than fifty-six million marks. Thus Riga is not only a commercial town of Russia, it is also an important centre of industry of that empire. The constant care of the government of the state, as well as of the local institutions, for the harbour and the railway stations, also the prospect of at last rendering the Duno river navigable, hold out the most favourable prospects for this town. The municipality of Riga is scarcely able to keep pace with the rapid development of the town. Thus a great many questions await a solution at Riga, and there is a wide field for sundry competitors in concessions.

**SOUTH AFRICA.**—The discussion in the British press regarding the recent "diversion" of South African railway orders to the United States still continues, but the fairer and better informed papers now agree that there was no discrimination in favor of American firms, as at first alleged, but that lower prices and far quicker deliveries were the factors that controlled the situation. The British and South African Export Gazette quotes Mr. Andrew Moir, of Messrs. Wernher, Beit & Co., the firm that recently placed a portion of the order for rolling stock for the Vereeniging-Witwatersrand railway in America, as stating that exactly the same specifications were submitted to all the tenderers, but that the average delivery requirement of the British manufacturers who competed was eighteen months as compared with four and a half months for the American firms, a difference of more than a year.

Among what may be termed the accidental assets of the war is the demonstration of the utility of drills in procuring water in various parts of South Africa not hitherto regarded as water bearing. The results of the military operations in this direction were recently described at the South African League Conference held at Capetown as magnificent; indeed, they induced the framing of a resolution, which was eventually unanimously passed, urging on the Cape Government the advisability of the more extensive employment of drills, with a view not only to their use in discovering fresh water supplies, but also in the prospecting for and developing the mineral wealth of the country. This latter service was, it may be assumed, not contemplated on their first introduction, but was one of the results of their use. It is not the less interesting on that account, for the scope for the use of drills for deep boring in many parts of the Cape Colony is still very extensive. It is interesting to learn that Mr. Rhodes contemplates using similar drills for water and coal prospecting in connection with the Bulawayo-Wankie railway extension.—British and South African Export Gazette.

**UNITED STATES.**—The keenness of the American Consul is well illustrated by an amusing report received by the Washington State Department from Mr. Consul Brundage, describing the effect on the people of Aix-la-Chapelle of an American circus. The bill-posting, he says, was a revelation in this

**GALVANIZING**

We are prepared to attend to all orders **Promptly** and **Economically**:

**WINDMILLS, PUMPS, TANKS, Etc.**

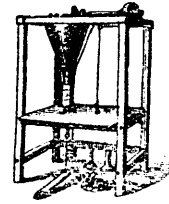
**ONTARIO WIND ENGINE and PUMP CO.**

LIMITED,

**95 ATLANTIC AVE., TORONTO.**

**SPECIAL MACHINE**

For Packing Soda, Baking Powder, Coffee, Chicory and all Powdered or Granulated Materials,



In Packages of from half ounce to six lbs.

For Flour and Other Cereals,

Six to fourteen lbs.

Ask us about this Machine.

**T. H. & A. H. DRYDEN**

**TORONTO**

I BUY all Minerals at Mines by contract or otherwise. Mineral Lands and Timber Properties bought and sold.

**H. FAWCETT HARTLAND,**

Room 309-310 Merchants Bank Chambers,  
 205 St. James Street, - Montreal.  
 Correspondence Solicited.

**The Rehder Plating & Mfg. Co.,**  
**THOROLD, - ONT.**

Manufacturers of

**Stove and Piano Trimmings and Novelties**

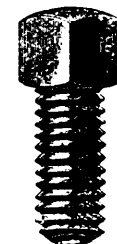
Fine Grey Iron Castings a Specialty.

**Nickel, Copper and Brass Electro Plating.**

WRITE FOR PRICES.

**TORONTO MACHINE SCREW CO.**

Manufacturers of



**Hexagon AND Square Head Cap Screws.**

Steel and Iron Set Screws, Hanger and Planer Bolts, Studs, etc.

Send for Price List and Discounts.

109 1/2 Adelaide St. W. - TORONTO.

**G. H. Adams & Co.**

**MANUFACTURERS' AGENTS AND COMMISSION MERCHANTS.**

Flinders Lane, MELBOURNE,  
 Clarence Street, SYDNEY,  
 and at FREMANTLE, ADELAIDE,  
 BRISBANE and N.Z.

Will be pleased to correspond with Canadian Manufacturers and Exporters desirous of opening up direct relations with Australasia.

**THE ABBEY IMPROVED CHILLED SHOT COMPANY, Limited, Newcastle.**

What better testimonials do Sportsmen require than the following, viz.:

Output of Shot in 1899 exceeded 1897 by 5,040 cwt., or equal to the loading of (at 1 oz. per load) 9,031,680 Cartridges.

The winner of the All-England Championship Cup in December, 1898, fired with our shot, and speaks highly of it.

Look for  
**PETRIE'S CATALOGUE**  
 of  
**MACHINERY**  
 NEW AND SECOND HAND  
 TORONTO, CANADA

line of work, both in magnitude and character; the way in which the tents were erected and the ground prepared astonished the people; and when the circus itself arrived, not a workman went to the factories; the spindles were idle all day. At every performance the tent was full, and the vague antipathy towards the United States has been turned into respect and awe; the people now say "anything is possible to Americans." Consul Brundage proceeds to point a moral by remarking that if an agent for American goods would follow in the wake of the circus, these would find a ready sale. That is just like an American Consul. —Commercial Intelligence.

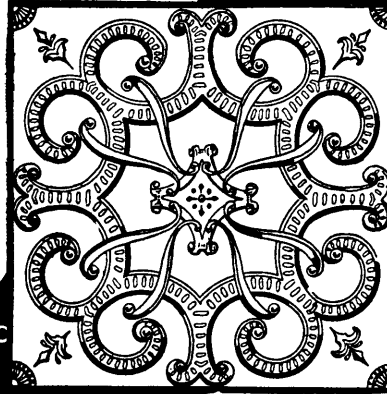
URUGUAY.—Referring to the numerous neglected opportunities to be found in Uruguay, the "Monte Video Times" calls special attention to the fact that one of the most frequent and most powerful causes must be attributed to the excessive "officialism" from which the republic has suffered for a long time past, and which, unfortunately, is being accentuated rather than abated under the present government. There are plenty of obvious openings for enterprise, some on a large scale, some on a small, but as soon as anyone attempts to take them, he is immediately confronted with some stupid official restrictions or some obstructive tax, which discourages or nullifies his well-meant efforts, and as often as not the result is the prompt abandonment of the enterprise; or, if it is persisted in, it results in failure; it is crushed by too much "officialism" or too much taxation—or too much of both combined.

This is a fact which, our contemporary adds, is unfortunately true in a variety of ways, and we could just as easily fill our columns with examples of this as with examples of neglected opportunities; indeed, the two topics run parallel to each other and it is difficult to mention one without being confronted with the other. As an example, on a large scale, we may specify the manner in which the proposal to introduce electric traction was recently treated by the municipality and by the Parliamentary Committee. It was first most unreasonably delayed, and eventually it was altogether crushed by undue interference and extortion. The same thing happens frequently on a smaller scale. If a man wants to import a new article, to add an additional branch to his business, to start some new industry or public service even on a small scale, he cannot do so without being mulcted in various ways, without obtaining a new license or permit, or without passing through some tedious formalities, national or municipal or both. Everywhere and in all matters, enterprise and effort are taxed and obstructed, instead of the taxation being directed upon achieved results, and so long as this system prevails progress will be slow and opportunities will be neglected. We might say that it is not the lack of capital, nor the lack of enterprise, that stands in the way of the development of the Republic nearly so much as the attitude of its authorities. We need only look at the decay of the port and of all the industries connected therewith, to see how fatal this attitude has been in some cases, and how it has positively sent matters backward where they ought to have progressed.

The above remarks have been somewhat of a digression, but they have been necessary before we could continue our subject, and we shall frequently have to refer to them.—South American Journal.

# INTERIOR DECORATION

THAT  
RETAINS  
IT'S  
BEAUTY!



Our  
Metallic  
Ceilings  
AND  
Walls

are in highest favor with practical and artistic people alike.

We make countless beautiful designs, with borders, friezes, dados and every detail to match; they are easily applied, in old buildings over plaster, or in new ones where plaster is not required.

They are suited for every building where practical, durable beauty is desired in the decorative finish, and are fire-proof and sanitary.

**EXPENSIVE?** Not at all. First cost is small. The plates are so carefully made they fit accurately. We will give you an estimate if you send an outline showing shape and measurements of your ceilings and walls. Let us hear from you.

The Metallic Roofing Co. Limited, Toronto.

ESTABLISHED 1823.

Telegrams:—"WILSONS, CORNHOLME."—A.B.C. Code Used.

## WILSON BROS. BOBBIN CO. (LIMITED)

CORNHOLME MILLS, TODMORDEN, ENGLAND.

BOBBIN AND SHUTTLE MANUFACTURERS.

FORTY PRIZE MEDALS AWARDED.

HIGH-CLASS WORKMANSHIP. SEVENTY YEARS' REPUTATION.

LARGEST BOBBIN MAKERS IN THE WORLD—(Over 1,400 Workmen).

ADDRESS—

**CORNHOLME MILLS, TODMORDEN, ENG.**

BRANCH ESTABLISHMENT:

**ATLAS BOBBIN WORKS, GARSTON, LIVERPOOL.**

OFFICE AND SHOWROOMS:

**14 MARKET PLACE, MANCHESTER.**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# INDEX TO ADVERTISEMENTS.

Where the folio is not given the Advertisement appears at intervals.

Abbey Improved Chilled Shot Co., Newcastle-on-Tyne, England.....	40	Fensom Elevator Works, Toronto.....	ofc	New Toronto Woolstock Co., New Toronto, Ont.....	ibc
Adams, G. H. & Co., Melbourne, Australia.....	40	Fetherstonhaugh & Co., Toronto.....	ofc	Northey Mfg. Co., Toronto.....	8
Albert Mfg. Co., Hillsborough, N.B.....	6	Finstbrook Box Co., Toronto.....	ibc	Northrop Loom Co., Valleyfield, Que.....	24
Archbold, George, Toronto.....	40	Fleming, W. A. & Co., Montreal.....	17	Nova Scotia Steel Co., New Glasgow, N.S.....	4
Armstrong Mfg. Co., Bridgeport, Conn.....	29	Flint & Walling Mfg. Co., Kendallville, Ind.....	28		
Atlantic Refining Co., Toronto.....	8	Forman, John, Montreal.....	8-abc	Oakey, John & Sons, London, Eng.....	ibc
Atteaux, F. E. & Co., Boston, Mass., and Toronto.....	ifc	Frick, H. C. Coke Co., Pittsburg, Pa.....	abc	Ontario Malleable Iron Co., Oshawa, Ont.....	abc
Automatic Check Book Co., Toronto.....	26	Frost, W. H., Smith's Falls, Ont.....	abc	Ontario Wind Engine & Pump Co., Toronto.....	40
Babcock & Wilcox, Montreal and Toronto.....	ofc	Garfield Oil Co., Cleveland, Ohio.....	26	Owen Sound Portland Cement Co., Owen Sound, Ont.....	ifc
Barber, Wm. & Bro., Georgetown, Ont.....	ibc	Gartshore, John J., Toronto.....	40		
Bell Organ & Piano Co., Guelph, Ont.....	ibc	Gartshore-Thomson Pipe & Foundry Co., Hamilton, Ont.....	36	Packard Electric Co., St. Catharines, Ont.....	36
Benson, W. T. & Co., Montreal.....	ifc	General Engineering Co., Toronto.....	32	Parke, Roderick J., Toronto.....	8
Bertram, John & Son, Dundas, Ont.....	3	General Fire Equipment Co., Toronto.....	31	Parker, Alfred S., New Toronto, Ont.....	ibc
Bourne-Fuller Co., Cleveland, Ohio.....	26	Goldie & McCulloch Co., Galt, Ont.....	3	Patent Clothboard Co., Parry Sound, Ont.....	37
Bouvier, L. P., Toronto.....	34	Gray, R. A. L. & Co., Toronto.....	29	Peerless Wire Co., Hamilton, Ont.....	38
Bowden, J. W. & Co., Toronto.....	35	Greening, B. Wire Co., Hamilton.....	30	Penman Mfg. Co., Paris, Ont.....	ibc
Bradstreets, Toronto and New York.....	34	Gutta Percha & Rubber Mfg. Co., Toronto.....	ofc	Perrin, Wm. R. & Co., Toronto & Chicago, Ill.....	33
Bristol Co., Waterbury, Conn.....	abc	Hamilton Cotton Co., Hamilton, Ont.....	ifc	Peterborough Canoe Co., Peterborough, Ont.....	6
Brown & Co., Paris, Ont.....	6	Hamilton Facing Mills Co., Hamilton, Ont.....	ifc	Petrie, H. W., Toronto.....	40
Brush, George, Montreal.....	34	Hartland, H. Fawcett, Montreal.....	40	Phillip, E. J., Toronto.....	18
Bunker, Mond & Co., Northwich, Eng.....	5	Hay, Peter, Galt, Ont.....	4	Phillips, Eugene F., Electrical Works, Montreal.....	34
Budden, Hanbury A., Montreal.....	40	Hore, F. W. Sons, Hamilton, Ont.....	34	Pittsburg Writing Machine Co., Kitchanning, Pa.....	
Buffalo Forge Co., Buffalo, N. Y.....	28	Houghton, John, Toronto.....	37	Polson Iron Works, Toronto.....	5
Burt Mfg. Co., Akron, Ohio.....	37	Hubbell, Harvey, Bridgeport, Conn.....	ibc	Queen City Oil Co., Toronto.....	ofc-19
Butterfield & Co., Rock Island, Que.....	5	Hutchison, Shurly & Derrett, Toronto.....	38		
		Imperial Oil Co., Petrolia, Ont.....	3	Itehrder Plating & Mfg. Co., Thorold, Ont.....	40
Canada Chemical Mfg. Co., London, Ont.....	ifc	Jardine, A. B. & Co., Hespeler, Ont.....	ofc	Itice Lewis & Son, Toronto.....	29
Canada Iron Furnace Co., Montreal.....	ifc	Jenckes Machine Co., Sherbrooke, Que.....	16	Robb Engineering Co., Amherst, N.S.....	6
Canada Lubricating Co., Toronto.....	abc	Jones, J. L. Engraving Co., Toronto.....	40	Roberts & Co., Montreal.....	35
Canada Switch & Spring Co., Montreal.....	abc	Jones & Moore Electric Co., Toronto.....	35	Rosamond Woolen Co., Almonte, Ont.....	ibc
Canadian Canoe Co., Peterborough, Ont.....				Royal Paper Mills Co., East Angus, Que.....	7
Canadian Colored Cotton Mills Co., Montreal.....		Karch, H. W., Hespeler, Ont.....			
Canadian Heine Safety Boiler Co., Toronto.....	38	Keller, John J. & Co., New York, N.Y.....	35	Sadler & Haworth, Toronto & Montreal.....	23
Canadian Manufacturer, Toronto.....	42	Kelly's Directories, Toronto and London, Eng.....	37	Schofield, H., Toronto.....	35
Canadian Office & School Furniture Co., Preston, Ont.....	40	Kemp Mfg. Co., Toronto.....	6	Scott, W. F., Toronto.....	40
Canadian Rand Drill Co., Montreal.....	17	Kerr Engine Co., Walkerville, Ont.....	30	Smart-Eby Machine Co., Hamilton, Ont.....	26
Canadian Rubber Co., Toronto and Montreal.....	7	Klipstein, A. & Co., New York, N.Y.....	6	Smith Wool-tock Co., Toronto.....	ibc
Canadian Sewer Pipe Co., St. John's Que., and Hamilton, Ont.....	ifc			South American Journal, London, Eng.....	
Canadian Typewriter Exchange, Toronto.....	37	Leitch & Turnbull, Hamilton, Ont.....	ibc	Storey, W. H. & Son, Acton, Ont.....	ibc
Carrier, Laine & Co., Levis, Que.....	abc	Leslie, A. C. & Co., Montreal.....	ofc	Stratford Mill Building Co., Stratford, Ont.....	20
Case, Egerton R., Toronto.....	37	Lewis, Rice & Son, Toronto.....	29	Sturtevant, B. F. Co., Boston, Mass.....	39
Clercy, Jules de, Toronto.....	35	London Machine Tool Co., London, Ont.....	33	Sturtevant Mill Co., Boston, Mass.....	18
Cooper, James Mfg. Co., Montreal.....	15	Lysaght, John, Montreal and Bristol, Eng.....		Sutton, Wm., Compound Co., Toronto.....	19
Cowan & Co., Galt, Ont.....	27			Syracuse Smelting Co., Montreal.....	21
Crestman Bros., Georgetown, Ont.....	36	Marion & Marlon, Montreal.....	abc	Tallman, J. N. & Sons, Hamilton, Ont.....	
Crestman Bros., Toronto.....	33	Matheson, Wm. J. & Co., New York, N.Y., and Montreal.....	5	Thompson, E. B., Toronto.....	37
Crosby Steam Gage & Valve Co., Boston, Mass.....	ibc	Merrimac Chemical Co., Boston, Mass.....	ibc	Thompson, Worth & Martin, Toronto.....	34
Cumner, F. D. & Son, Co., Cleveland, Ohio.....	21	Metallic Roofing Co., Toronto.....	30-41	Toronto & Hamilton Electric Co., Hamilton, Ont.....	29
Cyclone Grate Bar Co., Toronto.....	18	Meyercood Co., Chicago, Ill.....	16	Toronto Fence & Ornamental Iron Works, Toronto.....	6
		Milnes, J. H. & Co., Toronto.....	25	Toronto Machine Screw Co., Toronto.....	40
Darling Bros., Montreal.....	6	Montreal Pipe Foundry Co., Montreal.....	ifc	Toronto Paper Mfg. Co., Cornwall, Ont.....	40
Desbarats Advertising Agency, Montreal.....	34	Morrison James Brass Mfg. Co., Toronto.....	7	Toronto Patent Agency, Toronto.....	37
Diamond Machine & Screw Co., Toronto.....	26	Morrow Machine Screw Co., Ingersoll, Ont.....	6	Toronto Woolen Machinery Co., Toronto.....	37
Dixon, H., Toronto.....	37			United Electric Co., Toronto.....	abc
Dodge Mfg. Co., Toronto.....	22	McArthur, Cornuelle & Co., Montreal.....	abc	Walkerville Malleable Iron Co., Walkerville, Ont.....	ofc
Dominion Bridge Co., Montreal.....	4	McEachren Heating & Ventilating Co., Galt, Ont.....	38	Wallberg, E. A., Toronto.....	28
Dominion Dyewood & Chemical Co., Toronto.....	ofc	McGuire, Wm. J. & Co., Toronto.....	31	Welland Vale Mfg. Co., St. Catharines, Ont.....	ibc
Dominion Engraving Co., Toronto.....	ibc	McLachlan Electric & Gasoline Motor Co., Toronto.....	36	Williams, A. R. Machinery Co., Toronto.....	24
Dominion Leather Co., Toronto.....	abc	McLaren, D. K., Montreal and Toronto.....	33	Winn & Holland, Montreal.....	5
Dominion Oil Cloth Co., Montreal.....	31	McLaren, J. C. Betting Co., Montreal.....	ofc	Wilson & Burnie, Leith, Scotland.....	37
Dovercourt Twine Mills Co., Toronto.....	38			Wilson Bros. Bobbin Co., Todmorden, Eng.....	41
Dryden, T. H. & A. H., Toronto.....	40	Nanz, A. & Co., New York, N.Y.....	26	Wilson, J. C. & Co., Glensra, Ont.....	ibc
		Neff, A. C., Toronto.....	40	Wright & Dallyn, Hamilton, Ont.....	6
Electrical Construction Co., London, Ont.....	29				
Fairbanks Co., Montreal.....	25				

ofc.....outside front cover.  
ifc.....inside front cover.

ibc.....inside back cover.  
obc.....outside back cover.

# THE CANADIAN MANUFACTURER

ESTABLISHED IN 1880.

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

*If You want Information, Ask for It.*

Address, THE CANADIAN MANUFACTURER, Toronto, Canada.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

### Smith Wool-Stock Co.

219 FRONT ST. E., TORONTO.

Makers of

### WOOL STOCK, SHODDIES, Etc.

W. H. PARKER

J. H. PARKER

### NEW TORONTO WOOL STOCK CO.

MANUFACTURERS OF

### WOOL STOCK and SHODDIES

Write for Samples and Prices.

NEW TORONTO, - ONTARIO, CANADA.

A. S. PARKER, NEW TORONTO



Dealer in Woolen Waste. Carpeting a Specialty

### PENMAN MANUFACTURING CO.

PARIS, ONT. LIMITED.

Manufacturers of

### Hosiery, Shirts, Drawers, Glove Linings and Yarns.

Selling Agents—D. Morris, Sons & Co., Montreal and Toronto.

### ROSAMOND

### WOOLEN CO.

ALMONTE, ONT.

### Fine Tweeds, Cassimeres, and Fancy Worsted Suitings and Trouserings.

LEITCH & TURNBULL, Canada Elevator Works, Queen and Peter St., HAMILTON, ONT. Patent Safety Hydraulic, Hand and Power ELEVATORS. Telephone Connection.

### W. N. Storey & Son, AOTON, ONT.,

Manufacturers of..... FINE GLOVES AND MITTS In every variety and style. Moccasin.

### WM. BARBER & BROS.

Georgetown, Ont.

Manufacturers of.....

### Book and Fine Papers.

Reproductions Made for Eight Cents per Square Inch.



Half Tones Made Direct from Photos.



## CROSBY STEAM GAGE AND VALVE CO.

Sole Proprietors and Manufacturers of

Crosby Pop Safety Valves, for all kinds of Boilers, Water Relief Valves including the Underwriter, which is fully approved by the Associated Factory Mutual Insurance Companies; Crosby Steam Engine Indicators, with Sargent's Electrical Attachment; Crosby Improved Steam Gages, Recording Gages and Patent Gage Testers. Original Single Bell Chime Whistles.

BRANDEN PATENT PUMP VALVES

CLARK'S LINEN FIRE HOSE AND ADJUSTABLE COUPLINGS

All Kinds of Pressure and Vacuum Gages used in the Various Arts

Gold Medal Paris Exposition, 1889

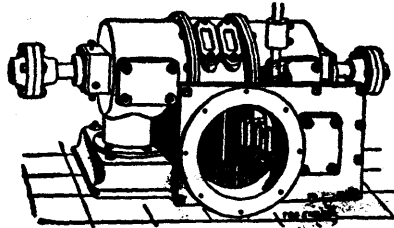
Ten Highest Awards Columbian Exposition, 1893

Main Office and Works.....

BOSTON, MASS, U.S.A.

Underwriter

Branch Offices at New York, Chicago, and London, Eng.



Horizontal Type.

### "LITTLE GIANT" TURBINE

.... FOR ALL PURPOSES....

HORIZONTAL AND VERTICAL

BUILT IN 44 SIZES.

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

Water Wheel Governors, Machine Dressed Gearing, Pulleys, Shafting and Bearings.

Catalogue and Gear List mailed on application.

Correspondence Solicited.

J. C. WILSON & CO., - - GLENORA, ONT.

## BELL PIANOS and ORGANS

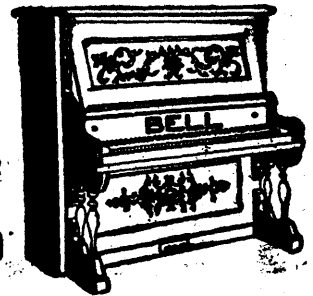
BUILT TO LAST A LIFETIME AND USED THE WORLD OVER

Send for Catalogue No. 47 to

### THE BELL ORGAN AND PIANO CO., LIMITED

GUELPH, - - ONTARIO.

LARGEST MAKERS IN CANADA.



## 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.

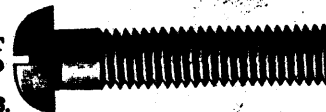
Manufacturers, JOHN OAKEY & SONS, Limited, Wellington Mills, Westminster Bridge Road, London, England.

ENQUIRIES SHOULD BE ADDRESSED TO

JOHN FORMAN, 650 CRAIG ST., MONTREAL

### ROLLED THREAD MACHINE SCREWS

Equal to CUT THREAD



COST LESS.

HARVEY HUBBELL, BRIDGEPORT, CONN.

### WELLAND VALE MANUFACTURING CO.

Limited, ST. CATHARINES, ONT.

... Manufacturers of....

Axes, Edge Tools, Saws, Farming Implements and Bicycles.

### The Firstbrook Box Co. Limited

PACKING CASES.

DOVETAIL BOXES.

Bottlers' SHIPPING CASES.

BOX SHOOKS, Etc.

TOP PINS, SIDE-BLOCKS & CROSS-ARMS

Write for prices. TORONTO, Canada.

### CARBONIZER

A neutral substance, harmless to animal fibre or tissue, while it destroys burrs, etc., as efficiently as acid. It leaves the wool in fine condition. Manufactured by the Merrimac Chemical Co., 15 PEARL ST. BOSTON.

