

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. 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 filming, are checked below.

L'Institut a microfilmé 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 filmage sont indiqués ci-dessous.

Coloured covers/  
Couverture de couleur

Coloured pages/  
Pages de couleur

Covers damaged/  
Couverture endommagée

Pages damaged/  
Pages endommagées

Covers restored and/or laminated/  
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/  
Pages restaurées et/ou pelliculées

Cover title missing/  
Le titre de couverture manque

Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées

Coloured maps/  
Cartes géographiques en couleur

Pages detached/  
Pages détachées

Coloured ink (i.e. other than blue or black)/  
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/  
Transparence

Coloured plates and/or illustrations/  
Planches et/ou illustrations en couleur

Quality of print varies/  
Qualité inégale de l'impression

Bound with other material/  
Relié avec d'autres documents

Continuous pagination/  
Pagination continue

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

Includes index(es)/  
Comprend un (des) index

Title on header taken from: /  
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/  
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 filmées.

Title page of issue/  
Page de titre de la livraison

Caption of issue/  
Titre de départ de la livraison

Masthead/  
Générique (périodiques) de la livraison

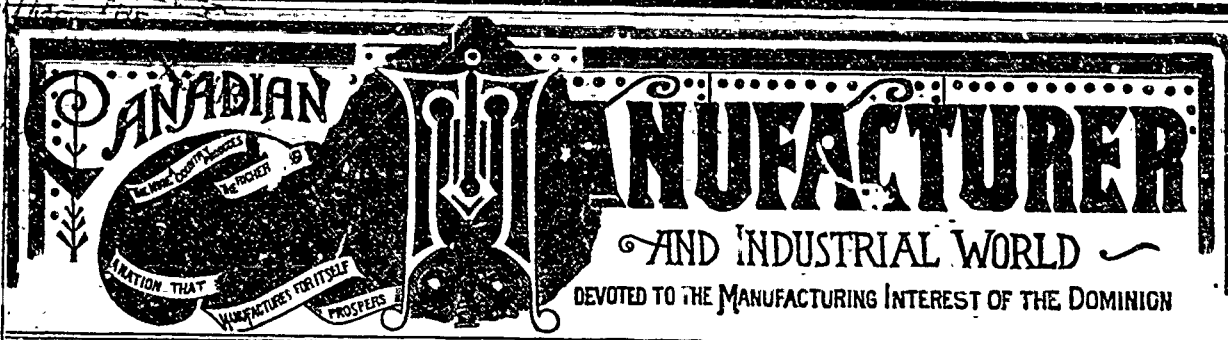
Additional comments: /  
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below /  
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

Manufacturer will save our readers money, and should be consulted by them before purchasing.

PATENTS



VOL. 48. TORONTO, NOVEMBER 20, 1903. No. 10

**STEAM BOILERS**  
FOR ALL PURPOSES  
ECONOMY  
DURABILITY  
SAFETY  
HEATERS, SUPERHEATERS,  
ECONOMIZERS  
AND STEAM ACCESSORIES  
**BABCOCK & WILCOX**  
LIMITED.  
NEW YORK LIFE BLDG., PLACE D'ARMES  
MONTREAL  
Toronto Office—114 King St. West

**"REDSTONE"**  
HIGH PRESSURE Sheet Packing  
MAKES PERFECT JOINTS.  
Does not blow out and requires no following up.  
Try a sample lot and be convinced of its merits.  
MANUFACTURED SOLELY BY  
**The Gutta Percha & Rubber Mfg. Co.**  
OF TORONTO, LIMITED  
Head Office and Warerooms:  
45, 47 and 49 WEST FRONT ST.,  
TORONTO, CANADA

... Malleable...  
**Iron Castings**  
XC Plate or Tinned  
CASTINGS  
also made to order.  
**McKinnon Dash & Metal Works Co., Limited**  
ST. CATHARINES, ONT.

**ELECTRIC LIGHT AND POWER CABLES**  
FOR UNDERGROUND INSTALLATIONS  
**The Wire & Cable Company, - - Montreal**

"STANDARD of the WORLD"  
**OTIS ELEVATORS**  
CANADIAN OTIS ELEVATOR COMPANY, LIMITED  
OFFICES  
TORONTO HAMILTON MONTREAL  
AND ALL PRINCIPAL CITIES

THE....  
**Walkerville Malleable Iron Co., (Limited)**  
Manufacturers of -  
REFINED AIR FURNACE  
**Malleable Castings**  
ALSO LIGHT GREY IRON CASTINGS.  
WALKERVILLE, - ONTARIO.

CAVEAT ETC.  
EGERT  
R.  
GAS  
Register  
Solicitor  
of Patent  
Notary  
Public;  
Member  
of the  
Canadian  
Manufacturers'  
Associati  
HEAD  
OFFICE  
TEMPLE  
BUILDING  
TORONTO  
OFFICES  
OTTAWA  
AND  
WASHINGTON,  
D.C.

The Classified Index

# Floor Space is Valuable!



For Attaching to Wall

Type 1 B  
Direct Current  
MOTORS



For Suspension from Ceiling

## FOR POWER PURPOSES

Substantial, Compact, Practical and Efficient

The greatest care in design, workmanship and testing is necessary to reach these results.

Our Motors are the Standard of the World.

# CANADIAN GENERAL ELECTRIC CO., LIMITED.

HEAD OFFICE

TORONTO, - ONT.

Montreal, Halifax, Ottawa, Winnipeg, Vancouver, Victoria, Rossland.

## STEEL RAILS

We are now offering Highest Quality

### BESSEMER STEEL RAILS

made by the

### ALGOMA STEEL CO., Limited

OF SAULT STE. MARIE, ONT.

### DRUMMOND, McCALL & CO.,

GENERAL SALES AGENTS

OFFICES:

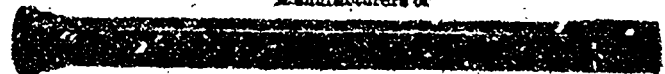
Canada Life Bldg., MONTREAL. 93 York St., TORONTO.

## MONTREAL PIPE FOUNDRY CO... (Limited)

SUCCESSORS TO

### DRUMMOND-McCALL PIPE FOUNDRY CO. (Limited)

Manufacturers of



"Specials," Hydrants, Valves, Etc.

Offices: - - - Canada Life Building,  
MONTREAL

## CRAIG MINE



## CRYSTAL CORUNDUM

### CUTS COLD, CUTS FAST, IS GRADED CAREFULLY.

ALWAYS PURE, ALWAYS UNIFORM IN QUALITY.

Unlike emery and other abrasives, it contains no non-cutting substance. Wheels made from it will not burn nor glaze. Now that it is obtainable in large quantities, only the unprogressive will continue to use the impure abrasives of the past, for grinding and polishing. Write for booklet and testimonials.

### THE CANADA CORUNDUM COMPANY, Limited, - Toronto, Canada

## Wood Working Machinery

The line of wood-working machines made by The Goldie & McCulloch Co., Limited, Galt, Ont., are in great demand. They build an extensive range suitable for almost any kind of wood-working establishments. Their machines are built very heavy and made to stand very hard and continuous work. Send for a catalogue, address

**WE MAKE** Wheelock Engines, Ideal Engines, Gas and Gasoline Engines, Boilers, Water Wheels, Pumps, Flour Mill Machinery, Oil Meal Mill Machinery, Oat Meal Steam Pan Kilns, Wood Working Machinery, Iron Pulleys, Wood Rim Split Pulleys, Shafting, Hangers, Gearing, Friction, Clutch Pulleys, Friction Clutch Couplings, etc., Safes, Vaults and Vault Doors.

**THE GOLDIE & McCULLOCH CO., Limited**  
GALT, Ont., Canada.

## LEONARD - CORLISS Engines

For all power purposes.

The **CORLISS ENGINE** is without question the most economical. Universally acknowledged as the peer of all slow speed engines. All Engines have multiported valves.

The **PEERLESS Self Oiling ENGINE** is the most perfect high speed engine in existence, there is nothing about the engine which has not been a proved success.

**Boilers** for all powers and purposes. **Heaters, Pumps.**

**CORRESPONDENCE SOLICITED.**

**E. LEONARD & SONS, - Manufacturers**  
London, Canada

Montreal, P.Q. Winnipeg, Man. St. John, N.B.

## THE WELLINGTON MILLS

London, England.

### GENUINE EMERY

Oakey's Flexible Twilled Emery Cloth.

Oakey's Flint Paper and Glass Paper.

Oakey's Emery Paper, Black Lead, Etc.

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

**Manufacturers**

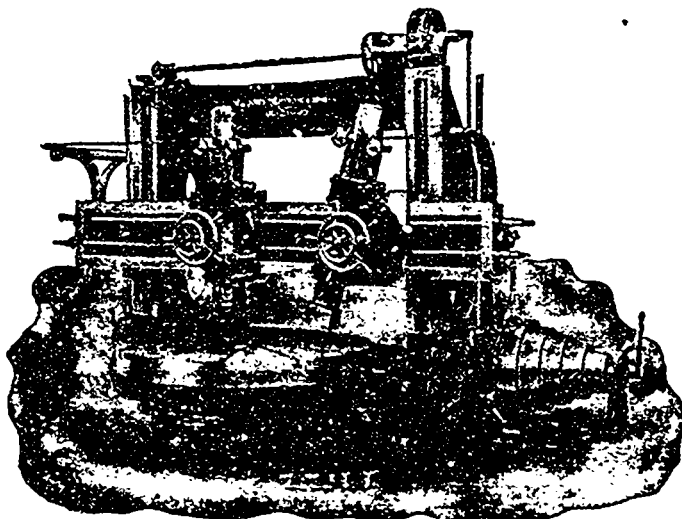
**JOHN OAKEY & SONS, Limited,** Wellington Mills, Westminster, Bridge Road, London, Eng.

Enquiries should be addressed to

**JOHN FORMAN, - 650 Craig St., MONTREAL**

## IMPORTANT BORING and TURNING MILLS

TO USERS OF



**NOTICE**—The above mill can be seen at our Works and is of the latest modern type. If you are a buyer please communicate with us. Instant delivery can be given. Full particulars sent on receipt of wire or letter.

WE are ready to delivery from STOCK one of our 84" Boring and Turning Mills, having two regular heads with positive geared feeds, each head being entirely independent in all its movements, making it adaptable to either light or heavy work within its range. Every part of the machine is manufactured after the most approved methods, and in placing a tool of this kind in your shop you are getting a machine suitable for your wants if you wish to make the most of your boring mill work. A greater range of work can be done on a mill of this character than any other kind of tool, so that the floor space occupied by Bertram mills always pays dividends.

**THE JOHN BERTRAM & SONS CO., Limited, - Dundas, Ontario**

# WIRE ROPE

FROM STOCK,  
ANY LENGTH.

*SPECIAL ROPES TO ORDER.*

*BEST QUALITY. BEST PRICES.*

**The Dominion Wire Rope Co., Limited, Montreal**

# THE NOVA SCOTIA STEEL & COAL CO.

MANUFACTURERS OF

LIMITED

## BRIGHT COMPRESSED STEEL SHAFTING

FROM 1/2 TO 5 INCHES IN DIAMETER. GUARANTEED STRAIGHT AND TRUE TO WITHIN 1/32 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

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



**ARMSTRONG'S PIPE THREADING AND CUTTING OFF MACHINES,**  
For Hand or Power.

Save Time and Labor.

Capacity from 1/4 to 6 inches.

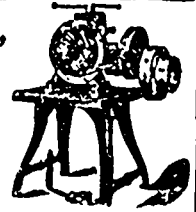
Armstrong's Genuine Stocks and Dies, **THE BEST WATER, GAS, AND STEAM FITTERS' TOOLS**

ARE MANUFACTURED BY

**THE ARMSTRONG MFG. CO., - BRIDGEPORT, CONN.**

New York Office—139 Centro St.

Catalogue on Request.



**ACCIDENT—HEALTH—LIABILITY**  
**MARYLAND CASUALTY CO.**  
OF BALTIMORE, MD.  
**CAPITAL, - \$750,000**  
AGENTS WANTED

**J. H. EWART**  
ONTARIO GENERAL  
AGENT  
16 WELLINGTON STREET EAST  
TORONTO

**FIRE INSURANCE ONLY**  
**NATIONAL ASSURANCE CO.**  
OF DUBLIN, IRELAND  
**CAPITAL, - £1,000,000**  
AGENTS WANTED

# PIG IRON.

**M. & L. SAMUEL, BENJAMIN & CO., 27 Wellington St. W., Toronto.**

ENGLISH HOUSE—SAMUEL, SONS & BENJAMIN, LONDON, E.C.

## CANADA IRON FURNACE CO., Limited

Manufacturers of the well-known



*Montreal, Radnor and Three Rivers*

### "C.I.F." THREE RIVERS CHARCOAL PIG IRON

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

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

Offices: CANADA LIFE INSURANCE BLDG., - - MONTREAL.

# COAL JAS. H. MILNES & CO. COKE

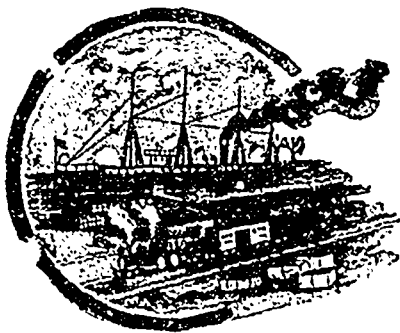
WHOLESALE DEALERS IN  
Best Grades of STEAM COALS.  
Best Grades of BLACKSMITHS' COALS.  
Best Grades of FOUNDRY COKES.  
Shipments made direct from Mines to any point in Canada. Write for quotations.

Head Office: 86 KING ST. EAST TORONTO. Docks: Esplanade, Foot of Yongo

**W-H-T-U-G-O**  
**SCAIFE**  
Water Softening and Purifying Systems  
FOR STEAM BOILERS AND ALL INDUSTRIAL USES.

**SCAIFE SAND AND CHARCOAL FILTERS..**  
FOR DOMESTIC AND INDUSTRIAL PURPOSES.  
Filters and Filtering Systems of any Size and Capacity.

**WM. B. SCAIFE & SONS CO., (FOUNDED 1802), PITTSBURG, PA.**



## The CANADIAN EXPORT CO.

LIMITED

Head Office, 27-29 Wellington St. E., TORONTO, CANADA

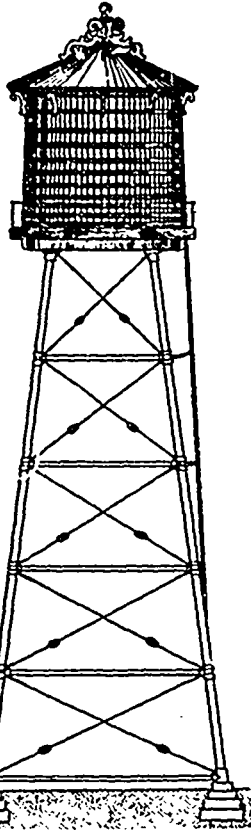
**BUYERS FOR EXPORT**

Great Britain      South Africa  
Australia              New Zealand

We have our own travelling representatives in these countries with sample and showrooms at the principal cities. Correspondence Invited.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

"Absolutely safe and reliable. Ask your friends."



## A LEAKY TANK

will negative the good points of a sprinkler system.

### A CALDWELL CYPRESS TANK

does not leak, is always ready for service, contains the best and latest ideas of tank construction, and is supplied with sufficient steel hoops properly spaced to prevent bursting. When mounted on a

### CALDWELL STEEL TOWER

there is ideal protection against fire.

Our catalogue describes the many good points of our outfits and gives prices.

**W. E. Caldwell Co.**  
LOUISVILLE, KY.

## JEFFREY MACHINERY

ELEVATING...  
CONVEYING...  
COAL MINING...  
COAL WASHING

### ELECTRIC MINE LOCOMOTIVES



JEFFREY REFUSE CONVEYOR.

THE JEFFREY MFG. CO., - Columbus, Ohio, U.S.A.

Toronto Agents—A. R. Williams Machinery Co.  
Montreal " Williams & Wilson.

Send for  
Catalogue.

## YOU MAY NOT NEED A LATHE OR PLANER

—NOW—

But in the near future a machine, as above, with all modern improvements, will be required. On request we will furnish you full particulars of points of merit which you will demand on next tools you buy. ✂

WRITE US AND BE CONVINCED

**THE R. McDOUGALL CO., LIMITED**  
GALT, Canada

## —THE— Samson Turbine

FOR ALL HEADS.

The recognized standard for Speed, Power and Efficiency.

The type of all that is best in Water Wheels.

Bear it in mind for present or future needs.

BUILT BY  
**The Wm. Hamilton Mfg. Co.**  
Limited  
PETERBOROUGH, ONT.

# THE CANADIAN PORTLAND CEMENT CO., LIMITED

MANUFACTURE "RATHBUN'S STAR" BRAND

**THE LEADING CANADIAN PORTLAND CEMENT**

**Capacity of Works—500,000 Barrels per Year**

THE RATHBUN COMPANY,  
310-312 Front Street West,  
TORONTO, ONT.

SALES  
AGENTS

ST. LAWRENCE PORTLAND CEMENT CO.,  
101-102 Board of Trade Building,  
MONTREAL, QUE.

## 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.

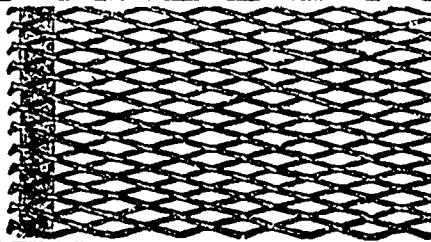
**THE OWEN SOUND PORTLAND CEMENT CO., Limited**

Works—SHALLOW LAKE, Ont. Head Office—OWEN SOUND, Ont. GEO. S. KILBOURN, Sec'y-Treas. Correspondence invited.

## Albert Manufacturing Co.

MANUFACTURERS OF THE WELL-KNOWN

"Hammer Brand" **Calcined Plaster** AND **PATENT ROCK WALL PLASTER.**  
HILLSBOROUGH, N.B., CANADA.



Expanded Metal is made in Canada.  
Used in **FIREPROOF** concrete roofs, walls, floors, etc.  
Stop building heavy and expensive brick, terra cotta, or solid concrete arches. Get our prices on factory wall and roof work. We sell material, furnishing full working-drawings, and foreman's instructions. Or we submit estimates and undertake contracts.  
You will save money by instructing your practical man to correspond with our engineer. Ask him to send rough drawing with accurate measurements, before building or making alterations.

**EXPANDED METAL & FIRE PROOFING CO., Limited**  
100 King Street West, - TORONTO

## "SCIOTO" FIRE BRICKS

Are the best that money can buy for  
**BLAST FURNACES, STEEL WORKS and ROLLING MILLS.**

Manufactured and Sold Direct by LET US TELL YOU ABOUT THEM. WE HAVE NO MIDDLE MEN.

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

## "Beech Creek" FIRE BRICK

STRICTLY HIGH-GRADE

MADE ONLY BY

**PENNSYLVANIA FIRE BRICK CO.,**  
LOCK HAVEN, PA., U.S.A.

Special Mixtures for use in Rolling Mills, Malleable Iron Works, Steel Works, Blast Furnaces, Glass Tanks, Cement Kilns, Locomotive Blocks, and all High Grade Uses.

*Difficult Shapes a Specialty.* Send for Catalogue and Prices.

**BRANDS: BEECH CREEK, BEECH CREEK ROOF, BEECH CREEK BUNG.**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



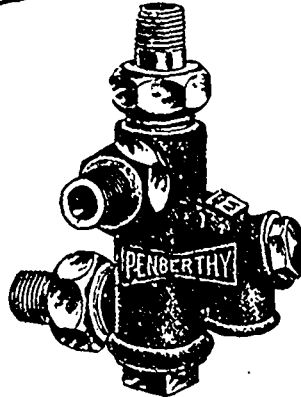
SEND FOR CATALOGUE

ASK FOR BULLETIN

TRADE  
**PENBERTHY**  
MARK.

**"PENBERTHY"  
LOW PRESSURE INJECTOR**  
FOR WATER PRESSURE.

WORKS LOW AT 10 LBS. PRESSURE.  
WORKS HIGH AT 175 LBS. PRESSURE.

MADE IN CANADA

**"PENBERTHY"  
HIGH PRESSURE INJECTOR**  
THE "AUTOPOSITIVE"

WORKS HIGH AT 200 LBS.  
WORKS LOW AT 18 LBS.

MADE IN CANADA

## AUTOMATIC INJECTORS

RANGE 22 to 150 LBS., GUARANTEED.

Also a Full Line of Oil and Grease Cups, Water Gages, Gage Cocks, Etc., Etc.

MADE IN CANADA

**PENBERTHY INJECTOR CO., LIMITED, WINDSOR, ONT.**

### IF YOU ARE HUNTING

for the most economical  
and efficient

#### POWER TRANSMISSION APPLIANCES

You will bag something worth having when you hit upon the Dodge—Canada's standard for wood split pulleys, friction clutches, hangers, shafting, and rope drives.

Our engineers solve power transmission problems for you without charge.

Before you place your next order let us hear from you. We can save you money.

**THE DODGE MANUFACTURING COMPANY**

OF TORONTO, Limited

TORONTO, - ONT.



When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**CASSELLA COLOR COMPANY**

(American Branch of Leopold Cassella & Co.)

ARTIFICIAL  
**DYE STUFFS**

New York, 182-184 Front Street.

Boston, 524 Atlantic Avenue.

Philadelphia, 126-128 South Front St.

Providence, 64 Exchange Place.

Atlanta, 47 North Pryor Street.

Montreal, 86-88 Youville Square.

**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, Thiocatechines, etc.

A Complete Assorted Stock of the above always on hand.

**W. T. Hanson & Co.,**

Sole Agents for Canada.

164 St. James St., MONTREAL

**GEIGY ANILINE & EXTRACT CO.**

SUCCESSORS TO JOHN J. KELLER & CO., Inc.

104 and 106 Murray Street, - NEW YORK

BOSTON PROVIDENCE PHILADELPHIA  
ATLANTA TORONTO

Manufacturers and Importers of

**ANILINE COLORS**

ECLIPSE SULPHUR COLORS

INDIGO J R G DOUBLE

SUMAC AND DYEWOOD EXTRACTS

SPECIALTIES FOR CALICO PRINTERS

Canadian Branch—29-33 MELINDA ST. (T. D. WARDLAW, Mgr.)

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

NORTHWICH, ENGLAND.

**PURE ALKALI**

48% and 58% (Light and Heavy)

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

35% to 37% (Hardwood Casks)

**CAUSTIC SODA**

60% to 77%.



**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.

**BELLHOUSE, DILLON & CO.**

201 Coristine Bldg., St. Nicholas St., MONTREAL.

**Logwood Crystals**

The only Extract that is absolutely pure and will do the work of Chips. Manufactured where the wood is grown, by The West Indies Chemical Works, Limited, Spanish Town, Jamaica, W. I.

**A. KLIPSTEIN & CO.**

122 Pearl St., New York

HAMILTON, ONT.—24 Catharine St. N.

MONTREAL—17 Lemoiné St.

**ANILINES**

**DYESTUFFS and CHEMICALS**

Sole Agents for the SOCIETY OF CHEMICAL  
INDUSTRY IN BASEL, SWITZERLAND.

**FAST COLORS FOR WOOL and COTTON**

ALSO FULL LINE OF DIRECT COTTON COLORS

BRANCHES—BOSTON, 283-6 Congress St. PHILADELPHIA, 50-52 N. Front St.  
CHICAGO, 196 Kinzie St. PROVIDENCE, 13 Mathewson St.

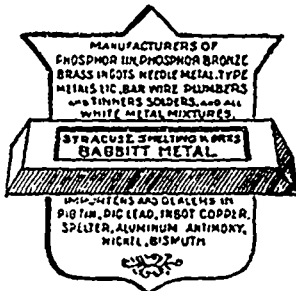


**B. GREENING WIRE CO.**  
(LIMITED)  
WIRE MANUFACTURERS  
& METAL PERFORATORS  
**HAMILTON  
& MONTREAL.**

## Wire Screens

for every class of material. Perforated Metal of Steel, Copper Brass, Zinc for all purposes. Special attention given to miners' requirements.

# The Day of Judgment is Come After All



And the jury have unanimously agreed that all the manufacturers in Canada who are looking out for their interests, are duty bound to protect themselves by using SYRACUSE BABBITT METAL only, the manufacturers to decide what grade of Babbitt they want to purchase.

For high speed and heavy pressure machinery they may choose such as Aluminum Genuine, Government Genuine, Hard Genuine and Dynamo; for medium speed Special, Manganese, Car Box and Extra; for slow speed Nos. 1, 2, 3 and 4.

THE SYRACUSE SMELTING WORKS shall have their name on every bar as a guarantee for the quality. Price is to be the lowest in Canada. Also every plumber or manufacturer who has any use whatever for any kind of solder must use the SYRACUSE SMELTING WORKS' for their own protection.

### THE VERDICT.

Everybody who is not using "SYRACUSE" BABBITT METAL or SOLDER, in fact any metals they manufacture, is working against their own interests. A word to the wise is sufficient.

## SYRACUSE SMELTING WORKS

MONTREAL, CAN.

NEW YORK, U.S.A.

SEATTLE, WASH.

# Packard

## NOW IS THE TIME

to attend to your lamp wants.

It is not too early to buy Packard lamps for the winter.

Manufacturers seeking the most economical as well as the most efficient and satisfactory lamps should place no order without corresponding with us.

Packard lamps are superior in every way—Small current consumption—Long life—Sustained candle power.

Let us hear from you to-day.

## THE PACKARD ELECTRIC COMPANY

MONTREAL, QUE.

ST. CATHARINES, ONT.

Our supply department—with all the standard lines—is at your service. When you need anything in the supply line at least let us quote you prices. You'll find we can effect quite a saving for you.

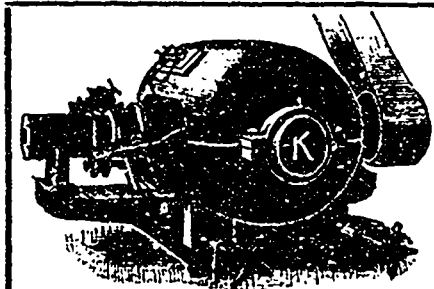
When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# THE EUGENE F. PHILLIPS ELECTRICAL WORKS

MONTREAL, - CANADA LIMITED

TORONTO STORE, 50 Adelaide Street West

## Bare Copper Wire Weatherproof Wire



Special Attention Given to Electrical Repairing.

### THE KEY ELECTRIC DYNAMO & MOTOR COMPANY, Limited

219-221 Queen St. East,

Manufacturers of — TORONTO, ONT.

MULTI-POLAR MOTORS.

BI-POLE MOTORS

ALTERNATING CURRENT MOTORS.

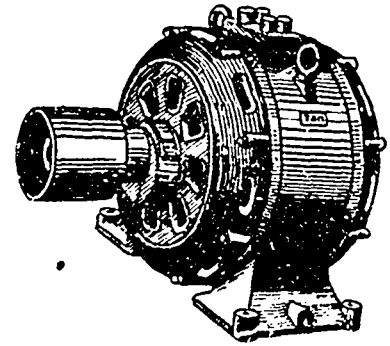
INDUCTION MOTORS.

DYNAMOS for Incandescent and Arc Lighting.

DYNAMOS for Electro-plating and Electrotyping.

ELECTRIC CONTROLLERS for Elevators.

ELECTRIC ORGAN BLOWERS.



### Induction Motors

of one, two and three phases.

HIGH POWER FACTOR and EFFICIENCY

— ALSO —

### A. C. Generators

IN ALL SIZES.

### TORONTO & HAMILTON ELECTRIC CO.

99-103 McNab North. HAMILTON, ONT.

# THE SICHE GAS CO.

81 YORK STREET - TORONTO  
8141 BLEURY STREET - MONTREAL

BUILDS and  
INSTALS...

## Gas Plants

(BI-CARBURET OF HYDROGEN) FOR

### Light, Heat and Power

NO STORAGE.  
NO DANGER.

NO DIRT.  
NO WASTE.

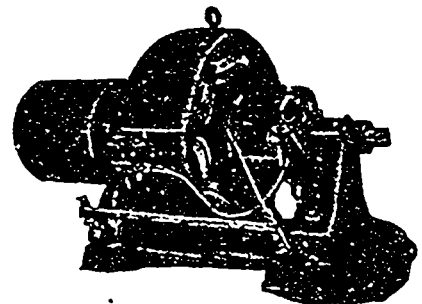
HUNDREDS IN DAILY USE.

ONLY MEDAL FOR GAS AT INDUSTRIAL EXHIBITION, 1902.

Catalogue and Prices on Application.

## 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.

# Hot Blast Heating Systems

— FOR —

Factories, Mills, Schools,  
Colleges, Hospitals, Etc.

PERFECT VENTILATION AT AN EVEN TEMPERATURE.

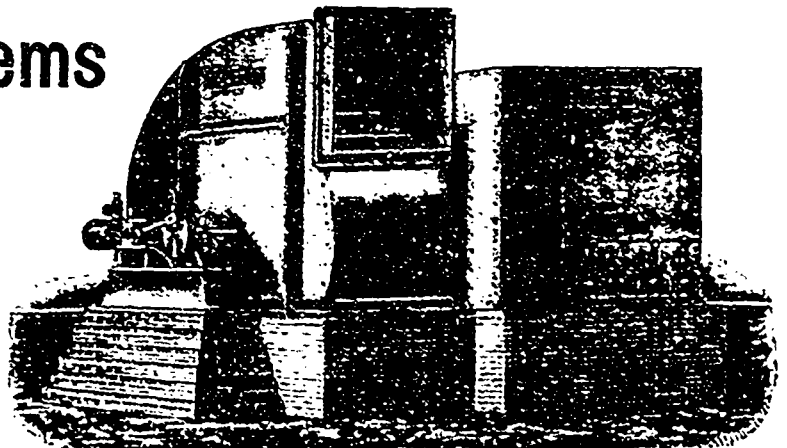
Write for prices and particulars to

## SHELDON & SHELDON

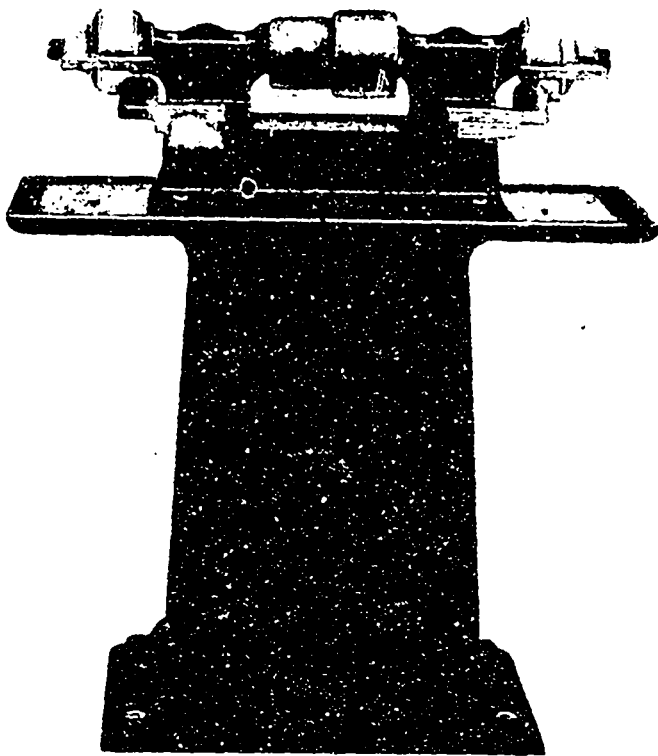
GALT, - - ONT.

FORMERLY

McEachren Heating & Ventilating Co.



When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



## CYCLONE GRINDER

— No. 16 —

BUILT ON SCIENTIFIC PRINCIPLES.  
CAN BE USED EITHER ON BENCH OR  
PEDESTAL, WITH OR WITHOUT TABLE.

Will carry 2 Wheels, 12 x 3 inches.  
Bearings absolutely dust proof Automatic Oilers.  
No vibration.  
Countershaft has cone pulley 12 and 13 x 3½ inches.  
Tight and loose pulleys 6 in. diameter, 4 in. face  
and should run 750 revolutions per minute.

Ready for Immediate Delivery

OUR SPECIALTY :

Craig Mine Crystal Corundum Wheels  
FOR ALL PURPOSES.

Write for catalogue and prices.

HART CORUNDUM WHEEL CO., LIMITED

HAMILTON,  
CANADA.

## “Say Friend”

Your aim should be to start up for yourself.

**Why Work** from morn till night for somebody else instead of pushing a business for yourself, and thus reap the full profit of your labor.

**We Will...** start men of ability and good character in every county in the Dominion.

WRITE FOR PARTICULARS TO

**THE EMPIRE MACHINE & METAL STAMPING CO.**

1012 Yonge Street - TORONTO, CANADA

LIMITED



## 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

**The Canadian Manufacturer Publishing Co., Limited.**

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

**SUBSCRIPTIONS:**

Canada and United States \$1.50 per year. All other Countries in Postal Union ten shillings sterling, including postage.

J. J. CASSIDEY, Editor and Manager.

Classified Index ..... Page 39  
Index to Advertisers ..... Page 46

**THE CANADIAN MANUFACTURER**

Reaches all the Blast Furnaces, Iron and Steel Works, Rolling Mills, Manufacturers of Iron and Wood-Working Machinery, Steam Engines and Boilers, Pumping and Mining Machinery, Electric Machinery, Textile, Pulp and Paper Mill Machinery, Water Power Plants Cement, Sewer Pipe and Terra Cotta Works, Dealers in Steam Fitters' and Plumbers' Supplies, and all Hardware Merchants in Canada.

**RETALIATION OR CONCILIATION.**

A prominent Canadian manufacturer who was a member of the excursion party that recently visited Manitoba, the North-West and British Columbia, noticing with much pleasure the rapid increase in population and wealth in those sections of Canada, directed attention to the large quantities of merchandise being taken there from the United States to supply the wants of the people. Another member of the party stated that there were great possibilities there for the establishment of manufacturing industries to supply these wants, but that manufacturers in Ontario and the country east thereof did not command the capital necessary for such investments, all their available funds having been expended and tied up in the enlargements and improvements of the factories they are already operating. Another spoke of the general inability of Canadian manufacturers to produce goods enough to supply the Western demand, and the remedy proposed by another manufacturer by which to protect the country against the influx of merchandise from the United States was to increase the duty on such imports, raising it to the level of the tariff of that country.

This proposition should receive serious consideration. The circumstances are: Canada is rapidly growing in population, and the requirements of the people are also increasing rapidly, Canadian manufacturers are unable to meet the requirements, these being supplied to a large extent by imports from the United States, and Great Britain makes no efforts to share in the trade. In the event of increasing the duty on American goods, making it virtually prohibitive, from what source are the goods to come to supply the wants of the people?

Canada is making strenuous efforts to increase her population; and the immigrants are chiefly those who become engaged not in manufacturing industries but in agricultural pursuits. The necessities of life should be placed within their reach, or they should not be invited to inhabit the land. The lack of facilities of Canadian manufacturers to supply the wants of the people has resulted in the establishing in Canada of many large manufacturing enterprises, chiefly with American capital; and while some very large concerns, such as the International Harvester Co. and the Westinghouse Co. are able to erect large works in Canada, thus avoiding the duties imposed by the tariff, there are hundreds of other concerns in the United States who cannot make such large investments

here, but who find it profitable to market their products in this country.

As we have stated, British manufacturers make no effort to supply the Canadian market, particularly in manufactures of metals. In January last an article was published in this journal showing the values of a selected list embracing eighty-four dutiable articles, chiefly manufactures of iron and steel, imported into Canada in the fiscal years 1898, 1900 and 1902, the duties thereon under the general tariff being given. The sources of these imports were Great Britain, United States and all countries. Of course the duties imposed upon imports from Great Britain, the product of that country, were favored by the tariff preference, which should have been a stimulus to such imports. The values of these eighty-four different lines of dutiable goods, imported during the three years under consideration were as follows:

	Great Britain.	United States.	All Countries.
1898.....	\$1,506,499	\$10,147,788	\$12,564,797
Proportion....	12.0 p. c.	80.7 p. c.	100.0 p. c.
1900.....	\$3,240,607	\$17,059,113	\$21,653,655
Proportion....	7.0 p. c.	78.07 p. c.	100.0 p. c.
1902.....	\$3,047,812	\$18,738,143	\$23,528,516
Proportion....	12.9 p. c.	75.3 p. c.	100.0 p. c.

The fact that in 1902 Canada required \$22,500,000 worth of such goods in excess of what was produced in the country, and that our imports of these were less than 13 per cent. from Great Britain, indicates the unwillingness or inability of that country to supply the Canadian demand. Reference to the table shows that in 1902 our imports from Great Britain of certain articles were: Locomotive engines, none; fire extinguishing apparatus, none; typewriting machines, none; cash registers, none; farm and freight wagons, none; bolts and hinges, \$295; cut tacks and shoe nails, \$108; horse-shoes, \$125; wood screws, \$329; stoves, \$484; telephone instruments, \$10; emery wheels, \$494; rubber belting, \$146; wheelbarrows, \$122.

The only large increases of imports from Great Britain under the preferential tariff are of woolen goods, resulting in the virtual destruction of a home industry which was well established and quite able, to a very considerable extent, to supply the home demand. The preferential tariff is of no benefit to Canada whatever, is unappreciated by Great Britain, and should, therefore, be abandoned.

But if not abandoned, why not extend it, for a consideration of course, to the United States who would appreciate its

bestowment, and who would, no doubt, be glad to make valuable tariff concessions to obtain it. The adoption of the United States tariff would be a burden upon the people of Canada that they would be unwilling to bear.

#### TO BE OR NOT TO BE.

At the recent annual meeting of the Maine State Board of Trade, a discussion was held by Hon. E. N. Foss and Mr. Albert Clarke, both of Boston, regarding reciprocity with Canada. Mr. Foss represents the wing of the Republican party now strongly favorable to the modification of the United States tariff with a view to bringing about reciprocity between the two countries, and Mr. Clarke represents the wing of that party opposed to reciprocity in any form.

"Reciprocity," says Mr. Foss, "means exchange. It means a fair field and an opportunity to occupy it. Some tariffs which were a help have become barriers, checking output and arraying the world against American industries." He believed, with McKinley, that "the period of exclusiveness is past." The United States tariff abounds with schedules which were purposely made high for trading purposes, otherwise they have no excuse for existence.

We quote from Mr. Foss' address:—

From a struggling, well-nigh helpless country, dependent upon the United States for supplies and drawing her chief profits from her sales here, Canada has grown robust and self-supporting. Shut out from our market in deference to our agricultural, fishing, mining and lumber interests, Canada has had forced upon her the problem of developing her own resources and finding markets abroad for her products. In this endeavor she has been successful, and her exports to the British Empire alone are equal in amount to her imports from the United States. Her imports from Great Britain are almost exactly the same as her exports to the United States. Her total exports to all countries and her total imports are about the same. With imports equalling exports, she is prosperous in every branch of trade and industry. All this she has accomplished under a moderate tariff, with some protective features.

It is for our interest and, we believe, it is for her interest, that Canada's tariff at least remain where it is as far as the United States is concerned. If it were not that events in Canada and in her relation to foreign nations had so shaped themselves of late as to put the whole question of reciprocity upon a new basis, we might very well be content to take the advice of some unthinking friends and let matters remain as they are. If it were not more than reasonably certain that Canada is at the point of striking a determined blow at all American industries, agricultural as well as mechanical, in the absence of reciprocity, there would be less need of reciprocity agitation in this country than there is now.

It is to be borne in mind that many of the articles which we send in large quantities to Canada enter the Dominion free while we tax most Dominion products heavily. Moreover, the average Dominion tariff is only half that of the United States. Trading conditions between the two countries are thus deliberately made unequal, and it is this situation which our Canadian friends have been trying for years to improve.

Mr. Foss, speaking of the interests in the United States which opposed reciprocity in 1899, and the change of these opinions since then, shows upon the authority of Mr. John Charlton, a member of the Joint High Commission, that in the course of the hearings before the Commission in 1898-9. Mr. Dingley became sincerely convinced that the free importation of Canadian lumber would amount to so little, in comparison with the American production, that it would make no material difference in the price; "but," he added, discussing this point with Mr. Charlton, "you will have a better time convincing the United States Senate of that than you have had in convincing me." Mr. Foss quoted directly from an

article by Edward N. Dingley which discusses the subject freely and fairly. Says the younger Dingley:

As the chief author of the Dingley tariff law, Mr. Dingley was charged with being hostile to any form of reciprocity; and when he was appointed a member of the Anglo-American commission, by President McKinley, Canada jumped to the conclusion that reciprocity with the United States was out of the question. However, the Canadian commissioners quickly changed their minds; and Mr. Charlton, the Canadian member of the commission from Ontario, conceded that Mr. Dingley was not only thoroughly posted on the matter of reciprocity and trade relations with Canada, but was disposed to be fair and conciliatory. In my 'Life and Times of Nelson Dingley, Jr.,' Mr. Charlton writes that Mr. Dingley was misunderstood in the matter of reciprocity. He was not narrow, but broad and liberal. It is not too much to say that had Mr. Dingley lived, the Anglo-American commission would have reached a substantial and satisfactory arrangement on all the disputed points, including reciprocity. Canada wanted to secure free lumber, free lead ore, free agricultural products and free fish. These were of course denied her, for the simple reason that the free admission of these articles would injure our domestic industries. And yet Mr. Dingley was willing to make concessions, if the senators and members from the interested northern states would consent. When the commission adjourned the Canadian members were discouraged, relying almost entirely upon the efforts of Mr. Dingley to harmonize the differences and to win over the members of Congress opposed to any treaty and to any reduction in the duties.

"To touch briefly upon the broader phases of this great subject," said Mr. Foss, "the failure to approach it in a more generous spirit has been responsible for changes in the Canadian sentiment which we can no longer ignore. In place of co-operation we have stimulated rivalry and dislike; in place of confidence we have bred distrust in our Canadian neighbors. Now, when at last we realize the great value of Canadian trade, we find that the chief object of our efforts must be to save it from destruction. In the short space of six years Canadian commerce has doubled, a record unequalled by that of any other country on the face of the earth, and with this enormous increase a national spirit has developed which is impatient of any dependence upon foreign countries." What an inglorious substitute for a scheme of fraternal reciprocity which would have operated for the welfare of both countries and have caused every question at issue to have been settled in the most amicable spirit and upon the most advantageous terms. Neither the benefits of reciprocity nor the damages of retaliation are to be measured altogether in dollars and cents, in figures showing the balance of trade.

Pointing out that in 1874 Canada negotiated a treaty with the United States which not only placed natural products on the free list but also agricultural implements and some forty other manufactured articles, Mr. Foss says: "To-day all industrial Canada is pressing the government to enact duties high enough to shut out our most important lines. In 1866, by the abrogation of the treaty, we compelled the Canadian farmer to stop growing barley, and he turned his attention to dairy products, with such success that his prices rule in the foreign market against us to-day, and he no longer looks here for a market for any of his wares. More than one-third of his product for foreign export which crosses United States territory comes through Maine and goes out at Portland, thus giving every merchant and farmer along the line the benefit of cheaper freight rates; yet such has been our attitude that his government is urging the abandonment of this route and the substitution of Halifax. Montreal, St. John and Portland have common cause for action in this attempted diversion of traffic, and their boards of trade would do well to get together."

While we are agitating for a belated reciprocity, the Dominion talks of forming an unnatural trade alliance with Great

Britain. While we "stand pat," England's premier moves for a restrictive tariff on our manufactures. Neither England nor Canada can fairly be criticised for these tendencies; the question for us to answer is whether our statesmen shall suffer such hostile and retaliatory steps to become necessary. Granted, if you please, that our exclusive policy has been a profitable one in the past, will we not lose more than we will gain in the future if we refuse to adapt it to changed conditions?

Canada, our third largest customer and our largest in the world per capita, is frankly for reciprocity or retaliation. We have taken the first steps toward negotiation and it will be decided within a very short time whether or not the Joint High Commission will resume its sessions. If it does not, our ultra-conservatism, not to say indifference in dealing with the Canadian question will bear unpleasant fruit. If it does, let us hope that every commercial body in the land will lend its aid to a proper solution of one of the most important economic questions now before the American people.

#### MR. CHARLTON AND RECIPROCITY.

Mr. John Charlton, M.P., the well known Canadian statesman, and a member of the Joint High Commission, one of the duties of which is, if possible, to bring about closer trade relations between Canada and the United States, delivered an address at a banquet of the Illinois Manufacturers' Association in Chicago on November 9. In effect, he said that the present state of trade relations between the two countries was absurd. Canadian tariff conditions could only be retained by important tariff concessions on the part of the United States.

Mr. Charlton began by showing that the abrogation of the Reciprocity Treaty in 1866, as a means of promoting political union sentiment in Canada, had been a signal failure. Canada developed the British market for her surplus products after being shut out by hostile American tariffs, and yet Canada has gone on buying more from the United States. Said Mr. Charlton: "It will be a serious mistake to suppose that this state of matters will be allowed to continue by the Canadian people. Either the tariff wall of the United States will be very materially lowered from the present scale of 50 per cent. upon dutiable imports, or the Canadian wall will be made much higher. The fact that the aggregate balance of trade against Canada and in favor of the United States since 1873 has been \$500,000,000 is one that proves trade conditions to have been unfairly favorable to the United States."

Of Canadian imports from the United States last year, \$69,485,000 were upon the free list, and embraced in this line were the following:

Manufactures.....	\$23,000,000
Forest products.....	4,986,000
Indian corn.....	3,250,000
Flax seed.....	1,303,000
Farm products.....	2,267,000
Tobacco leaf.....	2,241,000
Hides and skins.....	2,612,000
Wool.....	307,000
Sundry agricultural products.....	2,050,000

\$43,016,000

In return for this enormous free list, which does not embrace free raw cotton, \$5,936,000, and free anthracite coal, \$5,000,000, the United States gave to Canada free saw logs, pulp wood, nickel matte and hop poles.

Under her moderate tariff Canada has become the best customer for manufactures that the United States possesses, and her trade with the United States largely exceeds that of

all Latin America with 56,000,000 inhabitants. The imports of manufactures into Canada from the United States were:

1898, manufactures from United States. . .	\$41,510,000
1902, manufactures from United States . . . . .	69,536,000
Excess over Great Britain in 1902.....	27,000,000

This vast market will expand indefinitely. Canada has room for 100,000,000 inhabitants. In the Canadian North-West there is an area of virgin wheat lands, the best in the world, as large as eight states the size of Illinois. It is a question of interest to the American manufacturer whether he shall continue to be permitted to enter this market of great present, and infinitely greater prospective value, upon substantially the same terms as at present, or whether he shall be excluded from it by tariff legislation as drastic as that of the United States has been for the last generation. The substantial continuance of present Canadian tariff conditions can only be secured by important tariff concessions on the part of the United States, and the question of adopting reciprocal free trade in natural products is one that will claim the attention of Americans, as upon this basis satisfactory conditions for the present may be obtained and a policy inaugurated that will tend to the continual broadening of trade relations, and the rapid and satisfactory increase of the volume of commerce between the two countries.

For more than a quarter of a century Canada was strongly favorable to reciprocity with the United States, and during that period the United States refused to entertain the proposition. By a singular turn in the tide of public sentiment, American opinion is coming around to a favorable view of the reciprocity question, while it seems as though an effort of magnitude would be required to bring Canada to entertain the idea with the favor of former days.

It is pertinent to the discussion of the question from the American standpoint to consider the probable effect upon prices of the free admission of Canadian natural products into the markets of the United States. Formerly the American farmer and lumberman opposed the policy, believing that the effect would be to depress prices in their home market. That this is a mere bugbear a careful and intelligent consideration of the matter will easily prove. Canadian expectations could not be realized if the effect of free access to the American market was to be the depression of prices in the United States to the normal Canadian level under present conditions. The Canadian desires free access to the American market for the purpose of getting the duty added to his present prices. If this is not to be the result there is nothing in reciprocity for him. Are his expectations well founded? When a careful comparison of the relative volume of American production and Canadian export for consumption in the United States is made, it will be found that the volume of exported quantities is so small compared with the volume of domestic production in the United States that it would be absurd to expect that imports from Canada for consumption in the United States could do more than produce an infinitesimal influence upon prices.

It must not be supposed that the trade in natural and especially in farm products would be exclusively from Canada to the United States. At the present time, and for years past, the interchange of farm products has been greatly in favor of the United States. In 1903 the export of farm products from Canada to the United States was \$9,200,000. The imports of farm products from the United States, exclusive of raw cotton, was \$21,601,000, of which \$6,909,000 was dutiable, and \$14,692,000 free. The dutiable articles paid the same rate of duties as similar articles paid in the United States, the American duties having been copied, and the free list embraced a



class of articles all of which were dutiable under the American tariff. This condition of the trade between the two countries in farm products renders it probable that under reciprocal free exchange the Canadian importation of farm products for consumption from the United States would nearly or quite equal the Canadian export of farm products to the United States for consumption. At present British Columbia and the Yukon draw largely upon the Pacific Slope States for their food supplies, and the Maritime Provinces draw to a considerable extent upon the United States. Under free trade the sale of American farm products to the Canadian Pacific Slope, the Maritime Provinces, and the lumbering and mining regions of Ontario would be largely increased, and the general trade balance against Canada would, although materially reduced, still be a large one.

Free trade in natural products is beyond question fully earned by Canadian tariff conditions. The sooner it is arranged the better for the interests of both countries. The present state of trade relations is absurd. If the Canadian buys heavily he asks the privilege of making proportionate sales in return. Preferential trade propositions claim his attention and militate, for the time being at least, against the desire to share the advantages of the great American market. The Alaskan boundary dispute presents itself as a disturbing element in its influence upon public opinion, and finds the Canadian ready to display temper over what he believes to have been a sacrifice of his rights, and he is the more disposed to manifest this feeling because the American policy for more than thirty years has excited his resentment, and daily strengthened his feeling of indifference about reciprocity or friendly relations. The time is now ripe for the display of a liberal spirit on the part of the United States. If that great country has the wisdom to display this spirit towards its northern neighbor, the result will be vastly more satisfactory than the continuance of present conditions.

#### DEMAND AND SUPPLY.

A United States trade journal contemporary asking the question "Is the end of prosperity at hand," says:

An enormous reduction in the quoted value of securities has occurred during the past eight months. The decline has been steady all along, but during the past few weeks the downward course has been precipitate. In some respects it has been a wholesome and natural way of correcting the evils of inflation and of bringing prices down to actual values, but unfortunately, while it is in no sense a panic, still the effect produced is similar to that of a panic in that money is not likely to be forthcoming to project new ventures or to prop up those that need additional capital to secure them. It is already quite clear that the recovery of confidence will be slow. Has the country got to the top of its wave of prosperity? Has the producing capacity of the country finally equalled its consuming capacity? If it has, no new mills and factories will be needed, and those which have recently been established will have difficulty in retaining a hold. A new industry cannot easily be established upon a falling market. The past three years have marked an increase in volume of trade and in prices obtained for commodities. Probably prices have been forced as high as they can safely go. Indeed, they now rest upon a higher level than can possibly be maintained if the theory is correct that the end of the demand has come. General business during the past few years has expanded wonderfully, and machinery, tools, locomotives and cars have been turned out lavishly to meet it. Factories have multiplied to meet the demand for manufactured products. If the crest is reached it is clear that the present producing capacity of the country is sufficient. If there is to be no more growth there is no need of new factories. True, they may be established, but there is no need of them. They can thrive only by lessening the business of some other plant,

but they can add nothing to the total of the country's wealth. From the continued sagging of the stock market it would appear as though the period of inflation were over, or that it is the sum of the opinion of investors that it is over. If the business of the country is to settle down to a normal basis it is well to look forward to a suspension of dividends upon common stocks, especially those which were never intended to represent anything other than water. A return to the old-fashioned system of financing a company would be welcome where the authorized capital at least would be on speaking terms with the actual value of the plant; for it has not been an uncommon thing during the past two years for a company with an authorized capital of \$10,000,000 to permit all of its tangible assets to be sold to satisfy a claim for \$300. A sensible return to normal conditions is not to be feared. Substantial companies will doubtless continue to earn a reasonable dividend upon the money actually invested. The unfortunate thing about this drastic shrinkage in prices is that the loss does not fall where it properly belongs. The combination maker manufactures the securities and the public digests them.

#### PORT SIMPSON, B.C.

Prospects of Port Simpson becoming the western terminus of the Grand Trunk Pacific has caused quite a flutter of excitement in Moosomin, the little Indian village at that place. To the Indians it foreshadows one more of the many inroads of the white man. They have their neat little houses and gardens, but they know too well that once the Transcontinental line makes a bid for the world's traffic, the Indian, progressive though he may be, must still make way for the building of enormous warehouses where now he tills the soil of his little back garden. As soon as the report reached Port Simpson, many of the Indians set to work and built substantial fences around their lots, thinking that if they had a fence around their land surely the Government would not take away their property.

The Port Simpson Indians are a thrifty lot, and their part of the village is a credit to their progressiveness, since they all have comfortable houses, and the chief's house is a veritable mansion. In order that he might have a house in keeping with his dignified position, he taxed each member of his tribe the sum of \$3 or more, according as they were able to pay. With this the chief obtained plans of an up-to-date house, and with the help of the carpenters of his tribe he built such a house as would be a credit to any western city.

An enterprising company has already laid out a town site on the outskirts of the village, and if there is no change in the terminus of the railway their foresight will be well rewarded. The village at present is situated on a gentle slope which extends down to the water's edge. The village site itself is fairly good, but the land to the back of it is soft and wet for a considerable distance and must first be drained before it can even be used for gardening purposes. The new site that is being exploited is on higher ground and is a better building situation.

Port Simpson harbor is fairly well sheltered, and has the advantage of deep water close up to the present wharf. The largest ocean vessels will have no difficulty in landing. At the present time there are two boats on the line between Port Simpson and Victoria. This gives the village a weekly mail service. The boats deliver the mail on arrival and proceed to Naas, a small port with a cannery, about five hours sail up the coast. Once a month they make a trip to Sikdegate, a village on Queen Charlotte Islands, about opposite Port Simpson. Here there is a factory for the manufacture of dog-fish oil, which is sold in the crude form for lubricating purposes, and in the refined form as a substitute for cod liver oil. Since

it is claimed that ocean liners will be able to make the trip from China or Japan to Port Simpson in two days less time than to Vancouver, it will only be a matter of a few years before a considerable amount of the world's traffic will enter Canada at this point.

Although Port Simpson is comparatively an unknown place, it is not by any means difficult to reach. The fare by boat from Victoria is \$15, and a comfortable trip can be made in two or three days. Being on the coast the climate is mild, and all kinds of vegetables and small fruits grow in abundance, and no doubt the near future will see a flourishing city where now stands this peaceful and progressive Indian village.

Mr. G. A. Glines, a merchant of Winnipeg, Man., during the past summer made a trip to Port Simpson via Vancouver, the distance between the two latter places being about five hundred miles.

Of the different points discussed as the probable terminus of the new trans-continental line, Mr. Glines is inclined to the belief that Port Simpson will be selected because of its ease of approach by land and water, because of its relation to the Orient, and because of its magnificent harbor.

Some other point might be reached with less railway building, but they are at the head of long and tortuous arms of the sea, and difficult to reach by deep draught ships. On the sea side Port Simpson is a direct line with the course which the steamers from the Orient steer on their way to America, and from which they break off near the Canadian coast to run down southward to the ports of southern British Columbia and northern Washington. In the same way the ships sailing for Hong Kong and Japan steer up the coast until about opposite Port Simpson, and then turn westward.

The harbor has a wide channel between its protecting coast islands to the deep sea, and the mouth of the harbor is protected by Birnie Island a mile long and five-eighths of a mile wide. As this island rises to a height of three hundred feet, it would prove an ideal spot for placing a battery to defend the ships and the town. The harbor is three miles long and two miles wide, which is sufficient to float all the ships of the British navy. There is a depth of forty-two feet of water near the town shore, and from that it deepens to 180 fathoms near the centre.

The waterfront of the town is about two miles long, and from this the land rises at a grade of about one hundred feet to the mile to the hills at some distance back from the shore. The site is cleared, and is covered with a black loamy soil. It thus makes an easily drained, and, in fact, an ideal spot for a city. It will be superior to Vancouver, because the city will be in one solid block, and not cut up by arms of the sea. Various knolls and spurs of the hills will provide vantage spots for residences, while at one end of the harbor is a sand beach which is even now a spot of local reputation for picnics, and which would make a good place for summer hotels.

The town site so far as laid out is planned with 66-foot streets and 20-foot lanes, laid out rectangularly to make blocks of 250x700 feet. The streets are laid out parallel with and at right angles to the line of the waterfront. The Hudson Bay Company reserve has not yet been surveyed, but it is understood they will run on the lines of the part of the town-site already laid out. A creek runs into the end of the harbor with a fall of about forty feet, and takes its rise in a lake a little distance back in the hills. Thus by gravity the new town might be provided with pure water under high pressure, and the surplus could be used for power. One end of the town is occupied by an Indian Reserve, upon which there is a village of 800 or 900 people. The Indians are of a superior

class, and the houses would compare favorably with those of a town of similar size in Manitoba. There is a Methodist and an Anglican church, and several institutions such as a hospital, girls' school, boys' school, etc. The Indians are employed in the canneries and sawmills along the coast, and in the halibut fishery, and are an intelligent and thrifty lot of people.

The other part of the town site occupied is the corner of the Hudson Bay Company's reserve, where there is a general store and a number of houses. The fertility of the soil is shown by the gardens of the Indians and the other residents, in which small fruit grow in a profusion not known in the East.

#### EDITORIAL NOTES.

Canadians resent Lord Alverstone's lofty refusal to recognize the formal and specific charge made by his two British colleagues, the Canadian commissioners. Sir Louis Jette and Mr. A. B. Aylesworth are "impartial jurists of repute," in a sense in which such words do not apply to the United States politicians who served with them on the Alaska Commission. They are also gentlemen of distinct ability and of unimpeachable integrity of character. Their charge, deliberately made, is that Lord Alverstone broke faith, and, in disregard of his judgment that the Canadian contention as to the islands in the Portland Canal "was absolutely unanswerable," signed an award not based on judicial grounds. Canadians cannot do otherwise, at this moment, than accept the solemn statement of the Canadian commissioners, especially as the British commissioner refuses to dispute or deny it. We have not the slightest hope of the British Foreign Office, or self-satisfied British officialdom, being made to understand Canada's attitude; but Canadian Imperialists in Canada and in Britain ought to understand. It is not plain that what Canadians resent is not the loss of territory by the fixing of the coast line, or the loss of the Lynn Canal, or even "the destroying of the strategic value to Canada of Wales and Pearse Islands" by the surrender of two other islands of still greater strategic value? It is not a question of territory at all, but of faith. Canada agreed to an adjudication by "impartial jurists"; our Government's protest against the appointment of compromised politicians as United States commissioners was disregarded by the British Government; and when all the facts respecting the conduct of the tribunal are made public it may be found that throughout the proceedings, and to the very last, the attitude of Britain, as represented by Lord Alverstone, was one of indifference, if not of hostility, to Canada's interests. Canadians do well to resent, not the decision merely, but the motives and atmosphere of the tribunal. And they wholly misunderstand the quality and basis of this resentment who suppose it to be only a superficial and temporary irritation, caused by disappointment over the loss of territory. As we judge Canadian public opinion, the resentment is deep and settled, and cannot be eradicated by any dignified refusal on the part of Lord Alverstone to refute the allegation of the Canadian commissioners.—Toronto Globe.

The new law, assented to August 13, 1903, empowers the Commissioner of Patents to place certain patents under the Compulsory License System in lieu of the actual manufacture of the patented article, provided application is made before February 13, 1904, in cases of patents granted before August 13, last. The patents which are likely to be placed under the Compulsory License System are for: an art or process; improvements on a patented invention, when both patents are not held by the same persons; appliances or

apparatus used in connection with railways, telegraph, telephone, and lighting systems and other works under the control of the public or large corporations, which are manufactured or constructed only to order and are not according to custom carried in stock. The cost of preparing and filing a Petition for the Commissioner's Order is ten dollars (\$10.00) in all ordinary cases.

The Postoffice Department has lately been advised of the adhesion of the colonial administration of British North Borneo to the arrangement initiated by Sir William Mulock the Postmaster General for an Imperial rate on newspapers. Under this arrangement Canadian newspapers are allowed to pass from offices of publication to the United Kingdom and the several colonies mentioned hereunder at the same rates and under the same conditions as apply to Canadian newspapers addressed to places in Canada. The complete group that have already signified adhesion to the arrangement are as follows—United Kingdom, Bahamas, Barbadoes, Bermuda, British Honduras, British North Borneo, Ceylon, Cyprus, Falkland Islands, Gambia, Hong Kong, Leeward Islands, (including Antigua, etc.), New Zealand, Sarawak, Sierra Leone, Transvaal, Turk's Islands and Zanzibar.

"What we want and don't make we buy" is a phrase that might be used in apposition to that other one "Made in Canada," now much in use. The inability of Canada to produce many of the articles absolutely necessary to our comfort is shown in the following list of importations from the United States in 1902:

Iron and steel and manufactures of	\$25,167,427
Cotton and manufactures of	7,651,447
Electric apparatus	1,850,505
Drugs, dyes, chemicals	3,041,991
Wool and manufactures of	606,792
Brooms and brushes	96,884
Buttons	86,660
Carpets, mats, etc.	26,665
Bicycles and tricycles	81,246
Carriages	1,275,645
Curtains	69,238
Dressing for leathers	54,000
Earthenware and chinaware	241,135
Fancy goods	389,990
Hemp and manufactures of	828,181
Glass and manufactures of	523,820
Gloves and mitts	56,117
Glue	92,389
Gutta percha and manufactures of	2,153,423
Gunpowder, explosives, etc.	307,901
Hats, caps and bonnets	1,042,141
Ink	118,636
Oilcloth	81,514
Optical instruments	230,077
Paints and colors	560,461
Paper and manufactures of	1,473,666
Silk and manufactures of	593,795
Soap	228,350
Sugars	573,425
Trunks, pocket books, etc.	130,635
Varnishes	102,547
Wood and manufactures of	5,656,270

These items account for about \$55,000,000 of the imports from the United States, of which the total was \$129,000,000.

Right Hon. R. J. Seddon, premier of New Zealand, has introduced in the Colonial Legislature his preferential tariff bill. It provides that after March, 1904, there shall be a surcharge of from 20 to 50 per cent. on certain imports when they are not British. The bill provides for reciprocal agreements with foreign countries. It is to be presumed that Canada will benefit considerably by the above proposal. In 1901-2 the total imports into New Zealand were valued at £11,817,915,

of which £5,599,272 were British. Of the remainder a very considerable portion was purchased from the United States. This trade will, in future, have to pay the surtaxes and Canadians should be able to capture a very large portion of it.

The interstate conference held at Chicago on November 14 to reorganize the movement for reciprocity with Canada was attended by delegates from Iowa, New York, Michigan, Indiana, Illinois, Wisconsin and Minnesota. Hon. John Miller, of Duluth, former governor of North Dakota, presided. It was decided to empower the chairman, Mr. Miller, to select a committee of five to have full control of the campaign, and that H. C. Staver, chairman of the Board of Directors of the National Reciprocity League be conferred with in the selection of the committee. The title of the committee is "Canadian Reciprocity Committee." The committee will at once endeavor to raise a large campaign fund, and will extend the campaign into Canada. The national committee on reciprocity with Canada transferred its organization to the committee of five. More branch leagues are to be formed, one in each of the interested states, and all of the branch leagues are to be under the direction of the Canadian Reciprocity Committee.

The values of the imports into Canada, for consumption including coin and bullion, from Great Britain and from the United States, since the passage of the preferential tariff law, were for the fiscal years ending with June 30, as follows:

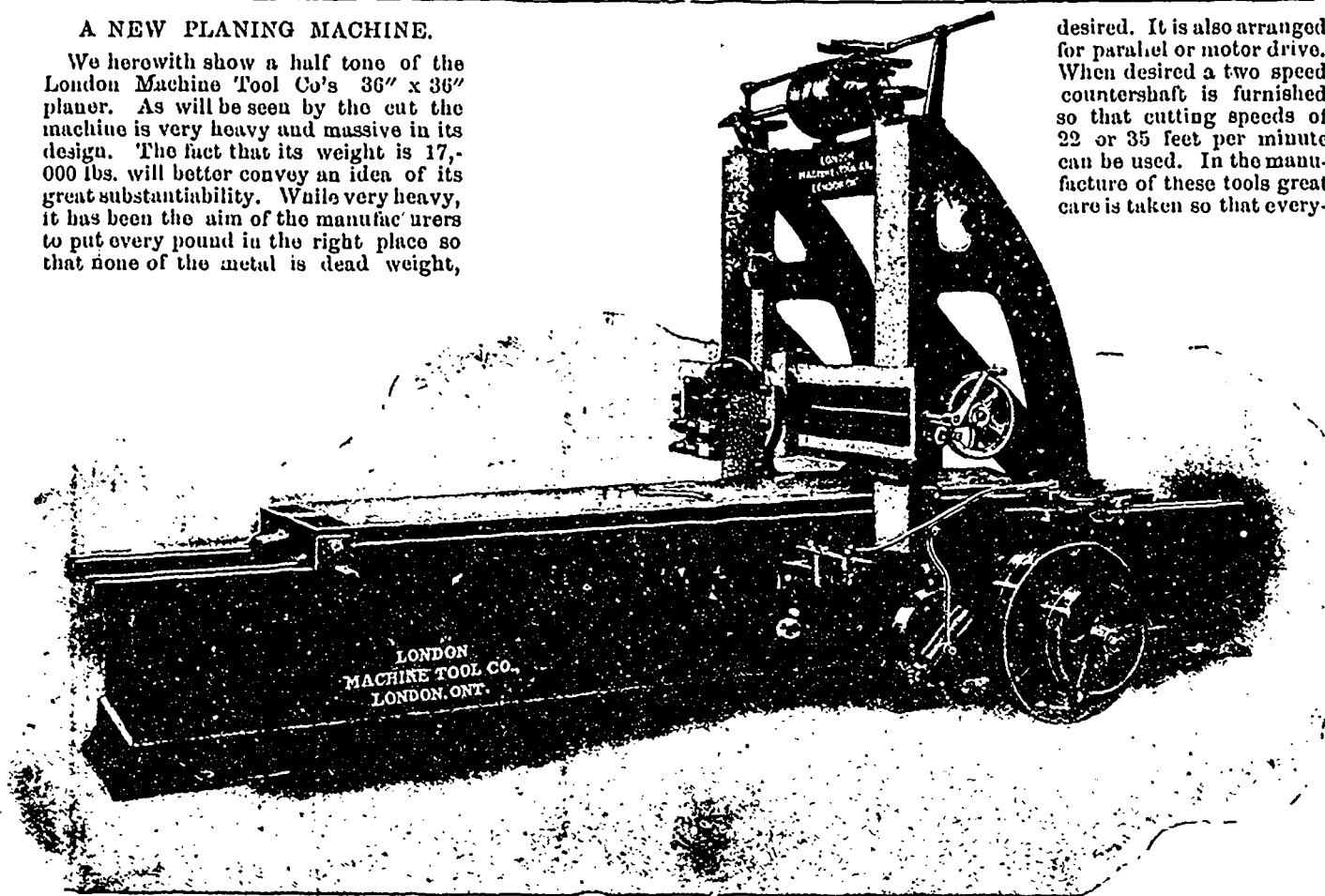
	Great Britain.	United States.
1897	\$29,412,188	\$61,649,041
1898	32,500,917	78,705,590
1899	37,060,123	93,007,166
1900	44,789,730	109,844,378
1901	44,018,164	110,485,008
1902	49,206,062	120,814,759
1903	65,007,080	137,605,195

The E. B. Eddy Co., whose immense saw and lumber mills and allied industries are at Hull, Que., opposite Ottawa, are among the oldest and most important manufacturing concerns in Canada. Mr. E. B. Eddy, the head of the concern, has recently returned home from an extensive tour of the West, including Manitoba, the North-West Territories and British Columbia, and has expressed his views regarding the economic conditions in those sections of the Dominion. Some of his observations are as follows.—"Our manufacturers in the East have not been making the exertions they should have in order to meet the wants of the West. The Eastern manufacturers have got to take a greater interest in the people of the West, and sell their products at a lower margin of profit. No doubt they are handicapped by heavy freights, but they have got to do it. Unless they take more pains, and strive to meet the needs of the Western market, a large percentage of that trade will go to the United States. Large manufacturing industries are springing up at Seattle, Tacoma, Portland and other places immediately south of the international boundary line. The freight from those places to Vancouver or Victoria is a mere bagatelle. With the duty added, it scarcely equals, even if it reaches, the freight rate from the far east of Canada. You can easily see, therefore, how necessary it is for our manufacturers to bestir themselves. The growth and development of the West is simply marvellous. New towns have sprung up along new branches of railway, others have greatly developed. Business everywhere is good. The growth of Winnipeg has been simply wonderful in every way. In respect to expansion of business, the improvement of streets and the erection of new buildings, I do not think there is a city of its size and population in America that is doing the same amount of business, improving its streets to the same extent, and adding so rapidly to its dwellings as is the city of Winnipeg. There is a great future within a few years for Winnipeg. If the growth of the past three or four years continues it will be the second city of Canada. Almost equally great is the future before the whole North-West."

## A NEW PLANING MACHINE.

We herewith show a half tone of the London Machine Tool Co's 36" x 36" planer. As will be seen by the cut the machine is very heavy and massive in its design. The fact that its weight is 17,000 lbs. will better convey an idea of its great substantiability. While very heavy, it has been the aim of the manufacturers to put every pound in the right place so that none of the metal is dead weight,

desired. It is also arranged for parallel or motor drive. When desired a two speed countershaft is furnished so that cutting speeds of 22 or 35 feet per minute can be used. In the manufacture of these tools great care is taken so that every-



LONDON MACHINE COMPANY'S 36" x 36" PLANER.

but has a particular use in resisting the strains put upon the machine in cutting. The bed is deep; is tied with many heavy box braces; has automatic oiling device for table and is made extra long to prevent overhang of table. The table is deep to prevent springing and has device for keeping dirt and chips out of V's. The V's are extra wide, being 21" from centre to centre and have wide bearing surfaces. The table is accurately scraped to bed.

The uprights have long bearings on bed which causes the planer to be very steady under the heaviest cuts. The cross rail is raised and lowered by power. The heads have wide bearing surfaces on cross rail and power feeds in every direction. The feeds are driven by friction gear, which for many years has asserted its superiority over all other types for this size planer. The planer is made with one, two, three, or four gears, as

thing is as near absolute as possible. All surfaces are carefully scraped. All gear and rack is cut from solid. All gears and pinions under stress are made from steel. Feed rack cut from solid steel bar. Safety device is placed so that table can not be accidentally started while operator is placing tools in position. Every feature necessary to make a thoroughly substantial and reliable tool has been incorporated in these planers.

## GLASGOW MUNICIPAL TELEPHONE SERVICE.

Two years ago Turnbridge Wells and Glasgow were pointed to as bright examples in Municipal Ownership of telephone service. A few months ago the former abandoned the attempt at giving a satisfactory telephone service and sold their plant to the National Company. Now reports are coming to hand of unsatisfactory results in Glasgow. The *Bailie*, a journal published in Glasgow, in its issue of September 9, says:

The position of the Glasgow Corporation Telephone Department as disclosed by the published accounts for the past financial year, is proving a source of uneasiness to those ratepayers with a sound knowledge of finance. Nor have their fears been alleviated by the auditors' remarks, who, in issuing their report make it perfectly plain that things are not as they ought to be. They point out that no depreciation has yet been provided for, nor has any sum standing at the debit of pre-

liminary and general expenses in capital account been written off out of revenue. In the matter of the sinking fund adequate provision has not been made, although, according to the auditors, the requirements of the Act of Parliament have been apparently complied with. Up till now certain management expenses, amounting in the aggregate to no small sum, have not formed a charge against revenue. Despite all this the committee who run the telephone department have the temerity to present the ratepayers with a financial statement showing a balance of several thousand pounds on the right side, and claiming that if the undertaking had been a joint-stock enterprise the result would have been that a dividend of 5% on the capital involved would have been paid. In this connection let it be pointed out that had the directors of a concern formed under the Companies Act put forward a balance sheet, such as the one under review, and declared a dividend, they would have

laid themselves open to much the same charges as are confronting at present Mr. Whitaker Wright, of London and Globe Finance Company fame, in which undertaking the trusting shareholders lost all.

It is greatly to be feared that instead of getting out of the tangle the telephone department will land itself deeper into the mire, although this is a contingency apparently viewed with equanimity by those in control who, of course, have nothing to lose. It has been said that figures can be made to prove anything, and if there is one thing the balance sheet of the Corporation Telephone shows, it is that the ratepayers of Glasgow have been saddled with a white elephant as matters stand at present. Were the enterprise a success, apart from its financial aspect, there might be some hope, but unfortunately the service is falling far short of what it ought to be, having regard to its formation at a period when the telephone business has been pretty well reduced to a fine art.

## CAPTAINS OF INDUSTRY.

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

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

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

The Kemp Manure Spreader Co., Stratford, Ont., have increased their capital from \$60,000 to \$150,000.

The Gas Supplies & Construction Co., Toronto, have been incorporated with a capital of \$50,000, to manufacture gas and water supply fixtures, fittings, machines, etc. The provisional directors include Robt. McKay, Andrew Dods and Edward Kilner, Toronto.

The Crowland Natural Gas Co., Port Colborne, Ont., have been incorporated with a capital of \$80,000, to produce oil, natural gas, salt, etc. The provisional directors include J. H. Smith, T. F. White, Port Colborne, and J. H. Pew, Stamford, Ont.

At the meeting of the Stratford City Council the Board of Works were authorized to engage an expert civil engineer to lay out a system of storm sewers, prepare specifications and give an estimate of the approximate cost of the work.

The Port Huron Iron Works intend starting a plant in London, Ont., that will employ forty hands. They are negotiating for a factory site there. The company manufacture iron for bridge work, and already have two factories in Ontario, one at Hamilton and the other at Walkerton.

The Chandler & Jones Lumber Co., Ogdensburg, N.Y., are building a large lumber mill at a point on the K. & P. line near Levant, just north of Kingston, Ont.

The Dominion Dump Car Co., Ottawa, Ont., have been incorporated with a capital of \$2,500,000, to construct cars for railways, tramways, etc. The provisional directors include H. S. Hart, S. Otis, T. F. Sheridan, Chicago, Ill., and Jas. Forman, Ottawa.

The Michigan Land & Lumber Co., a United States incorporation, have been granted a license to do a lumber business in Ontario.

The Cameron, Dunn Mfg. Co's handle factory at Strathroy, Ont., was destroyed by fire November 7. Loss about \$15,000.

The Breadner Mfg. Co., Limited, Ottawa, Ont., have been incorporated with a capital of \$25,000, to acquire the business of The Breadner Mfg. Co., and to manufacture jewellery, etc. The provi-

sional directors include S. Breadner, S. B. Kennedy and H. C. Smith, Ottawa.

The Stark T. L. & P. System, Limited, Toronto, have been incorporated with a capital of \$1,000,000, to generate and supply electricity, and to manufacture electrical appliances, etc. The provisional directors include A. M. Stark, G. Grant and J. C. Gardner, Toronto.

Mr. A. W. Campbell, Assistant Commissioner of Crown Lands, has returned from making an inspection of the London & Port Stanley, Ont., toll road. The inspection was made under the recent act of the Legislature providing for Government inspection of such roads, and was asked for by a petition numerously signed by people in the locality, who contended that the bridges were in a dangerous condition and the road out of repair. Mr. Campbell found three of the large bridges unsafe, and renewals will be ordered. These three are the Dodds, a 60-foot span bridge, the Foote bridge, 186 feet long, and the Asbery bridge, 245 feet long.

The Canada Furniture Manufacturers, Limited, will erect a new factory for the manufacture of furniture at Woodstock, Ont. One hundred hands will be employed, and steps are being taken to form a building association to provide the necessary dwelling houses for them.

The Hamilton Brass Mfg. Co's establishment at Hamilton, Ont., was damaged by fire November 12. Loss about \$37,000.

If it can be shown that 10,000 h.p. can be developed at Mississippi Falls, 55 miles north of Kingston, Ont., a leading Canadian financier promises to put up the \$200,000 necessary to harness the falls and put the power within Kingston's limits. It is estimated that power can be supplied from Mississippi to Kingston manufacturers at a saving of about 35 per cent. compared with the present cost.

The Town of North Bay, Ont., will have a new high school building erected at a cost of \$15,000.

The ratepayers of North Bay, Ont., have raised the sum of \$20,000 for a new town hall and fire hall.

The Toronto Street Railway Co. have closed a contract, through the Canadian General Electric Co., representative in Canada of the Electric Storage Battery Co., Philadelphia, Pa., manufacturers of

"chloride accumulators," for the installation of a large chloride accumulator battery in their railway power house. The battery consists of 276 cells, having a capacity of three thousand amperes for regulating.

Mr. Alfred J. Stevens, Toronto, has several high grade tandem compound engines for sale. The owners of these engines, in enlarging their power plants, find it necessary to increase the sizes of their units and adopt direct connected types of engines. His advertisement appears on page 29.

Mr. Charles L. Bailey, Toronto, the Canadian manager for the English steel firm of William Jessop & Sons, Sheffield, has left for England to confer with the members of the company in regard to the establishment of a plant in Canada. The concern has decided to build a branch in this country, and would prefer Toronto as a location, if satisfactory arrangements can be made with the civic authorities, as the concern would employ about 2,000 hands. It is believed that every encouragement will be offered to secure the industry for Toronto.

Preparations are being made for the commencement of the surveys of the Winnipeg-Moncton section of the National Transcontinental Railway.

The Bertram Engine Works Co., Toronto, have received an order for a large hoisting engine from the Elias Roger's Co., and a similar order from the Conger Coal Co., both of Toronto.

Messrs. Galloways, Limited, of Manchester, England, recently made a test of 7 inch M.A.Y.  $\frac{3}{4}$  in. thick belting manufactured by the Rosendale Belting Co., which stood a strain of 24,000 pounds. The Rosendale Belting Co's Canadian offices and salesrooms are at 59 and 63 Front street, East, Toronto.

The Rudd Harness Co., Toronto, are building a five storey brick factory on King street West, adjoining the plant of the W. J. Bradley Machinery Co., which will be supplied with heat and power by the latter company.

The United Typewriter Co., have fitted up fine new offices and salesrooms on Adelaide street, East, Toronto. The increased quarters have been secured in order to accommodate the greatly increased business of the company.

Messrs. Clark & Demill, Galt, Ont., inform us that they are building still another addition to their works. This is a machine shop 80x60 feet, and is the fourth enlargement they have made to their works since they started in business a little more than two years ago. They are building a new and up-to-date line of wood-working machinery, all from new designs and patterns. They are now turning out three fast feed flooring machines weighing about 6,000 pounds each, of large capacity. Every department of this business is under the immediate care and supervision of the gentlemen composing this concern.

The Ogilvie Flour Mills have begun work on a 4,000-barrel flour mill and an

elevator of 750,000 to 800,000 bushels capacity at Fort William, Ont. The ratepayers of Fort William recently passed a by-law granting exemption of the land and buildings from taxation for a period of thirty years. The mill building proper will be seven stories in height and equipped with modern machinery. It is expected that it will be completed and in operation by October 1, 1904. The new power plant will be complete in every detail and be capable of developing 2,000 h.p. With the addition of this new mill, the capacity of the Ogilvie Flour Mills Co's mills will be over 11,000 barrels a day.

An Ottawa dispatch announces that during the coming winter the Canada Atlantic Railway Co. will erect a 12,000,000 bushel grain elevator at Depot Harbor, Ont., their lake terminal. This addition to their harbor facilities is made necessary by the large quantities of grain brought from Chicago and Lake Superior by their steamer line for shipment abroad via the St. Lawrence river route.

The Owen Sound Distilling & Cattle Feeding Co., Owen Sound, Ont., have been incorporated with a capital of \$500,000, to manufacture alcoholic liquors and to carry on a cooperage business. The provisional directors include Wm. H. Prittie, Toronto, S. Lloyd, and W. B. Stephens, Owen Sound.

The Odorless Oil Stove & Burner Co., Toronto, have been incorporated with a capital of \$50,000, to manufacture lamp burners, lanterns, coal-oil stoves, etc. The provisional directors include J. H. Stone, R. H. Stewart and D. A. Ghent, Toronto.

The Snyder Bros. Upholstering Co., Waterloo, Ont., have been incorporated with a capital of \$35,000, to manufacture upholstered goods, supplies, mattresses, etc. The provisional directors include H. M. Snyder, A. H. Snyder and H. W. Roos, Waterloo.

The Croft Lumber Co., Huntsville, Ont., have been incorporated with a capital of \$40,000, to carry on a saw-mill and lumbering business. The provisional directors include Geo. Pagot, E. A. Pagot, Huntsville, and James Rae, Croft, Ont.

The Ontario Alberta Ranch & Packing Co., Toronto, have been incorporated with a capital of \$500,000, to carry on a ranching and packing business and to generate electricity, etc. The provisional directors include Jas. H. Hallett, A. J. Williams and A. C. Cornell, Toronto.

The Walker Parker Co., Toronto, will increase their capital from \$50,000 to \$90,000.

The J. E. Wilkinson Co., Toronto, have been incorporated with a capital of \$40,000, to manufacture dentists' platers' and jewelers' supplies, etc. The provisional directors include J. E. Wilkinson, M. Love and A. E. Long, Toronto.

The Shakespeare Gold Mining Co., Shakespeare, Ont., have been incorporated with a capital of \$2,000,000, to carry on a general mining, milling and reduction business. The provisional directors

include W. E. Seelye, Wm. Wood and F. C. Bolin, Brainerd, Minn.

The Ben-Hur Mfg. Co., Hamilton, Ont., have been incorporated with a capital of \$25,000, to manufacture woodenware, hardware, etc. The provisional directors include Thomas Burrows, jr., E. A. Gard and Wm. Marshall, Hamilton.

The Drecanite Explosive Co. of Canada, Toronto, have been incorporated with a capital of \$200,000, to manufacture explosives, explosive shells, etc. The provisional directors include John T. Eastwood, Geo. Stevenson and A. W. Holmsted, Toronto.

The Reliance Knitting Co., Toronto, have been incorporated with a capital of \$40,000, to manufacture textile fabrics, knitted and woven goods, etc. The provisional directors include A. J. Moreland, F. R. Sweeney, Toronto and Wm. H. Brennan, Dunnville, Ont.

The Cullen Johnson Brass Mfg. Co., Toronto, have been incorporated with a capital of \$40,000, to manufacture plumbers' supplies, etc. The provisional directors include F. N. Cullen, H. E. Johnson and Wm. Meen, Toronto.

The St. Catharines Box & Lumber Co., St. Catharines, Ont., have been incorporated with a capital of \$75,000, to manufacture boxes, builders' supplies, etc. The provisional directors include M. J. Murphy, Wm. S. Duffin and H. H. Wilson, St. Catharines.

The Preston-Bell Furniture & Lumber Co., Fort Frances, Ont., have been incorporated with a capital of \$95,000, to manufacture furniture, and to operate lumber mills, etc. The provisional directors include W. A. Preston, Mine Centre, Ont., H. O. Bell and A. H. Carr, Wingham, Ont.

The United Shoe Machinery Co., of Canada, a United States incorporation, have been licensed to manufacture boot and shoe machinery in Ontario with a capital of \$40,000, and have appointed Geo. C. Gibbons, London, Ont., to be their attorney.

The Northern Navigation Co's steamer Atlantic was destroyed by fire near Red Rock on Georgian Bay, November 10. Loss about \$32,000.

The coke supply house of the Consumers' Gas Co., Toronto was destroyed by fire November 10. Loss about \$30,000.

The Sylvester Mfg. Co's works at Lindsay, Ont., were damaged by fire November 2. Loss about \$2,000.

The ratepayers of Brockville, Ont., voted favorably on a by-law granting a bonus of \$16,000 to Cossitt Bros. Mfg. Co.

A by-law authorizing the purchase of the electric light plant by the town of Wingham, Ont., from Mr. Walter Green for the sum of \$28,000 was carried a few days ago.

The ground wood pulp mill at Sault Ste. Marie, Ont., was started November 11, and is running full capacity, giving employment to 125 men. There is a

possibility of the vincer and saw mills being started shortly.

The acetylene gas machine in the basement of the Lozar House, Ridgetown, Ont., exploded November 11, wrecking the building.

Dr. Robert Bell, director of the Geological Survey, Ottawa, returned a few days ago from a trip to the Thunder Bay district, where he had been investigating the condition of the mining industry of the region. He reported that the temporary spell of stagnation is apparently at an end, and that the mines are beginning to show a revival. Dr. Bell also visited the Lake of the Woods region, and made a close inspection of the Sultana gold mine, which has lately resumed operations. He says that the mine is now down 560 feet, and that the vein which had been lost was rediscovered near the bottom of the mine. As soon as a sufficient supply of quartz has been raised the stamp mill will be started.

An order-in-council has been passed permitting the entry into Canada free of duty, of orange mineral, dry white lead and dry red lead, made from lead produced from Canadian ores. In the refining process the substances mentioned are extracted, and it is felt only proper that Canadian products of this kind should be allowed to come into the country again free, as there is no refinery in the Dominion.

The Ellis furniture factory at Ingersoll, Ont., was partially destroyed by fire November 4.

The Canadian Telephone & Telegraph Co. have made formal application to the city of Ottawa for permission to operate a telephone system. They offer to pay \$1,500 a year and furnish 40 free 'phones for civic use, or to pay \$2,000 a year and give 15 free 'phones. They agree to furnish residential 'phones for \$22 a year, and business 'phones for \$36 a year, payable quarterly in advance. The company representatives state that they are willing to go into competition with the Bell Co., commencing in Ottawa, and they purpose installing long distance lines at once, so as to reduce the cost of long distance messages.

A by-law to raise \$50,000 for the purchase of the gas works at Belleville, Ont., will be submitted to the electors at the municipal elections in January.

Messrs. Ryrie Bros., jewellers, Toronto, have purchased a building adjoining their present premises by which they will enlarge their present establishment.

A 50-ton smelter will be erected at the Tip Top mine, near Port Arthur, Ont.

Plans have been prepared for the new buildings of the Standard Paint & Varnish Co., Windsor, Ont.

Plans are being prepared for the erection of a general hospital at Smith's Falls, Ont., to cost about \$20,000.

A children's aid shelter 60x25 feet will be erected at London, Ont.

The Empire Carpet Co., have been granted a bonus of \$10,000, to establish a factory at Dundas, Ont.

A Toronto architect has prepared plans for a chair factory, to be built at Gravenhurst, Ont., by D. Grimston. The factory will consist of two buildings one 200x40 feet, the other 70x40 feet, both solid brick.

An explosion of a battery of four boilers in the woodenware factory of Wm. Cane & Sons, at Newmarket, Ont., occurred November 18. Loss about \$15,000. The company will commence reconstruction work at once.

The Government has decided to extend the time for cutting the timber on the limits that will be offered for sale on December 9 from ten years to fifteen years. The regulation at first was that no licenses should issue after the expiration of ten years from April 30 next for cutting timber from these limits, and that all timber remaining on the limits, after that should become the property of the Crown. Representations were made to the Government that this time would not be sufficient for removing the timber.

The Dominion Government have purchased a site at Ottawa for the erection of a building for the Victoria National Museum which shall provide suitable accommodation for the Department of Mines and the Geological Survey, and for the storage and display of works of art, and specimens illustrative of the natural resources of Canada. The intention is to proceed immediately with the construction of the edifice for which Parliament at its recent session voted \$150,000, and it is safe to say that the museum and its surroundings will be in every respect a credit to "the Washington of the north." There has been some talk of having the spacious grounds laid out in accordance with modern ideas of landscape gardening, and of having in connection with the building a theatre where scientific or literary societies could meet and popular science lectures be delivered from time to time.

The Ontario Department of Agriculture estimates that the Canadian export of cheese this year will amount to \$25,000,000 worth, against \$21,000,000 last year. The prices are higher this season than last, and farmers have made a good profit out of their milk.

The Ontario Government will shortly invite tenders for the government printing and binding. At present all the work is done by Warwick Bros. & Rutter, Toronto, but it is the intention of the Government to divide the contracts. A printing company backed by John R. Barber, M.L.A., and R. L. Patterson, is in process of formation and will be a strong competitor for the work.

The ratepayers of Renfrew, Ont., passed a by-law to loan \$18,000 to the Coming Manufacturing Co., manufacturers of woodwares and steel utensils. The company will employ fifty hands at the start.

A. E. Robins of Buffalo, N. Y., general manager of the Buffalo division of the Wabash Railway, was in St. Thomas, Ont., Aylmer, Ont., and Chatham, Ont., his business being looking over grounds

and securing information in regard to the location of the Wabash shops, which it is said will be erected at some point in Canada next spring.

The copper mines at Eustis and Capelton, eight miles south of Sherbrooke, Que., have been worked to advantage and give employment to about 300 men. A company was formed last year for the purpose of erecting a smelter at Sherbrooke, but it has been unable as yet to raise the necessary funds to install the plant. If this smelter could be built and put in operation it would put new life into the mining industry in that region and be the means of opening up many new copper properties as well as renewing work on old ones, which were abandoned because of lack of smelting facilities at reasonable prices. The asbestos mines at Thetford and Black Lake, have had a good year. Their shipments to the United States amounted to \$647,067, as compared with \$610,741 in 1902.

A large pulp mill has recently been built at Brompton Falls, Que., six miles from Sherbrooke, at a cost of nearly \$500,000 and is now in full operation and shipping its product to the United States. The capital to build and equip this plant came from the United States. This company will soon erect a paper mill at a cost of \$300,000 to be operated in conjunction with the pulp mill. American capital is rapidly invading this part of the Dominion, and the near future will see the erection and equipment of many large manufacturing plants, which will greatly increase the wealth and business of this section and promote trade with the United States. American companies are now building factories in Canada and manufacturing the same goods that they turn out in the United States, thereby saving the Canadian duty and freight rates, which enables them to sell their goods at about the same prices as they obtain for them in the United States.—Paul Lang, United States, Consul at Sherbrooke, Que.

The amount of coal shipped from the Maritime Provinces ports to Montreal this season has exceeded any previous record, and before the close of navigation the amount coming into Montreal from the mines in the Maritime Provinces will have exceeded a million tons. From the opening of navigation to November 1 the total amount coming into the port of Montreal by means of the coal-carrying steamships was 959,098 tons, as compared with 958,661 for the season last year.

Messrs. Lantel & Co's boot and shoe factory at Maisonneuve, Que., was destroyed by fire November 15. Loss about \$60,000.

The Montreal Woollen Mills storehouse, Montreal, was destroyed by fire November 15. Loss about \$10,000.

The Continuous Rail Joint Co. of Canada, Montreal, have been incorporated with a capital of \$49,000, to manufacture iron, steel, railway appliances, etc. The provincial directors include Wm. W. Near, C. L. Dunbar, Guelph, Ont., and L. F. Braine, Newark, N.J.

H. B. Binister's elevator at Ruscomb, Que., was destroyed by fire November 13.

La Fonderie de Thetford, Kingsville, Que., have been incorporated with a capital of \$30,000, to carry on a foundry business. The provisional directors include J. Lemieux, J. L. Roberge, Saint Alphonse de Thetford, Que., and L. H. Huard, Kingsville.

The Mill Stream Lumber Co., Quebec city, have been incorporated with a capital of \$20,000, to manufacture pulp, paper, lumber, etc. The provincial directors include F. D. Wilsey, New York City, C. E. Taschereau, and L. A. Cauvince, Quebec City.

The Ledoux Carriage Co., Montreal, have been incorporated with a capital of \$250,000, to acquire the business of B. Ledoux & Co., and to manufacture carriages, automobiles, etc. The provisional directors include Chas. Ledoux, Westmount, Que.; F. J. Pelletier and J. P. Montpetit, Montreal.

The Canada Tag & Label Printing Co., Montreal, have been incorporated with a capital of \$20,000, to carry on a printing and book-binding business and to print on tape, ribbon, etc., tags and labels. The provisional directors include F. C. Jamieson, R. H. Jamieson, Montreal, and Wm. H. Lash, Westmount, Que.

The A. H. Sims Co., Montreal, have been incorporated with a capital of \$250,000, to manufacture silk, cotton, linen, etc., and to acquire the business of A. H. Sims & Co. The provisional directors include A. H. Sims, Wm. J. Barnard and H. H. Sims, Montreal.

We are informed by Mr. Guy Tombs, general freight and passenger agent of the Great Northern Railway of Canada, that that road will be running from the city of Quebec into Montreal by the end of the current month.

By an Order-in-Council of the Province of Quebec, article 12 of the regulations relating to woods and forests have been amended to read as follows:—"Licentiatees are forbidden to cut on Crown Lands pine trees measuring less than 12 inches in diameter, spruce trees measuring less than 11 inches in diameter, and trees of other descriptions measuring less than nine inches diameter at the stump, at three feet from the ground. But they are permitted to cut black spruce at a diameter of seven inches at the stump as aforesaid."

The Bell Telephone Co., Montreal, will enlarge their building by the erection of a five story addition at a cost of about \$125,000.

The E. Phillips, Little, Wire Co., St. Louis, Que., will erect a new factory to cost about \$40,000.

The Belgo-Canadian Pulp Co. will probably build a paper mill at Shawinigan Falls, Que.

The pulp and paper business is unprecedentedly good along the line of the Quebec and Lake St. John Railway, and there is every indication of a prosperous

winter season, especially in the lumber field. Contracts have been closed for the manufacture of over 2,000,000 feet of logs during the winter months, and apart from this the Chicoutimi Pulp Co. have contracted for 1,125,000 feet for the manufacture of pulp. The additions to the Chicoutimi mills have been completed and they are now in full running order. There are twenty-nine grinders in operation.

The first consignment of the \$400,000 order for freight engines placed in Germany by the Canadian Pacific Railway, have arrived, and have been set up in the new Canadian Pacific Railway shops at Rosemount, near Montreal. The consignment consisted of two engines, both of which are now at work in the Windsor Station yard. Two more engines are due on the Hamburg-American liner Fresia, from Germany, while two others are on the way from Boston. The order was for twenty engines and they will all be delivered before the middle of December. The engines cost approximately \$20,000 each and are of the highest type of freight engines. They were built in Germany to plans furnished by the Canadian Pacific Railway. They will be distributed over the Canadian Pacific Railway system and will be put in active service as soon as they can be set up. The engine in the Windsor Station yard was inspected by General Manager McNichol and General Superintendent Osborne of the Eastern division and pronounced entirely satisfactory.

Considerable new machinery is being installed in the Newcastle colliery at Port Morien, N.S., and preparations are being made to continue shipping all winter. The output from the mine is not large at present, but the management intend to do all in their power to have it increased. A steamer will be chartered to carry on a local trade during the winter. The mining extends out under the waters of the bay about one mile, and mining operations will be carried on in that direction.

Messrs. C. & E. Harding & Son's lumber warehouse at St. John, N.B., was partially destroyed by fire November 7. Loss about \$2,500.

• With reference to the fire brick works to be erected by the Intercolonial Coal Mining Co., Westville, N.S. Mr. Charles Fergie, the vice-president and general manager of the company informs us that it is not expected that the works will be in operation within six or nine months from this time.

The Royal Furniture Co., Woodstock, N.B., have been incorporated with a capital of \$20,000, to manufacture furniture, machinery, etc. The provisional directors include Alex. Henderson, J. A. Hayden and B. H. Smith, Woodstock, N.B.

The Canadian Bank Note Co., have been incorporated at Fredericton, N.B., with a capital of \$48,000, to carry on the business of book-binding, engraving, etc., and to manufacture bank notes, etc. The provisional directors include E. B. Seely,

H. J. Smith and R. D. Clarke, St. John, N.B.

The sales-agent of the Dominion Iron & Steel Co. has concluded arrangements with Mr. Johnson, of Stockholm, for a trial shipment of steel billets to Sweden. This shipment will go forward from Sydney, N.S., on the steamer Oscar II. in a few days. With the transportation facilities available, the company are looking forward to finding a considerable market for their iron product in Sweden. Negotiations are also in progress between Mr. Johnson and the officials of the Dominion Coal Co. with a view to marketing a large quantity of coal in Sweden. These shipments were inaugurated some time ago through the efforts of Alexander Dick, the general sales agent. The Government of Sweden are using the coal on their railway system, and it has been found satisfactory.

† In a recent issue of The Halifax Herald, was given a full page illustrated notice of Messrs. Clayton & Sons, clothing factory, warehouse and offices. In the several divisions of the factory there is a floor space of 127,650 feet, divided as follows: Factory, three floors, 230x65 feet, 44,850; salesrooms, five floors, 100x100 feet, 50,000; office building, four floors, 100x30 feet, 12,000; boiler building, two floors, 60x20 feet, 2,400; packing and shipping warehouse, four floors, 60x40 feet, 9,600; hall, two floors, 40x30 feet, 2,400; storage and workshop 80x80 feet, 6,400. This company gives employment to over 500 people, and it is said to be Halifax's largest industry and Canada's largest clothing establishment.

The Van Buren Lumber Co., Edmundston, N.B., have been incorporated with a capital of \$24,000, to manufacture lumber, etc. The provisional directors include Thos. J. Cochran, J. M. Stevens, and A. Lawson, Edmundston, N.B.

The Scott Lumber Co., Dumfries, N.B., have been incorporated with a capital of \$98,000, to carry on a general lumber and sawmilling business. The provisional directors include Jas. M. Scott, Wm. J. Scott and C. E. Scott, Dumfries.

Louis Miller, a lumbering operator will acquire large holdings of timber limits in Nova Scotia. He has completed arrangements for the purchase of the Dominion Lumber Co's property at St. Margaret's, near Halifax. The property comprises 8,000 acres of spruce and hemlock. The price is about \$250,000.

Two large Northey pumps are being set in the Phalen seam Dominion No. 2, at Sydney, N.S., chiefly for fire purposes. These pumps will be so arranged, that in case of fire, and the supply of water giving out below, the water can be turned on from the surface reservoir, and forced by the pumps to any part of the mine.

Mr. Scott is arranging with the civic authorities at St. John, N.B., for the accommodation of immigrants during the winter season. There are to be new immigration quarters, which, when completed, will be among the finest in the world. These will be 340 feet long by

70 feet wide. There will be every accommodation for some three thousand persons. Arrangements have been made for the construction of living and sleeping rooms for the use of those who may be compelled to stay over for a few days. The city is erecting the buildings, and the Government will lease them.

It is proposed to construct a trunk sewer across the Common in Halifax, N.S., at a cost of \$33,500.

The Midland Railway will be extended from Truro, N.S., to Brule, N.S., 30 miles distant.

Mr. Wetmore, provincial engineer of Fredericton, N.B., is making surveys for new bridges at Ryan Brook, Sussex District, and Emskillen Station bridge in Queen's county.

W. C. McVey, St. John, N.B., is inviting tenders for construction of a bottling plant building at Satina, King's county, N.B.

Messrs. Cornell & Hetherington's implement house, and the Arcola Hotel, at Arcola, Man., were destroyed by fire November 1. Loss about \$25,000.

H. W. Lockwood, Westport, Ont., will establish a large cheese factory near Innisfail, N.W.T.

The Ryan & Goodland Co., St. Boniface, Man., have been incorporated with a capital of \$60,000, to manufacture woolen and cotton yarns, blankets, rugs, etc. The provisional directors include John Ryan, St. Boniface, H. T. Goodland and A. E. Levy, Winnipeg, Man.

A large linen factory will be established at Edmonton, N.W.T. The building will be of brick 500 x 100 feet, and \$15,000 worth of machinery will be installed. The town council will grant a bonus of \$5,000, and exemption from taxation for ten years. The Edmonton district is pre-eminently suited for the growth of the very best flax.

The Winnipeg Rendering Co., Winnipeg, Man., have been incorporated with a capital of \$15,000, to manufacture the refuse of abattoirs, etc., and to carry on a general rendering business. The provisional directors include J. Turner, F. H. Phippen and G. D. Minty, Winnipeg, Man.

The National Laundry Co., Winnipeg, Man., have been incorporated with a capital of \$40,000, to do a general laundry business, and to manufacture cotton and linen wearing apparel, etc. The provisional directors include M. E. Davis, A. Merrill and H. Pollard, Winnipeg.

The Rainy River Fuel Co., Winnipeg, Man., have been incorporated with a capital of \$40,000 to manufacture fuel, timber, ties, etc. The provisional directors include P. T. Roberts, D. Robertson, Rainy River, Ont., and James A. Tierney, Fort Francis, Ont.

The Union Stock Yards of Winnipeg, Limited, Winnipeg, Man., have been incorporated with a capital of \$500,000 to do a general stock raising and hotel business. The provisional directors include T. L. Metcalf, B. Kenaston and W. J. Clearihue, Winnipeg.



The Manitoba Cold Storage Co., Winnipeg, Man., have been incorporated with a capital of \$150,000, to carry on a general cold storage business, etc. The provisional directors include W. A. Black, A. A. Andrews, and Jas. Murray, Winnipeg.

The Winnipeg Casket Co., Winnipeg, Man., have been incorporated with a capital of \$25,000 to manufacture caskets, cases, undertaker's supplies, etc. The provisional directors include A. McConville, Crookston, Minn.; H. E. Diebold, Thief River Falls, Minn.; and A. L. Diebold, Calgary, N.W.T.

The McRobie Fire Extinguisher Mfg. Co. have been incorporated at Victoria, B.C., with a capital of \$40,000, to manufacture fire extinguishing apparatus, generators, motors, etc.

The Western Medicine Co. have been incorporated at Vancouver, B.C., with a capital of \$200,000, to manufacture medicines, etc.

The Keystone Press Co., Vancouver, B.C., have been incorporated with a capital of \$50,000 to manufacture ink, and to do a general printing and book-binding business.

The Winnipeg city council have decided to submit \$1,000,000 money by-laws to the ratepayers to develop Assiniboine water power and to start a municipal gas plant.

The sugar mills at Raymond, N.W.T., started its first run November 9. There are 5,000 tons of beets in the sheds, and 150 men employed. This season's run will last fifty or sixty days, and will give 2,500,000 pounds of sugar to the West. Sharp bids are coming in for the product from both local and outside dealers.

The Leo Electric Insole Co. will erect a four-story factory at Winnipeg, Man.

The Great Northern Railway have commissioned Mr. John Crean, New Westminster, B.C., to secure an option on property at least 120x100 feet, within two blocks of the city hall, upon which a six-story first-class hotel, to be called the Great Northern, will be erected. The plans provide for an elegant modern house, costing about \$250,000.

J. B. Dorfman has purchased some valuable timber limits in Vancouver, B.C., and will erect large sawmills at Departure Bay, B.C.

A shipment of 85,000 ounces of refined silver was made a few days ago from the Trail, B.C., smelter to the United States Government mint in San Francisco for coinage for the Phillipine Islands. The shipment was of .999 fine quality, and is said to be the first silver refined in Canada from British Columbia ores. The Trail smelter also shipped 1,000 ounces of .995 fine gold to the United States Assay Office in Seattle, which is an innovation in the smelting industry in Canada. Heretofore the ore was shipped in bulk across the border for refinement, but from now on British Columbia ores will be smelted and refined in the province by the Canadian Smelting Works at Trail.

A paper mill is to be built in British Columbia at once, the pulp to be supplied from Princess Royal Island. W. A.

Bauer has completed his survey of 75,000 acres of spruce and larch, and has surveyed the water power and pipelines and is now engaged on the plans of the pulp mill, at the instance of the British Columbia capitalists, Colonel Mellis and Mr. Youle, who were in the province a short time ago. The estimate for the mill proper is \$500,000, but the plant entire will cost in the neighborhood of \$1,800,000.

A Dominion order-in-council authorizes the Vancouver Dry Dock & Shipping Co. to receive the statutory subsidy for the construction of a floating dry dock at Vancouver, B.C. This subsidy, under the act of last session, amounts to 3 per cent. of the cost of construction for twenty years up to a maximum of \$30,000 per annum. The new dock will be 500 feet long, and will accommodate vessels of 11,000 tons. The construction of the dock will be begun right away.

The authorities of the Louisiana Purchase Exposition are taking every precaution to prevent the recurrence at St. Louis of any such disastrous fire as that which destroyed the great Cold Storage Building at the Chicago Exposition in 1893, and are making adequate provision for water supply by putting in the largest installation of fire pumps in the world. These pumps, which have been purchased from Henry R. Worthington, of New York City, comprise twelve, 1,000-gallon, standard Underwriter fire-pumps, each capable of supplying four fire streams, making it possible to have 48 fire streams in use at one time. The pumps are of the Duplex double acting type and are supplied with air and vacuum chambers of large capacity. The fittings are of composition metal throughout, and the piston and valve rods are of bronze.

The large steel screw tug Emerson, built by the Collingwood Shipbuilding Co., Collingwood, Ont., for the Montreal Transportation Co., was successfully launched November 18. Her length over all is 118 feet, beam 23 feet, and depth of hold 13 feet 9 inches. She is fitted with triple expansion engines of 850 h.p., and is supplied with steam from two Scotch boilers at a pressure of 180 pounds to the square inch. The tug is equipped with steam steering gear, is lighted throughout with electricity, and has all modern appliances. The engines and boilers were also built in the shops of the Shipbuilding Co.

Messrs. John Sykes & Son's sawmill at Oshawa, Ont., was destroyed by fire November 19. Loss about \$6,000.

The Shevlin-Carpenter Co., Minneapolis, Minn., have purchased a large tract of timber lands from John Hanbury, of Brandon, Man., and they will erect a large sawmill.

W. S. Dwinnell, Minneapolis, Minn., has purchased a large tract of timber land in Saskatchewan Valley, N.W.T., and he will erect a sawmill at Edmonton, N.W.T.

The Leishman-Maundrell Co. and Clarkson Bros., Woodstock, Ont., have amalgamated under the firm name of The Woodstock Lumber Co., which will be

capitalized at from \$75,000 to \$100,000. A new factory will be erected for the manufacture of lumber and building materials.

T. T. Simpson, Esq., consulting and electrical engineer, 55 Sparks street, Ottawa, has been engaged by a party of Canadian and American capitalists to report on and prepare estimates for a very large plant for transmitting electric power into the city of Winnipeg, Man. The amount of power to be delivered will be from 10,000 to 20,000 h.p., and the distance of transmission over 100 miles, constituting one of the largest transmission plants in Canada.

#### CHICAGO PNEUMATIC TOOL CO.

Referring to the affairs of the Chicago Pneumatic Tool Co., President Duntley says:

The company have paid promptly all their interest and sinking fund charges on their bonded indebtedness. They have declared their dividends out of actual earnings, after writing off all expenses, fixed charges, and allowing liberally for depreciation of plants, etc. They have paid their dividends out of their own moneys. They do not owe a dollar of borrowed money. They have no floating indebtedness, except current monthly bills for material and supplies, which do not exceed \$48,000, and these we are ready to pay promptly when due. The company have over \$1,000,000 in quick assets over and above all current liabilities, including current bills, accrued interest, dividends, etc. The company's net earnings for the past nine months were \$513,224. Their present business and the outlook for the future, is satisfactory in every way. The European business is growing faster in proportion than the local business. The company are now selling their tools and machines in every civilized country in the world, and are no longer dependent on the American trade for their business. These are facts, and the company's record shows the payment of every obligation, no borrowed money, no current indebtedness, except their monthly bills, and a large surplus in quick assets. The regular annual statements will be made and published at the end of the year.

#### ONTARIO TIMBER RESERVES.

Hon. E. J. Davis, Ontario Minister of Crown Lands, who returned from a trip to the Temiskaming and Temagami districts a few days ago, has been so much impressed by the importance of Ontario's forest wealth as to determine on a new policy for its preservation and continuance. The scheme practically amounts to a system of permanent forest reserves, on which the timber will be sold only as it comes to maturity, and the price paid will be regulated by the amount actually taken, that is to say, measuring will be by the thousand feet, and not by the acreage.

Mr. Davis, speaking of this new policy, said:—The position is this: The area in the Province that has timber upon it is divided into two classes. One class is

land that is good for agricultural purposes. On that class the present system of selling the timber is practically about the only system that can be pursued, because the timber must be cleared off and the land opened up for settlement. The other class of land is not suitable for agriculture, being rocky and otherwise unsuitable. On these areas the new policy will apply. The Temagami reserve was set apart in 1901 as a permanent forest reserve. Since that time we have not sold any timber there. It contains about 1,400,000 acres, or 2,200 square miles of land, not good for agriculture. The proposition is that we should sell certain portions of the timber as it develops and can be placed on the market to advantage. We have decided to sell the timber by public competition, at so much a thousand feet, and the trees that are to be taken will be marked by our men. No trees below the size marked can be cut.

We are hoping to set apart reserves whenever we can, in other areas, in a similar way. Many old licenses will in time lapse, and the limits will revert to the Crown. These will be reforested and kept as a permanent forest reserve. The

system practically is a first step towards the plan of reforestry in use in Germany, and will involve much more stringent regulations in regard to fire ranging than have been hitherto in force.

WINNIPEG'S INDUSTRIES.

Regarding the growth of manufacturing industries in Winnipeg, Man., The Commercial, of that enterprising city, publishes the following facts and figures. It was a remark frequently heard in the early days that Winnipeg would never become a manufacturing centre of any importance. While we cannot yet point to many large industries, considerable progress has nevertheless been made in the establishment of industries here. Certainly the results achieved have been beyond the expectations of many well informed persons. Some really important industries are now well established on a sound basis, and more are coming all the time. Industries will increase with population, and notwithstanding earlier predictions, Winnipeg promises to become a manufacturing centre of great importance. The following is a list of the more important industries of the city:

- Ogilvie flour mill, capacity 2,500 barrels. The second largest mill in Canada.
- Ogilvie oatmeal mill, capacity 327 barrels; perhaps the second largest oatmeal mill in Canada.
- Hudson's Bay Co. flour mill.
- Great West Saddlery Co. factory, the largest of the kind in the Dominion.
- The Emerson-Hague Mfg. Co., Limited, men's cotton clothing, shirts, mattresses, tents, etc.
- The Hoover Mfg. Co., Limited, men's cotton clothing, shirts, etc.
- Bromley & Co., tents, awnings, mattresses, etc.
- Imperial Dry Goods Co., Limited, overalls, shirts, etc.
- Winnipeg Shirt & Overall Mfg. Co.
- John May & Co., tents, mattresses.
- McDonald & Co., tents, awnings, wagon covers, etc.
- E. L. Drowry, ales, beers, carbonated waters, sauces, etc.
- McDonagh & Shea, brewers.
- Blackwoods, Limited, brewers, carbonated waters, etc.
- Pellesier & Gobeil, carbonated waters.
- J. Y. Griffin & Co., extensive pork packing establishment, capacity 1,200 hogs per day.



Because we go to Ceylon for Plumbago and to Klingenberg for Clay, we furnish America with the uttermost limit of Crucible-perfection. Ask us for particulars.

McCULLOUGH-DALZELL CRUCIBLE CO., - PITTSBURG, PA.



# IRON and STEEL

All goods for import at close prices to wholesale buyers.

A. C. LESLIE & CO., - MONTREAL.

FOR Strictly High Class Steam Plants for Electric Light, Manufacturing and other purposes

CORRESPOND WITH

## The Stratford Mill Building Co.

Manufacturers of...

STRATFORD, ONT.

The Brown Automatic Engines, Stationary Boilers, Heaters, Pumps, Etc.

PRICES QUOTED FOR ALL SIZES OF BOILERS.

— ALSO —  
MANUFACTURERS OF THE NEVERFAIL GASOLINE ENGINE

The Western Packing Co. Limited, packers and slaughterers.  
 P. Gallagher & Sons, Limited, packers and slaughterers.  
 Gordon, Ironsides & Fares, packers and slaughterers.  
 Mitchell & Sturgess, pork packers.  
 J. Brown & Co., pork packers.  
 Codville & Co., Gold Standard line of grocers, package goods, coffees, baking powder, spices, etc.  
 Blue Ribbon Mfg. Co., grocers' package goods.  
 Campbell Bros. & Wilson, grocers' package goods.  
 Dyson, Gibson Co., coffee, spices, etc.  
 The Dyson Co., coffee, pickles, etc.  
 Carnefac Stock Food Co., stock food.  
 Western Mfg. Co., baking powder, extracts, etc.  
 Bole Drug. Co., druggists' package goods, proprietary articles, etc.  
 Martin, Bole & Wynne Co., druggists' package goods, proprietary articles, etc.  
 G. F. Stephens & Co., paints, putty, wood polishes, varnishes, etc.  
 J. A. Body & Co., linseed oil mills.  
 Waterous Engine Works Co.  
 The Stuart Machinery Co., Limited, machine shop.  
 Manitoba Iron Works Co., Limited, founders and machinists.  
 Vulcan Iron Co., Limited, founders and machinists.  
 Northern Iron Works, founders and machinists.  
 Schmidt & Co., brass foundry.  
 Manitoba Anchor Wire Fence Co.  
 D. E. Sprague, saw mills.  
 Rat Portage Lumber Co., saw mill (under construction).  
 Lalonde, Milord & Co., sash, doors, show cases, store fittings.  
 G. W. Murray, sash, doors and wood working factory.  
 Brown & Rutherford, sash, doors, etc.  
 Manitoba Mfg. Co., sash, doors, etc.  
 McCormick & Ludlow, sash, doors, etc.  
 John Mattson, sash, doors, etc.  
 Beeman & Co., fanning mills.  
 D. P. Estabrook, acetylene plants, washing machines, etc.  
 The Czerwinski Box Co., wood boxes, crates, cases, printers on wood.  
 Winnipeg Box Factory, wood boxes.  
 D. Ackland & Son, carriage wood work.  
 A. C. McRae, carriage tops and trimmings.  
 E. H. Briggs & Co., brooms, etc.  
 G. F. Bryan & Co., brooms, etc.  
 D. R. Dingwall, Limited, manufacturing jewellers.  
 Geo. E. Ellis & Co., manufacturing jewellers.  
 Western Cigar Factory, Thos. Lee, proprietor.  
 G. F. Bryan & Co., cigar factory.  
 Havana Cigar Syndicate, cigars.  
 Keystone Cigar Factory, cigars.  
 W. P. Kilbourne, cigars.  
 Ripstein Bros., cigars.  
 Seal of Manitoba Cigar Factory, cigars.  
 Royal Soap Co., laundry and toilet soaps, washing powders, etc.  
 Boyce Carriage Works.  
 John Dick, Limited, jute and cotton bags.  
 H. G. Middleton & Co., staple boots and shoes.

Winnipeg Creamery & Produce Co., butter, cheese, etc.  
 National Creamery & Produce Co., butter.  
 Reid, Rich & Co., butter.  
 Paulin-Chambers Co., biscuits, confectionery.  
 Sampson Walker, oil, grease, etc.  
 Winnipeg Oil Co.  
 Western Implement Mfg. Co.  
 John Currie, pumps.  
 Kemp Mfg. Co., tin cans, boxes, etc.  
 Allward & McCormick, stained glass, etc.  
 Bell & Co., stained glass.  
 Stewart & Bird, trunks, valises, leather novelties.  
 Ryan & Goodlands, woolen mill.  
 W. J. Hammond, furrier.

In addition to this list there are quite a number of other concerns which could be classed as manufacturers, such as upholsterers, of which there are several doing a customs trade, two marble works, four taxidermists, three dyers, four blank book, paper box and bookbinding establishments, two engravers and lithographers, many printing houses, several confectionery establishments, three or four manufacturing jewelers, harness shops, etc., etc. We have, however, endeavored to confine our list to concerns which manufacture mainly for the trade, omitting manufacturers who work principally for custom trade, or retail orders.

There are also the big car shops of the Canadian Pacific Railway and the Canadian Northern companies which must not be overlooked in any review of industrial Winnipeg. These shops employ hundreds of artisans, and when the new Canadian Pacific Railway shops are completed the number of men employed will easily reach four figures.

#### CENTRIFUGAL DYEING MACHINE.

Messrs. A. Klipstein & Co., 122 Pearl St., New York, are introducing a patent centrifugal dyeing machine, which is now in successful use in the United States for a variety of purposes, particularly for the dyeing of yarns and hosiery in compact form, whether in shape of woft of twist cop, cone or bundle. The principle of the machine is that of the hydro-extractor covered in, and it has a partitioned cage, which receives perforated boxes packed with cops or other materials. Dye or other liquor is introduced and forced through these boxes, which are fitted around the revolving cage, and the liquor is thus thrown centrifugally through the material with uniformity and certainty. The machine dyes all direct colors, as well as the new fast sulphur blacks. The feature upon which special emphasis is laid is that it eliminates several processes in the manipulation of dyed yarns. The ordinary system requires that the yarn shall be wound from cops into skein in order to dye, and after dyeing it has to be rewound into cone, spool or other form, whereas with this machine the yarn is dyed directly in the cop as stripped from the mule spindle, and can be used without any of these processes. Ring yarn, instead of being skeined, may be wound direct on the

cone and so dyed. The capacity of 72-inch machine on sulphur blacks is stated to be 1,000 pounds per day minimum, and the result in saving in the winding and rewinding processes is figured at a large amount.

A circular descriptive of the machine and claims made for it has recently been issued, and will be sent upon application.

#### THE BRUCE MINES.

Mr. W. E. H. Carter, Inspector for the Ontario Bureau of Mines, who is on a trip of inspection in the western part of the province, reports a visit to the iron and copper properties in the Sault Ste. Marie region. The Bruce mines, he says, are being kept unwatered, and it is reported that a sale has been made to the Canadian Copper Co. The *Chicago Mining World* of October 24 says that the sale has been made to the International Nickel Co., which is the Canadian Copper Co. reorganized and a Charles M. Schwab property. The price paid was \$600,000. The Bruce property has been one of the best known mines of the west for over half a century, and was bought for its value as a flux in the smelting operations of the International Co. in its new furnaces at Sudbury. The mines have been idle for a year or so, before which date, for a short time, they were operated by Lord Douglas of Hawick for an English syndicate. Before that they were idle for over 20 years. In their early days the mines produced more than \$8,000,000 in copper, and were at one time the largest mines operated on this continent by British capital.

C. M. Schwab bought up the International Co. from Rockefeller in the hope of cornering the world's supply of nickel. The company are now completing at Sudbury additions consisting of four new furnaces, to cost over \$1,000,000. During the past year, the *Chicago World* says, a party have been secretly buying up all nickel properties and mines in the Sudbury region that have been available, and large sums have been spent. Nobody seems to know or be able to guess who this party is, but it is supposed that developments of the greatest interest to the world, so far as the nickel industry and armor plate making are concerned, are about to be made, or indeed, have been made.

#### THE "LITTLE GIANT" MECHANICAL STOKER.

The Chicago Pneumatic Tool Co., Chicago, Ill., are directing attention to the "Little Giant" mechanical stoker manufactured by them. The "smoke nuisance" particularly in cities and towns, arising from insufficient combustion of fuel, has been the cause of more or less effective legislation, and one is reminded by the adage that where there is smoke there must be fire; but it is also contended that the converse of the proposition, that where there is fire there must be smoke, is not necessarily true. Smoke is unconsumed carbon, meaning fuel, and an appliance that provides perfect combustion cannot but be a fuel saver and therefore a money saver.

## Prevent Repair Bills

— BY USING A —



### Burt Exhaust Head.

The constant dripping from your exhaust steam pipe will rot your roof and walls.

The Burt Exhaust Head will prevent this dripping and allows only the dry steam to escape. No oil or water can get past it.

It also deadens the unbearable puffing, which is so annoying to some people.

"The Exhaust Head is giving entire satisfaction, and we are not troubled with water on the roof, as we were before your Exhaust Head was placed."

STARK ROLLING MILLS, Canton, O.

## THE BURT MFG. CO.,

Largest Mfr. of Oil Filters in the World.

AKRON, OHIO, U.S.A.

A complete stock carried by the  
**FAIRBANKS CO., - Montreal.**

We are now prepared to ship promptly

## Cold Rolled Strip Steel

All gauges and qualities.

Prices quoted on receipt of specifications.

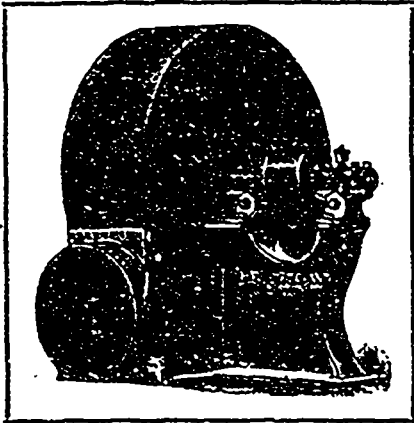
## THE BOURNE-FULLER CO.

IRON, STEEL,

PIG IRON,

COKE.

Cleveland, Ohio.



## STURTEVANT EXHAUSTERS

for handling

## BARK & CHIPS

are made with sides, rim and wheel of double thickness steel plate & The shaft and boxes are of extra strength.

Send for Catalogue C 101 Mr.

**B. F. STURTEVANT CO.,**

BOSTON, MASS.

New York. Philadelphia. Chicago. London.

## It is a Fact

That the finest class of work in ornamental Counter Railings & Office Fittings is being produced by

## THE GEO. B. MEADOWS

Wire, Iron & Brass Works Co., Limited

117 King St. West, TORONTO, Canada

That mechanical firing of coal is the correct principle, and that the small rather than the large sizes of coal gives far better results, especially as applied to boiler firing, are well known facts. Acting on these principles, the Chicago Pneumatic Tool Co. designed the Little Giant stoker to utilize the slack and cheaper grades of coal which have heretofore been of so little value; and it is claimed for it that the device will operate with any variety of coal from a size which will conveniently pass through  $1\frac{1}{4}$  inch screen to the smallest size of slack.

The coal which is first dumped in the hoppers, passes over a revolving cogged wheel, which regulates the flow. It then passes into a slowly oscillating spreader, which, moving slowly backwards and forwards, distributes the coal evenly, permitting only such a quantity to enter as the conditions may require, and distributing it in such a manner as to cause an even incandescent fire of intense heat. There is no mechanical action that is dependent upon the complete consumption of the coal, no dumping of partly consumed coal in ash pits; the oscillating spreader with great accuracy distributes the fuel in such a manner, that the most remote portions of the grate are covered with as intense a fire as the center.

Simplicity is one of the most important points claimed for the "Little Giant." Having but very few wearing parts, all of which are of slow movement, and subjected to but very little strain, there is practically nothing to wear out. The only part which comes in actual contact with the flames is the spreader, and this can be taken off at will in five or ten minutes.

Another fact which cannot fail to appeal strongly to the engineers and boiler men is that no alteration or damage to boiler front is necessary in attaching a "Little Giant" stoker. It is simply bolted on by means of four studs and can therefore readily be removed if for any reason hand-firing should be desired for a short time. Any engineer of ordinary intelligence can install and operate it successfully.

The makers do not desire the "Little Giant" to be classed with the numerous so-called "smoke consumers" on the market. They do not claim that it will consume smoke, but they do make the assertion that it serves the same purpose by preventing smoke.

The method of spreading the fuel thinly over the grate surface, of course, maintains a thin and incandescent fire, consequently a white heat and luminous flame. The small particles of coal are practically on fire before they touch the grate and the result is a smokeless stack.

In hand-firing it naturally follows that every time the fire is stirred up, the green unconsumed coal causes the objectionable black smoke, so familiar to all.

#### POWER AT PETERBORO'.

Mr. J. Alex. Culverwell of Peterborough makes the following statement to the Globe:—Your Peterborough despatch in Wednesday's Globe, which was, I

know, inspired by certain power holders of Peterborough, who now are smarting at their exposure by the resolution of protest of the Port Hope Canal Association to the Dominion and Ontario Governments, does me grave injustice. Your Port Hope correspondent in Monday's Globe was wrong in stating that I said at the Port Hope meeting "that Peterborough was doing all in her power to have the completion of the Trent Canal to Lake Ontario delayed." What I did say—and the Port Hope press reports will bear me out—was that the statement of the manager of a power company at the Peterborough meeting that there would not be sufficient water to operate the Trent Canal next summer was the most slanderous attempt ever made to hinder the completion of the canal, and that it was made for the benefit of the selfish interests of several Peterborough power owners, who, he stated, had run short of power. I also produced reports of eminent engineers, proving the statement a slander.

The resolution of protest of the Port Hope association in itself shows that they acted upon the information of the Peterborough press reports of the speakers at the meeting in Peterborough, so I cannot be accused of misrepresentation to the Port Hope meeting by your correspondent. The reports also show that a power-holder admitted that it was his intention to hoodwink the Ottawa and Toronto Ministers into believing that the expenditure for the reservoir dams in the back district was necessary for navigation purposes, and to hide the fact that it would benefit power-holders, and that he stated that Hon. Messrs. Mulock and Blair had turned down the last deputation for the reason that it was for local interest only.

It was also stated by another power-owner that the official estimate was \$100,000 for this work, and that there would be claims for damages for flooding, expenditure for purchase of some back lakes and wages for operating these dams. The truth is that these power-owners have used up all the water they are entitled to by the Government leases. I am backed up in this statement by reports of engineers as to the present flow of the river, and which have been published in the Peterborough press since the meeting.

The fact that I am a power-owner need not prohibit me from exposing these underground methods of securing power from the Government. Their high position in political circles will not prevent my acting even as a "policeman" for the causal.

My journalistic efforts in advocating the completion of the Trent Canal are well known, and my contention was at the Port Hope and Peterborough meetings that this Peterborough deputation should go for a larger purpose than that of power; it should go with a view to secure the immediate completion of the canal in the interests of the taxpayers of the whole Trent district of Canada, and even of the empire, for it will be a link of a great international highway between the "Granary of the Empire" and Britain.

#### COAL IN KOOTENAY.

The entrance of the Great Northern Railway into Morrissey Mines has opened up a market whose demands will probably always be in excess of the supply. The Great Northern Railway alone could take many times the present output of the Morrissey collieries, and orders from smelters in the United States for Crow's Nest coke have not been filled owing to the coal company not having sufficient coking plant to produce a surplus for export after first satisfying the demands of the Canadian smelters in West Kootenay. The demand for coke from the smelters of West Kootenay is constantly increasing and with the available markets waiting in the United States, one has not far to seek for the reasons for such large increases in coke oven plant, as are now under construction and in contemplation at Morrissey Mines. An adequate supply of first quality coke at low prices, from the Crow's Nest coal fields, is helping to solve some of the smelting problems of West Kootenay, rendering ores available for treatment that a few years ago were considered of too low grade to be profitably smelted.

On the southeast side of Morrissey Creek, across from the Crow's Nest Pass Coal Co's lands, is the Dominion Government reserve of 50,000 acres of coal land. The fact that the geologists of the Dominion Government advised the choosing of the Government coal lands reserve here, is significant. On what is now the reserve, the Canadian Pacific Railway established a camp and did considerable work two years ago, said to approximate \$50,000. When the coal seams on the government reserve are opened up, another large pay roll will add to the prosperity already existing here.

Morrissey Mines is the nearest point to, and connected by trail with the now famous Flathead country, and naturally will be the outfitting point of that district when the Provincial Government cancels the reserve placed on that rich country. Southeast Kootenay is said to be the richest part of Canada in natural resources, and Morrissey Mines, situated right in the heart of the district, and backed by the great coal mining industry, promises to be one of the largest and best towns in the Kootenays, and the banner camp of the Crow's Nest Pass Coal Co.

#### REGARDING DYESTUFFS.

The Cassella Color Co., sole United States and Canada agents of Leopold Cassella & Co., Frankfurt-on-the-Main, Germany, manufacturers of coal tar dyes, issue at regular intervals, cards and bulletins, describing the qualities, uses and application of their colors. Among those lately received are:

Bulletin 90.—Anthracene Chrome Violet B. In this bulletin are shown four dyeings of this new violet, two on woolen yarn, one on loose wool (felted after dyeing) and one on fine cloth. The properties of the color are extreme fastness to light and to milling. Anthracene Chrome Violet B is also fast to sponging, steaming, carbonizing, poling, stoving and crocking.

Established 1873. Telephone Main 1880.  
**THOMAS HEYS & SON**  
 CHARLES H. HEYS, Manager.  
**CHEMICAL and MINING EXPERTS.**  
 Analyses of all commercial products, etc. Plans and reports on mines and mining locations.  
 114 Bay Street, TORONTO, ONT.

**THE DELANO-OSBORN ENGINEERING Co.**  
*Consulting Engineers* LIMITED  
 Civil, Mechanical and Electrical Engineering, Power Plants, Manufacturing Establishments. Inspections, Tests and Reports.  
 Manning Chambers, TORONTO, ONT.

**THE METALLURGICAL LABORATORY**  
 GEO. P. MAURY, MANAGER.  
**CHEMISTS, ASSAYERS, METALLURGISTS, CHEMICAL and MINING ENGINEERS.**  
 545 LIBERTY AVE. | Analyses of every description, consultations and examination of properties.  
 PITTSBURGH, PA.

**S. DILLON - MILLS**  
**MINING EXPERT**  
 SPECIALTY: - Examinations, Prospecting and Initial Development of Mining Properties.  
 Address correspondence to  
 588 HURON STREET. - - TORONTO

**NEFF & POSTLETHWAITE**  
**CHARTERED ACCOUNTANTS**  
 28 Wellington St. East, TORONTO  
 Phone Main 1880.  
 Audits and Investigations a Specialty.

**PATENTS**  
**TRADE MARKS, Etc.**  
**HANBURY A. BUDDEN**  
 NEW YORK LIFE BUILDING,  
 MONTREAL.

**R. S. KELSCH**  
 Mem. Am. Inst. E. E. | Mem. Can. Soc. C. E.  
**Consulting Engineer**  
**38 Victoria Square, MONTREAL**  
 LONG DISTANCE PHONE  
 OFFICE AND RESIDENCE  
 Cable Address: "KELSCH, Montreal"  
 Late General Superintendent and Engineer of The Lachine Rapids Hydraulic & Land Co., Limited.  
 Design and Construction of Transmission, Lighting and Power Plants of every description. Underground System, Conduit, Estimates, Reports and Arbitrations.  
 Twenty years' practical experience.

**T. T. SIMPSON**  
 A.M. Amer. Inst. E.E.  
**CONSULTING ENGINEER**  
 DESCHENES, OTTAWA,  
 QUE. 55 Sparks Street.  
 LONG DISTANCE PHONE 1333.  
 Factory Light and Power Distribution.  
 Long Distance Transmission.  
 Reports-Tests.  
 Specifications Valuations.

**THE PATENT EXCHANGE AND INVESTMENT COMPANY.**  
**ATTORNEYS, SOLICITORS AND PROMOTERS OF PATENTS.**  
 JOINT STOCK COMPANIES PROMOTED AND ORGANIZED.  
 Book on Patents. List of Inventions wanted and for sale, mailed to any address free. Address,  
 Cor. Queen and Victoria Streets  
 Toronto, Can.  
 J. ARTHUR MacMURTRY, Manager.

**C. H. VOGEL**  
 A. M. Can. Soc. C. E. **ENGINEER**  
 OTTAWA, CAN.  
 Surveys, Plans, Specifications and Supervision  
**WATER POWER**  
 PAPER, PULP and SULPHITE FIBRE MILLS

**JOHN J. GARTSHORE,**  
 83 Front St. West, Toronto.  
**RAILWAY, TRAMWAY, and**  
**Contractors' Supplies**  
**METALS and SCRAP IRON**  
 Bought and Sold.

**T. A. MORRISON & CO.**  
 204 St. James Street. MONTREAL.  
 New and Second Hand Contractor's Plant. Complete Concrete Plants. Portable and Stationary Gasoline Engines. Road Machinery. Fire Apparatus. Gasoline Fire Engines.

**DR. GEO. ARCHBOLD, M. A.,**  
**TECHNICAL CHEMIST**  
 PRESCOTT, ONT.  
 Dr. Archbold is technical adviser to three of the oldest firms in U.S.A. Terms on application.

**RODERICK J. PARKE**  
 A.M. AMER. INST. E.E.  
 A.M. CAN. SOC. C.E.  
**CONSULTING ENGINEER**  
 James Building, TORONTO  
 Long Distance Telephone.  
**TO MANUFACTURERS:** - Advice and specifications covering Industrial Applications of Electricity-Lighting-Power Transmission-Factory Power Distribution - Steam Plants.  
**TESTS-REPORTS-VALUATIONS.**

**FIVE SECOND-HAND**  
**Tandem Compound Engines - For Sale**

Will develop 300 h.p. and 340 h.p., Fly Wheel 3'-6" face, 10'-0" diam., 150 R.P.M. These engines are in the best of condition, subject to inspection. Immediate delivery.

**ALFRED J. STEVENS**  
 Temple Bldg., TORONTO, ONT.

**SPECIAL WORK.**

WE are equipped to make any desired machine complete from drawings. We make a specialty of designing new machines for Labor Saving Purposes. We also make a specialty of Special Tools and Die Work, Rubber Moulds, etc. Experimental machines perfected. We can handle any order of reasonable size promptly and economically.

Call or write for estimates.  
**A. P. HOLDEN,** - Mechanical Expert.  
 107 and 109 Adelaide St. West. Toronto, Ont.

**ADVERTISE in**  
**Canadian Manufacturer**

**R. F. Wentz Engineering Co.**  
**Consulting Engineers and Cement Work Specialists**  
 Designing Cement Plants. Specifications and Estimates.  
 Superintendence of Construction.  
 Inspection and Reports of Cement Material and Properties.  
 Analysis and Tests of Raw Material and Cement.  
**DESIGNED and CONSTRUCTED**  
**24 CEMENT PLANTS** in United States and Canada.  
**20 YEARS PRACTICAL EXPERIENCE**  
 Designing, Constructing and Operating Cement Works.  
**CEMENT PROPERTIES FOR SALE.**  
 For further information address- **ROBERT F. WENTZ, M.W.S.E., Pres't.**  
**OFFICES:** 12-15 Babyp's Block, - - NAZARETH, PA., U.S.A.  
 509-510 Manning Chambers, TORONTO, ONT., CAN.

The color dyes very level and the dyeing is done with Glauber's salt and sulphuric acid, and in the same bath, after treated with Bichromate of Potash.

Bulletin 91.—Paraphosphine GG, Patented on Leather. This bulletin contains four dyeings on leather, of this new basic dye-tuff, both by itself and in combination with other basic colors suitable for leather dyeing. Paraphosphine GG yields very clear, greenish tones of yellow, and when used in combination with brown dyestuffs, the dull yellow shades now so much in demand are obtained.

It dyes on leather perfectly level and possesses great tinctorial strength; in other characteristics it is similar to our earlier paraphosphines, but is especially fast to light and very easily soluble. Full dyeing directions are given, together with a list of basic colors which may be employed for the dyeing of bark tanned leather.

Bulletin 92.—Method of dyeing black cotton linings containing white or colored silk effects. This bulletin describes a most valuable process of dyeing cotton goods with silk effects with Immedial colors, in such a way that the silk is not tinted. The essential part of the process consists in adding a certain amount of glue to the dye-bath, which not only prevents the silk fibre from being dyed in the least by the Immedial color, but also counteracts the destroying influence of the sulphide of sodium upon the silk.

The bulletin is illustrated with four pretty dyeings of cotton linings containing white and colored silk effect stripes.

Bulletin 93.—In this bulletin, direct as well as reserve prints with Immedial Indone R Conc. are shown. In the direct prints the essential point consists in dissolving the color with bisulphite of soda and glucose, which of course does not attack the copper or brass rollers.

In the reserve prints the goods are first printed with a paste containing sulphate of zinc and zinc white, and then they are dyed in a lukewarm bath with Immedial Indone R, after the usual method. The zinc reserve keeps the parts quite white, as will be seen from the four samples exhibited in this bulletin.

Bulletin 94.—Azo Wool Violet 7 R. In this bulletin are shown six attractive dyeings on woolen yarn and piece goods, illustrating the use of Azo Wool Violet 7 R alone and in combination with Cyanole Extra, Cyanole Green G and Orange Extra.

The properties of this new reddish violet dyestuff for wool dyeing are its fastness to light and alkali, level-dyeing and it does not smut. White cotton effects, artificial silk and ramie are not tinted, and even silk is not stained, if the dyeing is done with the addition of acetic acid. Azo Wool Violet 7 R is dischargeable with tin crystals or with zinc dust.

Bulletin 95.—Cyanole Fast Green G, Patented. This bulletin describes this new and valuable green dye stuff for wool dyeing, which is dyed according to the method usually employed for easily leveling dyestuffs, viz., with the addition of bisulphate of soda or Glauber's salt and sulphuric acid. Its properties are fastness

to rubbing, alkalies, washing and stoving, and exceptional fastness to light.

Its dyeings also resist ordinary steaming and are fast to carbonizing. Six attractive patterns are shown on woolen yarn and piece goods.

Bulletin 96.—Anthracene Acid Black S T Patented. This bulletin describes the adaptability of this color for the dyeing of worsted and dress goods which contain white cotton effects, giving in detail the method of dyeing, and illustrating the effects obtained by two dyeings on union italians and two on cloth for men's suitings.

Bulletin 97.—Azo Wool Violet 4 B. In this bulletin are shown six dyeings of this new wool color, both straight and in combination with Azo Wool Blue SE patented, Cyanole Fast Green G, patented, and Cyanole Extra, patented, on woolen piece goods and yarn.

Its properties are described and dyeing directions given.

Copies of any of the above may be obtained by application to Cassella Color Co., 86-88 Youville Square, Montreal, or 182 Front Street, New York.

#### OWEN SOUND, ONT.

Development of local industries and increasing the trade with the Manitoulin Island, the North Shore and adjacent territory is the policy which Owen Sound must take up energetically. Following the erection of the last elevator here President Shaughnessy, of the Canadian Pacific Railway made the statement, according to the Owen Sound Times, that the through freight carrying was in a problematic stage which might not have a final settlement in less than ten or even twenty years. Those who have closely watched the trend of traffic east and west since that statement was made, have made up their minds so far as Owen Sound is concerned the bulk of the increase of the transportation will not come this way. The reason is plain in the heavy grades and the indirect route between this port and the seaboard. It is unquestionable that only from the east shores of Georgian Bay can a direct route be secured that will admit of the Canadian Pacific meeting its competitors in the through carrying trade. When that port will be found is difficult to say. It is not even suggested that it has been looked for, but the practical solution of the problem admittedly lies along that shore, whether it be by the proposed French River route or by some of the numerous harbors not yet suspected of ever forming a shipping point, and at which the company will have all the frontage necessary to give it the facilities it requires. It does not necessarily follow that Owen Sound will lose what it now has from the company, as no more central port can be found for the large percentage of passenger and freight traffic which originates in Ontario. But to look for an extension of the business here would be unwise. The empty elevators are significant of a change. Yet there is not the slightest cause for pessimism in connection with the matter. Owen Sound's industrial progress is on a safe basis and is growing.

There are splendid possibilities in the Georgian Bay territory, and it is to the development of commercial trade with these sections that the town should set itself. The transportation facilities should be made the best and the trade relations cultivated to their full extent. The Manitoulin island is in itself a magnificent territory which in the near future will have a large population. As a distributing point Owen Sound is admirably situated, and with close connection the present trade is capable of an expansion not yet thought of. A successful future is already assured for this town and the possibilities have only been touched upon, but watchfulness is essential so that when the time comes for a change in the great transcontinental route, Owen Sound will not receive a set back either in prosperity or reputation. Industrial development will be discussed later.

### OPPORTUNITIES.

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

1118. A firm in the Midlands, England, are desirous of getting into touch with Canadian manufacturers of hay forks.

1119. Enquiry is made for basswood glued-up panels, for piano key-boards.

1120. An agent established at Marseilles offers his services to Canadian houses exporting canned meats and lobsters, fresh and dried apples, preserved fruits, etc.

1121. A chartering agent in London, England, is anxious to get the agency of firms who require steam tonnage for the conveyance of grain from Canada to the United Kingdom. Is also prepared to induce business in shipping by taking up agencies and selling goods for first-class houses.

1122. Enquiry has been made for the addresses of Canadian manufacturers of vinegar.

1123. A Glasgow, Scotland, house asks to be placed in communication with packers of Canadian gallon apples of the finest quality. They would take large quantities and would require cans to be labelled with their own brand.

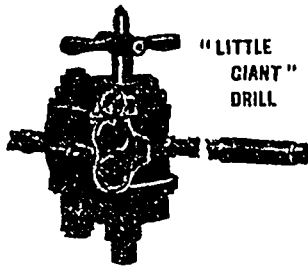
1124. A London import firm asks to be put into touch with Canadian shippers of graphite of good quality.

1125. A firm in Scotland enquire for samples, prices, etc., of Canadian wood pulp paper. They also ask for similar particulars from Canadian makers of felts supplied in rolls.

1126. A London firm is open to represent Canadian exporters of wood-ware and other goods for ship-chandlers. They are also looking for a market in Canada for their own manufactures, marine life-saving apparatus, life-belts, buoys, mooring buoys, coir mats, etc.

1127. A correspondent makes enquiry respecting the starting of a new manufacturing business for the production of salt in Canada.

OUR  
CATALOG  
IS  
FREE



"LITTLE  
GIANT"  
DRILL



The Boyer Riveting Hammer.

The "LITTLE GIANT"  
and "BOYER"

pneumatic tools have been adopted everywhere as the standard.

They are manufactured in sizes and styles suitable for every variety of work and will save both time and money for you.

Write for specifications on a Complete Air Plant, including tools, air compressor and all necessary accessories. We will include the entire plant under one guarantee.

Chicago Pneumatic Tool  
Company

CHICAGO - - Fisher Building.  
NEW YORK - - 95 Liberty Street.  
TORONTO - Foresters' Temple Bldg.

Thomas Carlin's Sons Company

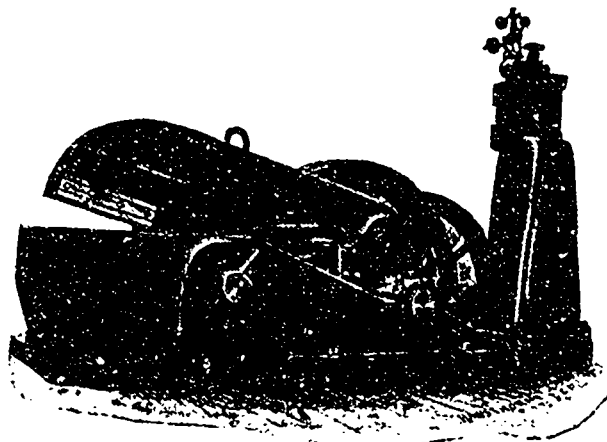
ALLEGHENY, - PA.

Manufacturers of

SHEARS,  
Grinding  
Pans

— AND —

Contractors'  
Machinery



Write for Catalogue No. 264.

TWIST DRILLS, REAMERS, "NOVO" Steel  
MILLING CUTTERS, Etc., made from

Full particulars and instructions supplied.

WILLIAM ABBOTT, - 384 St. James Street, Montreal  
SOLE AGENT FOR CANADA

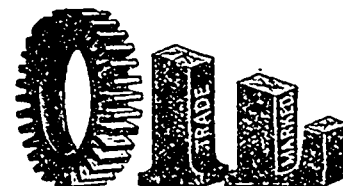
"Capitol" Cylinder

"RENOWN" ENGINE

"ATLANTIC" RED

RELIABLE WELL-KNOWN BRAND

ALL ORDERS PROMPTLY FILLED



THE QUEEN CITY OIL CO. LIMITED

TORONTO, Canada.

W. H. Storey & Son, ACTON, ONT.,  
Manufacturers of..... FINE GLOVES AND MITTS  
In every variety and style. Moccasins.

F. W. HORE & SON, Limited, HAMILTON, ONT.  
Manufacturers of  
CARRIAGE, WAGGON. AND SLEIGH WOOD WORK.

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.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



## INDUSTRIAL PUBLICATIONS.

The Westcott Chuck Co., Oneida, N. Y., have issued a brochure relating to their spur (not bevel) geared scroll combination lathe chuck, which, they say, is an old and well tried principle in mechanics, now for the first time applied to a chuck.

The Cree-Dickson Mfg. Co., Minneapolis, Minn., have sent us an interesting pamphlet, descriptive of the Cree-Dickson sectional book-case for office and domestic use.

The Bertram Engine Works, Toronto, have issued a booklet containing an interesting article on "Grain Carriers" on the Lakes. It also contains descriptions and illustrations of the hoisting and marine engines and boilers built by the company.

The Journal of the American Foundrymen's Association is to be issued hereafter as a quarterly, and the first issue under the new plan is in magazine form, attractive in matter and make-up. The secretary, Dr. Richard Moidenke, has secured the assistance of a number of well-known writers on foundry subjects, who will have charge of various departments, giving in each number of the Journal considerable original matter, and making the publication of great value to foundrymen.

An interesting and instructive souvenir was presented to the members of the New England Foundrymen's Association on the occasion of their recent visit to the new foundry and pattern departments of the B. F. Sturtevant Co., at Hyde Park, Mass. This has been republished as Bulletin 54, a 16 page pamphlet, describing and illustrating these departments, and particularly their industrial equipments. The removal of the foundry and pattern departments is the first step towards the removal of the entire plant from Jamaica Plain, Mass., to the extensive new works at Hyde Park.

The Buffalo Forge Co. have sent us a sectional catalogue of Buffalo mechanical forced draft, also sectional catalogue of Buffalo steel pressure blowers. These books are just from the printer, are beautifully illustrated, and should be of special interest to steam and power users.

The Canadian General Electric Co., Toronto, have issued a booklet, the object of which is to direct attention to the track clearing devices handled by them.

The Howe Mfg. Co., Louisville, Ky., have issued a folder having reference to the Huxley brass and iron globe and angle valve, etc., made by them. The A. R. Williams Machinery Co. are Canadian agents.

The Chicago Fuse Wire & Mfg. Co., Chicago, Ill., are sending out a very neat and handy booklet relating to the fuse wire, fuse strip, telephone fuse, wire joints, etc., made by them. The Canadian General Electric Co., Toronto, handle these goods.

Messrs. W. E. Caldwell & Co., Louisville, Ky., have favored us with a copy of their now illustrated catalogue descriptive of the tanks, towers, tubs, etc., made by

them. They manufacture both steel and wood tanks, and three types of towers, an all wood structure, a combined wood and iron, and an all steel tower. Tables are given relating to round wood tanks for all purposes, giving capacity in gallons, inside diameter and depth, shipping weight, prices, etc. They also make both rectangular and elliptical tanks of any required dimensions, especially adapted for use in woolen and cotton mills, mines, chemical works, rolling mills, breweries, etc.

The Buffalo Steam Pump Co., North Tonawanda, N. Y., have issued a new folder relating to the Underwriter duplex fire pump and the duplex boiler feed pump manufactured by them.

Messrs. Goltman and Leroy, proprietors of Goltman's Metropolitan Business College, Montreal, have recently published two editions, one in English and the other in French, of an interesting 40-page work on the metric system. One of the most important resolutions submitted to the Congress of Chambers of Commerce of the British Empire in Montreal last summer, had reference to the adoption within the Empire of the metric system, and therefore the little book before us possesses special value in that connection.

The McCullough-Dalzell Crucible Co., Pittsburg, Pa., have sent us a brochure entitled "Crucible Facts," which relates to the plumbago crucibles and allied plumbago products made by them. They allude to the fact that they have been making crucibles for more than thirty years, chiefly for the manufacture of steel; and are desirous of doing a more extended trade among the brass founders.

The Motsinger Device Mfg. Co., Pendleton, Ind. have sent us a circular relating to the Motsinger ignition dynamo made by them. Among the points of excellence claimed for this improved auto-sparker are that it is a most successful method of firing the charge in a gas or gasoline engine, and that it can be used on all engines now using batteries.

The Smart-Turner Machine Co., Hamilton, Ont., have sent us their Bulletin No. 3, embodying useful information regarding the pumping machinery manufactured by them. The duplex and single pump alluded to are their piston pattern for boiler feeding and for general service; outside packed plunger pump with pot valves; automatic feed pump with sub-base; compound duplex pump for general service, etc. Tables are also given showing diameter of steam and water cylinders for different capacities, length of stroke, capacity per minute, boiler horse-power required, size of pipes, etc. Besides the pumps listed in the pamphlet, the Smart-Turner Machine Co. make air, circulating and vacuum pumps, Underwriter fire pumps, tan liquor pumps, tank pumps, condenser centrifugal pumps, etc.

Mr. John A. Drew, of the International Steam Pump Co., New York, has written an interesting article on "Hot Water Meters for Boiler Tests." The subject is one of some importance in view of the increasing amount of attention being paid

to matters of fuel economy and to improved forms of furnaces, grates, boilers, automatic stokers and similar appliances for saving fuel.

"Graphite Lubricants" is the title of an exceedingly interesting brochure sent us by the Joseph Dixon Crucible Co., Jersey City, N. J. The purpose of the booklet is to place in the hands of their customers a complete description of the various lubricants manufactured by them, and includes not only a description of Dixon's flake graphite, its various sizes and uses, but also a description of their lines of lubricating greases and compounds in which graphite is an ingredient.

The Canadian Corundum Wheel Co., Hamilton, Ont., manufacturers of emery wheels, corundum wheels, grinding machines and machinery, of which Messrs. L. Sherk is president and H. E. Sherk manager, have sent us their 1904 illustrated catalogue, having reference to their business, and which also contains a large amount of exceedingly useful information regarding the uses to which such goods are put, methods of using, etc. Diagrams are given of ordinary and special shapes of corundum goods, including cylinders, scythe stones, rubbing bricks, wheels for grinding hollow ware, knife and tool grinders, polishing wheels. The book is gotten up in splendid style, and reflects much credit upon the publishers.

The Cassella Color Co., New York, have sent us an illustrated bulletin relating to "Dyeings on Mercerized Linings" with silk effects, in which is shown a number of samples of such goods, and instructions for dyeing in diamine colors.

## GOLD MINING IN THE YUKON.

"History of Klondike Mining Concessions," is the title of a pamphlet issued by the Dawson Board of Trade from which we extract as follows:

In the latter part of the year 1896 the famous discoveries of placer gold were made on the creeks in the basin of the Klondike River. These were followed in the years of 1897 and 1898 by the scarcely less famous placer gold discoveries in the basin of Indian River and on the hills and benches adjoining all the creeks on which discoveries had previously been made. During the past two or three years rich placer ground has been found in the basin of the Stewart River, notably on Duncan, Clear, and Henderson creeks, also in the Forty-mile district. The more famous creeks in the Klondike basin are Eldorado, Bonanza, Hunker, Last Chance, and Bear, while in the Indian River basin Dominion, Sulphur, Gold Run, and Quartz are the most noted. Not only in the beds of the creeks in both Klondike and Indian River basins, but also on the adjacent hills and benches the wealth of placer gold discovered has been enormous.

The proper protection and development of all these discoveries would have insured to the Yukon Territory, a population of at least 100,000 souls. This population, being dependent almost wholly for food and supplies on the

**MORGAN CONSTRUCTION COMPANY**  
 Worcester, Mass., U. S. A.

**STEEL PLANTS  
 ROLLING MILLS  
 GAS PRODUCERS  
 WIRE MACHINERY**

Nearly every Important Wire Mill in Canada and the United States uses our Machinery.

**MACHINERY**

—FOR—


**WIRE DRAWING MILLS  
 AND  
 CHAIN WORKS.**

—

**SEWER PIPE PRESSES  
 AND  
 SOCKET DIES.**

WRITE FOR PRICES.

**The TURNER, VAUGHN & TAYLOR CO.**  
 Cuyahoga Falls, O., U.S.A.



**AUCTION SALE OF TIMBER BERTHS.**

PUBLIC NOTICE is hereby given that pursuant to authority of Orders in Council, the Red and White PINE TIMBER in the following townships, berths and areas, namely:—

IN THE DISTRICT OF NIPISSING—the Townships of HUTTON, CREELMAN, PARKIN, AYLMER, MACKEGAN, MCCARTHY, MERRICK, MULOCK (part of) FRENCH (part of), STEWART, LOCKHART, (part of) GARNOW (part of), OSBORNE (part of), HAMMILL and PHELPS (part of).

IN THE DISTRICT OF ALGOMA—Berths Nos. 195 and 201, the townships of KITCHENER and ROBERTS and Block "W" near Onaping Lake.

IN THE RAINY RIVER DISTRICT—Berths G19, G21, G23, G29 and G38, and the following Berths with the right to cut and remove the pine, spruce, tamarack, cedar and poplar:—G4, G6, G17, G18, G21, G23, G26, G27, G28, G33, G35, G36, G37, G39, G40, G41, G42, G43, Berths Nos. S1, S2, S3, and S4, will be offered for sale by Public Auction at the Parliament Buildings, in the City of Toronto, on WEDNESDAY, the NINTH day of DECEMBER, 1903, at the hour of ONE o'clock in the afternoon.

Sheets containing terms and conditions of Sale and information as to Areas and Lots and Concessions comprised in each Berth will be furnished on application, either personal or by letter, to the Department of Crown Lands, Toronto, or the Crown Timber Agencies at OTTAWA, SAULT STE. MARIE, PORT ARTHUR, RAT PORTAGE and FORT FRANCES.

**E. J. DAVIS,**  
 Commissioner Crown Lands.  
 DEPARTMENT OF CROWN LANDS,  
 TORONTO, July 29, 1903.

N.B.—No unauthorized publication of this advertisement will be paid for.

---

**WANTED**

December 1st or January 1st services, in permanent positions. Successful General Agents of Harvesting Machinery by Canadian Corporation, to represent their factories in Canada and United States. State experience, references, salary expected and age. All replies will be held confidential. Address, "CANADIAN,"  
 Care CANADIAN MANUFACTURER, Toronto, Ont.

**IRON PYRITES  
 MINE  
 For Sale**

A vast Deposit of Pyrites of Iron in Ontario for sale or exploitation.

Of great richness and practically inexhaustible quantity.

Within easy reach of railway and water transportation.

Cheap electric and water power available.

WRITE FOR PARTICULARS.

Address, "IRON PYRITES,"  
 Care CANADIAN MANUFACTURER,  
 TORONTO, CANADA.

**SEE HERE**

You will surely admit that the best is none too good; therefore if you want a really first-class **AIR COMPRESSOR** you will install a **RAND**. Want our catalogue?

**THE CANADIAN RAND DRILL CO., Sherbrooke, Que.**

MONTREAL—18 Victoria Sq.      TORONTO—1103 Temple Bldg.      HALIFAX 116 Hollis St.  
 RAT PORTAGE, ONT.      ROSSLAND, B.C.      GREENWOOD, B.C.      VANCOUVER, B.C.

**FULL MOUNTED  
 DERBY SCREW PLATE NO. 119.**  
 1/4 5/16 3/8 7/16 1/2 5/8 3/4 7/8 1"  
 WITH ONE No. 9 AND ONE No. 11 TAP WRENCH






**WE MANUFACTURE**

**STAY BOLT TAPS**, all diameters and lengths up to 94 inches.  
**SPINDLE STAY BOLT TAPS** and **TAPS for Screw Machines**, and **TAPS for all uses.**

Regular and Full Mounted Reece and Derby Plates, Bicycle and Machinists' Plates, etc., etc.

**BUTTERFIELD & CO.,**  
 Rock Island, Que.



When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

sources outside the Yukon Territory, would have afforded a large and unexcelled market to the rest of Canada for farm products and manufactured goods. The possibilities of this market have, we believe, not yet been understood or appreciated by the government, the industries, or trades of the rest of Canada.

In the whole of the Yukon Territory, except around the town of White Horse, the prosperity of the whole population depends entirely upon the production of gold by the individual placer miner. A very large part of the people are engaged directly in this pursuit and the remainder are engaged in supplying the wants of those so employed. Anything which stimulates or retards this one industry equally stimulates or retards the prosperity of the whole community. The cessation of placer mining would result in the abandonment of the territory for the present by almost the entire population. Many of the rich early discovered claims have already, by wasteful and rough methods, been worked over, leaving a large part of the gold behind, and are now being reworked by our present improved placer-mining methods, which are obviously capable of immeasurably greater improvements, as the methods used by a few of our best operators show. But the greater part of the placer areas have to the present remained unworked, in some cases through lack of water, but generally because it requires a long time and much labor to prospect thoroughly so large a country, and because it was desirable in regard to low-grade ground in the earlier years to wait for (a) the reduction of royalty, (b) the cheapening of labor, and (c) the introduction of improved machinery.

The work done thus far has taught our miners to work ground at a small fraction of the former cost and more thoroughly, and has located gravel beds of great extent over the whole Klondike and Indian River basins that can profitably be worked by present placer methods. Yet the Yukon is losing its population and all business is depressed.

#### PERSONAL.

The Fairbanks Co., Montreal, are opening large sales rooms in Toronto in order to better handle their Ontario business.

The Sunbeam Incandescent Lamp Co.,

whose plant is located at St. Catharines, Ont., have opened offices in the McKinnon Building, Toronto.

Messrs. Drummond, McCall & Co., of Montreal, have removed their Toronto offices from York street to 100 King street west.

The Rosendale Belting Co. have secured larger quarters for their offices at 59 and 63 Front street east, now occupying the first floor.

Mr. D. Davies has been appointed comptroller of the Crow's Nest Pass Coal Co., with offices at Fernie, B.C. His duties include those of purchasing agent, and trade catalogues will be gladly received by him.

The Canadian Railway Club, Montreal, contains the official report of the proceedings of the Club held in Montreal on September 1, and in Toronto on September 7. At the Montreal meeting a most interesting paper on "Apprenticeship," by Mr. Robert Patterson, was read and discussed.

Mr. Charles H. Hines, Montreal, has been appointed electrical engineer for the Canadian Pacific Railway system. The office is a new one, and Mr. Hines' duties will include a general supervision over all electrical matters relating to that system.

Mr. Forrester B. Leslie, representing Messrs. A. C. Leslie & Co., iron, steel and metal merchants of Montreal, has taken an office at 503 McKinnon Building, Toronto, from which he will look after the interests of his company in Ontario.

Mr. T. T. Simpson, C.E., Ottawa, has been engaged by the plaintiffs in the case of Stone vs. The Ottawa Electric Co., which is a suit for damages arising from the death of George Stone, who was killed in the Ottawa Collegiate Institute in August.

#### POSSIBILITIES OF CANADIAN TRADE.

A few days ago Mr. J. D. Allan, a well known Toronto manufacturer, delivered an interesting address before the Liberal Club upon the possibilities of Canadian trade in the far east. Mr. Allan, who has just returned from a business trip to Russia and the famous fair and gathering of tradesmen of the east at Niji Novgorod, said that no other nation did as much in

the way of education for the Asiatic trade as Russia, pointing to the University of Vladivostok, where there are fifteen professors who are specialists in the Asiatic languages and customs, and asked whether Canada, in constructing transcontinental railways, realized that there was on the Pacific a consuming population greater than Europe. One of the greatest weaknesses of British commerce is the foreign consular service, and yet Canada has to depend upon it. What Britain wants is a Department of Commerce, presided over by a business enthusiast and not a Board of Trade with a university graduate as president. He pointed out that the Russians utilized the long winter nights by making canes, spoons, knives, etc., and thought our own people had not discovered the economic value of time. Referring to the agricultural development he said that the Russian Government in a few years established 240 creameries, which last year exported 70,000,000 pounds of the best butter to England to compete with the Canadian article, much of which worked greater mischief than could be overcome in years. On the future of the country economically, good government must rest, and he would like to see consideration of such subjects take the place of the bitterness of party politics.

The Winnipeg Elevator Co's elevator at Minette, Man., was destroyed by fire November 17.

The Western Pulp & Lumber Mills Co., Vancouver, B.C., will erect a pulp mill.

The Canadian Pacific Railway are installing a water-softening plant at Moose Jaw, N.W.T., at a cost of about \$30,000.

## New Telephone Line

### — IN — ONTARIO

A new copper metallic line has just been completed from Simcoe to Port Rowan, Ont. The towns listed below can now be reached from Toronto at the following rates:

Port Rowan	-	50c.
St. Williams	- -	50c.
Vittoria	- -	40c.

The BELL Telephone Co. of Canada

## CORUNDUM WHEELS, EMERY WHEELS and GRINDING MACHINERY

## CANADIAN CORUNDUM WHEEL CO. HAMILTON, - ONT.

## RICE LEWIS & SON, LIMITED, Hardware and Metal

MACHINIST TOOLS, PIPE FITTINGS,

COMPLETE STOCK OF STOCKS AND DIES. PIPE VICES.

STILLSON AND TRIMO WRENCHES.

STEAM PIPE.

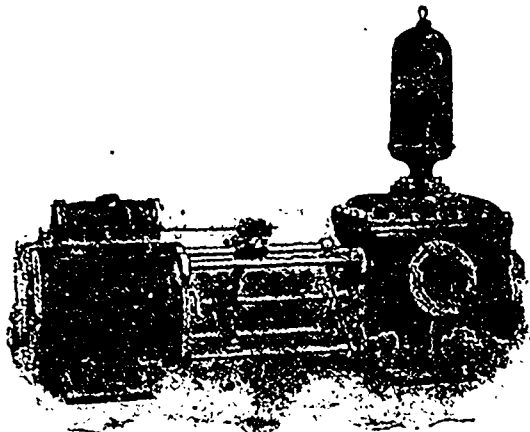
CORNER KING AND VICTORIA STREETS, - - - TORONTO.

When writing to Advertiser kindly mention THE CANADIAN MANUFACTURER.

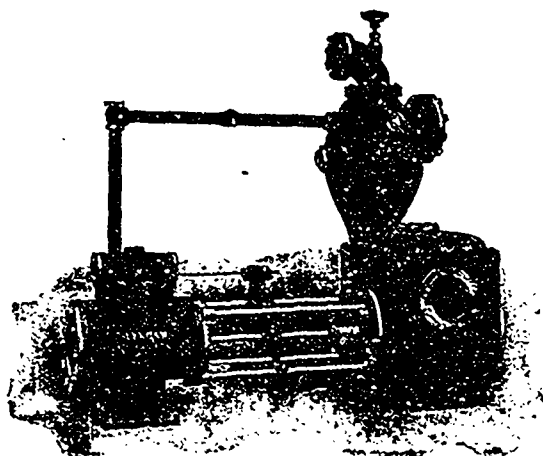
We Manufacture  
the

# Burnham Steam Pumps

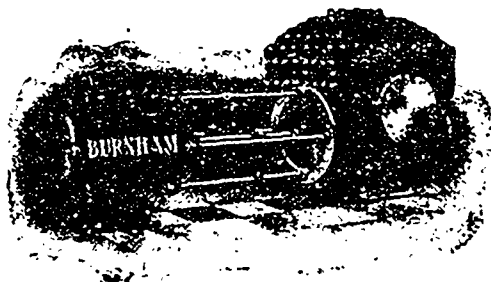
## For Every Service



BURNHAM HIGH DUTY AND BOILER FEED PUMP.



BURNHAM AIR PUMP AND JET CONDENSER.



BURNHAM VACUUM PUMP.

### OUR GUARANTEE

We guarantee all Steam Pumps made by us to be equal to the best the market affords, in quality and service. All pumps sold from our factory or through our Agents are made of the best material for the purpose, and in the best workman-like manner. They are thoroughly tested, and any pump ordered according to our tables can be returned at our expense and purchase money refunded, if it does not perform the service.

All parts are made duplicate, interchangeable, and can be furnished promptly.

Pumps will be furnished to responsible parties, and ample time given to test.

COMPLETE CATALOGUE MAILED ON APPLICATION.

# DARLING BROTHERS, "RELIANCE WORKS"

10 Ottawa Street,

MONTREAL

RICHARD DAWSON, Representative.  
Quebec Bank Building, TORONTO, ONT.

FRANK DARLING, Representative.  
Molson Bank Chambers, VANCOUVER, B.C.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

# English Card Clothing

FULL STOCK ON HAND

**"GENUINE OAK"**  
**Leather Belting**

OUR PRICES ARE LOW

## Rubber Belting

**D. K. McLAREN**

751 Craig Street, - - MONTREAL  
132 Bay Street, - - - TORONTO

NO NEED TO ENGAGE THE SERVICES OF  
A CONSULTING ENGINEER

— AS —

This expert service is

**Free to Canadian Manufacturers**

if they take out

**A Steam Boiler Policy**

in the

**Canadian Casualty and  
Boiler Insurance Co.**

A Steam Boiler Policy in the Canadian Casualty and Boiler Insurance Company insures your Boilers, Buildings, surrounding buildings, goods stored therein, Fire Insurance on lives of Engineers and Firemen; Public Liability Protection; Defense of Suit; Consultation of our expert Engineers FREE. Competent inspection.

Many of the largest Steam Plants in Canada are insured in the Canadian Casualty and Boiler Insurance Co.

Head Office—N.E. Cor. Adelaide & Victoria St. TORONTO

Write for our Book "To Canadian Manufacturers."

ALEX. SUTHERLAND, President.  
A. G. C. DINNICK, Managing Director.

51 Lime St., LONDON, E. O., ENG.

## BLAGDEN, WAUGH & CO.

Telegraphic Address: "PHENOLATE."

—SOLE AGENTS FOR—

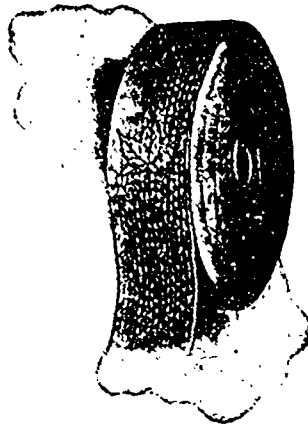
**THE DOMINION TAR & CHEMICAL CO., Limited,**

Works at Sydney, Cape Breton, CANADA.

Manufacturers of Pitch (Roofing and Target); Creosote (Dead Oil); Carbolic, Naptha, Disinfectants, Refined Tar.

Also Naphthalines (all qualities); Cyanides (Prussiates of Potash and Soda) and Ammonia Salts.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



Use our "MAPLE LEAF"  
Belt Dressing.

STITCHED  
**Cotton Duck Belting**

SUPERIOR TO ALL  
OTHER BELTING

— FOR —

Agricultural Machinery, Cement Mills, Cotton and Woolen Mills, Paper Mills, Pulp Mills, Electric Powers, Flour Mills, and all other classes of Machinery. Superior in Tensile, Strength, Pliability, Weight, Freedom from Stretching.

Manufactured by

**DOMINION BELTING CO.,**  
Limited,  
HAMILTON, ONT.

## THE CANADIAN OAK BELTING CO.

LIMITED

## TANNERS

MANUFACTURERS OF

### Pure Oak Tanned Leather Belting

SPECIAL

Patent Waterproof Cement Splice  
AND IX L Dove Tail Splice.

BRANCH:

771 Craig Street - MONTREAL

BROCKVILLE, ONT.

## TIRESOME

Lifting that carriage to inspect the writing. Actual tests made show the daily average to be 200 times. Think of it! Why not try an Underwood? The cost is only a trifle more.

Sole Canadian Dealers

### UNITED TYPEWRITER CO., Limited

15 Adelaide St. East, TORONTO.

W. H. SHAW, President.

J. J. SEITZ, Gen. Mgr.

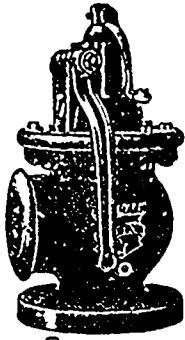
## TO BUILD A HOME

Is one of the first ambitions of the successful manufacturer or business man. When you are ready to plan call or write

**R. J. EDWARDS, Architect**

Canada Permanent Chambers

18 TORONTO STREET, - - - TORONTO



A VALVE YOU CAN RELY ON  
SEND FOR PRICES

### CROSBY STEAM APPLIANCES EXCEL

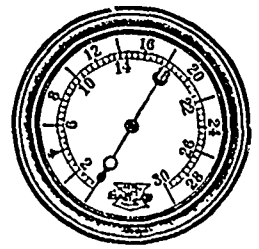
Steam Engine indicators.  
Recording Gages.  
Revolution Counters.  
Pressure and Vacuum Gages.  
Lubricators, etc.



Stationary and Marine Valves.  
Water Relief Valves.  
Blow-off Valves.  
Globe and Anglo Valves  
Single Bolt Chime Whistles.  
SEND FOR CATALOGUE

**CROSBY STEAM GAGE and VALVE CO.**  
BOSTON, NEW YORK, CHICAGO, LONDON

A TRUTHFUL GAGE IS THE ONLY GOOD GAGE



**CAMEL BRAND . . . BELTING**  
**BALATA . . .**  
**RUBBER . . .**

Linen Fire Hose,  
Water and Steam Hose,  
Packings, Etc., Etc.

**THE STANDARD**



**GOLD WATER PAINT**

WEATHER PROOF, FIRE PROOF  
WHITE AND COLORS.

**MILL SUPPLIES**

Lubricating Oils and Greases  
PAINT, PAINT OILS, ETC.

**W. A. FLEMING & CO.**

Montreal and St. John, N.B.

### THE CANADIAN COLORED COTTON MILLS COMPANY.

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

Only Wholesale Trade Supplied.

**D. MORRICE, SONS & CO.**  
AGENTS  
MONTREAL and TORONTO.

HYDRAULIC PRESSURE PUMP  
SMALL BOILER FEEDER  
LARGE BOILER FEEDER  
MARSH STEAM PUMPS  
STANDARD FOR ALL DUTIES  
MANUFACTURED BY AMERICAN STEAM PUMP CO.  
BATTLE CREEK MICH.  
PATENT FEED COVERING STEAM VALVE  
PATENT EAST SEATING WATER VALVES  
NO OUTSIDE VALVE GEAR  
FOR DEEP WELLS  
50,000 SOLD IN 13 YEARS  
MAXIMUM STRENGTH SIMPLICITY AND SERVICE  
COMPOUND  
LARGE TANK  
WRITE FOR NO. 11 CATALOGUE.

Canadian Agents **The A. R. WILLIAMS MACHINERY CO. LIMITED**  
Head Office, TORONTO  
Branch Office—MONTREAL

WHY  
**Manufacturers Locate**  
 — AT —  
**PETERBOROUGH**

An American manufacturing concern recently erected in Peterborough a Canadian branch factory—having a capacity to give employment to 800 hands—for export and Canadian trade.

**The following letter**, addressed to a Peterborough newspaper, gives the reason why :

*" We notice in your issue of Saturday, September 27, 1902, a statement by Mr. ——— at the meeting of the Peterborough Board of Trade, that we were induced to locate here through the influence of one man.*

*" Please permit us to state that Mr. ——— is incorrect in making a statement of this kind, privately or publicly, and evidently speaks without full knowledge, or, in fact, without any knowledge whatever on the matter, and in correcting this mis-statement permit us to assure you and the public that our Company came here on account of the natural advantages of Peterborough, which are the geographical location, railways, the water power, and the Trent Canal, which, we were assured, would be shortly completed, and which, when finished and in operation, will, in our opinion, secure to Peterborough all the industries that your city can comfortably take care of."*

**Peterborough offers Tax Exemption to Manufacturers.**

Peterborough is located on the Main Line of the Canadian Pacific Ry., Grand Trunk Ry. and the Trent Canal, and has with suburbs, a population of 15,000.

**For Electric Power at Lowest Rentals**

— APPLY TO —

**THE CENTRAL ONTARIO POWER CO., LIMITED**

**J. ALEXR. CULVERWELL, Managing Director,**

Address Branch Office—9 Toronto St., TORONTO.

Head Office—Cor. George & Hunter Sts., PETERBOROUGH.

**CLASSIFIED INDEX.****Abrasives.**

Canadian Corundum Wheel Co., Hamilton, Ont.  
Hart Corundum Wheel Co., Hamilton, Ont.  
Rice Lewis & Son, Toronto.  
Williams, A. R., Machinery Co., Toronto.

**Air Compressors**

American Steam Pump Co., Battle Creek, Mich.  
Canadian Hand Drill Co., Sherbrooke, Que.  
Cooper, James, Mfg. Co., Montreal.  
Darling Bros., Montreal.  
Jonckes Machine Co., Sherbrooke, Que.

**Air Reservoirs.**

Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

**Aluminum**

Syracuse Smelting Works, Montreal.

**Angles, Beams and Girders**

Bourne-Fuller Co., Cleveland, Ohio.  
Leslie, A. C. & Co., Montreal.  
Nova Scotia Steel & Coal Co., New Glasgow, N.S.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

**Annealing Boxes.**

Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

**Annealing Muffles and Furnaces.**

Morgan Construction Co., Worcester, Mass.  
Turner, Vaughn & Taylor, Cuyahoga Falls, Ohio

**Antimony**

Samuel, M. & L. Benjamin & Co., Toronto.  
Syracuse Smelting Works, Montreal.

**Anvils and Vices.**

Leslie, A. C. & Co., Montreal.

**Architects**

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

**Assayers.**

Metallurgical Laboratory, Pittsburg, Pa.  
Wentz, R. F. Engineering Co., Toronto.

**Axles**

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

**Babbitt Metal**

Samuel, M. & L. Benjamin & Co., Toronto.  
Syracuse Smelting Works, Montreal.

**Banks**

Bank of Hamilton, Hamilton, Ont.

**Bar Iron and Steel**

Bourne-Fuller Co., Cleveland, Ohio.  
Leslie, A. C. & Co., Montreal.  
Rice Lewis & Son, Toronto.  
Samuel, M. & L. Benjamin & Co., Toronto.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

**Bolt Dressing.**

Rosendale Belting Co., Toronto.  
Williams, A. R., Machinery Co., Toronto.

**Bolt Fasteners.**

Bristol Co., Waterbury, Conn.  
Rosendale Belting Co., Toronto.  
Williams, A. R., Machinery Co., Toronto.

**Bolting (Cotton.)**

Dominion Belting Co., Hamilton, Ont.  
Fleming, W. A. & Co., Montreal.  
Rosendale Belting Co., Toronto.

**Bolting (Leather.)**

Canadian Oak Belting Co., Brockville, Ont.  
Fleming, W. A. & Co., Montreal.  
McLaren, D. K., Montreal.  
Rice, Lewis & Son, Toronto.  
Williams, A. R., Machinery Co., Toronto.

**Bolting and Supplies**

Bristol Co., Waterbury, Conn.  
Canadian Oak Belting Co., Brockville, Ont.  
Carrier, Laine & Co., Loris, Que.  
Dominion Belting Co., Hamilton, Ont.  
Fleming, W. A. & Co., Montreal.  
Jeffrey Mfg. Co., Columbus, Ohio.  
McLaren, D. K., Montreal.  
Rice Lewis & Son, Toronto.  
Rosendale Belting Co., Toronto.  
Williams, A. R. Machinery Co., Toronto.

**Blot Heating Furnaces**

Morgan Construction Co., Worcester, Mass.

**Bobbins**

Wilson Bros. Bobbin Co., Liverpool, England.

**Bolt Taps**

Butterfield & Co., Rock Island, Que.

**Brass**

Samuel, M. & L. Benjamin & Co., Toronto.

## Combines the Best Qualities of Other Boilers

The Mumford Standard internally-fired boiler combines, to a remarkable extent, the best features of the Scotch and English types of internally-fired boilers, together with the lighter weight, less floor space, and more perfect circulation of the best boilers of the American water tube type.

The construction throughout, except the tube sheets, is cylindrical and spherical—requiring no stays. The boiler is supplied with an outer steel casting, or for brick setting, as desired by the customer.

The steam and water space is divided between two cylindrical shells. The thickness of plate is not so great as in the Scotch marine type, and the expensive and troublesome rear combustion chamber is avoided.

## Robb Engineering Co., Limited

AMHERST, N.S.

**AGENTS:**

WILLIAM MCKAY, 19 McKenzie Crescent, Toronto.

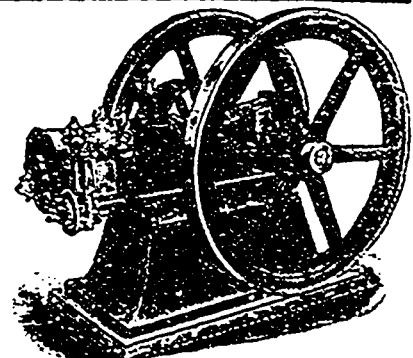
WATSON, JACK & CO., 7 St. Helen Street, Montreal

## GASOLINE ENGINES

3 to 21 Horse Power.

Write for prices and descriptive matter.

The Dominion Motor & Machine Co.,  
50 Esplanade St. East,  
TORONTO.



## HAMILTON COTTON CO.

HAMILTON, ONTARIO

## YARN DYERS and BLEACHERS

Manufacturers.

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, WEBBINGS, Etc.

Dyeing of all Colors, including GENUINE FAST BLACK.

### BROWN & CO.

Manufacturers of

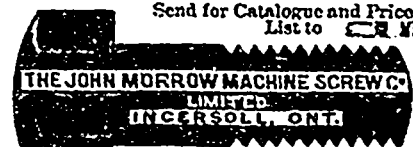
Square and Hexagon

HOT PRESSED NUTS.

PARIS, - ONT.



Send for Catalogue and Price List to



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



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

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



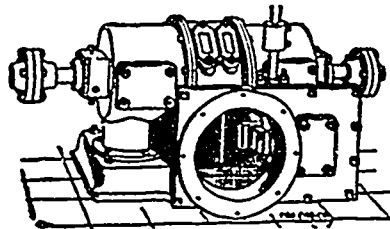
3 in. to 60 in. diameter.  
**For Water, Gas, Culverts and Sewers**

Special Castings and all kinds of

FLEXIBLE AND FLANGE PIPE.

**WATER WORKS SUPPLIES**

**HAMILTON, ONT.**



Horizontal Type.

**"LITTLE GIANT"  
TURBINE**

....FOR ALL PURPOSES....

HORIZONTAL AND VERTICAL  
BUILT IN 44 SIZES.

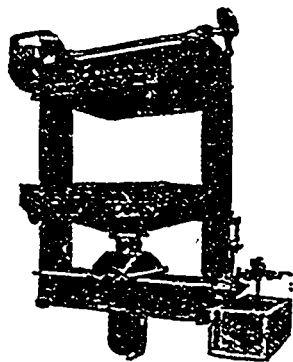
We guarantee a higher percentage of power from water used than any other wheel on the market.

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.**



**Hydraulic Screw**

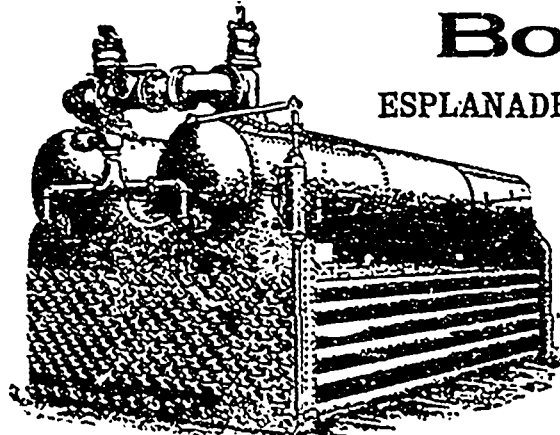
and

**Filter Presses.**

**WILLIAM R. PERRIN & COMPANY**  
Toronto, - Canada.

**The Canadian Heine Safety Boiler Co.**

**JOHN J. MAIN,**  
President and Manager.



ESPLANADE (Opp. Sherbourne St.)

**TORONTO**

HIGH-CLASS  
**Water Tube Steam Boilers..**

FOR ALL PRESSURES  
DUTIES AND FUEL

From 75 to 800 H.P. Each

REFERENCES :

N.B.—We do not make small Boilers

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 Mutual Co., Confederation Life Co. (all of Toronto, where Boilers may be seen working), also Orillia A. Gunn, Orillia, Ont., and LaPresse Publishing Co., Montreal.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

**CLASSIFIED INDEX.**

(CONTINUED).

**Brass Founders**

Hamilton Brass Mfg. Co., Hamilton, Ont.  
Meadows, Geo. B. Wire, Iron & Brass Works Co. Toronto.  
McDougall, R. Co., Galt, Ont.  
McKinnon Dash & Metal Works Co., St. Catharines, Ont.

**Bridges.**

Scalfe, Wm. B. & Sons Co., Pittsburg, Pa.

**Building Iron and Steel.**

Canada Foundry Co., Toronto.  
Expanded Metal & Fireproofing Co., Toronto.  
Scalfe, Wm. B. & Sons Co., Pittsburg, Pa.

**Builders' Materials**

Albert Mfg. Co., Hillsboro, Ont.  
Canada Foundry Co., Toronto.  
Canadian Oils Elevator Co., Toronto.  
Canadian Portland Cement Co., Deseronto, Ont.  
Expanded Metal & Fireproofing Co., Toronto.  
Gartshore, John J., Toronto.  
Metallic Roofing Co., Toronto.  
Owen Sound Portland Cement Co., Owen Sound Ont.  
Rice Lewis & Son, Toronto.  
Sheldon & Sheldon, Galt, Ont.

**Canada's Plates**

Leslie, A. C. & Co., Montreal.  
Nova Scotia Steel & Coal Co., New Glasgow, N.S.  
Samuel, M. & L. Benjamin & Co., Toronto.

**Canoes**

Peterborough Canoe Co., Peterborough, Ont.

**Caps.**

McAllough-Dalzell Crucible Co., Pittsburg, Pa.

**Cast Iron Pipe**

Canada Foundry Co., Toronto.  
Gartshore-Thomson Pipe & Foundry Co., Hamilton, Ont.  
Rice Lewis & Son, Toronto.  
Montreal Pipe Foundry Co., Montreal.

**Castings (Iron and Brass.)**

Toronto Iron & Brass Rodstock Co., Toronto.

**Cement**

Canadian Portland Cement Co., Deseronto, Ont.  
Owen Sound Portland Cement Co., Owen Sound, Ont.

**Cement Machinery.**

Wentz, R. F. Engineering Co., Toronto.

**Chain Making Machinery**

Turner, Vaughn & Taylor, Cuyahoga Falls, Ohio.

**Channels**

Bourne-Fuller Co., Cleveland, Ohio.  
Leslie, A. C. & Co., Montreal.  
Nova Scotia Steel & Coal Co., New Glasgow, N.S.  
Samuel, M. & L. Benjamin & Co., Toronto.  
Scalfe, Wm. B. & Sons Co., Pittsburg, Pa.

**Charcoal Pig Iron**

Canada Iron Furnace Co., Montreal.

**Chemicals and Dye Stuffs**

Bellhouse, Dillon & Co., Montreal.  
Benson, W. T. & Co., Montreal.  
Brunner, Mond & Co., Northwich, England.  
Cassella Color Co., New York City.  
Geigy Aniline & Extract Co., New York City.  
Kliefstein, A. & Co., New York City.  
McArthur, Cornelio & Co., Montreal.  
Winn & Holland, Montreal.

**Chemists**

Archbold, Dr. Geo., Prescott, Ont.  
Heys, Thos. & Son, Toronto.  
Metallurgical Laboratory, Pittsburg, Pa.  
Wentz, R. F. Engineering Co., Toronto.

**Clay Working Machinery.**

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

**Coal and Coke**

Millnes, James H., & Co., Toronto.

**Coal Cutting Machines**

Jeffrey Mfg. Co., Columbus, Ohio.

**Coal Tippers.**

Jeffrey Mfg. Co., Columbus, Ohio.  
Scalfe, Wm. B. & Sons Co., Pittsburg, Pa.

**Coil Chains.**

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

**Continuous Rolling Mills**

Morgan Construction Co., Worcester, Mass.

**Contractors' Machinery**

Carl's, Thomas Sons Co., Allegheny, Pa.

# CLASSIFIED INDEX.

(CONTINUED.)

### Conveying Machinery

Dodge Mfg. Co., Toronto.  
 Jeffrey Mfg. Co., Columbus, Ohio.  
 Perrin, William R., & Co., Toronto.  
 Stevens, Alfred J., Toronto.

### Copper Materials

Greening, B. Wire Company, Hamilton, Ont.  
 Samuel, M. & L. Benjamin & Co., Toronto.  
 Syracuse Smelting Works, Montreal.  
 Wire & Cable Co., Montreal.

### Corrugated Iron and Steel.

Scalfo, Wm. B. & Sons Co., Pittsburg, Pa.

### Corundum.

Canada Corundum Co., Toronto.

### Corundum Wheels.

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

### Covers.

McCullough-Dalzell Crucible Co., Pittsburg, Pa.

### Crayons

Lowell Crayon Co., Lowell Mass.

### Crucibles

Dixon, Joseph, Crucible Co., Jersey City, N.J.  
 McCullough-Dalzell Crucible Co., Pittsburg, Pa.  
 Samuel, M. & L. Benjamin & Co., Toronto.  
 Syracuse Smelting Works, Montreal.

### Crucible Caps and Nozzles

McCullough-Dalzell Crucible Co., Pittsburg, Pa.

### Crucible Covers and Stoppers

McCullough-Dalzell Crucible Co., Pittsburg, Pa.

### Dies

Hamilton Stamp & Stencil Works, Hamilton, Ont.  
 Dies (Socket, Sower Pipe and Tile-Clay)  
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

### Directories

Kelly's Directories, Limited, Toronto.

### Draw Benches (Wire.)

Morgan Construction Co., Worcester, Mass.  
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

### Drills

Bertram, John, & Sons Co., Dundas, Ont.  
 Canadian Rand Drill Co., Sherbrooke, Que.  
 Cooper, James, Mfg. Co., Montreal.  
 Jeffrey Mfg. Co., Columbus, Ohio.  
 London Machine Tool Co., London, Ont.

### Dry Kilns.

Sheldon & Sheldon, Galt, Ont.  
 Stevens, Alfred J., Toronto.  
 Sturtevant, B. F. Co., Boston, Mass.

### Dust and Shavings Separators

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

### Electric Mine Locomotives

Jeffrey Mfg. Co., Columbus, Ohio.

### Electrical Supplies

Canadian General Electric Co., Toronto.  
 Electrical Construction Co., London, Ont.  
 Forman, John, Montreal.  
 Jones & Moore Electric Co., Toronto.  
 Kay Electric Dynamo & Motor Co., Toronto.  
 Packard Electric Co., St. Catharines, Ont.  
 Phillips, Eugene F., Electrical Works, Montreal.  
 Toronto & Hamilton Electric Co., Hamilton, Ont.  
 United Electric Co., Toronto.  
 Worth & Martin, Toronto.

### Electro-Plating

Brantford Plating Co., Brantford, Ont.

### Elevators

Canadian Oils Elevator Co., Toronto.  
 Darling Bros., Montreal.  
 Jeffrey Mfg. Co., Columbus, Ohio.

### Emery and Emery Wheels.

Canadian Corundum Wheel Co., Hamilton, Ont.  
 Forman, John, Montreal.  
 Hart Corundum Wheel Co., Hamilton, Ont.

### Employers' Liability Insurance

Maryland Casuply Co., Toronto.

### Engineers (Cement).

Wentz, H. F. Engineering Co., Toronto.

### Engineers (Chemical.)

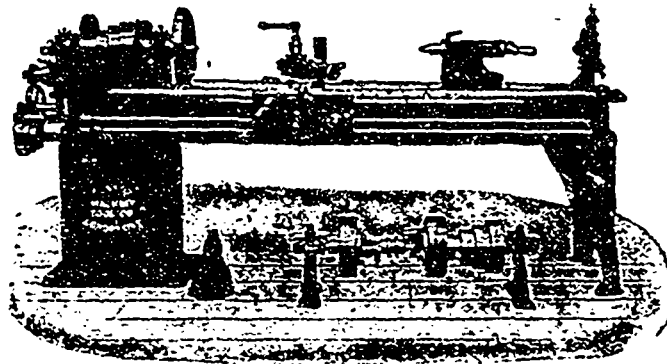
Heyk, Thos. & Son, Toronto.  
 Metallurgical Laboratory, Pittsburg, Pa.

# DIXON

WHEN your engine groans, it needs Dixon's Graphite. Give it a spoonful and see how much better it feels and works. A single dose may cure. Ask for booklet 33-C.

JOSEPH DIXON CRUCIBLE COMPANY, JERSEY CITY, N.J.

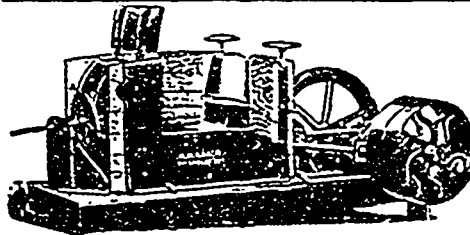
## The London Machine Tool Co., LONDON, ONT.



MANUFACTURERS OF

### GENERAL MACHINERY

- LATHES
- PLANERS
- DRILLS
- SHAPERS
- HAMMERS
- BULL DOZERS
- PUNCHES
- PRESSES



## H. W. KARCH

HESPELER, ONT.

### IRON FOUNDER and MACHINIST

Manufacturer of

### WOOLEN MACHINERY,

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

## MOTORS For All Circuits.

DIRECT OF ALTERNATING.

Phone Main 4227.

## The Electric Engineering and Supply Co., MONTREAL, CANADA.

MAIN FACTORY—BRADFORD, ENG.

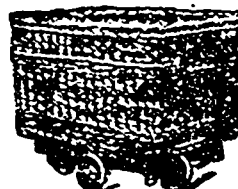
CANADIAN FACTORY—MONTREAL

# WE BUILD TRUCKS

That sustain our Reputation.

THE LARGEST TRUCK ESTABLISHMENT IN THE WORLD.

NOTHING BUT THE BEST

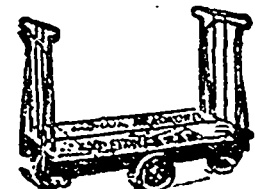


Spins Like a Top.

For the Warehouse, Factory, Brewery, Stores, Hospital—in fact for every conceivable purpose—all on the famous Slingsby Patent Sliding Wheel Principle.

HAVE YOU SEEN IT?

We also make special Trucks. Simply give us your ideas.



Runs either way

H. C. Slingsby for Canada

TEMPLE BLOC, MONTREAL.

Advertise in The Canadian Manufacturer. Send for Rates.

## Hyde Water Tube Safety Boiler

The modern boiler for  
Rolling Mills, Blast  
Furnaces, and general  
power purposes.

In successful operation  
in every state from  
Atlantic to Rockies.

## HYDE BROS. & CO.

PITTSBURG, PA.

## WM. BARBER & BROS.

Georgetown, Ont.

Manufacturers of.....

## Book and Fine Papers.

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.

## Smith Wool-Stock Co.

219 FRONT ST. E., TORONTO.

Makers of

## WOOL STOCK, SHODDIES, Etc.

## The Toronto Iron & Brass Bedstead Co.

148, 148 and 150

Niagara Street, TORONTO

Manufacturers of...

ORNAMENTAL IRON AND BRASS

## Bedsteads

OF ALL KINDS.

WRITE FOR PRICES

## CLASSIFIED INDEX.

(CONTINUED).

### Engineers (Civil)

DeLano-Osborn Engineering Co., Toronto.  
Kelsch, R. S., Montreal.  
Parke, R. J., Toronto.  
Vogel, C. H., Ottawa.

### Engineers (Consulting)

DeLano-Osborn Engineering Co., Toronto.  
Electrical Construction Co., London, Ont.  
Kelsch, R. S., Montreal.  
Morgan Construction Co., Worcester, Mass.  
Parke, R. J., Toronto.  
Perrin, Wm. H. & Co., Toronto.  
Simpson, T. T., Deschênes, Que.  
Vogel, C. H., Ottawa.  
Wentz, R. F., Engineering Co., Toronto.

### Engineers (Contracting)

Darling Bros., Montreal.  
Electrical Construction Co., London, Ont.

### Engineers (Electrical)

Canadian General Electric Co., Toronto.  
DeLano-Osborn Engineering Co., Toronto.  
Electrical Construction Co., London, Ont.  
Electric Engineering & Supply Co., Montreal.  
Jones & Moore Electric Co., Toronto.  
Kay Electric Dynamo & Motor Co., Toronto.  
Toronto & Hamilton Electric Co., Hamilton, Ont.  
United Electric Co., Toronto.  
Worth & Martin, Toronto.

### Engineers (Mechanical)

Carrier, Laine & Co., Louis, Quebec.  
Darling Bros., Montreal.  
DeLano-Osborn Engineering Co., Toronto.  
Electrical Construction Co., London, Ont.  
Kelsch, R. S., Montreal.  
Kerr Engine Co., Walkerville, Ont.  
Morgan Construction Co., Worcester, Mass.  
Robb Engineering Co., Amherst, N.S.  
Sheldon & Sheldon, Galt, Ont.  
Wentz, R. F., Engineering Co., Toronto.

### Engineers (Mill and Hydraulic)

Vogel, C. H., Ottawa.

### Engineers (Mining)

Heys, Thos. & Son, Toronto.  
Metallurgical Laboratory, Pittsburg, Pa.  
Mills, S. D., Toronto.

### Engineers and Contractors.

Jeffrey Mfg. Co., Columbus, Ohio.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Engines and Boilers

Babcock & Wilcox, Limited, Montreal.  
Canadian Heino Safety Boiler Co., Toronto.  
Cowan & Co., Galt, Ont.  
Goldie & McCulloch Co., Galt, Ont.  
Hyde Bros. & Co., Pittsburg, Pa.  
Leonard, F. & Sons, London, Ont.  
McDougall, R. Co., Galt, Ont.  
Robb Engineering Co., Amherst, N.S.  
Scaife Wm. B. & Sons Co., Pittsburg, Pa.  
Stratford Mill Building Co., Stratford, Ont.  
Williams, A. R., Machinery Co., Toronto.

### Engravers

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

### Exhaust Heads

Burt Mfg. Co., Akron, Ohio.  
Darling Bros., Montreal.

### Exporters

Canadian Export Co., Toronto.

### Factory Sites

Central Ontario Power Co., Peterboro, Ont.

### Films

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

### Financial

Bradstreet's, New York City.  
Dun, R. G. & Co., Toronto.  
Neff & Postelthwait, Toronto.

### Filters

Burt Mfg. Co., Akron, Ohio.  
Darling Bros., Montreal.  
Perrin, Wm. H. & Co., Toronto.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Fire Brick

Hamilton Facing Mill Co., Hamilton, Ont.  
Pennsylvania Fire Brick Co., Lock Haven, Pa.  
Scioto Fire Brick Co., Sciotoville, Ohio.

### Founders

Canada Foundry Co., Toronto.  
Cowan & Co., Galt, Ont.  
Gartshore-Thomson Pipe & Foundry Co., Hamil-  
ton, Ont.  
Karch, H. W., Hespeler, Ont.  
McDougall, The R. Co., Galt, Ont.

### Foundry Facing

Hamilton Facing Mill Co., Hamilton, Ont.

### Galvanized Iron and Steel.

Leelle, A. C. & Co., Montreal.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Galvanizing

Brantford Plating Co., Brantford, Ont.  
Ontario Wind Engine & Pump Co., Toronto.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Galvanizing and Tinning Machinery and Furnaces (Clay.)

Morgan Construction Co., Worcester, Mass.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls  
Ohio.

### Gas and Gasoline Engines

Dominion Motor & Machine Co., Toronto.  
Goldie & McCulloch Co., Galt, Ont.  
Morrison, T. A. & Co., Montreal.  
Stratford Mill Building Co., Stratford, Ont.

### Gas Plants

Sicho Gas Co., Toronto.

### Gas Producers.

Morgan Construction Co., Worcester, Mass.

### Generators

Canadian General Electric Co., Toronto.  
Electrical Construction Co., London, Ont.  
Forman, John, Montreal.  
Jeffrey Mfg. Co., Columbus, Ohio.  
Jones & Moore Electric Co., Toronto.  
Kay Electric Dynamo & Motor Co., Toronto.  
Phillips, Eugene F., Electrical Works, Montreal.  
Toronto & Hamilton Electric Co., Hamilton, Ont.

### Government Notices

Factory Inspectors.  
Minister of Agriculture.

### Grinding Machinery

Hart Corundum Wheel Co., Hamilton, Ont.

### Grinding Pans

Carlin's, Thomas Sons Co., Allegheny, Pa.

### Hand Traveling Cranes

Morgan Construction Co., Worcester, Mass.

### Hardware

Butterfield & Co., Rock Island, Que.  
Cooper, James, Montreal.  
Empire Machine & Metal Stamping Co., Toronto.  
Gartshore, John J., Toronto.  
Morrow, John, Machine Screw Co., Ingersoll, Ont.  
Rice Lewis & Son, Toronto.  
Samuel, M. & L. Benjamin & Co., Toronto.

### Hoating and Ventilating

Darling Bros., Montreal.  
Leonard, F. & Sons, London, Ont.  
Sheldon & Sheldon, Galt, Ont.  
Stevens, Alfred J., Toronto.  
Sturtevant, B. F., Co., Boston, Mass.

### Hydraulic Accumulators

Morgan Construction Co., Worcester, Mass.

### Hydraulic Cranes

Morgan Construction Co., Worcester, Mass.

### Hydraulic Machinery

Darling Bros., Montreal.  
Jenckes Machine Co., Sherbrooke, Que.  
Morgan Construction Co., Worcester, Mass.  
Perrin, Wm. H. & Co., Toronto.  
Wilson, J. C. & Co., Glenora, Ont.

### Iron and Steel Specialties

Abbott, William, Montreal.  
Armstrong Mfg. Co., Bridgeport, Conn.  
Bourne-Fuller Co., Cleveland, Ohio.  
Brown & Co., Paris, Ont.  
Dodgo Mfg. Co., Toronto.  
Karch, H. W., Hespeler, Ont.  
Leslie, A. C. & Co., Montreal.  
Mendows, Geo. B. Wire, Iron & Brass Works Co.  
Toronto.  
McDougall, R. Co., Galt, Ont.  
Nova Scotia Steel & Coal Co., New Glasgow, N.S.  
Rice Lewis & Son, Toronto.  
Samuel, M. & L. Benjamin & Co., Toronto.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Lamps—Electric

Forman, John, Montreal.  
Packard Electric Co., St. Catharines, Ont.

### Lathes

Bertram, John, & Sons Co., Dundas, Ont.  
London Machine Tool Co., London, Ont.  
McDougall, R. Co., Galt, Ont.  
Williams, A. R., & Co., Toronto.

### Leather Belting

Canadian Oak Belting Co., Brockville, Ont.  
Fleming, W. A. & Co., Montreal.  
McLaren, D. K., Montreal.  
Rice Lewis & Son, Toronto.  
Williams, A. R. Machinery Co., Toronto.

# CLASSIFIED INDEX.

(CONTINUED).

## Machinists.

Worth & Martin, Toronto.

## Machinists' Supplies

Armstrong Mfg. Co., Bridgeport, Conn.  
Butterfield & Co., Rock Island, Que.  
Cooper, James, Montreal.  
Goldie & McCulloch Co., Galt, Ont.  
Jeffrey Mfg. Co., Columbus, Ohio.  
Morrow, John, Machine Screw Co., Ingersoll, Ont.  
Worth & Martin, Toronto.

## Machino Tools

Abbott, William, Montreal.  
Bertram, John, & Sons Co., Dundas, Ont.  
Darling Bros., Montreal.

## Malleable Iron Castings

McKinnon Dash & Metal Works Co., St. Catharines, Ont.  
Ontario Malleable Iron Co., Oshawa, Ont.  
Smith's Falls Malleable Castings Co., Smith's Falls, Ont.  
Walkerville Malleable Iron Co., Ltd., Walkerville, Ont.

## Metal Shears

Morgan Construction Co., Worcester, Mass.

## Metal Specialties

Brantford Plating Co., Brantford, Ont.

## Metal Stamping

Empire Machine & Metal Stamping Co., Toronto.

## Metallurgists.

Metallurgical Laboratory, Pittsburg, Pa.  
Mills, S. D., Toronto.  
Wentz, R. F. Engineering Co., Toronto.

## Mill Machinery and Supplies

Armstrong Mfg. Co., Bridgeport, Conn.  
Cooper, James, Montreal.  
Cooper, James, Mfg. Co., Montreal.  
Cowan & Co., Galt, Ont.  
Darling Bros., Montreal.  
Fleming, W. A., & Co., Montreal.  
Gartshore, John J., Toronto.  
Goldie & McCulloch Co., Galt, Ont.  
Jeffrey Mfg. Co., Columbus, Ohio.  
Hamilton Brass Mfg. Co., Hamilton, Ont.  
Hay, Peter Knife Co., Galt, Ont.  
Jenckes Machine Co., Sherbrooke, Que.  
Karch, H. W., Hespeler, Ont.  
Leonard, E. & Sons, London, Ont.  
London Machine Tool Co., London, Ont.  
McDougall, R. Co., Galt, Ont.  
Morrow, John, Machine Screw Co., Ingersoll, Ont.  
Rico Lewis & Son, Toronto.  
Robb Engineering Co., Amherst, N.S.  
Samuel, M. & L. Benjamin & Co., Toronto.  
Sponco, R. & Co., Hamilton, Ont.  
Stratford Mill Building Co., Stratford, Ont.  
Wilson, J. C., & Co., Glenora, Ont.

## Mining Machinery

Canadian Rand Drill Co., Sherbrooke, Que.  
Cooper, James, Montreal.  
Cooper, James Mfg. Co., Montreal.  
Jeffrey Mfg. Co., Columbus, Ohio.  
Jenckes Machine Co., Sherbrooke, Que.  
Porrin, Wm. H. & Co., Toronto.  
Williams, A. R. Machinery Co., Toronto.

## Motors and Dynamos

Canadian General Electric Co., Toronto.  
Electrical Construction Co., London, Ont.  
Forman, John, Montreal.  
Jeffrey Mfg. Co., Columbus, Ohio.  
Jones & Moore Electric Co., Toronto.  
Kay Electric Dynamo and Motor Co., Toronto.  
Toronto & Hamilton Electric Co., Hamilton, Ont.  
United Electric Co., Toronto.

## Novelty Manufacturers.

Worth & Martin, Toronto.

## Nozzles.

McCullough-Dalzell Crucible Co., Pittsburg, Pa.

## Office Furniture and Supplies

Canadian Office & School Furniture Co., Preston, Ont.

## Oils and Lubricants

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

## Oil Filters

Burt Mfg. Co., Akron, Ohio.  
Darling Bros., Montreal.

## Paints and Colors

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

## Paper Manufacturers

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

## Patents

Budden, Hanbury A., Montreal.  
Case, Egerton R., Toronto.  
Fotherstonhaugh & Co., Toronto.  
Patent Exchange & Investment Co., Toronto, Ont.

## Perforated Metals

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

## Phosphorizers.

McCullough-Dalzell Crucible Co., Pittsburg, Pa.

## Pig Iron

Bourne-Fuller Co., Cleveland, Ohio.  
Canada Iron Furnace Co., Montreal.  
Nova Scotia Steel & Coal Co., New Glasgow, N.S.  
Samuel, M. & L. Benjamin & Co., Toronto.  
Syracuse Smelting Works, Montreal.

## Pipe Threading Machines

Armstrong Mfg. Co., Bridgeport, Conn.  
Rico Lewis & Son, Toronto.

## Pipe (Rivoted Iron and Steel.)

Scalfo, Wm. B. & Sons Co., Pittsburg, Pa.

## Pipes and Tubes

Abbott, William, Montreal.  
Bourne-Fuller Co., Cleveland, Ohio.  
Canada Foundry Co., Toronto.  
Gartshore-Thomson Pipe & Foundry Co., Hamilton, Ont.  
Montreal Pipe Foundry Co., Montreal.  
Rico Lewis & Son, Toronto.  
Samuel, M. & L. Benjamin & Co., Toronto.

## Plaster

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

## Plates

Bourne-Fuller Co., Cleveland, Ohio.  
Nova Scotia Steel & Coal Co., New Glasgow, N.S.  
Rico Lewis & Son, Toronto.  
Samuel, M. & L. Benjamin & Co., Toronto.  
Scalfo, Wm. B. & Sons Co., Pittsburg, Pa.

## Plating

Brantford Plating Co., Brantford, Ont.

## Plumbago

McCullough-Dalzell Crucible Co., Pittsburg, Pa.

## Pneumatic Tools

Chicago Pneumatic Tool Co., Chicago, Ill.  
Cooper, James, Mfg. Co., Montreal.  
Jenckes Machine Co., Sherbrooke, Que.

## Pointers (For Rods and Wire.)

Morgan Construction Co., Worcester, Mass.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

## Portland Cement

Canadian Portland Cement Co., Deseronto, Ont.  
Owen Sound Portland Cement Co., Owen Sound, Ont.  
Rathbun Co., Toronto.  
St. Lawrence Portland Cement Co., Montreal.

## Power-Electric and Water

Central Ontario Power Co., Peterboro, Ont.

## Power Plants-Equipments

Canadian General Electric Co., Toronto.  
Cooper, James, Mfg. Co., Montreal.  
Darling Bros., Montreal.  
DeLavo-Osborn Engineering Co., Toronto.  
Electrical Construction Co., London, Ont.  
Goldie & McCulloch, Galt, Ont.  
Jeffrey Mfg. Co., Columbus, Ohio.  
Jenckes Machine Co., Sherbrooke, Que.  
Jones & Moore Electric Co., Toronto.  
Kay Electric Dynamo & Motor Co., Toronto.  
Leonard, E. & Sons, London, Ont.  
Perrin, Wm. R. & Co., Toronto.  
Phillips, Eugene F. Electrical Works, Montreal.  
Robb Engineering Co., Amherst, N.S.  
Stevens, Alfred J., Toronto.  
Sturtevant, B. F., Co., Boston, Mass.  
Toronto & Hamilton Electric Co., Hamilton, Ont.  
United Electric Co., Toronto.  
Wilson, J. C., & Co., Glenora, Ont.

Presses (Tilo, Sewer Pipe, Nozzles and Sleeves.)

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

## Pulleys

Darling Bros., Montreal.  
Dodgo Mfg. Co., Toronto.  
Goldie & McCulloch Co., Galt, Ont.  
Jeffrey Mfg. Co., Columbus, Ohio.  
Wilson, J. C., & Co., Glenora, Ont.

## Purifiers

Cowan & Co., Galt, Ont.  
Goldie & McCulloch Co., Galt, Ont.  
Scalfo, Wm. B. & Sons Co., Pittsburg, Pa.

## Purifying System (Water.)

Darling Bros., Montreal.  
Scalfo, Wm. B. & Sons Co., Pittsburg, Pa.



**FIRE-PROOF GLASS WINDOWS.**

They give absolute security—resist intense fire heat, as well as the action of water.

Arranged to open with this "fusible link" attachment, they close and lock automatically if a fire occurs—150° melts the link—thus giving complete and perfect protection.

This "wired glass" admits the light as freely as plain glass—is rather ornamental in effect, and greatly lessens insurance rates.

Full information if you write  
**METALLIC ROOFING CO.,**  
Wholesale Mfrs. LIMITED,  
TORONTO, CANADA.



**ONTARIO WIND ENGINE AND PUMP CO.**  
Limited  
Phone : 822  
Atlantio Avenue  
Toronto

**KERR'S VALVES**

**ARE FOR SALE BY ALL FIRST-CLASS DEALERS IN STEAM SPECIALTIES**

**Ask for KERR'S**

**The Kerr Engine Co. Limited**  
WALKERVILLE, - ONT.

# BANK OF HAMILTON

J. TURNBULL, General Manager.

HEAD OFFICE, - HAMILTON, ONT.

Capital.	Reserve.	Total Assots.
\$2,000,000	\$1,700,000	\$22,000,000

### BRANCHES IN

TORONTO, MONTREAL, WINNIPEG, VANCOUVER,  
and all principal towns in Canada.

Collections made in all parts of Canada.

CHARLES F. CLARK,  
President.

JARED CHITTRNDEN,  
Treasurer.

Established 1849.

# BRADSTREET'S

Capital and Surplus, \$1,500,000

Offices Throughout the Civilized World.

### EXECUTIVE OFFICES,

348 & 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.	Winnipeg, Man.

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

# The Mercantile Agency

ESTABLISHED 1841.

# R. G. DUN & CO.

Offices in 169 of the leading business  
centres of the world.

### CANADIAN OFFICES

TORONTO,	MONTREAL,
HAMILTON,	QUEBEC,
LONDON,	OTTAWA,
WINNIPEG,	ST. JOHN,
VANCOUVER,	HALIFAX.

W. O. MATTHEWS, Toronto,  
General Manager for Canada.

# Do You Use CRAYONS ?

Ours are made by Cotton Mill Men, who  
know what the ingredients should be.

Ours will wash off the goods in process of  
manufacture without leaving a stain.

LOWELL CRAYON CO., - LOWELL, MASS.

Original Makers. Samples Sent.

# WOOD ENGRAVING PHOTO ENGRAVING HALF TONES

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

J. L. JONES ENG. CO.  
168 BAY ST. - TORONTO

# CLASSIFIED INDEX.

(CONTINUED).

### Railroads

Chicago & North-Western Ry., Toronto & St.  
Paul, Minn.  
Quebec Central Railway, Sherbrooke, Que.

### Railway Supplies

Algoma Steel Co., Sault Ste. Marie, Ont.  
Cooper, James, Montreal.  
Gartshore, John J., Toronto.  
Greening, B. Wire Co., Hamilton, Ont.  
Montreal Steel Works, Montreal.  
Nova Scotia Steel & Coal Co., New Glasgow, N.S.  
Phillips, Eugene F., Electrical Works, Montreal.

### Rivets

Bourne-Fuller Co., Cleveland, Ohio.

### Roll Lathes

Morgan Construction Co., Worcester, Mass.

### Rolling Mills

Morgan Construction Co., Worcester, Mass.

### Rolling Mill Engineers

Morgan Construction Co., Worcester, Mass.

### Roofing

Metallic Roofing Co., Toronto.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Rubber Goods

Gutta Percha & Rubber Mfg. Co., Toronto.

### Shafting

Bourne-Fuller Co., Cleveland, Ohio.  
Jeffrey Mfg. Co., Columbus, Ohio.  
Nova Scotia Steel & Coal Co., New Glasgow, N.S.

### Shear Knives

Carlin's, Thomas Sons Co., Allegheny, Pa.  
Hay, Peter Knife Co., Galt, Ont.

### Sheets (Iron and Steel)

Abbott, William, Montreal.  
Bourne-Fuller Co., Cleveland, Ohio.  
Leslie, A. C. & Co., Montreal.  
Samuel, M. & L. Benjamin & Co., Toronto.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Smoke Stacks

Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Softening Systems (Water)

Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Solder

Syracuse Smelting Co., Montreal.

### Stamps & Stencils

Hamilton Stamp & Stencil Works, Hamilton, Ont.

### Stand Pumps

Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Steam Gauges

American Steam Pump Co., Battle Creek, Mich.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
Williams, A. R., Machinery Co., Toronto.

### Steam Pumps

American Steam Pump Co., Battle Creek, Mich.  
Darling Bros., Montreal.  
Goldie & McCulloch Co., Galt, Ont.  
Leonard, E. & Sons, London, Ont.  
Williams, A. R., Machinery Co., Toronto.

### Steam Separators

Darling Bros., Montreal.

### Steam Specialties

Darling Bros., Montreal.

### Steam Valves

American Steam Pump Co., Battle Creek, Mich.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
Darling Bros., Montreal.  
Kerr Engine Co., Walkerville, Ont.  
Williams, A. R., Machinery Co., Toronto.

### Steel Plants

Morgan Construction Co., Worcester, Mass.

### Steel Rails

Algoma Steel Co., Sault Ste. Marie, Ont.  
Cooper, James, Montreal.  
Drummond, McCall & Co., Montreal and Toronto.

### Steel Shafting

Darling Bros., Montreal.  
Dodgo Mfg. Co., Toronto.  
Leslie, A. C. & Co., Montreal.  
Nova Scotia Steel & Coal Co., New Glasgow, N.S.  
Wilsor, J. C. & Co., Glendon, Ont.

### Stocks and Dies

Armstrong Mfg. Co., Bridgeport, Conn.  
Butterfield & Co., Rock Island, Que.  
Rico Lewis & Son, Toronto.  
Worth & Martin, Toronto.

### Stoppers.

McCullough-Dalzell Crucible Co., Pittsburg, Pa.

### Structural Steel.

Abbott, William, Montreal.  
Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Tanks (Iron and Steel.)

Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Teas

Bourne-Fuller Co., Cleveland, Ohio.

### Textile Manufacturers

Canadian Colored Cotton Mills Co., Montreal.  
Cantile, James A., Montreal.  
Dominion Oil Cloth Co., Montreal.  
Hamilton Cotton Co., Hamilton, Ont.  
Morris, D. Sons & Co., Montreal.  
Relche & Co., Bradford, England.  
Smith Wool Stock, Toronto.  
Storoy, W. H., & Sons, Acton, Ont.

### Tin

Leslie, A. C. & Co., Montreal.  
Samuel, M. & L. Benjamin & Co., Toronto.  
Syracuse Smelting Works, Montreal.

### Tin Plates

Leslie, A. C. & Co., Montreal.  
Samuel, M. & L. Benjamin & Co., Toronto.

### Tool Steel

Abbott, William, Montreal.  
Bourne-Fuller Co., Cleveland, Ohio.  
Leslie, A. C. & Co., Montreal.

### Trucks

Morgan Construction Co., Worcester, Mass.  
Slingsby, H. C., Montreal.

### Trucks (Wire Mill)

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

### Tubs (Cleaning and Coating-Wire)

Morgan Construction Co., Worcester, Mass.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls  
Ohio.

### Turbines

Jenckes Machine Co., Sherbrooke, Que.  
Wilson, J. C., & Co., Glendon, Ont.

### Typewriters and Supplies

United Typewriter Co., Toronto

### Valves

American Steam Pump Co., Battle Creek, Mich.  
Canada Foundry Co., Toronto.  
Hamilton Brass Mfg. Co., Hamilton, Ont.  
Kerr Engine Co., Walkerville, Ont.  
Williams, A. R., Machinery Co., Toronto.

### Ventilators

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

### Wagons and Carriages

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

### Washers or Rollers (Cleaning Rubber.)

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

### Water Filters and Filtering Systems.

Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Water Softening and Purifying Systems.

Scaife, Wm. B. & Sons Co., Pittsburg, Pa.

### Water Tanks

Caldwell, W. E. Co., Louisville, Ky.

### Water Towers

Caldwell, W. E. Co., Louisville, Ky.

### Weaving Machinery

Karch, H. W., Hespeler, Ont.

### Wire and Wire Rope

Dominion Wire Rope Co., Montreal.  
Greening, B. Wire Co., Hamilton, Ont.  
Leslie, A. C. & Co., Montreal.  
Samuel, M. & L. Benjamin & Co., Toronto.  
Wire & Cable Co., Montreal.

### Wire Cloth

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

### Wire Drawing Machinery

Morgan Construction Co., Worcester, Mass.  
Turner, Vaughn & Taylor, Cuyahoga Falls, Ohio.

### Wire Rod Rails

Morgan Construction Co., Worcester, Mass.

### Wire Specialties

Empire Machine & Metal Stamping Co., Toronto.  
Meadows, Geo. B. Wire, Iron & Brass Works Co.,  
Toronto.

### Wire Testing Machinery

Morgan Construction Co., Worcester, Mass.

# CLASSIFIED INDEX.

(CONTINUED).

### Wood-Working Machinery

Carrier, Laine & Co., Lewis, Que.  
 Cowan & Co., Galt, Ont.  
 Karch, H. W., Hespeler, Ont.  
 London Machine Tool Co., London, Ont.  
 Sheldon & Sheldon, Galt, Ont.

### Zinc

Leslo, A. C. & Co., Montreal.  
 Samuel, M. & L. Benjamin & Co., Toronto.  
 Syracuse Smelting Works, Montreal.

# :: PLATING ::

Gold, Silver, Nickel, Copper and Brass  
 Plating in any quantity.

MANUFACTURERS OF METAL SPECIALTIES

**BRANTFORD PLATING CO., Brantford, Can.**



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

JAS. T. BURKE, Parliament Buildings, Toronto.  
 JAS. R. BROWN, Parliament Buildings, Toronto.  
 MARGARET CARLYLE, Parliament Buildings, Toronto.  
 O. A. ROCQUE, Orleans, Ont.

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

JOHN DRYDEN, Minister of Agriculture

# THE CANADIAN MANUFACTURER

SUBSCRIPTION—

\$1.50 per year, of 24 issues.

A COPY OF

# TARIFF EDITION

sent free to all new subscribers paying \$1.50.

Single Copies, 50 cents.

ADDRESS:

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

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

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

**R. SPENCE & CO.**  
 HAMILTON, ONT.  
**FILE and RASP MANUFACTURERS AND RE-CUTTERS.**  
 A trial order solicited. Write for terms.  
 C. P. MOORE, PROPRIETOR.

**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.**

# QUEBEC CENTRAL RAILWAY

**THE FAMOUS SPORTSMEN'S AND TOURISTS' ROUTE BETWEEN ALL POINTS.**

**FROM NEW YORK AND NEW ENGLAND POINTS TO QUEBEC CITY, THE LAKE ST. JOHN REGION, and THE LOWER ST. LAWRENCE**

**THROUGH PULLMAN CARS BETWEEN BOSTON AND QUEBEC AND NEW YORK AND QUEBEC.**

**FRANK GUNDY, J. R. WALSH,**  
 GENERAL MANAGER. GEN. PASS. AND FREIGHT AGENT.  
**HEAD OFFICES—SHERBROOKE, QUE.**

**The International Safety Solvent Co.**  
**of SAGO, MAINE, U.S.A.**

Offers for sale, licenses under Canadian Patents Nos. 50,401—50,411—57,749—70,531—70,532—77,485, granted to Emilo Maertens for the

**DEGREASING and SCOURING OF WOOL**

by the "Solvent Process," and will furnish drawings for the erection of plants, and will undertake the erection of plants for this purpose in Canada.

Address—**THE CANADIAN MANUFACTURER, or THE INTERNATIONAL SAFETY SOLVENT CO., Providence, R.I., U.S.A.**

# SELF-EDUCATION FOR MECHANICS.

A Monthly Journal intended as a Guide to Correct Methods in Work and Study.  
**25c. A YEAR. SAMPLE COPY FREE.**  
**Industrial Publication Co.,**  
 18 Thomas Street - NEW YORK.

# INDUSTRIES

Gives correct weekly summary of iron and steel market conditions in the important centers of the States.

An advertising medium that reaches the offices of the people whom you want to interest in your product.

Subscription, \$3.00 per annum.

General Offices: Youngstown, Ohio.

Advertising rates on application.

# ATTENTION!

Do you desire to keep posted on the industrial affairs of Alabama, and more especially the Great Birmingham District? If so, subscribe for

# The Dixie Manufacturer BIRMINGHAM, ALA.

It is the only industrial paper published in Alabama. It is old and established. Published semi-monthly. Subscription price, \$2 per year. If you want to sell machinery, hardware, electrical and building supplies you cannot find a better medium. Send for copy and advertising rates.

**ROUNTREE PUBLISHING CO.,**  
 BIRMINGHAM, ALABAMA.

# Canadian Manufacturers.

If you are interested in the progress of new industries in the United States and wish to get in touch with the swelling tide of improvements, you should have our daily trade advance information letter.

It tells of all new industrial enterprises, railroads, mills and factories, ice and storage plants, water works, mines, breweries, electric plants, etc. We furnish you from 40 to 50 trade pointers every day.

# STEEL AGE OF PITTSBURG,

2121 Farmers Bank, - PITTSBURG, Pa.

# THE COAL TRADE JOURNAL

PUBLICATION OFFICE—TIMES BLDG., PARK ROW, NEW YORK.

FREDERICK E. SAWARD, Editor and Proprietor.

THE COAL TRADE JOURNAL was established April 21, 1869, and it is the only newspaper in the United States entirely devoted to the coal interests. No clique or class of dealers control its columns. RELIABLE, PROMPT, CORRECT, INDEPENDENT. Not local; facts and figures from all parts of the United States.

To keep posted on Coal read **THE GOAL TRADE JOURNAL**

Annual Subscription Price, \$5.

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

INDEX TO ADVERTISEMENTS.

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

Table listing various manufacturers and their locations, including entries for Abbott William Montreal, Edwards E J Toronto, McLaughlin R Co Galt Ont, and Dominion Oil Cloth Co.

ofc..... outside front cover.

obo.....outside back cover.

WE call your special attention to STEEL STAMPS

Our product is first class in every particular, and prices are satisfactory.

Hamilton Stamp & Stencil Works HAMILTON, ONT.

TO WOOLEN MANUFACTURERS MESSRS. REICHE & CO.

WOOL, TOPS, NOILS, YARNS, Etc.

Represented in Canada by BRADFORD, ENGLAND

JAMES A. CANTLIE

22 ST. JOHN STREET, MONTREAL. Samples and Lowest Quotations Promptly Supplied. Correspondence Solicited.

Dominion Oil Cloth Co. LIMITED

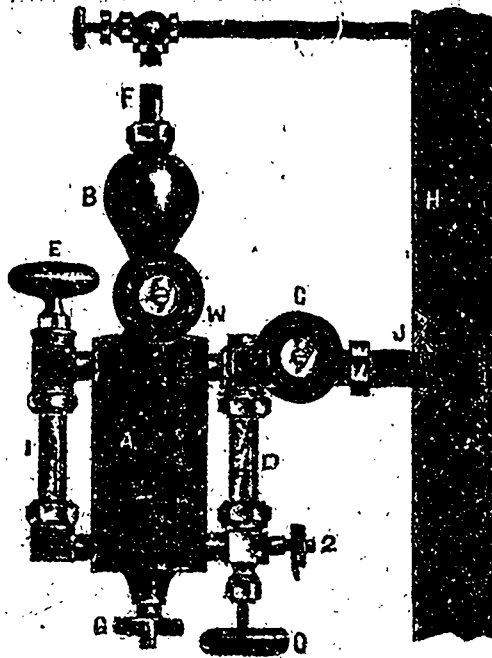
Manufacturers of Oilcloths of Every Description.

Floor Oil-Cloth, Table Oil-Cloth, Carriage Oil-Cloth, Enamelled Oil-Cloth, Stair Oil-Cloth, etc.

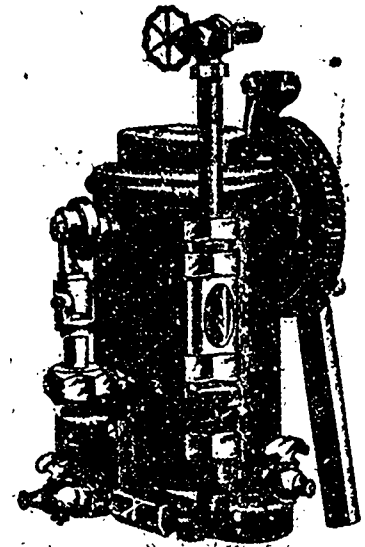
OFFICE AND WORKS Cor. St. Catherine and Parthenais Streets MONTREAL, Que.



IMPROVED T. J. C. INJECTOR  
No. 2.



IMPROVED MICHIGAN LUBRICATOR.



THE IMPROVED HAMILTON  
OIL PUMP  
with and without Sight Feed.

# THE HAMILTON BRASS MFG. CO., Limited

HAMILTON, - ONT.

A 15-inch  
**CROCKER  
TURBINE**  
horizontal.

Running  
under  
98 ft. head.

Electric  
Light Plant  
at  
Fraserville,  
Que.



The Crocker Turbine is built in all sizes and all settings for any head. Our Bulletin 200, shows many of them. It is free.

**The Jenckes Machine Company,**  
626 LANSLOWNE STREET, SHERBROOKE, QUE.



# THE ROSSENDALE BELTING CO.

59 TO 63 FRONT ST. EAST, - TORONTO LIMITED

MANUFACTURERS of "M. A. Y." (Solid Woven) "MAIR" (Solid Woven), and "MAYAVE" (Balata) BELTS.  
 JACKSON'S Patent Bolt Fasteners.  
 Special Bolt Dressing free from Resin.  
 LARGE STOCK CARRIED OF THESE SPECIALTIES.

50 cents PER COPY.

TARIFF EDITION of The Canadian Manufacturer

50 cents PER COPY.

## McARTHUR, CORNEILLE & CO.

310 to 316 ST. PAUL ST. MONTREAL

U.S. CHEMICALS, DYESTUFFS

AND TANNING EXTRACTS

Waxes, Gums, Shellacs, Glues, Gelatines, Etc.

CANADIAN AGENTS

FOR THE BERLIN ANILINE CO. BRITISH ALIZARINE CO. and MILLER'S TANNING EXTRACT CO.

LONG DISTANCE PHONE 1108.

The Electrical Construction Company of London, LIMITED

32-40 Dundas St., London, Can.

Perfection TYPE **DYNAMOS AND MOTORS**

Multipolar or Bipolar, Direct-Connected or Belted.

OVER 1500 OF OUR MACHINES IN USE.

We contract for complete installations, including wiring of factories.

We repair machines of any make. Descriptive matter and estimates furnished on application.

BRANCHES AT Vancouver, Winnipeg, Toronto, Montreal, Halifax.

## The Ontario . . . Malleable Iron Co.

(Limited)

...Manufacture of...

**MALLEABLE IRON** . . . . . Castings to Order for all kinds of

**AGRICULTURAL IMPLEMENTS** .

...AND...

**Miscellaneous Purposes** . . . .



OSHAWA, - - ONT.

# THE UNITED ELECTRIC CO.

LIMITED

MANUFACTURERS OF

**Dynamos, Motors, Arc Lamps**

ETC.



Head Office, - 134 KING ST. W., TORONTO, ONT.

## Montreal Steel Works

Limited

—SUCCESSORS TO—

The Canada Switch and Spring Co., Limited

MANUFACTURERS OF

**STEEL CASTINGS**

(OPEN HEARTH SYSTEM)

Springs, Frogs, Switches, Signals

FOR STEAM AND ELECTRIC RAILWAYS

CANAL BANK, - POINT ST. CHARLES . . MONTREAL . .

## BRISTOL'S PATENT STEEL BELT LACING

—ONE HUNDRED SIZES—



READY TO APPLY FINISHED JOINT

Greatest Strength with Least Material

EASILY APPLIED and LOW IN PRICE

Saves Time, Saves Belts, Saves Money

SAMPLES SENT FREE

... .

THE **BRISTOL CO.** WATERBURY, CONN.

## Smith's Falls Malleable Castings Company, Limited

CAPACITY 4,000 TONS

MANUFACTURERS OF

**MALLEABLE IRON CASTINGS**

Labor Gazette

Smith's Falls, Ont., Can.

# CARRIER, LAINE & CO. Dredges.

LEVIS, P.Q.

SAW MILL MACHINERY, ETC.

Montreal Branch.... 147 St. James St.  
 Quebec Branch.... 282 St. Joseph St.

THE HAMILTON FOUNDRY CO., LIMITED, MANUFACTURERS OF HAMILTON, ONT.  
 Ceylon Plumbago SUPPLIES FOUNDRY SHIPPERS AND FIRE SAND, also Extra Fine Quality MOLDING SAND. Write for prices.