

Technical and Bibliographic Notes / Notes techniques et bibliographiques

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

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

- | | | | |
|-------------------------------------|---|-------------------------------------|---|
| <input type="checkbox"/> | Coloured covers /
Couverture de couleur | <input type="checkbox"/> | Coloured pages / Pages de couleur |
| <input type="checkbox"/> | Covers damaged /
Couverture endommagée | <input type="checkbox"/> | Pages damaged / Pages endommagées |
| <input type="checkbox"/> | Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée | <input checked="" type="checkbox"/> | Pages restored and/or laminated /
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> | Cover title missing /
Le titre de couverture manque | <input checked="" type="checkbox"/> | Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> | Coloured maps /
Cartes géographiques en couleur | <input type="checkbox"/> | Pages detached / Pages détachées |
| <input type="checkbox"/> | Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire) | <input checked="" type="checkbox"/> | Showthrough / Transparence |
| <input type="checkbox"/> | Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur | <input checked="" type="checkbox"/> | Quality of print varies /
Qualité inégale de l'impression |
| <input checked="" type="checkbox"/> | Bound with other material /
Relié avec d'autres documents | <input type="checkbox"/> | Includes supplementary materials /
Comprend du matériel supplémentaire |
| <input type="checkbox"/> | Only edition available /
Seule édition disponible | <input type="checkbox"/> | Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées. |
| <input checked="" type="checkbox"/> | 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. | | |
| <input checked="" type="checkbox"/> | Additional comments /
Commentaires supplémentaires: | | Continuous pagination. |

THE CANADIAN RAILWAY ACCIDENT INSURANCE COMPANY, OTTAWA, CANADA.
A PURELY CANADIAN COMPANY.

JOHN EMO, General Manager

J. P. DICKSON, Secretary-Treasurer

D. MURPHY, President

AUTHORIZED CAPITAL, \$500,000.
 Issues all classes of Accident and Sickness Insurance at lowest rates as is consistent with safety.

SUBSCRIBED CAPITAL, \$200,000.

Railroad Employees and Collective Insurance a specialty.

Agents wanted in unrepresented districts.



With which is incorporated The Western World, Established 1890.

Devoted to Steam and Electric Railway, Shipping, Express, Telegraph & Telephone Interests.

Old Series, No. 155.
 New Series, No. 73.

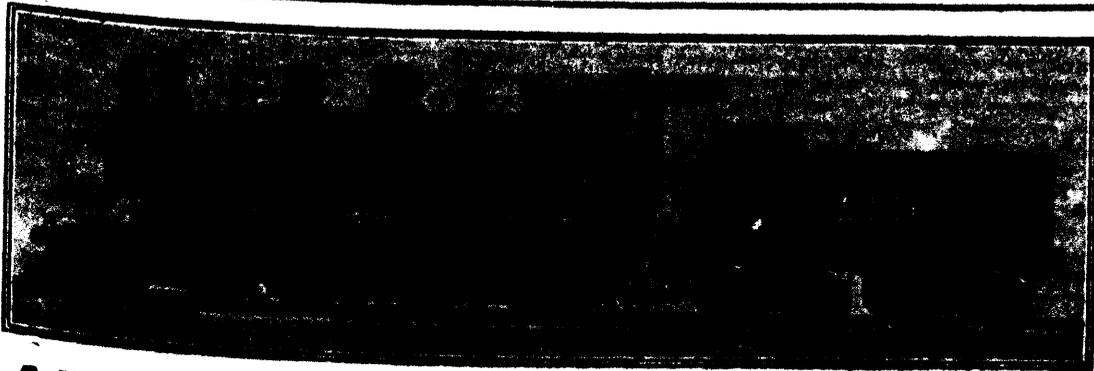
TORONTO, CANADA, MARCH, 1904.

10c. A Copy
 \$1 A Year.

RICE LEWIS & SON

LIMITED

General HARDWARE Merchants TORONTO.



CANADIAN LOCOMOTIVE CO. LTD.,
 KINGSTON, ONT.,

Builders of Simple
 and Compound

LOCOMOTIVES

Adapted to every
 variety of service.

The Travelers Insurance Company, of Hartford, Conn., issues the best of Life and Accident Insurance Contracts, at the lowest rates of premium.

For Sample Contracts apply to

FRANK F. PARKINS, Manager,

Royal Insurance Building, MONTREAL.

and Advertising Purposes. For Prices, &c., address THE ACTION BURROWS
 CO., 29 MELINDA STREET, TORONTO.

McCaskill, Dougall & Co.,
 McCaskill Standard Railway Varnishes and Japans, Montreal.
 MANUFACTURERS
 EIGHT MEDALS AWARDED.

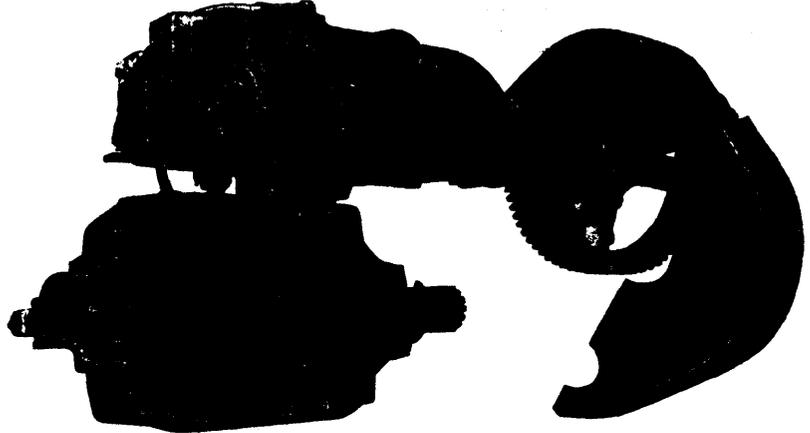
Westinghouse No. 56 Railway Motor

FOR HIGH SPEED INTERURBAN SERVICE

The ventilated armature winding gives great overload capacity, also reduces the cost of repairs.

The large number of commutator bars (117) permits the use of high voltage.

The easy accessibility of all parts for inspection or repairs is a characteristic common to all Westinghouse Motors.



For particulars address nearest Office of

CANADIAN WESTINGHOUSE CO., LIMITED

General Sales Offices and Works: HAMILTON, ONT.

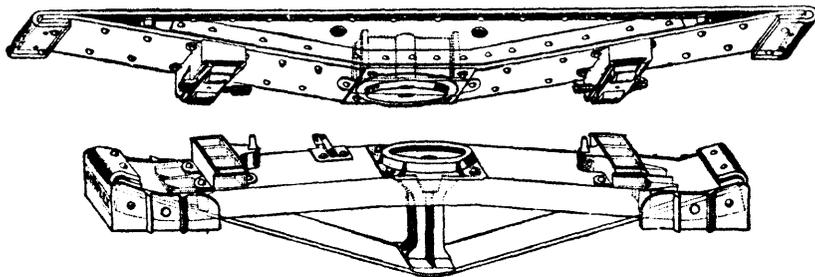
DISTRICT OFFICES:

Lawlor Building, King and Yonge Street,
TORONTO

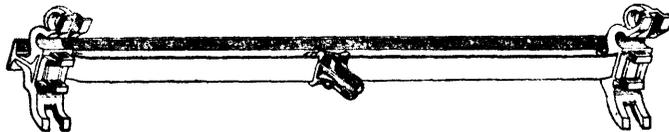
Hadden Block, Vancouver

Liverpool & London & Globe Building,
MONTREAL

S
I
M
P
L
E
X



BRAKE BEAMS



SUSEMIHL FRICTIONLESS SIDE BEARINGS

The **SIMPLEX RAILWAY APPLIANCE
CO. OF CANADA, Limited.**

OFFICE AND WORKS - ST. HENRI DE MONTREAL
NEW YORK OFFICE-141 BROADWAY

B
O
L
S
T
E
R
S

THE Railway and Shipping World

With which is incorporated The Western World. Established 1890.

Devoted to Steam & Electric Railway, Shipping, Express, Telegraph & Telephone Interests.

OLD SERIES, No. 155.
NEW SERIES, No. 73.

TORONTO, CANADA, MARCH, 1904.

10 CENTS A COPY.
\$1 A YEAR.

RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Alberni and Cowichan Ry.—A. C. Rhinehart, Big Woods, Minn.; J. and L. Thompson, Victoria, B.C., are applying at the current session of the B.C. Legislature for an act incorporating a company with this title to construct a railway from near Sarita townsite, on the Alberni canal, by way of Nit-Nat Valley, to Cowichan lake, thence to Cowichan bay, on the east coast of Vancouver island, or by any other more feasible route. (Jan., pg. 9.)

Atlantic, Quebec and Western Ry.—Application will be made next session of the Dominion Parliament for an act extending the time within which the first 20 miles of this line, from Paspébiac to Gaspé Basin, Que., may be built. Paspébiac is the terminus of the Atlantic and Lake Superior Ry., which connects with the Intercolonial Ry. at Matapédia, 100 miles distant. The principal line of the A.Q. and W. Ry. will extend from Gaspé Basin through the centre of Gaspé county to the Intercolonial Ry. near Causapschal. (Dec., 1903, pg. 422.)

Bay of Quinte Ry.—At the last sitting of the Railway Committee of the Privy Council an application was made to permit the B. of Q. Ry. to cross the C.P.R. tracks at Tweed, Ont., on the level, on putting in and maintaining the necessary safety appliances. The matter came before the new Board of Railway Commissioners Feb. 16, and was adjourned for the attendance of engineers. (Dec., 1903, pg. 422.)

Beersville Coal and Ry. Co.—The railway connecting the Imperial Coal Co.'s mines at Beersville with Adamsville, N.B., on the Intercolonial Ry., has been completed and placed in operation. The directors and other officials of the B.C. & Ry. Co., and of the Imperial Coal Co. paid a visit of inspection to the railway and mines Feb. 4. (Jan., pg. 1.)

Berlin, Waterloo, Wellesley and Lake Huron Ry.—Application will be made next session of the Dominion Parliament for an act authorizing the construction of an extension of this projected line from Wellesley field, on Lake Huron. Power will also be sought to acquire other steam or electric lines either by lease or purchase. C. R. Hanning, Preston, Ont., is secretary. (Dec., '03, pg. 423.)

Brantford and Erie Ry. (Electric).—Application is being made at the current session of the Ontario Legislature for an act incorporating a company with this title to construct a line from Brantford, via Waterford

and Simcoe to Port Dover with a loop line from Waterford via Delhi and Lynedoch to Simcoe. R. A. Dickson, Delhi, Ont., is solicitor for the applicants.

Brantford and Hamilton Ry. (Electric).—Application will be made next session of the Dominion Parliament for an act incorporating a company to construct a railway from Brantford to Hamilton, Ont., via Ancaster. Wallace & Little, Woodstock, Ont., are solicitors for the promoters. This application is understood to be in the interests of the Von Echa Co., which at present controls the

Brockville, Westport and Northwestern Ry.—A committee has under consideration the question of the extension of the line from its present terminus northerly, but nothing of a definite nature has been announced. The work to be done on the line between Brockville and Westport, Ont., is in the nature of ballasting (Dec., 1903, pg. 423.)

Campbellford, Lake Ontario and Western Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with power to construct a line from between Blairton and Ivanhoe, on the C.P.R. Toronto-Montreal line, south-westerly to Cobourg, thence to the C.P.R. Toronto-Montreal line between Locust Hill and Leaside Jct. A. B. Colville, Campbellford, Ont., is solicitor for the promoters.

Canada Atlantic Ry.—Nothing is being done in the way of making surveys for the proposed extension from near Whitney to Sault Ste. Marie, Ont. (Sept., 1903, pg. 305.)

Plans are stated to be in course of preparation for the proposed central station at Ottawa, and it is expected that matters will be so far forward that work will be started in the spring. Two sets of plans are being considered, one of which will call for the expenditure of \$75,000 more than the other. (Oct., 1903, pg. 340.)

Cape Breton Coal, Iron and Ry. Co.—T. Lancaster, Manager of the Company, of New York, was recently in Sydney, N.S., looking over the route for the projected electric railway from Sydney to Mira bay, about four miles, with a view to the early starting of construction. (Aug., 1903, pg. 267.)

Cardiff Ry.—Application will be made next session of the Dominion Parliament for an act enabling the Company to acquire by purchase or lease the undertaking, franchises and assets of the United Gold Fields of B.C., and to pay for the same in paid-up shares of the Cardiff Ry. Co., or the West Canadian Collieries (Ltd.). Power is also sought for an extension of the time for the commencement and completion of the Company's undertaking. (July, 1903, pg. 233.)

See also United Gold Fields of B.C. (Ltd.), and West Canadian Collieries (Ltd.)

Central Ontario Counties Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from the C. P. R. Montreal-Toronto line, near Ivanhoe, Ont., through the counties of Hastings, Northumberland, Durham, Ontario and York to Agincourt, also on the C.P.R. Montreal-Toronto line. Chrysler & Bethune, Ottawa, are solicitors for the applicants.



GEORGE H. SHAW,
Traffic Manager Canadian Northern Railway.

Brantford St. Ry., the Woodstock, Thames Valley and Ingersoll Electric Ry., and the Grand Valley Ry.

B.C. Mono-rail Ry.—J. H. Gray, C.E., has completed the survey for the first section of the electric railway which it is proposed to construct in British Columbia on the mono-rail system. The route surveyed is from Kaslo up the south fork of Kaslo river to its junction with the north fork. Arrangements for the construction of this section are expected to be completed early in the spring. (Jan., pg. 1.)

THE RAILWAY & SHIPPING WORLD,

With which is incorporated
The Western World, Established 1890.

AN ILLUSTRATED PERIODICAL DEVOTED TO STEAM AND
ELECTRIC RAILWAY, SHIPPING, EXPRESS, TELEGRAPH
AND TELEPHONE INTERESTS.

The Official Organ of
The Canadian Freight Association.
The Canadian Roadmasters' Association.
The Canadian Ticket Agents' Association.
PUBLICATION OFFICE,
33 MELINDA STREET, TORONTO, CANADA.
Bell Telephone, Main 3201.

SUBSCRIPTION PRICE, postage prepaid to Canada and
the United States, \$1 a year; to Great Britain and other
countries in the Postal Union, \$1.25 (5 shillings sterling).
The best and safest way to remit is by express or post
office money order payable at Toronto.

ADVERTISING RATES furnished on application.

Sole Advertising Agents in the United Kingdom, W.
L. ERWOOD, LTD., 30 Fleet Street, London, E.C.

TORONTO, CANADA, MARCH, 1904.

Canadian Association of Masters and Mates.

MASTER, Capt. Jas. Wilson, Collingwood, Ont.;
FIRST OFFICER, Capt. Milligan, St. Catharines, Ont.;
SECRETARY, W. Ireland, Parry Sound, Ont.; TREASURER,
Capt. M. McKay, Owen Sound, Ont.

Canadian Excursion Agreement Meeting.

CHAIRMAN, J. H. Walsh, Sherbrooke, Que.
SECRETARY, care of Passenger Department, C.P.R.,
Montreal.

Canadian Freight Association.

PRESIDENT, W. P. Hinton, Ottawa, Ont.; 1st VICE-
PRES., C. Howe, Buffalo, N.Y.; and VICE-PRES., W.
R. MacInnes, Montreal; SEC.-TREAS., J. Earls, Tor-
onto.
OFFICIAL ORGAN.—THE RAILWAY & SHIPPING WORLD,
Toronto.

Canadian Pacific Railway Club.

PRESIDENT, W. J. Brown; SECRETARY, pro tem, W.
J. Miller; TREASURER, J. D. Scott.
REGULAR MEETINGS, 1st Monday each month, in club
rooms, Toronto Junction.

Canadian Railway Club.

PRESIDENT, T. A. McHattie, Montreal; 1st VICE-
PRESIDENT, S. King, Moncton, N.B.; and VICE-PRESI-
DENT, W. E. Fowler, Montreal; SECRETARY, W. H.
Rosevear, Jr., St. Lambert, Que.; TREASURER, S. F.
Underwood, Montreal.
MEETINGS at Windsor Hotel, Montreal, 1st Tuesday
of each month, 8 p.m., except June, July and Aug.

Canadian Roadmasters' Association.

PRESIDENT, A. McAuley, Toronto Jct., Ont.; VICE-
PRESIDENT, J. R. Brennan, Ottawa, Ont.; SECRETARY-
TREASURER, J. Drinkwater, Winchester, Ont.
OFFICIAL ORGAN.—THE RAILWAY & SHIPPING WORLD,
Toronto.

Canadian Society of Civil Engineers.

PRESIDENT, Col. W. P. Anderson, Ottawa; VICE-
PRESIDENTS, C. E. W. Dodwell, C. H. Keefer, E. Mar-
ceau; TREASURER, H. Irwin; SECRETARY, C. H.
McLeod; LIBRARIAN, E. G. M. Cape.
MEETINGS AT 877 Dorchester St., Montreal, every
alternate Thursday, 8 p.m.

Canadian Ticket Agents' Association.

PRESIDENT, M. McNamara, Walkerton, Ont.; FIRST
VICE-PRESIDENT, W. H. C. Mackay, St. John, N.B.;
SECOND VICE-PRESIDENT, C. E. Morgan, Hamilton,
Ont.; THIRD VICE-PRESIDENT, W. H. Harper, Chatham,
Ont.; CHAIRMAN EXECUTIVE COMMITTEE, W. Bunton,
Peterboro', Ont.; SEC.-TREASURER, E. de la Hooke,
London, Ont.
OFFICIAL ORGAN.—THE RAILWAY AND SHIPPING
WORLD, Toronto.

Dominion Marine Association.

PRESIDENT, C. F. Gildersleeve, Montreal; VICE-
PRESIDENT, J. J. Long, Collingwood, Ont.; SEC.-
TREASURER, F. King, Kingston, Ont.

Engineers' Club of Toronto.

PRESIDENT, K. Gamble; 1st VICE-PRESIDENT, R. F.
Tate; and VICE-PRESIDENT, Jas. McDougall; SEC-
RETARY, W. Chipman.
Rooms, 96 King St. West, Toronto.

Great Lakes and St. Lawrence River Rate Committee.

CHAIRMAN, C. E. Markham, Buffalo, N.Y.
SECRETARY, G. C. Wells, Montreal.

National Association Marine Engineers of Canada.

PRESIDENT, T. J. S. Milne, Kingston, Ont.; VICE-
PRESIDENT, N. Ducap, Montreal, Que.; SEC.-TREAS.,
N. J. Morrison, St. John, N.B.; SECRETARIES OF LO-
CAL COUNCILS—Toronto, R. Beals; St. John, N.B.,
G. T. G. Blewett; Collingwood, Ont., A. McDougall;
Kingston, Ont., J. Gillie; Montreal, N. Ducap; Vic-
toria, B. C., P. Gordon; Vancouver, B. C., T. M.
Heard; Levis, Que., E. Belanger; Sorel, Que., A. L. de
Martigny; Owen Sound, J. M. Wilson; Windsor, Ont.,
N. Maitland.
NEXT ANNUAL MEETING of the Grand Council, in
Collingwood, Ont., fourth Tuesday in Jan., 1905.

Niagara Frontier Summer Rate Committee.

CHAIRMAN, H. H. Gildersleeve, Kingston, Ont.
SECRETARY, G. C. Wells, Montreal.

The Shipping Federation of Canada.

PRESIDENT, H. A. Allan; CHAIRMAN OF EXECUTIVE
COMMITTEE, W. I. Gear; MANAGER, T. Robb; SEC-
RETARY, T. B. Odell. Office, 526 Board of Trade, Montreal.

Back Numbers for Sale.

THE RAILWAY AND SHIPPING WORLD:

March to December, 1898, price . . . \$1.00
January to December, 1899, " . . . 1.10
January to December, 1900, " . . . 1.10
January to December, 1901, " . . . 1.10
January to December, 1902, " . . . 1.10
January to December, 1903, " . . . 1.10

including postage.

Address

THE RAILWAY AND SHIPPING WORLD,
33 Melinda St., Toronto, Canada.

Cuts For Sale.

With few exceptions, all cuts which appear
in THE RAILWAY AND SHIPPING WORLD as
illustrations are for sale.

For prices, etc., address

THE RAILWAY AND SHIPPING WORLD,
33 Melinda St., Toronto, Canada.

Subscription Agents Wanted.

We want an agent at each railway and
shipping centre in the Dominion to secure
new subscriptions to the RAILWAY AND SHIP-
PING WORLD, for which we will pay liberal
commissions.

The work is easy, the paper recommending
itself; and is specially adapted for clerks in
transportation offices. It can be done at odd
times without interfering with other duties.

For terms and other particulars, address

THE RAILWAY AND SHIPPING WORLD,
Toronto.

RAILWAY DEVELOPMENT.

(Continued from page 73.)

Chatham Point to Comox.—Application
will be made next session of the Dominion
Parliament for an act incorporating a com-
pany with power to construct a railway on
Vancouver Island from Chatham Point to Al-
berni, via Comox, and thence to Quatsino
Sound. D. J. Macdonell, Vancouver, B.C.,
is solicitor for the promoters.

Coal Branch to Richibucto.—The Cana-
dian Coal Mining Co. has acquired consider-
able areas of coal lands in the vicinity of Coal
Branch, N.B., on the Intercolonial Ry., and
in connection with the development of the
same is making application to the N.B. Gov-
ernment for a subsidy towards the construc-
tion of a line from Coal Branch to the mines,
eight miles, with power to extend to Richi-

Alphabetical List of Advertisers.

	PAGE
W. Abbott, Montreal	98
The Accident and Guarantee Co. of Canada	104
American Locomotive Co., New York	Cover 4
Babcock & Wilcox (Ltd.), Montreal	100
Baldwin Locomotive Works, Philadelphia, Pa.	90
Bell Telephone Co. of Canada	102
Bradstreet Company	106
The Acton Burrows Co., Toronto	Cover 1
Canadian Locomotive Co., Kingston, Ont.	Cover 1
Canadian Northern Railway	82
Canadian Pacific Railway Land Department	100
Canadian Railway Accident Insurance Co.	Cover 1
Canadian Steel and Wire Co., Hamilton	98
W. H. Coddington, Hamilton	90
B. J. Coghlin & Co., Montreal	102
James Cooper, Montreal	98
Dominion Bridge Co., Montreal	100
Dominion Steamship Line	100
Dominion Wire Manufacturing Co., Montreal	98
Dominion Wire Rope Co., Montreal	102
E. L. Drewry, Winnipeg, Man.	102
Drummond, McCall & Co., Montreal	84
Firstbrook Box Co., Toronto	98
Galena Signal Oil Co., Franklin, Pa.	100
J. J. Gartshore, Toronto	100
Government of Manitoba	100
The B. Greening Wire Co., Hamilton, Ont.	100
Holt, Renfrew & Co., Toronto	100
Hudson's Bay Company	Cover 4
Hunter, Rose Co., Toronto	106
James Hutton & Co., Montreal	106
Illinois Central Railroad	104
Imperial Bank of Canada	104
Intercolonial Railway	96
International Mercantile Marine Co.	96
Wm. Jessop & Sons (Ltd.), Sheffield, Eng.	98
Lima Locomotive & Machine Co. Lima, Ohio	100
Lehigh Valley Railroad	Cover 1
Rice Lewis & Son, Toronto	88
Locomotive and Machine Co. of Montreal	100
Mail Job Printing Co., Toronto	100
McCaskill, Dougall & Co., Montreal	Cover 1
John S. Metcalf Co., Chicago, Ill.	100
Mica Boiler Covering Co., Montreal	104
Montreal Steel Works, Montreal	98
James Morrison Brass Mfg. Co., Toronto	98
T. A. Morrison & Co., Montreal	98
W. H. C. Mussen & Co., Montreal	100
New York Central Railroad	100
Northern Electric and Manufacturing Co., Montreal	100
A. O. Norton, Coaticook, Que.	98
Ontario Wind Engine and Pump Co., Toronto	98
Page Wire Fence Co., Walkerville	98
Eugene F. Phillips Electrical Works, Montreal	98
The Hiram L. Piper Co., Montreal	98
N. L. Piper Railway Supply Co., Toronto	100
Place Viger Hotel, Montreal	100
Polson Iron Works, Toronto	98
J. W. Pyke & Co., Montreal	100
Queen City Oil Co., Toronto	100
Rhodes, Curry & Co., Amherst, N. S.	100
Russell House, Ottawa	100
St. Thomas Brass Co., St. Thomas, Ont.	98
Safety Car Heating & Lighting Co., New York	98
Saxon Engine Works, Chemnitz, Germany	Cover 1
Simplex Railway Appliance Co., Montreal	98
Sonne Awning, Tent & Tarpaulin Co., Montreal	98
J. & J. Taylor, Toronto	100
Toronto Engraving Co., Toronto	100
Travelers' Insurance Co., Montreal	Cover 1
Westinghouse Manufacturing Co., Hamilton	Cover 1
Wire & Cable Co., Montreal	84

bucto harbor, a further distance of eight miles
also westerly from Coal Branch to connect
with the New Brunswick Coal and Ry. Co.'s
line at Chipman. Plans are being prepared
for submission to the Government, and the
necessary authority will be asked at the next
session of the Legislature. J. P. Geddes, of
New York, is Managing Director of the Cana-
dian Coal Mining Co.

Coast-Yukon Ry.—F. Buscombe, R. Kelly
and G. I. Wilson, of Vancouver, B.C., have
been incorporated at the current session of the
B.C. Legislature as a company with this title
with power to construct a railway from Hazel-
ton to Atlin lake, and thence to the 60th paral-
lel of north latitude. It is proposed to utilize
the line already subsidized from Vancouver to
Hazelton, and to commence construction at
the latter point.

Crawford Bay to Fort Steele (Electric).—
Application will be made next session of the
Dominion Parliament for an act incorporating
a company to construct a railway to be oper-
ated by electric or other power, from Craw-
ford bay, Kootenay lake, through the Craw-
ford creek and St. Mary's river valley to Fort
Steele, B.C. Macdonald & Winn, Rossland,
B.C., are solicitors for the promoters.

Detroit River Bridge.—The ice on the De-
troit river during the present winter has been

particularly heavy and has interfered considerably with the railway ferry traffic at all points between Canada and the U.S. Nothing has been decided upon in regard to the projected bridge by the railway companies interested, and a suggestion was recently made to construct a tunnel between the two shores. The proposition is to dredge out a channel for the tunnel and to construct it in sections. The tunnel would consist of two steel tubes, each 23 ft. diameter outside, and 19 ft. diameter inside, and containing a single track. C. H. Fisk, Detroit, Mich., is reported to be arranging

to form a company, to be called the Detroit Tunnel Co., to carry out the proposal. (Dec., 1903, pg. 423.)

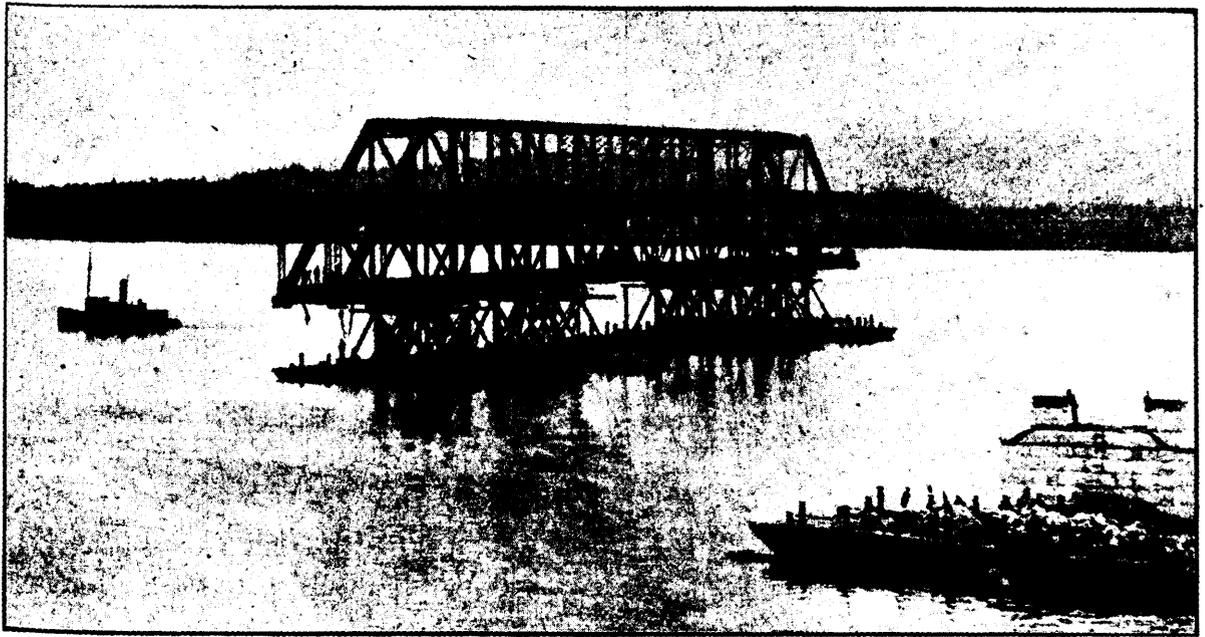
Du Lievre and Ottawa Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title to construct a line from Ottawa, via Hull to Buckingham, Que., along the Du Lievre river valley to James bay; with a branch from Buckingham to the Ottawa river. Power is asked to use electricity or other motive power.

Duluth, Virginia and Rainy Lake Ry.—During 1903 track was laid from camp 6 to Ashawa, Minn., 8.3 miles, and a branch logging line constructed to Swan lake, 10 miles. Grading was also pushed forward from Ashawa to Pelican lake, 16 miles. G. F. Bristol, Virginia, Minn., is General Manager. (Aug., 1903, pg. 267.)

Edmonton and Slave Lake Ry.—Application will be made next session of the Dominion Parliament for an act authorizing an extension of time for the commencement and completion of the Company's authorized line from Edmonton, Alta., to Lesser Slave lake, Atha. Z. A. Lash, Toronto, is solicitor for the promoters.

Edmonton, Athabasca and Mackenzie Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from Edmonton, Alta., northerly to the Athabasca river, crossing that river between Fort Murray and Point la Biche; thence to Fort Vermillion, on Peace river; thence via the Hay river valley to Great Slave lake; in Mackenzie Territory. Sutherland & Manning, Winnipeg, Man., are solicitors for the promoters.

Edmonton Street Ry.—A draft of the proposed agreement respecting the construction of an electric railway in Edmonton, Alta., has been submitted by W. G. Trethewey to the city council. The proposed company will bind itself to have two miles of the track laid within 15 months, and to have street cars running regularly from 6 a.m. to 10 p.m. every day except Sundays. If the agreement is not signed before March 1 the time above stated will be extended for three months—the company to make a deposit of



FRASER RIVER BRIDGE, NEW WESTMINSTER, B.C.

The superstructure of the 380-ft. span over the deepest portion of the river was erected over the swing span and, when completed, four scows, with trestle work, were towed into position underneath it. When the tide rose the span was raised by the scows from the piers, and was then towed out into the river.

\$5,000 as a guarantee that the terms of agreement will be carried out. The town will share in the net profits of the company to the extent of 25%. Any differences between the company and the town will be determined by arbitration. The company's stock within the municipality will be exempt from taxation for 10 years. The company will have the power to distribute motive power and may string such wires as are necessary for this purpose. The proposal is still under consideration. (Jan., pg. 1.)

Fort Frances, Manitou and Northern Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title, and authorizing the construction of a railway from the International boundary at Fort Frances, Ont., opposite Koochiching, Minn., northerly through the Manitou lakes country, to Dinorwic, on the C.P.R., thence to the Albany river. Kerr, Bull & Shaw, Toronto, are solicitors for the promoters, who obtained an act of incorporation in Ontario in 1903.

Great Northern Ry. of Canada.—We are advised that survey parties are in the field locating the projected direct line into Quebec. It is proposed that the cut-off will run from the present line near St. Catharines direct into Quebec, but no details of the route have been decided on. (Jan., pg. 25.)

Great Northern Ry., U.S.—The new track laid on the various lines of the G.N. Ry. during 1903 was: Branch southwest of Hibbing, Minn., Kelley Lake to Exmore, 9.69 miles; Crosby mine spur in Minnesota, 1.56 miles; branch, Granville to Mohall, N.D., 46.97 miles; branch, Souris to West Hope, N.D., 16.4 miles; on cut-off from Columbia Falls to Rexford, Mont., 70 miles; track was laid from Columbia Falls to Whitefish, 8 miles, on account of change of line between Belleville and Fairhaven, Wash., a portion of the old road was left for a spur to Samish Lake, increasing the main track mileage 9.66 miles.

Guelph Junction Ry.—Application will be made next session of the Dominion Parliament for an act authorizing the company to dispose of its railway by lease or otherwise, to authorize the construction of branch lines, and other purposes. See also Guelph and Goderich Ry.

Plans of the proposed extension as prepared by the engineers working under P. A. Peterson, Consulting Engineer, C.P.R., were laid before Goderich city council Feb. 10. The city has voted \$20,000; the township of Colborne has voted \$6,000 and the township of West Wawanosh has voted \$2,000 as bonuses towards the construction of the line. (Jan., pg. 3.)

Guelph and Goderich Ry. Co.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from the present terminus of the Guelph Junction Ry. at Guelph, to Goderich, or to a junction with some other line that may yet be constructed into Goderich from some other point, with power to construct branch lines to Listowel, and to St. Mary's and Clinton via Stratford. Power is also asked to acquire the Guelph Junction Ry. and all rights, franchises, etc., that company may have obtained in connection with its proposed extension from Guelph to Goderich, and to lease or sell the lines of the company to the C.P.R. See also Guelph Junction Ry.

Halifax and Southwestern Ry.—The Nova Scotia Legislature at its current session passed an act extending the time within which construction of the line between Halifax and Barrington Passage or Yarmouth may be completed. A further measure is under consideration by the Legislature giving the company power to take water for use during the construction of the line, and in future for its operation from any lakes or streams along the route, also a measure enabling the city of Halifax to provide money for the payment of a right of way into the city. The location of the line through Dutch village has been agreed on and the approval of the Government has been approved from Halifax to Liverpool, but westward of Liverpool there are some points not finally agreed upon between the Company and the Government. Between Halifax and Mahone the grading for three-fourths of the distance has been completed, and 10 miles of track has been laid from Mahone easterly. The grading between Mahone and Liverpool is about three-fourths completed, while the bridging, both east and west of Mahone is well advanced. A daily train is in

Galena-Signal Oil Company,

Franklin, Pa., and Toronto, Ont.

**Successor to Galena Oil Company and
Signal Oil Company, sole Manufacturers
of the celebrated Galena Coach, Engine
and Car Oils, and Sibley's Perfection
Valve and Signal Oils.**

CHARLES MILLER,
PRESIDENT.

operation on the Caledonia branch of the Old Central Ry. of N.S. (Jan., pg. 3.)

Halifax and Yarmouth Ry.—During 1903, additional sidings were constructed at different points as found necessary for the traffic. No new work was undertaken, and nothing is being done in the way of surveys for any extension of the line, which runs from Yarmouth to Barrington Passage, N. S., or for any branch lines. (June, 1903, pg. 214.)

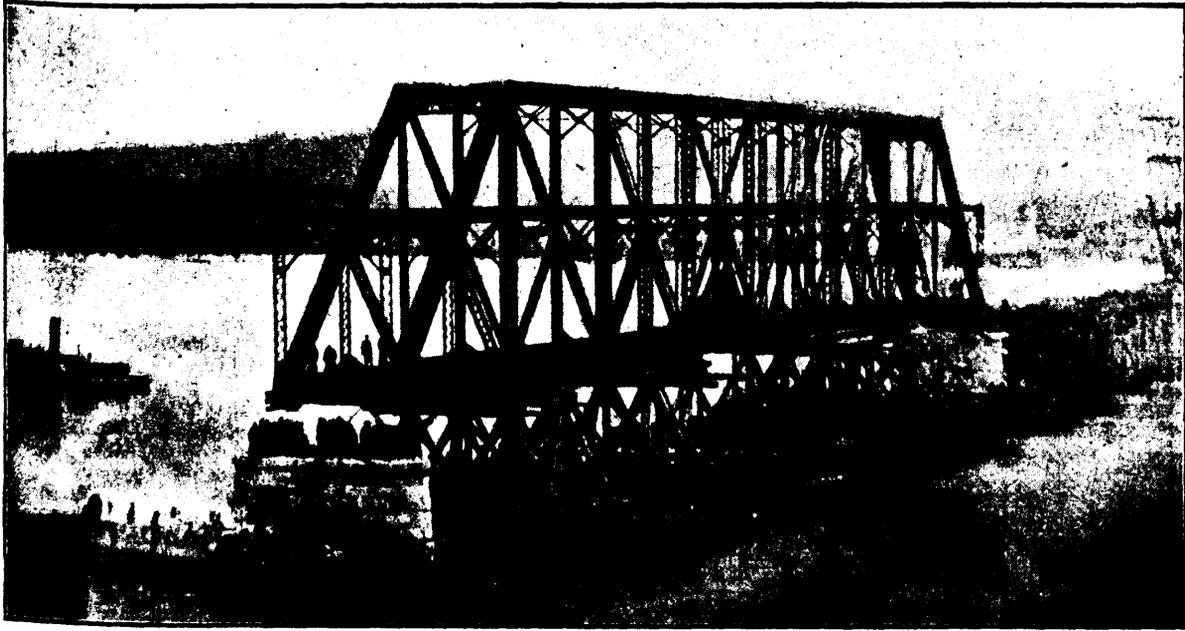
Hamilton, Grimsby and Beamsville Ry. (Electric).—Application will be made at the current session of the Ontario Legislature for an act confirming a by-law of Hamilton city council with reference to the Company, and giving the Company power to construct branch lines and to acquire land for parks.

The Saltfleet council has decided not to grant the permission asked for the construction of a line to Van Wagner's beach near Stony Creek, and the project has been abandoned for the present. (Jan., pg. 3.)

The extension to Vineland, 4 miles in length, under construction during 1903, has been placed in operation. (Sept., 1903, pg. 305.)

Representatives of the Company recently had an interview with the St. Catharines city council in connection with the projected extension of the line from Vineland into St. Catharines. The proposition as made to the council through the Mayor was to the effect that the Company would require a perpetual franchise in the city, as the 7½ miles of line to be constructed would cost three times as much as an ordinary line; also a free right of way crossing at Ann st. to connect with the Niagara, St. Catharines and Toronto Ry. for the purpose of exchange of traffic; also to have permission to connect with any electric railway to be constructed from St. Catharines to Queenston; to construct a spur line or switch way to connect with the G.T.R., and to carry passengers, fruit and express matter as on other portions of the line. A high level bridge to be erected to be used for electric cars and the general public, but not for a steam railway, the company to pay one-fourth of the cost of the same, but the bridge to be the property of the city. The city to rent to the Company 300 electric horse-power at the same rate as the Hamilton Cataract Power, Light and Traction Co. is doing; and to pay a proportionate share of the right of way to be acquired south of the canal. Before entering into a contract with the city the Company will have to secure satisfactory by-laws in Louth and Grantham townships, and right of way over the steel bridges at Jordan and 15 Mile and 16 Mile Creeks. The council referred the matter to a committee for consideration and report.

Hamilton, London and Lake Erie Ry. (Electric).—Application will be made at the current session of the Ontario Legislature for



FRASER RIVER BRIDGE, NEW WESTMINSTER, B.C.

When the scows with the 380-ft. span had been towed into position between piers 3 and 4, they were securely anchored, and as the tide fell the span, which weighed over 800 tons, was lowered into position.

an act incorporating a company with this title to construct a railway from Aylmer, via St. Thomas, London, Ingersoll, Woodstock, Brantford and Paris to Hamilton, Ont., with power to construct branch lines from St. Thomas to Port Stanley, and from London to Strathroy. The applicants are S. Watson, H. C. Osborne, G. L. Francis, Toronto; L. Harris, C. Cook, Brantford, Ont., and A. C. Frost, Chicago, Ill.

Hamilton Radial Ry. (Electric).—Application will be made at the current session of the Ontario Legislature for an act amending the existing provisions relating to the crossing of highways and railways; authorizing the extension of its line from Mimico to Toronto, and extending the time for the completion of the line.

At a recent meeting of the Oakville, Ont., town council a franchise was granted permitting the laying of tracks on certain streets, the work to be commenced in July next and completed by July, 1905. (Jan., pg. 3.)

Herbertville, St. Bruno and Alma Ry.—Application will be made next session of the Quebec Legislature for an act incorporating a company to construct a railway from Herbertville, via St. Joseph d'Alma, Perebonka Falls and Mistassini, to a junction with the James Bay Ry. near Roberval, Que., thus forming a belt line round Lake St. John, with power to construct a branch line from near Herbertville to deep water on the Saguenay river at Ha! Ha! Bay.

Hopewell Cape to Hillsboro.—Arrangements are in progress to have a survey made for a line from Hopewell Cape to the Salisbury and Harvey Ry., near Hillsboro, N.S. Sheriff Lynds is a member of the committee appointed by the residents of the district to have the survey made.

Hudson Bay and Northwest Ry.—Application will be made at the next session of the Dominion Parliament for an act extending the time for the commencement and completion of this projected railway, and for a number of amendments.

Huntsville and Lake of Bays Ry.—The Company has renewed its application to the Ontario Government for a subsidy towards the construction of the mile of railway which it has nearly completed between the Lake of

Bays and Peninsula lake, near Huntsville, Ont. (Jan., pg. 3.)

International Ry. Co. of Manitoba.—C. D. Warren, R. C. Crean, Toronto; J. Arbuthnot, F. B. Warren and T. M. Daly, K.C., Winnipeg, applied at the recent session of the Manitoba Legislature for an act incorporating a company with this title to construct the following railways: (1) from the International boundary line tp. 1, range 3 west, northeasterly to Winnipeg; (2) from Winnipeg northeasterly to near Tyndall on the C.P.R., thence northerly to near the mouth of Winnipeg river; (3) from the International boundary line, tp. 1, range 3, to Morden, thence to Carberry, thence to Falkland, and thence between the Canadian Northern Ry. and the Riding and Duck mountains to the northern boundary of the province; (4) from the International boundary line tp. 1, range 8 west, northwesterly to Brandon, crossing the C.N.R. at Baldur; (5) from the International boundary line tp. 1, range 17 west, northwesterly to Elgin, Souris, Virden and to a point on the western boundary line of the province in tp. 17; (6) from the International boundary line tp. 1, range 24 west, northwesterly crossing the Souris branch of the C.P.R. between Melita and Napinka, and the Pipestone branch of the C.P.R., near Reston, to tp. 9, range 27 west, joining line no. 7; (7) from the western boundary of the province in tp. 9, easterly, crossing the Souris branch of the C.P.R. to a junction with line no. 4 at Martinville, thence easterly via Rosendale to Winnipeg; (8) from a point on the western provincial boundary in tp. 6 easterly to Hartney, thence northeasterly to a junction with line no. 1, near La Salle; (9) from the western provincial boundary in tp. 17, southeasterly to Rapid City, thence to a junction with line no. 3, thence easterly to Portage la Prairie; (10) from Portage la Prairie southeasterly to Carman, thence to a junction with lines no. 1 and no. 5. Power to issue bonds to the extent of \$16,000 a mile was asked, and capital stock to the extent of \$500,000 was to be issued. The act did not pass.

International Ry. Co. of New Brunswick.—Up to the end of 1903 about six miles of grading was done, which opens the line, ready for track laying to within three miles of the Upsalquitch river. Of this six miles, five was

in very light earth work running about 2,000 cubic yards to the mile. The line is projected from Cambellton to the St. John river, between St. John and Edmundston, N.B. Jas. M. Shanley, C.E., Campbellton, N.B., is chief engineer. (Dec., 1903, pg. 425.)

Intercolonial Ry.—Tenders are under consideration for the erection of an extension to the station at Eureka, N.S.; the erection of a freight shed at Avondale, N.S.; and for the construction of a shed for wrecking crane and a building for car repair shop at Stellarton, N.S.; and tenders have been asked for the construction of a transfer shed at Moncton, N.B.

An extension to the station at Amherst, N.S., is being gone on with, the contract having been let to Rhodes, Curry & Co. (Ltd.) of Amherst.

W. B. McKenzie, Chief Engineer, and other officials, recently visited Halifax, N.S., to inspect the double track work between Halifax and Rockingham, N.S.

Tenders are being asked for the construction of a second track on the line between Bedford Bridge and Windsor Junction, N.S. Bedford Bridge is 8.68 miles from Halifax and Windsor Junction 13.91, the distance to be double tracked therefore being 5.23 miles.

A conference between the I.C.R. engineers, the Provincial engineer and an engineer from Quebec was recently held at Matapedia, N.B., to decide upon the best plan for placing a passenger bridge on the piers of the railway bridge there. We are advised that the railway is replacing the existing bridge with a stronger one, and the existing bridge is being taken down. There has been some negotiations between the Dominion Government and the Governments of the Provinces of Quebec and New Brunswick in regard to utilizing the present bridge on an adjoining site as a road bridge for teams and passeng-

ers. Nothing has been decided and the bridge is being taken down and piled on the land adjoining the river.

Iroindale, Bancroft and Ottawa Ry.—No decision has been reached in reference to the projected extension of this line from its present terminus near Bancroft, to Renfrew, Ont. (Jan., pg. 3.)

James Bay Ry.—Surveys have been made for the construction of a railway from Toronto to Sudbury, Ont., via Parry Sound, about 260 miles. The first section of the proposed line surveyed was from the present terminus of the line in Parry Sound to near Sudbury, 110 miles, and the survey for the southern section is practically completed. Three survey parties have been working southerly, one between Otter Lake, near the point where the line constructed in 1901 joins the Canada Atlantic Ry. at Quebec siding, to Gravenhurst; the second between Gravenhurst and Beaverton; and the third between Beaverton and Toronto. While nothing has been definitely decided about the route to be followed, the line will follow a fairly straight route from Quebec siding to near Gravenhurst, westerly of the Muskoka lakes; from Gravenhurst easterly of Lake Couchiching and Lake Simcoe to Beaverton, and from Beaverton to Richmond Hill, and into Toronto via the Don flats. A deputation from Orillia recently waited on Mackenzie, Mann & Co., and was informed that the line would be taken as close to Orillia as was possible. Two deputations have interviewed the Ontario Government, one from Parry Sound and the second from Sudbury, asking for the voting of cash subsidies in aid of the line. (Jan., pg. 3.)

Kingston, Portsmouth and Cataraqui Electric Ry.—The Kingston city council has declined to grant permission for the extension of the switch on Princess st., and the com-

pany has withdrawn its service from all lines. The company says that all it is required to do by the terms of its franchise is to run a car over the line every six months. The city authorities have applied to the Ontario Legislature for an act providing that the Company shall forfeit \$100 a day for each legal day the cars are not operated, and also for power to purchase the line as a going concern at a valuation after giving six months' notice of such intention. (Jan., pg. 3.)

Klondike Mines Ry.—To the end of 1903 only half a mile of track, from Klondike City to the mouth of Bonanza creek, Yukon Territory, was laid on this projected railway from Dawson to Stewart river, a total distance of 84 miles.

In connection with further construction nothing much has been done, but we are advised that negotiations are in progress with British and French capitalists, and that there is every reason to believe that matters will be so arranged that construction work will be gone on with early in the spring. (Nov., 1903, pg. 389.)

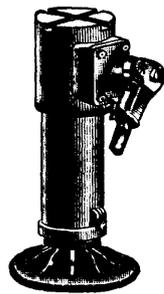
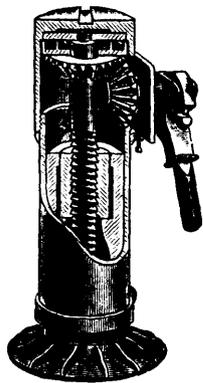
Lake Erie and Detroit River Ry.—The by-law providing for a bonus of \$20,000 with freedom from taxation for ten years and manufacturers' rates for water, in order to secure the location of the company's repair shops and the shops for the repair of the rolling stock of the Pere Marquette Rd. in Canada, has been passed by the taxpayers of St. Thomas, Ont. (Jan., pg. 3.)

Levis County Ry. (Electric).—Surveys have been made for an extension of this line from St. Romuald to Chaudiere, Que., about 1.75 miles. (Jan., pg. 3.)

London Street Ry. Co.—The Ontario Court of Appeal has decided the action in which this Company sought to have a city by-law, calling for the construction of additional

No Other Jack

One make of Jack is NOT "as good as another"
—certainly not! No other Jack combines the safety, simplicity, efficiency
and durability found in the



Norton Ball-Bearing Jack.

Made in 50 styles, 8 to 70 tons capacity. Adapted to all classes of service.

MANUFACTURED BY

A. O. NORTON, Coaticook, Que.

Carried in stock by Canadian Agents, W. H. C. MUSSEN & Co., Montreal, Que.

mileage quashed and a decision given on other matters in regard to which the Company and city council did not agree. According to the decision the by-law has been quashed, but it is held that the city is entitled to additional mileage, but not to the extent claimed, as the basis upon which it was calculated was not correct. The city claimed to be entitled to have 2½ miles of new track constructed, but the new decision will reduce the additional mileage to which the city is entitled by one mile. (May, 1903, pg. 149.)

Manitoba and Keewatin Ry.—Application will be made next session of the Dominion Parliament for an act extending the time for the commencement and completion of the main and branch lines authorized. (Aug., 1902, pg. 265.)

Maritime Coal and Ry. Co.—The Nova Scotia Legislature at its current session passed an act incorporating a company with this title.

Metropolitan Ry. (Electric).—The Company is purchasing right of way between Newmarket and Sutton, Ont., in connection with its projected extension from Newmarket to Jackson's Point on Lake Simcoe. (Jan., pg. 5.)

Michigan Central Rd.—At the last sitting of the Railway Committee of the Privy Council an order was made for the construction of a subway under the tracks of the M.C.R. at Ross st., St. Thomas, Ont., the cost to be divided between the Company and the city, the latter to pay one-third. (July, 1903, pg. 237.)

Montreal and Grenville Ry.—Application will be made next session of the Quebec Legislature for an act incorporating a company to construct a railway from Grenville to Montreal, to be operated by steam or electricity.

Montreal Park and Island Ry. (Electric).—Application will be made next session of the Dominion Parliament for an act extending the time for the completion of the lines authorized, defining "tramway" as used in the act of incorporation and amending acts, and authorizing the Company to enter into contracts with municipalities for the construction of lines within their limits.

Murray Bay to St. Irene.—A proposition is under consideration locally to construct an electric railway from Murray Bay to St. Irene, Que., with branches to a number of points.

Nepigon Ry.—Application will be made at the current session of the Ontario Legislature for an act authorizing the construction of a line from the north end of Lake Nepigon to intersect the projected line of the Grand Trunk Pacific Ry.; also for the purpose of authorizing the operation of a railway ferry on the lake to connect the proposed northern extension with the surveyed portion of the authorized line from Lake Superior, near Nepigon, to the southern shore of the lake.

We were recently advised that it was expected to complete the location of the first section of the line between Lake Superior and Lake Nepigon, early in Feb. The starting point of the surveyed route is at Red Rock on Nepigon Bay, where a deep water terminus will be located, thence following the west bank of the Nepigon river, to about opposite Nepigon station on the C.P.R. transcontinent-al line, where it crosses the river to the east bank, crossing under the approach of the C.P.R. bridge over the river. From this point the surveyed route follows the east shore of Lake Helen and the Nepigon river to Camp Alexander, 12 miles from the C.P.R., thence following the valley of Fraser creek, and Lake Nepigon at an elevation of about 500 ft. above Lake Superior. The distance from the terminal on Lake Superior to Lake Nepigon is 34 miles. The spur to connect

with the C.P.R. at Nepigon station will be about one mile in length, and that at Camp Alexander to connect with the Nepigon Pulp Co.'s mills, will be about half a mile long. The maximum gradient is 1% compensated, and the maximum curve is 6°. The principal bridge on the line will be that crossing the Nepigon river. It will consist of three spans of 150 ft. each; all other structures will be trestle and pile bridges. The district which will be opened up, is well adapted for agriculture, the soil being a clay loam. R. A. Haslewood is Chief Engineer. (Jan., pg. 5.)

New Brunswick Coal and Ry. Co.—There is under contract, and work will be proceeded with as soon as possible, on a branch from Minto, N.B., northerly to the coal mine, 1.25 miles, and a second branch of four miles to the coal mines south of Minto. The James Barnes Construction Co., of Chipman, N.B., has the contract, and E. G. Evans, C.E., Hampton, N.B., is Chief Engineer. It is proposed to construct an extension of the line from Minto to Gibson, on the St. John river, opposite Fredericton, 30.4 miles. (Jan., pg. 5.)

Niagara to Toronto.—A report on the construction work done by the Electrical Development Co. at Niagara Falls, Ont., states among other things that W. T. Jennings, who has had charge of the purchase of the right of way for the transmission pole line from Niagara Falls to Toronto, has acquired 85% of the land required between the Falls and Lambton, 75½ miles, and that the right of way so acquired will be sufficient to allow of the construction of a double-track electric railway. The Company has power in its charter enabling it to construct such a line.

Nicola, Kamloops and Similkameen Coal and Ry. Co.—Application was made to members of the B.C. Legislature and to the Government, to favor the passing of an act guaranteeing the interest on the bonds of the Company to the extent of \$25,000 a mile for a period of 20 years, the Company agreeing to turn over to the Province the amount of the Dominion subsidy, and 35% of the gross earnings of the line. T. W. Holland, who was engaged in the negotiations with the Government, stated on returning to Vancouver that if the guarantee was given the Company would start work within six months, and would complete the line within eight months thereafter. The Government did not bring in a bill providing for the guarantee.

The preliminary surveys for portions of the line were made by the C.P.R., and cover the route between Spences Bridge and a point 45 miles up the valley of the Nicola river, upon which it was intended to commence construction work. The character of the valley up to the 45th mile is favorable for the development of a first-class line with gradients not exceeding 1%, and moderate curvature. A number of bridges will be required, but their character will not be decided upon until the final location survey of the route is made. The intention of the Company, however, is to construct a first-class line, with steel and masonry bridges and heavy rails. (Jan., pg. 5.)

North Lanark Ry.—The route which it is proposed to follow will start at High Falls, above Calabogie via White Lake to Arnprior, thence to Galetta and Fitzroy harbor, and then on to Ottawa. It is intended to have a survey made at an early date. (Jan., pg. 6.)

Northern Pacific Ry.—Surveys are reported to have been made for an extension of the Seattle-Everett-Vancouver division, which now has its terminal at Sumas, Wash., to New Westminster, B.C., where a connection would be made with the tracks of the Vancouver, Westminster and Yukon Ry.

Nova Scotia Eastern Ry.—An act was passed at the first portion of the current session of the Nova Scotia Legislature making a number of amendments in the act relating

to the Company, and extending the time for the construction of the line. Press reports state that the necessary financial arrangements have been completed so that construction may be started in the spring, but we are unable to verify this, as those connected with the Company are very reticent on the subject. The route, so far as can be gathered, has not been finally approved by the Provincial Government. (Jan., pg. 6.)

Newfoundland.—In connection with the mining enterprises at Baie Verte, a railway 2½ miles long has been constructed from the mines to the shore, where a wharf 500 ft. long has been erected. Two locomotives and a full equipment of cars are operated on the line. F. A. Horsey is President of the mining company, and J. A. Horsey & Sons, of New York, are agents for the property.

In connection with the proposal that Newfoundland should join the Dominion of Canada the question of terms has been mentioned. One of the conditions which Newfoundlanders appear to think should be agreed to as a preliminary to confederation would be the construction of a railway from the Reid Newfoundland Co.'s Ry. to Heart's Content as a Dominion undertaking.

Ontario Electric Ry.—G. E. Smith and A. B. Turner, of Boston, Mass., have been interviewing representatives of the municipalities along the proposed route of this line between Toronto and Ottawa, and a further circular letter was addressed to the municipal officers early in Feb., stating that full details of the Company's plans would be laid before them at an early date. (Jan., pg. 7.)

Ontario Traction Co.—Application will be made at the current session of the Ontario Legislature for an act incorporating a company with this title to construct a system of railways to be operated by electricity or compressed air, or any other power except steam, subject to the approval of the Government, from London to Stratford; London to Seaforth; London to Clinton; Stratford to Mitchell and Wingham; with power to construct branch lines. T. H. Luscombe, London, Ont., is solicitor for the applicants.

Ontario Traction Co. (Ltd.)—The charter granted this company under the Ontario Companies' Act, dated Nov. 17, 1903, provides for the construction of 1½ miles of electric railway in Walkerville, Ont., fixes the capital at \$40,000 and the head offices at Walkerville. The provisional directors are: C. M. Walker, E. F. Ladore, and J. H. Coburn, of Walkerville. (Jan., pg. 7.) See also Walkerville electric railway.

Orford Mountain Ry.—Location surveys have been made on the following extensions: from Kingsbury to Greenlay, opposite Windsor Mills, Que., 10 miles; from Bonallie lake to Orford township, about one mile; from Eastman to a point in Potton township, about 12 miles. Plans for the first named extension have been deposited with the Department of Railways at Ottawa. The right of way has been secured, and it is expected that construction on the extension will be commenced in the spring. No decision has been announced as to the probable time for the commencement of construction on the other projected extensions. (Jan., pg. 7.)

Ottawa and New York Ry.—We are informed that while the matter of changing the line so that it may be operated by electricity is under consideration, the matter has not been sufficiently far advanced to permit any definite announcement being made. The management is looking into the question of the cost of making the change. The press reports referring to the matter stated that in changing the motive power the line would not lose its identity as a steam road—the cars and equipment will be the same, but the motive power will be electricity instead of steam.

It is proposed to generate power at Ottawa and Cornwall, Ont., and for the United States section of the line—the New York and Ottawa Ry.—at Massena Springs, N.Y. (Oct., 1903, pg. 345.)

Ottawa River Ry.—Application will be made next session of the Dominion Parliament for an act authorizing an extension of the line to Ottawa, and giving power to purchase or amalgamate with connecting lines. The Company will apply at the current session of the Ontario Legislature for an act authorizing the construction of a line from its present proposed terminus to Georgian bay.

The Company, under the Dominion Act of 1903, has been organized with the following officials and directors: President Col. E. McMullen, Boston, Mass.; Vice-President, Hon. J. Domville, St. John, N.B.; 2nd Vice-President, F. D. Monk, M.P., Montreal; Treasurer,

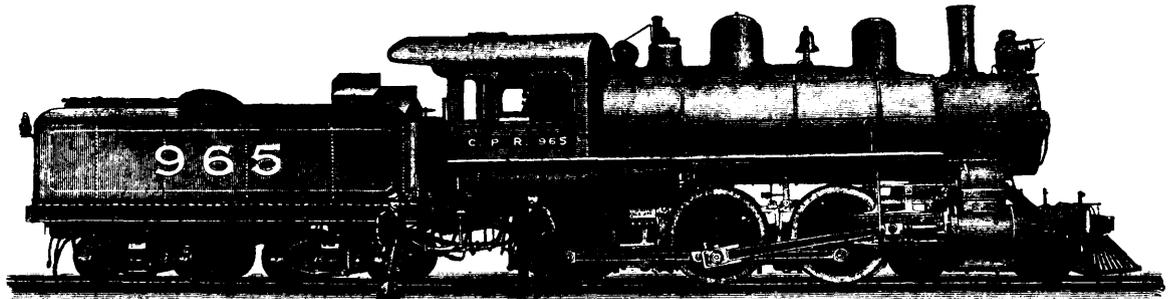
H. W. Raphael, Montreal; other directors, Hon. W. Owens, T. Gauthier, Montreal; J. A. C. Ethier, M.P., St. Scholastique, Que.; T. A. Richardson, J. D. Wells, New York; Secretary, C. Wilkinson, Montreal.

Surveys are reported to have been gone on with during the winter, the route followed being from Montreal to Grenville, passing through the following places: Mile End, Cartierville, Ste. Dorothie, St. Joseph du Lac, St. Placide, St. Andrews and Carillon. The heaviest bridge work will be the crossing of the Riviere des Prairies. Between Carillon and Grenville a junction will be made with the Ottawa Valley Ry., from St. Andrews to Lachute. (Jan., pg. 7.) See also Ottawa Valley Ry.

Ottawa to James Bay.—Application will be made next session of the Dominion Parliament for an act incorporating a company to

construct a railway from Ottawa and Hull to Buckingham, Que., thence to James bay; and a branch line from Buckingham to the Ottawa river between Thurso and Templeton, Que. McCracken, Henderson & McDougal, Ottawa, are solicitors for the applicants.

The Ottawa Valley Ry. was constructed in 1892-93 and extends from Lachute to St. Andrews, Argenteuil county, Que., about 10 miles. It was operated for some years in harmony with the C.P.R., but when that company acquired the Montreal and Ottawa Ry. from Vaudreuil to Point Fortune, Que., opposite St. Andrews, thus controlling the traffic on both sides of the Ottawa river, a dispute arose as to the terms for the exchange of traffic at Lachute, and finding that it was impossible to work the line without loss it was closed, and has not been operated since. It is proposed to utilize the line in connection

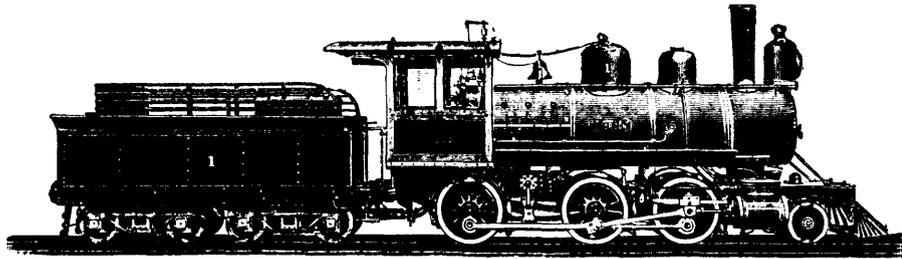


The Saxon Engine Works, late Rich. Hartmann, Limited

CHEMNITZ (Germany),

Carry on the construction of **LOCOMOTIVES** of every description.

Number of Workmen, 5,200.



Capital, \$3,000,000.

THE

INTERCOLONIAL RAILWAY

Calendar for February says:

“True courtesy is greatly to be desired, therefore be courteous.”—ANON.

The courtesy experienced on Intercolonial trains meets with frequent and favorable comment. On the Maritime Express, running between Montreal, Quebec, St. John, Halifax and the Sydneys, with its commodious sleeping cars and excellent dining car service, the passenger is brought into contact with the most courteous of railway employes.

INTERCOLONIAL RAILWAY

FAST FREIGHT TRAINS VIA



RUNNING DAILY BETWEEN

MONTREAL, QUEBEC, ST. JOHN, HALIFAX and the SYDNEYS

Give every satisfaction to shippers

with the proposed electric line which the Ottawa River Ry. Co. has projected to connect Montreal and Grenville. See also Ottawa River Ry.

The Peterboro' and Ashburnham Ry. Co. (Electric) proposes to construct about three miles of track during the year, but has not come to any definite decision as to the particular points in Peterboro', Ont., which will be served by the new line. The taxpayers, at the annual municipal elections passed the by-law granting the Peterboro' Light and Power Co. a 30-year franchise of the railway, and also one giving a lighting franchise to the same Company. This latter by-law had previously been quashed by order of the Courts on the ground that it was given as a reward for introducing the street railway. (Oct., 1903, pg. 345.)

Point Ellice Bridge, Victoria.—The new bridge, carrying electric tracks, etc., at Point Ellice, Victoria, B.C., is practically completed, and the flooring and tracks will be laid so as to have it ready for use early in the spring.

Pontiac and Interprovincial Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from Waltham, Que., the terminal of the old Pontiac Pacific Junction Ry., to Ferguson's Point, thence across the Ottawa river to the C.P.R., between Petewawa and Chalk River, Ont., with a branch from Chapleau to near Desjardinsville, Que. Gorman & O'Connor, Ottawa, are solicitors for the promoters.

Preston and Berlin Ry. (Electric).—It is proposed to construct a line from Berlin East, Ont., to the freight yards, and to several factories in the vicinity, a total distance of 2.50 miles. A. A. McDonald, Berlin, Ont., is the contractor.

The line at present extends from Preston to Albert st., Berlin, and is $9\frac{3}{4}$ miles in length. Starting from Cedar Grove, on King st., which is about $\frac{1}{4}$ mile before the end of track, is the extension to Waterloo. The line has been graded from Cedar Grove for some distance, but nothing more will be done this winter, the question of the location beyond Queen st., Berlin, being still in abeyance. The line will probably be extended to Erb st., Waterloo, $3\frac{1}{2}$ miles from Berlin. The work is being done under the management of M. H. Todd, President of the Galt, Preston and Hespeler Ry., which has acquired the line. (Jan., pg. 7.)

Prince Edward Island Ry.—Surveys have been made for the extension of the Murray River branch from its present terminus at Murray River, about 65 miles from Charlottetown, to Machin's Point, about eight miles, and a branch from Montague Bridge to Carriagan, about seven miles, to connect the Murray Harbor branch with the Georgetown branch. The surveys were made by H. J. McKenzie and T. T. Black under the direction of W. B. McKenzie, Chief Engineer of the Government railways. Tenders have been invited for straightening the main line at Curtis Creek, 6,146 ft. of line being necessary; also for making the connection between the main line and the Hillsborough river bridge at Charlottetown, 2,323 ft. of line being required for this purpose. (Jan., pg. 7.)

Quebec and Lake Huron Ry.—Application will be made next session of the Dominion Parliament for an act authorizing an extension of time for the commencement and completion of the authorized line of railway from Quebec to the mouth of French River, Ont. J. G. Langelier, Quebec, is Secretary. (May, 1903, pg. 151.)

Quebec and Lake St. John Ry.—During 1902 a spur line 13 miles long was constructed from St. Andre Jct. to the Metabouchouan Pulp Co.'s mills at Metabouchouan, Que., and on Feb. 5 a deputation representing the Pulp Co. waited on the Dominion Govern-

ment to ask for the payment of the subsidy voted therefor. The officers of the Department of Railways state that the subsidy has not been earned, and further, that the line is costing more for construction than it should.

J. G. Scott, General Manager, recently stated that during the past eight years over \$1,000,000 had been expended in betterments on the line. It was possible to haul trains of 620 tons on the line now, whereas the maximum trainload was formerly 300 tons. The district had now over 50,000 settlers, and from 4,000 to 5,000 additional settlers were coming in annually. (Jan., pg. 7.)

Quebec Central Ry.—A press report states that an order for 2,000 tons of 70 lb. rails has been placed by the Company in England, for replacing 50 and 60 lb. rails.

Application will be made next session of the Quebec Legislature for an act authorizing the Company to subscribe for and hold stock in the Quebec Bridge and Ry. Co., and to acquire land in the city of Quebec for terminal purposes generally. (Jan., pg. 7.)

Quebec Radial Ry. (Electric).—Application will be made next session of the Quebec Legislature for an act incorporating Hon. J. Sharples, Hon. N. Garneau, J. T. Ross, J. B. Forsyth, W. H. Wiggs, R. Campbell, A. Lavoie, A. Rhodes, A. C. Dobell and M. H. Brophy, a company for the purpose of constructing electric railways or tramways to connect Quebec city with various points throughout the county of Quebec, or between any two points in the county. The present proposal is to connect the parishes of St. Columbe de Sillery, Bergerville and Charlebourg with Quebec.

Quebec, Saguenay and Gulf of St. Lawrence Ry.—H. Holgate, C.E., of Ross and Holgate, Montreal, engineers for the North Shore Power, Ry. and Navigation Co., recently stated that a survey would be commenced early in the spring for a line to connect Quebec with the Bay of Seven Islands. The charter for the line is owned by the directors of the N.S.P. Ry. and N. Co., which has constructed a railway 9 miles in length from Clarke city on the Bay of Seven Islands, to the falls of the Ste. Marguerite river, where a pulp mill is under construction. While surveys will be made, it is not at all probable that any construction will be gone on with this year. (Jan., pg. 7.)

Roseau-Emerson Power Co.—Geo. E. W. and F. J. Pocock and A. E. Hosken were incorporated at the recent session of the Manitoba Legislature under this title to develop power on the Roseau river, and to distribute the same for manufacturing and other purposes. In connection with the power transmission plant authority is given to construct electric railways within a radius of 75 miles from Emerson, Man.

St. Catharines to Welland.—Application is being made at the current session of the Ontario Legislature for an act incorporating a company to construct an electric railway from St. Catharines, via Thorold to Welland, Ont. Marquis and Gilleland are solicitors for the applicants.

St. John Ry. (Electric).—The following additional lines are projected and surveys have been made, but the company's plans have not been fully prepared nor the necessary agreement completed with the local municipalities: from the city line Carleton, through Carleton or West St. John, about 3 miles; and from Princess st. to Brittain st., 0.75 miles. (Jan., pg. 8.)

St. John's Street Ry.—A press report states that the Reid Newfoundland Co. proposes to run electric or other motor busses in connection with the street railway in St. John's, Nfld.

St. Joseph and Stratford Electric Ry.—N. Cantin, of St. Joseph, is applying at the

current session of the Ontario Legislature for an act incorporating a company with this title to construct an electric railway from Stratford to St. Joseph on Lake Huron.

As the result of a meeting with the Stratford city council a preliminary agreement was completed by which N. Cantin will be given a franchise to construct a belt line in the city, in connection with the projected line from Stratford to St. Joseph, and H. M. Sloan, of Chicago, Ill., will be given a franchise to connect his projected radial lines from Stratford to Sebringville and Mitchell; and to St. Mary's. Nothing of a very definite nature has been arranged between the parties, and it is not expected that much will be done until after the necessary legislation has been secured. (Jan., pg. 9.)

The St. Mary's River Ry. during 1903 extended its line from Spring Coulee to St. Mary's river, 13 miles, and proposes to extend it to Cardston, Alta., an additional two miles; A bridge is in course of construction over the river, which it is expected to complete by May. From about 10 miles from Spring Coulee surveys have been made for a branch line running southerly, and it is proposed to go on with construction early in the spring. (Jan., pg. 9.)

Sandwich, Windsor and Amherstburg Ry.—Application will be made at the current session of the Ontario Legislature for an act authorizing this Company to take over the property, rights and assets of the City Ry. Co. of Windsor (Ltd.), and also authorizing the Company to subscribe for stock in any electric or street railway company. (Aug., 1903, pg. 269.)

Spokane and Kootenai Ry.—Press reports state that surveys have been completed for the proposed line from Spokane, Wash., to a junction with the C.P.R. on the International Boundary near Kootenay Landing, B.C. D. C. Corbin, of Spokane, Wash., is one of the promoters.

Strait of Canso Bridge.—The plans for the projected bridge across the Strait of Canso, N.S., are being prepared by Waddell & Hedrick, Kansas City, Mo. This firm prepared the plans for and had charge of the erection of the bridge over the Fraser River at New Westminster, for the British Columbia Government. The plans will provide for a cantilever bridge, the total length of the steel work being 4,370 ft.; the centre span being 1,800 ft., with anchorage spans of 600 ft. in length at the shore ends. The floor of the bridge will be 150 ft. above high water. The main piers will rest on steel caissons 40 ft. in diameter, filled with concrete and sunk to a depth of 90 ft. The depth of water in the middle of the channel is 270 ft. There will be trestle approaches at either end. The cost of the bridge is estimated at about \$5,000,000. The bridge will extend from Cape Porcupine, on the mainland, to near Hastings, Cape Breton island. The bridge will be constructed by the Strait of Canso Bridge Co., but connection will be given to the Intercolonial Ry., which at present operates a car ferry service between Mulgrave and Point Tupper, N.S. An opportunity will be afforded to other railway companies to connect with the bridge. (Aug., 1902, pg. 267.)

Strathroy and Western Counties Ry.—Application will be made at the current session of the Ontario Legislature for an act authorizing the Company to extend the line already authorized, from Strathroy southerly via St. Thomas to Lake Erie, and branch lines. Royce & Henderson, Toronto, are solicitors for the promoters. (Dec., 1903, pg. 425.)

The Suburban Rapid Transit Co. was given an act at the recent session of the Manitoba Legislature confirming an agreement with the municipality of Assiniboia, and

amending the act of incorporation. (Feb., 1903, pg. 47.)

Temiskaming and Northern Ontario Ry.
—In the speech of the Lieutenant-Governor of Ontario at the opening of the Legislature reference was made to the satisfactory progress that had been made with the construction of the line, and to the great value of the undertaking, which had been fully demonstrated by the advantages which had already resulted to the Province. The surveys made during the past year, it was added, showed that the railway may be profitably prolonged at moderate cost through the centre of the rich agricultural district northwest of Lake Temiskaming, at least as far as the proposed line of the Grand Trunk Pacific Ry.

The second annual report of the Commissioners having charge of the construction of the line was presented to the Legislature Feb. 8. The total expended during the year was \$1,842,451, making a total expended to Dec. 31, 1903, of \$2,020,092, which includes \$5,841 expended on explorations north of New Liskeard. The principal items of expenditure during the year were: engineers' construction, \$1,156,527; rails and fastenings, \$326,103; rolling stock, \$73,789; ties, \$65,425; ballasting, \$37,599; pay rolls, \$4,098; telegraph line, \$9,489; tracklaying, \$20,579. The Commissioners also gave an estimate of the cost of the 112 miles of line from North Bay to New Liskeard completed and equipped ready for traffic. This shows a total cost of \$3,332,560, made up as follows: grading, including trestle work, bridging, etc., \$18,000 a mile; rails and fittings, ties, ballasting, telegraph line, tracklaying, etc., \$7,000 a mile; terminals, sidings, stations, water-tanks, etc., \$1,755 a mile; rolling stock, \$3,000 a mile; total, \$29,755 a mile. The line being constructed is of the highest class, equal to the trunk line standard.

The report of the engineer, W. B. Russel, shows what has been done, and states that it is intended to have the line to New Liskeard completed and in operation by the end of 1904. During 1903 the grade was completed on 76 miles, track was laid on 57 miles, and the telegraph line completed for the same distance. The maximum gradient which it was necessary to use on the first 32 miles of 1.25% rising north and 1% rising south was reduced on the balance of 80 miles to 1% rising north and 0.75% rising south, the maximum curve being 6° and easement on all curves over a 3°. The located part of the line between the 50th and 72nd miles presented considerable difficulties and was abandoned, a new line being run some miles inland from Rabbit lake with good results and the saving of one mile. The surveys north of New Liskeard show that a line can be located on the entire route to the Abitibi river with a maximum gradient of ½% of 1% and a maximum curve of 4°. A location working to this standard is now in progress and will be ready for construction in the early spring. While the grading will be comparatively light, the crossing of streams in deep ravines will be somewhat expensive. The proposed extension passes through a clay loam and comparatively flat country from 12 to 20 miles wide. There is an almost unlimited quantity of pulpwood, and the prospects of mining development are great.

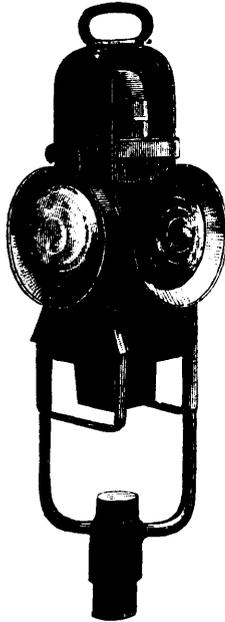
The Government is asking for power to extend the line from New Liskeard to the Abitibi river, to increase the bonding powers from \$25,000 to \$30,000 a mile; to permit the transfer to the Commissioners by order-in-council of townsites along the line of railway, such townsites not to be part of the security for bondholders, but to be sold and the proceeds applied towards the maintenance of the line; and further authorizing the transfer to the Commissioners, by order-in-council, of not exceeding \$2,000,000 by way of loan at 3½%, the bonds of the railway to be deposited as security. (Jan., pg. 9).

Terrebonne Electric Ry.—Application has been made at Quebec for a charter for the

The HIRAM L. PIPER CO'Y

12 St. Peter St. - MONTREAL. LIMITED

PIPER Switch Lamps



Require no
Chimney

Consumption
of Oil reduced
by half

Wick regulat-
ed from
outside

Made of
annealed iron,
galvanized

Fittings
copper and
brass

Brass Oil Tank
never leaks

A post card will bring to you our No. 30 Catalogue of Railway Signals and Supplies.

STORRS' "NEVER BREAK" Mica Headlight Chimneys

Save
50 per cent.
in cost of
Chimneys
alone.

Save
Cleaning
and
Replating
Reflectors



CANADIAN NORTHERN RAILWAY

THE NEW CANADIAN HIGHWAY FROM PORT ARTHUR, THE
HEAD OF LAKE SUPERIOR, TO—

**FORT FRANCOES
WINNIPEG
BRANTON LA PRAIRIE
BRANDON**

**MORRIS
EMERSON
GARMAN
HARTNEY**

**GLADSTONE
NEEPAWA
DAUPHIN
SWAN RIVER**

Line surveyed and now under construction to:—

PRINCE ALBERT

BATTLEFORD

EDMONTON

FREIGHT:—Shipments are handled from points in Eastern Canada, either Grand Trunk or Canadian Pacific Railways, via North Bay to Port Arthur, thence Canadian Northern Railway.

PASSENGER:—Passengers destined to points on the Canadian Northern Railway north, south and west of Winnipeg, can purchase through tickets via Chicago and St. Paul, where connection is made with the Canadian Northern Flyer for Winnipeg via Great Northern Railway, also with Northern Pacific Railway.

Freight Rates, Folders and other Information furnished on application to:—

R. H. BELL, T. F. & P. A., Board of Trade,
MONTREAL, QUE.

WM. PHILLIPS, G. E. A.,
TORONTO, ONT.

GEO. H. SHAW, Traffic Manager,
WINNIPEG, MAN.

construction of electric railways in the county of Terrebonne.

Thorold and Lake Erie Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from Thorold via Port Colborne to Brantford, Ont. German and Pettit, Welland, Ont., are solicitors for the promoters.

Thunder Bay, Nipigon and St. Joe Ry.—Application is being made at the current session of the Ontario Legislature for an act authorizing an extension of the projected line from a point 60 or 70 miles from Port Arthur, easterly and northerly to the Albany river, and for amendments to the financial sections of the act of incorporation. (Jan., pg. 9).

Toronto and Hamilton Ry. (Electric).—Application will be made next session of the Dominion Parliament for an act authorizing an extension of the company's projected line from Toronto to Hamilton, beyond the latter point to the Niagara river, and power to construct branch lines. (Oct., 1903, pg. 346).

Toronto, Hamilton and Buffalo Ry.—Hamilton papers recently stated that the proposed extension from Brantford to Woodstock or Drumbo, Ont., to connect with the C.P.R., would be abandoned. T. H. and B. officials stated that there was nothing in the original reports, but color was given to them by reason of E. Fisher, General Superintendent, attending certain meetings where such an extension was discussed. (Jan., pg. 9).

Toronto Ry. (Electric).—Residents of the north-west portion of the city are asking for an extension of the street railway along Bloor st., from the present terminal at Lansdowne ave. It is suggested that the city should bear the cost of protecting the railway crossings. (Oct., 1903, pg. 347).

Toronto Suburban Ry. (Electric).—Application will be made at the current session of the Ontario Legislature for an act authorizing the construction of the following extensions: from a point on the company's authorized lines through Hamilton to Niagara Falls; from near Weston to Woodbridge; and from a convenient point on the line to Brampton. Power is also asked to extend the time for the commencement and completion of the already authorized lines not at present constructed. (April, 1903, pg. 122).

The United Gold Fields of B.C., which was authorized by Chap. 110 of the Acts of 1902 to construct a railway from Frank to Grassy Mountain, Alta., will apply next session of the Dominion Parliament for an act authorizing it to sell or lease its property, franchises and assets to the West Canadian Collieries, Ltd., and the Cardiff Ry. Co., or either of them, to amalgamate with either of them. An extension of time is also sought for the commencement and completion of the line authorized. The U.G.F. of B.C. is a British corporation, and Latchford, McDougall and Daly, Ottawa, are solicitors for it in connection with the present application. (See Frank and Grassy Mountain Ry., Sept., 1903, pg. 305.) See also Cardiff Ry. and West Canadian Collieries, Ltd.

Vancouver, Victoria and Eastern Ry. and Navigation Co.—Application will be made next session of the Dominion Parliament for an act extending the time for the completion of the Company's projected line. (Oct., 1903, pg. 347.)

The Vancouver, Westminster and Yukon Ry. is the title given by the Dominion Parliament to the railway which is also described as the Victoria, Westminster, Northern and Yukon Ry. Tracklaying on the line from New Westminster to Vancouver was completed by Dec. 31, and a train service was placed in operation Jan. 1. Various difficulties have since arisen with the C.P.R., and some tracks have been torn up, with the result that in-

junction and other proceedings have been instituted. The Railway Committee of the Privy Council at its last sitting granted the V.W. and Y. Ry. permission to cross the C.P.R. tracks at Heatly ave., Vancouver, but declined to give permission to carry a line along the water front at New Westminster. The various matters in dispute are now before the new Board of Railway Commissioners. (Jan., pg. 10.)

Wabash Rd.—The St. Thomas, Ont., city council has been notified by the officials of the Wabash Rd. that its amended offer of Dec. 7, 1903, has been accepted by the Company, and that as soon as the necessary legislation has been secured an agreement will be entered into for the purpose of constructing shops at St. Thomas for repairing the equipment used in its Canadian traffic. (Jan., pg. 10.)

Walkerton and Lucknow Ry.—Application will be made at the next session of the Dominion Parliament for an act incorporating a company with this title to construct a line from Walkerton via Teeswater to Lucknow, Ont. A. H. Macdonald, Guelph, Ont., is solicitor for the promoters.

Walkerville Electric Ry.—Application is being made at the current session of the Ontario Legislature for an act incorporating a company to construct an electric railway from, in, near or through Windsor, Chatham, Walkerville, and the townships of Sandwich East, Maidstone, Rochester, Tilbury North, Tilbury East, Dover East, Raleigh; with power to construct branch lines, and to acquire the lines of other companies. J. H. Coburn, Walkerville, Ont., is solicitor for the promoters, who are understood to be connected with the Hiram Walker and Sons' interests. The right of way in Walkerville is reported to have been secured. See also Ontario Traction Co. (Ltd.).

The West Canadian Collieries (Ltd.) is a British corporation licensed under the Dominion Companies' Act to carry on mining operations in the Yukon district and the Northwest Territories. Application will be made next session of the Dominion Parliament for an act empowering the Company, among a number of other things, to construct branch railways not exceeding 10 miles long in any one instance; to lease or purchase, in whole or in part, the property, business and franchises of the Cardiff Ry. Co., and the United Gold Fields of B.C. (Ltd.), or either of them; or to enter into an agreement with the Cardiff Ry. Co. The capital of the Company is fixed at \$1,000,000. See also Cardiff Ry. and United Gold Fields of B.C. (Ltd.).

Westmount Traction and Power Co.—Application will be made next session of the Quebec Legislature for an act incorporating a company with this title to construct a railway through Westmount communicating with the centre of Montreal; with branch lines through any municipality on the island of Montreal.

Whitehorse and Aisek Ry.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from Whitehorse to Dawson, Yukon, with power to construct branch lines. Livingston, Garrett & King, Vancouver, B.C., are solicitors for the promoters.

The Windsor, Essex and Lake Shore Rapid Ry. Co. (Electric), in connection with its application at the current session of the Ontario Legislature for power to increase its capital stock from \$500,000 to \$1,000,000, is asking for power to extend its line from its present authorized terminal at Wheatley to Chatham, Ont. (Jan., pg. 10.)

Winnipeg and Stony Mountain Ry.—After full investigation the City Engineer has decided that an extension of the line from the city stone quarries into the city is impracticable, as the cost of hauling stone by it would

bring the total to a figure higher than it amounts to at present when hauled over the C.P.R. (Jan., pg. 10.)

Winnipeg Electric St. Ry.—It is proposed at an early date in the spring to lay a second track on Main st. north for about a mile.

At the recent session of the Manitoba Legislature an act was passed confirming an agreement entered into between the Company and the municipality of St. Boniface respecting the construction of a line there, and also agreements with other municipalities respecting projected extensions of its lines. (Jan., pg. 10.)

Winnipeg, Selkirk and Lake Winnipeg Ry. (Electric).—An act was passed at the recent session of the Manitoba Legislature, giving power among other things to construct a branch line by way of Point Douglas on the C.P.R., to the vicinity either of Fort Alexander or Lac du Bonnet, a branch from near Stony Mountain to Stonewall, and a belt line round Winnipeg, passing through or near St. Boniface. Power is asked to make agreements for connections with other lines, to develop power and to supply power and electric light. Agreements with Selkirk and the rural municipalities of Kildonan, St. Paul's and St. Andrew's granting franchises are confirmed, and power is given to enter into agreements with other railway companies for running rights into the city of Winnipeg or within any of the municipalities within which the Company has power to construct lines. (Jan., pg. 11.)

Yonge St. Bridge, Toronto.—The draft order for the construction of the bridge over the G.T.R. and the C.P.R. tracks at the foot of Yonge st., Toronto, has been under the consideration of the legal department of the Toronto city council, but the final settlement of its terms has been delayed owing to the transfer of the duties of the Railway Committee of the Privy Council to the Board of Railway Commissioners. (Dec., 1903, pg. 425.)

Yukon Ry.—A press report states that the Yukon District Council is gathering information with a view of ascertaining the feasibility of constructing a railway from Whitehorse to Dawson City.

The C.P.R. recently carried a consignment of raw silk and silk goods valued at \$1,932,000, from Vancouver, B.C., consigned to the silk mills at Weehawken, N.Y. The consignment weighed 900 tons, and filled 28 freight cars.

The Canadian Westinghouse Co. (Ltd.) is applying at the current session of the Ontario Legislature for an act confirming the Hamilton city by-law fixing the amount of taxation to be placed on the Company's premises and plant in the city.

The American Association of General Passenger and Ticket Agents recently held a meeting at St. Louis, Mo., to discuss passenger rates, etc., in connection with the Louisiana Purchase Exposition. The C.P.R. was represented by R. Kerr, C. E. E. Ussher, and G. C. Wells; the G.T.R. by G. T. Bell and G. W. Vaux; the Intercolonial Ry. by J. M. Lyons, and the Richelieu and Ontario Navigation Co. by T. Henry.

A. O. Norton, manufacturer of jacks, Coaticook, Que., and Boston, Mass., has sent out an advertising novelty in the form of a fancy cake of soap accompanied by a circular reading: "Possibly you have thought of 'washing your hands' of antiquated, inefficient and dangerous jacks, and the inclosed cake of soap is sent in the hope that when the 'washing' occurs, and you are looking for a jack to meet modern requirements—one that can be depended upon in an emergency, is absolutely safe and durable, yet moderate in price—that the Norton ball-bearing jack will not be forgotten."

TON MILEAGE.

By K. W. Blackwell, M. Can. Soc. C. E.

The following paper was read at the recent annual meeting of the Canadian Society of Civil Engineers, by the retiring President, K. W. Blackwell:

A majority of the members of this Society in the ordinary routine of their professional duties have been engaged on work which is

more or less connected with the great problem of transportation. I presume, therefore, that I need not apologize when I ask them to follow me for a brief space while I endeavor to point out the general commercial result of their labors, as expressed in rates per ton per mile. This is an age in which everything is measured by results. Some results are measured in dollars and cents, others in "killo watt hours," and others in "foot pounds" and "ton miles," etc. It is probable

that a large number of our members are interested in the question of "ton miles." The economies that have been brought about in transportation on this continent are so much in advance of what has been done in England, and Europe generally, that I have confined my remarks to the ton mileage results on this continent, and in the American Atlantic trade.

In speaking on this subject, J. J. Hill, of St. Paul, who is President of the largest system

Drummond, McCall & Co.

IRON, STEEL AND METAL MERCHANTS

Branch Office: TORONTO

Montreal

STEEL RAILS

Prompt Shipment from stock of 60 lb. and 80 lb. A. S. C. E. Standard Sections, the product of **The Algoma Steel Co.**, of Sault Ste Marie, Ont.

For Import:—English Rails, "Barrow" brand, all standard sections; also rails of best German manufacture.

IMPORTERS OF { Beams, Channels, Angles, Steel Plates,
Mild Steel Bars, Cold Rolled Steel
Shafting, Wire Rope, Tool Steel, Etc. } **COMPLETE STOCK
KEPT IN MONTREAL.**

MONTREAL STEEL WORKS

MANUFACTURERS OF **STEEL CASTINGS**

LIMITED

(UP TO 15 TONS)

(OPEN HEARTH SYSTEM)

SWITCHES AND TRACK WORK

FOR STEAM AND ELECTRIC ROADS

SPRINGS

OF ALL KINDS

MANGANESE STEEL CASTINGS

For wearing Parts, Insuring Great Hardness and Durability

INTERLOCKING PLANTS

WORKS AND OFFICE: CANAL BANK, PT. ST. CHARLES, MONTREAL

WIRES AND CABLES

OF EVERY DESCRIPTION FOR

Telephone, Telegraph and Electric Power Purposes.

THE WIRE AND CABLE COMPANY, - - - MONTREAL.

of railways in the world, when addressing the members of the Commercial Club of St. Paul, said: "Regarding land transportation in Great Britain, it costs \$2.35 on an average to haul a ton of freight 100 miles; on the continent of Europe it costs \$1.90 and in the U.S. 70 cents. We pay four times the wages they pay, and yet we furnish the transportation for little more than one-third of the average of Europe, and still we are hardly happy."

The engineer who is interested in works that have brought about such gratifying results commercially, is now invited to look at the following table of freight rates for 1903 reduced to a ton mileage basis:

ALL RAIL RATES.	Rate.	Miles.	Per ton per cent.
Chicago to Portland	10c.	1136	.31
Chicago to New York	10c.	974	.37
Brandon to St. John, N.B.	36c.	2038	.37
Spring Hill, N.S., to Montreal	1.86	738	.25
LAKE AND RAIL RATES.			
Chicago to Montreal	1.3c.	1080	.26
Brandon to St. John	25c.	2038	.22
Chicago to Montreal (via Canada Atlantic)	8c.	827	.21
INLAND WATER RATES.			
Duluth to Cleveland	8c.	875	.09
Chicago to New York	9c.	1390	.15
Chicago to Montreal	12c.	1175	.23
Duluth to Quebec	12c.	1580	.17
OCEAN RATES.			
Montreal to Antwerp	£0 1 3	3250	.044
Antwerp to Montreal	0 7 3	3250	.053
Montreal to Liverpool	0 1 3	2900	.046

The rates in the foregoing table are all important commercial examples, and cannot fail to convey to the mind of the engineer exactly what has been accomplished up-to-date. In putting forward these rates, no effort was made to search for isolated cases of unusually low rates, but rather to furnish an idea of what the regular every day freight rates actually are. Now, as to the future we are all inclined to anticipate events and you are, I think, almost before you have digested these figures, asking yourselves to what extent they can be bettered by the progress of engineering improvements which you have in contemplation. This is the interesting point of the whole question. You will naturally say that we have already accomplished much. How much more can we do, and what are the features that will limit our efforts to attain further economy in transportation by land or water? The foregoing rates per ton per mile are not of course the average rates which apply on miscellaneous articles, but are the low haul rates which obtain to-day in the handling of grain, coal, iron, etc., and which constitute the greatest part of our tonnage. These splendid results from an economical point of view are what you are invited to consider.

Let us analyse the details of the water carriage of iron ore from Duluth to Cleveland, Ohio. The particulars of a standard ore-carrying lake steamer are as follows: Length 416 ft., over all 436 ft., beam 50 ft., depth moulded, 28 ft.; carrying capacity 6,500 gross tons of iron ore; consumption of coal on round trip of 875 miles, going up light and returning with ore, 180 tons; approximate value of boat, \$280,000. The engines of this boat are of the vertical type with three inverted cylinders, diameter of cylinders being 22, 35, and 58, by 42 in. stroke, indicating 1,300 horse power, which propel the boat 11 miles per hour. Cost per day for wages about \$70. This steamer can be loaded from the ore pockets in 50 minutes, and unloaded by mechanical means

in 6 or 7 hours. This ore business is done at .09 of a cent a ton per mile at present, when rates are supposed to be very remunerative. And it is a well-known fact that these vessels have made profitable returns on a 60c. rate, which is .06 of a cent a ton per mile, or in round numbers less than 1-10 of the average rate of freight per ton per mile that is earned by the railways of this continent. It may be interesting to you to know, because it confirms these figures, that the Dominion Coal Co. finds by its large experience in the transport of coal, of say about 1,000,000 tons a year from Sydney to Montreal, that the actual cost of transportation, owning or chartering their own vessels, is 55c. a ton for the 780 miles or about .06 of a cent a ton per mile.

The history of the competition between the Erie canal and the railways paralleling it is most instructive in connection with this question of cost of carriage per ton per mile. The present old-fashioned canal boats have a capacity of 240 tons, and the grain rate this summer from Buffalo to New York by canal was 2.6c. a bushel, or .23c. a ton per mile, and while it is a fact that the parallel roads were charging nearly 4c. a bushel, or say .35c.

tory, and while they may be undoubtedly somewhat improved upon in the future, they leave very little to be desired, considering all the circumstances. The exhibit given in the table of rates on the Atlantic shows still lower rates per ton per mile, but it is generally conceded by shipping men that these rates are more or less unprofitable and are about rock bottom. While shipping men are not holding out hopes of any substantial reduction in rates in the near future, railway men on the other hand appear to be alive to the possibility of further economies.

The present comparatively low railway freight rates have come from many causes, larger locomotives, larger cars, and the practice of making up train loads to the full capacity of each locomotive, and also to that most important work of improving the gradients and curvature. This last question is one to which all railway officers are now fully aroused. It is with them the most important question of the hour. Nearly every railway company in good standing financially is making marked progress in this respect. The railway president of to-day who has mapped out a plan of improvement for his road that will result in a reduction of controlling gradient of say from 1% to 0.4 of 1%, has, so to speak, a level head. Such a change will reduce the cost of hauling freight per ton per mile very largely, and he will be able to give to the community served by his road lower rates and at the same time place the railway in a better position to give its shareholders fair returns on their investments.

A very brief examination of the subject of engine loads upon varying gradients affords the most convincing proof of the value of easy grades. A. M. Wellington, in his work on the economic theory of railway location, gives the following figures to show what is a working load of a locomotive upon various grades. For instance he sets forth in his tables that an 18x24 in. freight engine could haul the following load of net tons, including weight of cars, on varying grades as under:

Incline of Grade.	Total load in net tons Mr. Wellington's Table.	C.P.R. Ratings.
Level	2183 tons.	
1 to 10 of 1 per cent.	1733 "	1500 tons.
2 to 10 " "	1433 "	1400 "
3 to 10 " "	1219 "	1300 "
4 to 10 " "	1058 "	1200 "
5 to 10 " "	933 "	1100 "
6 to 10 " "	883 "	1000 "
7 to 10 " "	751 "	900 "
8 to 10 " "	682 "	800 "
9 to 10 " "	625 "	700 "
One per cent.	578 "	607 "



HON. M. E. BERNIER,
Deputy Chief Railway Commissioner for Canada.

a ton per mile for the same haul, the canal is now more or less out of business, and many of the boats laid up. This state of affairs has been brought about by the railways, which on more than one occasion during the last few years, made a cut on the grain rate from Buffalo to New York, to 2.5c. a bushel, which so disturbed canal traffic as to leave the railways the masters of the situation. The tax payers of the State of New York have decided to spend \$110,000,000 in enlarging the Erie Canal, giving it a depth of 12 ft. so that 1,000 ton barges can be used, and the rates reduced to .06 of a cent a ton per mile, or less than 3-4 of a cent a bush. Buffalo to New York. The New York State Canal Committee, after a careful inquiry into this matter, reported that there was no probability of the railways ever being able to carry freight at .1 of a cent per ton per mile, which would be a guarantee of the continued and uninterrupted value and usefulness of the canal to the State. I think you will agree with me that the estimate the commissioners made was a pretty safe one, and that the figures have a most important significance with reference to the whole question of the relative cost of land and water transportation. These examples of water rates are sufficiently low to be eminently satisfac-

I have examined the working ratings and loads for locomotives as adopted by the C.P.R., after they had arrived at the same by making an exhaustive investigation of the subject by aid of a dynamometer car, and find that they work out approximately as shown. This is an interesting and satisfactory comparison. In explanation of the discrepancies in the above table, it must be remembered that a level piece of road free from the complications of curvature is very rare, and Mr. Wellington's figures giving the load for a level piece of road as 2,183 tons were no doubt arrived at after making a test on an ideal piece of level tangent which is hard to find in actual practice. The question also of speed has to be considered very carefully in making a comparison of this nature.

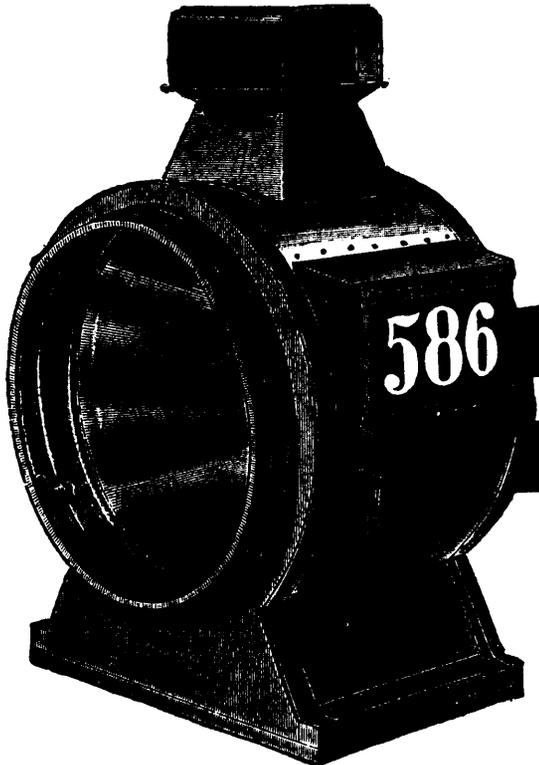
With regard to possible further reductions in rail rates in the future, I have analyzed the results of some of the most economically operated railroads on this continent. The public of this country are paying on an average, as before stated, about .70 of a cent per ton per mile for their freight rates by rail, but at the same time a large amount of mineral and grain traffic is handled, as shown in this paper, below .35 of a cent per ton per mile. In fact that remarkably well-equipped railway, the Bessemer and Lake Erie, which handles most of the iron ore coming from the great lakes to

The N. L. Piper Railway Supply Co.

314 FRONT ST. WEST

LIMITED

TORONTO CANADA

RAILWAY
SUPPLIES

LOCOMOTIVE HEADLIGHT

LAMP
AND
SIGNALS

1904

ONTARIO JOCKEY CLUB

TORONTO, CANADA

SPRING MEETING

— MAY 21st to JUNE 4th —
(INCLUSIVE)

Racing and Steeplechasing

THE KING'S PLATE

WILL BE RUN ON

SATURDAY, MAY 21st.

Six or More Races Each Day

WM. HENDRIE W. P. FRASER
President Sec.-Treas.

GOD SAVE THE KING

NOTICE is hereby given that the ordinary general half-yearly meeting of the Grand Trunk Railway Company of Canada will be held at the City Terminus Hotel, Cannon Street, London, on Tuesday, March 8th, 1904, at 12.00 o'clock noon, precisely, for the purpose of receiving a report from the Directors, for the election of Directors and Auditors, and for the transaction of other business of the Company.

Notice is also given that at such meeting an agreement dated the 29th July, 1903, between the Government of Canada and Sir Charles Rivers Wilson and others representing therein and acting on behalf of the Grand Trunk Pacific Railway Company, and an agreement supplementary thereto, will be submitted for approval, with a resolution to authorize the Directors to carry the same into effect, so far as they relate to the Grand Trunk Railway Company of Canada, and for that purpose to provide the deposit and give the guarantee required pursuant to the said agreements.

Notice is also given that the Transfer Books of the Company in London will be closed from Monday, the 22nd of February, to the day of meeting, both days inclusive.

By order,

C. RIVERS WILSON, President.

H. H. NORMAN, Secretary.

Dashwood House,

9 New Broad Street, London, E.C.

17th February, 1904.

NOTICE.—The Canadian Pacific Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time within which it may commence and complete the construction of the branch line from a point at or near New Westminster to Vancouver, mentioned in section six of the Act 2 Edward VII, chapter 52.

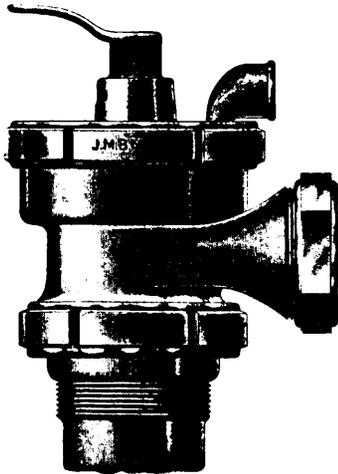
By order of the Board,

CHARLES DRINKWATER,
Secretary.

Montreal, 15th January, 1904.

The Best Brass Work for Locomotives

That is one of our specialties, and we have been successfully engaged in the manufacture of Locomotive Brass Work for 15 years.



Blow-Off Cock

Pure Ingot Copper, the best Imported Tin as raw materials, handled by the most skilled workmen, make our product without an equal.

We carry the largest lines of standard goods and are prepared to execute special orders to your satisfaction.

Our New Illustrated Locomotive Catalogue explains our line—it's free upon request.

The Jas. Morrison Brass Mfg. Co.

79 to 89 Adelaide St. West., TORONTO, ONT.

Pittsburg, is able to show very good returns on its capital and make extensive betterments to its system at the same time, on an average rate of .4 of a cent per ton per mile. The tonnage statistics as published in the annual report of this road are of great interest, and having one of the heaviest mineral traffic in the world, it has conditions for making a good showing, which are quite ideal; for instance its average load of freight for last year on south bound iron ore trains was 1,479 tons, and its average train load for north and south bound trains was 913 tons. These are remarkable figures and are more than 100% better than are shown by such roads as the transcontinental systems, all of which handle a mixed traffic, and the train load results which they show of from 300 to 480 tons a train mile is all that can be expected under the circumstances.

With regard to the future of railway rates, a study of the subject forces one to the conclusion that railway companies are so progressive and enterprising that, given a large and steady volume of traffic, they will equip themselves to carry it cheaply, as the Bessemer and Lake Erie Ry. and others have done, and that in the future we shall see rates that are substantially lower than those we have considered in this paper. It is generally conceded that the rapid progress that has been made by the railways in operating economics has been largely brought about up to the present time by the improvements that have been made in locomotive and car construction. The latest statistics obtainable on the train load questions, as given below, would indicate that the rate of improvement in the train load figures has not been so well maintained during the past year, and that the yearly improvements in the train load which have been accomplished by increasing the size of locomotives and cars, have about reached their limit.

TRAIN LOADS INCREASED.

	1903.	1902.	1901.	1900.
Lehigh Valley.....	485	466	452	439
Atchafalaya.....	279	247	242	221
Illinois Central.....	288	274	235	221
New York, Ontario & West.....	287	285	290	287
Norfolk & Western.....	486	476	461	345
C. C. & St. Louis.....	333	332	333	335
St. Louis & San F.....	195	186	200	154
Wabash.....	302	285	283	269
Toledo, St. Louis & W.....	295	285	250
Wisconsin Central.....	303	286	260	258
Erie.....	406	376	375	369
St. Louis South West.....	252	234	210	207

TRAIN LOADS UNCHANGED

	1903.	1902.	1901.	1900.
New York, N.H. & H.....	218	218	208	204
Louisville.....	231	231	222	239

TRAIN LOADS DECREASED.

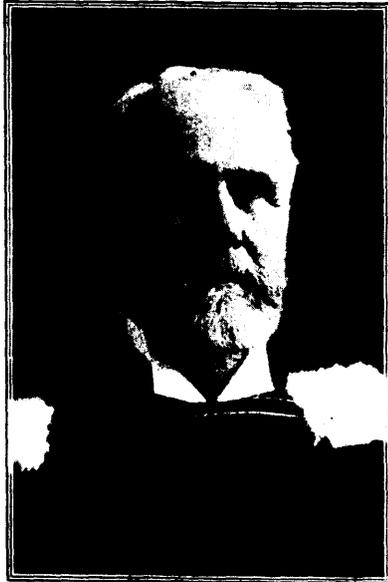
	1903.	1902.	1901.	1900.
Northern Pacific.....	344	346	324	317
St. Paul.....	444	254	237	205
Southern.....	193	195	192	176
Chesapeake & Ohio.....	493	509	511	488
Chicago & Great West.....	277	291	313	261
Chicago & New Orleans.....	231	249	232	235

In order to make further reductions the railways must continue the work of cutting down their gradients, and will also probably obtain additional economy from the adoption of the alternating current electric locomotive.

The question of coal consumption in relation to ton mileage is also of interest. In large freight vessels fitted with marine engines of the most advanced type for fuel saving, a consumption of 2.5 lbs. of coal per 100 ton miles of freight carried, has been claimed as a record, but marine engineers generally regard a consumption of 5 lbs. of coal per 100 ton miles as the average, whereas the consumption of coal upon railways is about 19 lbs. per 100 ton miles.

I commenced my early engineering training in locomotive work, and have the highest appreciation of the locomotive in all the stages of its wonderful development. But it would seem that it has now nearly reached its limit, and is destined to be outclassed by a

machine which will merely consist of a group of four or more electric motors mounted on as many driving axles. There is no doubt that such electric apparatus has been designed and can be built upon the basis of the electrical engineering science as it now exists, and that such a machine would give better results than the locomotive in fuel economy, Draw Bar Pull, and the economical and elastic distribution of wheel load with reference to wear and tear on rails, roadbed and bridges. There is no data in existence based upon results that can lead us to any definite conclusion as to what the relative consumption of fuel and power would be as between the handling of freight trains as they are now handled by steam locomotives, compared with results that might be obtained by the use of the electric locomotive driven from a central power station. Still we have the very instructive and significant comparison which exists between the fuel consumption on steam tram cars as compared with the consumption on electric cars in street railway service. In the case of the former, the consumption of coke, which is the usual fuel used, is 15 lbs. per car per mile, and in the latter 8 lbs. of coal per car per mile.



JAMES MILLS,
Member of the Board of Railway Commissioners,
for Canada.

Recent British Columbia Legislation.

At the recent session of the B.C. Legislature the following acts affecting transportation interests were passed:
 Incorporating the Coast-Yukon Ry. Co.
 Incorporating the Cowichan, Alberni and Fort Rupert Ry. Co.
 Securing to pioneer settlers within the Esquimalt and Nanaimo Ry. land belt their surface and under surface rights.
 Amending the Granby Consolidated Mining, Smelting and Power Co. Act, 1900.
 Amending the Midway and Vernon Ry. Co. Act, 1901.
 Providing an additional sum for the completion of the New Westminster bridge across the Fraser river.

Canadian Ticket Agents' Association.—W. Bunton, Chairman, and W. Jackson, another member of the Executive, recently went to St. Louis, Mo., to make arrangements for the visit of the Association there in May. A meeting of the Executive will be held in Toronto on Mar. 7 to receive their report and to arrange the itinerary, etc.

March Birthdays.

- Many happy returns of the day to
- P. S. Archibald, C.E., General Manager Elgin and Havelock Ry., at Moncton, N.B., born at Truro, N.S., Mar. 21, 1848.
 - C. N. Armstrong, ex-General Manager Atlantic and Lake Superior Ry., at Montreal, Que., born at Maskinonge, Que., Mar. 19, 1850.
 - D. E. Brown, General Agent C.P.R. for China, Japan, etc., at Hong Kong, born at Owen Sound, Ont., Mar. 20, 1855.
 - G. J. Bury, General Superintendent Central division C.P.R. at Winnipeg, Man., born at Montreal, Que., Mar. 6, 1866.
 - J. A. Cameron, ex-Superintendent C.P.R. at Cranbrook, B.C., born at Pictou, N.S., Mar. 5, 1855.
 - F. G. J. Comeau, General Freight Agent Dominion Atlantic Ry. at Halifax, N.S., born at Meteghan River, N.S., Mar. 10, 1859.
 - A. E. Cox, Storekeeper Canadian Northern Ry. at Winnipeg, Man., born at Huddersfield, Eng., Mar. 12, 1863.
 - H. B. Curtis, General Superintendent Newfoundland Express Co. at St. John's, Nfld., born at Adrian, Ohio, Mar. 21, 1848.
 - Hon. L. J. Forget, President Montreal Street Ry. Co., born at Terrebonne, Que., Mar. 11, 1853.
 - C. O. Foss, Engineer of Maintenance Halifax and Southwestern Ry., at Bridgewater, N.S., born at Wentworth, N.H., Mar. 20, 1852.
 - H. W. Gays, President and General Manager Ottawa and New York Ry., and Receiver New York and Ottawa Rd. at Ottawa, Ont., born at Brant, Erie co., N.Y., Mar. 21, 1848.
 - F. Grundy, General Manager Quebec Central Ry., at Sherbrooke, Que., and President Temiscouata Ry., born at Bury, Lanc., Eng., Mar. 28, 1836.
 - J. Halstead, chief clerk to Assistant General Freight Agent C.P.R. at Vancouver, B.C., born at Bracebridge, Ont., Mar. 2, 1877.
 - R. M. Hannaford, Engineer Permanent Way, Buildings and Bridges, Montreal Street Ry., Montreal, born there, Mar. 22, 1865.
 - W. Hartly, M.P., President Canadian Locomotive Co., Kingston, Ont., born in Biddulph tp., Middlesex, Ont., Mar. 8, 1847.
 - C. A. Hayes, Assistant General Freight Agent G.T.R., Chicago, Ill., born at West Springfield, Mass., Mar. 10, 1865.
 - H. S. Heydon, New York Agent Freight Department Canada Atlantic Ry., at New York city, born at Newark, N.Y., Mar. 28, 1861.
 - C. B. Hibbard, General Manager Quebec Southern Ry., Montreal, born at St. John's, Que., Mar. 31, 1858.
 - C. H. Hines, Electrical Engineer C.P.R., Montreal, born at Buffalo, N.Y., Mar. 6, 1865.
 - J. Hobson, Chief Engineer G.T.R. at Montreal, born at Guelph, Ont., Mar., 1834.
 - C. E. Lytle, General Superintendent Duluth, South Shore and Atlantic Ry., at Marquette, Mich., born at Newark, Ohio, Mar. 2, 1859.
 - L. Macdonald, Division Freight Agent G.T.R. at Hamilton, Ont., born Mar. 15, 1860.
 - D. D. Mann, of Mackenzie, Mann & Co., and 1st Vice-President Canadian Northern Ry. Co., Toronto, born at Acton, Ont., Mar. 23, 1853.
 - Owen McKay, Division Engineer Buffalo division Pere Marquette Rd., Walkerville, Ont., born in Ross tp., Renfrew co., Ont., Mar. 13, 1848.
 - W. C. Orchard, chief Freight Tariff Bureau C.P.R., at Montreal, born in London, Eng., Mar. 16, 1865.
 - H. Parry, General Agent Passenger Department, New York Central Rd., at Buffalo, N.Y., born at Hamilton, Ont., Mar. 27, 1865.

R. Patterson, Master Mechanic G.T.R. at Stratford, Ont., born at Brantford, Ont., Mar. 13, 1860.

J. Ritchie, General Eastern Agt. Canada Atlantic Ry. Boston, Mass., born Mar. 16, 1860.

J. A. Sheffield, ex-Superintendent Sleeping and Dining Cars C.P.R. at Montreal, born at Columbus, Ohio, Mar. 16, 1845.

C. J. Smith, General Traffic Manager Canada Atlantic Ry., and Canada Atlantic Transit Co. at Ottawa, Ont., born at Hamilton, Ont., Mar. 10, 1862.

W. Y. Soper, Vice-President Ottawa Electric Ry. Co., Ottawa, Ont., born at Oldtown, Me., Mar. 9, 1854.

W. F. Tye, Assistant Chief Engineer

C.P.R. at Montreal, born at Haysville, Ont., Mar. 5, 1861.

H. Wallis, ex-Chief Mechanical Superintendent G.T.R., Montreal, born at Derby, Eng., Mar. 10, 1844.

D. O. Wood, Western Agent at Toronto for Robert Reford Co., Steamship Agents, Montreal, born at Kleinburg, Ont., Mar. 16, 1864.

The Locomotive & Machine Company

OF MONTREAL (Limited)

— BUILDERS OF —

SINGLE EXPANSION AND COMPOUND LOCOMOTIVES

for all Classes of Service

also **STRUCTURAL STEEL**

for Bridges, Buildings, Roof Trusses, Etc.

Estimates furnished on application and early deliveries assured on orders placed now.

Offices: Street Railway Chambers, MONTREAL, QUE.



STEAM SHOVELS

RAILWAY PILE DRIVERS
WRECKING CRANES, ETC.

W. H. C. Mussen & Co.

RAILWAY, MINING AND CONTRACTORS' SUPPLIES

763-765 Craig St MONTREAL, P.Q.

WIRE ROPE

FOR HOISTING, HAULAGE, TRANSMISSION,
GUYS, SEMAPHORES, ETC.

THE DOMINION WIRE ROPE CO'Y

MONTREAL

LIMITED

SPECIAL:
BALLAST
CABLES
SWITCH
ROPES
BLOCKS and
FITTINGS

Ottawa Electric Railway Co.

The report for the year 1903 presented at the annual meeting Jan. 25 showed that the gross receipts were \$348,888.78, and the expenses, including interest on bonds, taxes and track mileage \$254,346.96, leaving a net profit of \$94,541.82, or nearly 11% on the average capital stock. Four quarterly dividends of 2% were declared, amounting to \$69,284.07, leaving a balance of \$25,257.75, of which \$20,200 has been placed to the credit of contingent account, to be applied to the reduction of car equipment account, new track expenditure on Bank and Rideau streets last summer, and other items. The balance of \$5,057.75 has been placed to the credit of profit and loss. The amount paid to the city for track mileage was \$8,881.48. The cost of snow clearing for the year was \$14,485.61. The storage battery referred to in the last report was completed on Feb. 3, since which it has been in continual operation, giving most satisfactory results. During the summer new 72 lb. rails were laid on Bank st. from Gladstone avenue to Exhibition grounds; on Rideau st. from Nicholas st. to Waller st., and on the south side of Rideau st. from Waller to Charlotte st. Arrangements were made during the year to extend the Bell st. line, but the work was postponed until 1904, to give the city and Canada Atlantic Ry. time to strengthen the bridge over the railway tracks. The profit and loss account showed a balance of \$139,023.39 brought forward from 1902, which with the net profit of 1903 of \$94,541.82 made a total of \$233,565.21; out of which was paid four dividends amounting to \$69,284.07, and \$20,200 was placed to the credit of the contingent account, leaving \$144,081.14 to be carried forward.

ASSETS.

Roadbed and equipment, water power property and plant, real estate and buildings.	\$1,648,870 93
Stores	5,495 31
Accounts receivable	3,287 59
Discount unearned	2,636 67
Cash	33,332 40
	<u>\$1,693,582 81</u>

LIABILITIES.

Capital stock	\$ 995,700 00
First mortgage bonds, 4%	500,000 00
Dividend No. 38 payable Jan. 1, 1904	19,241 71
Interest on bonds payable Jan. 5, 1904	10,000 00
Unpaid dividends	420 67
Accounts payable	3,939 29
Contingent account	20,200 00
Profit and loss	144,081 14
	<u>\$1,693,582 81</u>

The report was adopted and directors re-elected. The officers and board for the year consists of: President, T. Ahearn; Vice-President, P. Whalen; other directors: W. Y. Soper, A. Lumsden, T. Workman, G. P. Brophy, and Hon. G. A. Cox; Secretary-Treasurer, J. D. Fraser.

Recent Manitoba Legislation.

The following acts relating to transportation interests were passed at the recent session of the Manitoba Legislature:

- Providing for an issue of guaranteed securities of the Canadian Northern Ry., and the exchange of certain outstanding guaranteed bonds therefor.
- Respecting the Northern Extension Ry. Co.
- Incorporating the Northwest Grain Dealers' Association.
- Incorporating the Roseau-Emerson Power Co.
- Amending the act incorporating the suburban Rapid Transit Ry. Co.
- Respecting the Winnipeg Electric Street Ry.
- Amending the act incorporating the Winnipeg, Selkirk and Lake Winnipeg Ry. Co.

Halifax Electric Tramway Co.

The report presented at the annual meeting in Halifax, N.S., Feb. 8, showed a surplus of \$25,941.19 after a payment of \$67,500 in dividends during the year. The plant had been maintained in its usual condition of efficiency. The income account for the year ended Dec. 31, 1903, was \$365,374.96, of which \$150,186.64 was earned by the street railway, and after meeting operating expenses on the street railway, the light and power and gas plants, \$240,812.67; coupons, \$30,000, and \$1,121.10 interest on loan, there remained net earnings of \$93,441.19. There was brought over from 1902 a balance of \$69,210.77, making altogether a surplus of \$162,651.96, out of which three dividends amounting to \$50,625 have been paid, and \$16,875 appropriated for a fourth dividend payable in Jan., leaving a balance on surplus account of \$95,151.96.

ASSETS.

Property	\$2,088,449 93
Accounts receivable	38,636 35
Supplies on hand	23,099 63
Suspense accounts, insurance, etc.	12,246 66
Deposit with city	500 00
Cash on hand	17,326 28
	<u>\$2,180,258 85</u>



CAPTAIN A. D. CARTWRIGHT,
Secretary of the Board of Railway Commissioners for Canada.

LIABILITIES.

Capital stock	\$1,150,000 00
5% bonds	600,000 00
Accounts payable	62,192 93
Bond interest	15,000 00
Tickets outstanding	1,038 96
Bills payable	40,000 00
Dividend due Jan. 2, 1904	16,875 00
Surplus account	95,151 96
	<u>\$2,180,258 85</u>

The directors and officers were re-elected as follows: President, Hon. D. MacKeen; Vice-Presidents, J. Y. Payzant, W. B. Ross; other directors: A. Kingman, J. C. Macintosh, H. S. Poole, J. Hutchison, W. M. Doull; Secretary, W. J. DeBlois; Manager, J. W. Crosby.

T. A. Morrison & Co., Montreal, have sold a steel champion stone crusher to the town of St. John's, Que.

The Governor-General-in-Council has sanctioned by-laws of the Manitoulin and North Shore Ry. fixing passenger and freight rates. The maximum passenger rate is 4c. a mile, except between points on Manitoulin island, where the rate is 3½c. a mile.

RAILWAY FINANCE, MEETINGS, ETC.

Alberta Ry. and Irrigation Co.—Application will be made next session of the Dominion Parliament for an act incorporating a company with this title; with power to acquire the properties, franchises, etc., of the Alberta Ry. and Coal Co., the St. Mary's River Ry. Co., and the Canadian Northwest Irrigation Co., making operative an agreement of amalgamation between the several companies, and conferring upon the amalgamated company all the powers possessed by the three companies named.

Alexander Gibson Ry. and Manufacturing Co.—At the annual meeting at Marysville, N.B., recently, the directors were re-elected, and subsequently officers were elected; the board for the present year being: President, A. Gibson, sr.; Vice-President, A. Gibson, jr.; Secretary-Treasurer, H. McLean; other directors: D. D. McLaren, M. S. L. Ritchie; auditor, A. Seeley.

British Columbia Electric Ry. Co.—Earnings and expenses for Dec., 1903:

	1902.	1903.	Increase or Decrease.
GROSS EARNINGS.			
Railway—Vancouver division	\$12,572	\$15,511	\$2,939+
Victoria	9,583	11,100	1,517+
Westminster	9,019	10,266	1,247+
Lighting—Vancouver division	22,877	31,028	8,151+
Victoria	11,827	13,723	1,896+
	65,878	81,628	15,750+
Less working expenses	35,943	41,564	5,621+
	29,935	40,064	10,129+
Renewal funds	4,222	4,988	766+
Net income	25,713	35,076	9,363+
Aggregate gross earnings, July 1, to Dec. 31	342,511	413,637	71,126+
Aggregate net earnings, July 1, to Dec. 31	\$119,708	\$156,089	\$36,381+
			+ Increase.

Calgary and Edmonton Ry.—The lease of the C. and E. Ry. to the C.P.R. for 99 years was finally approved by an Order-in-Council dated Jan. 8. (Dec., 1903, pg. 409.)

Canada Southern Ry.—The agreement respecting the lease of trackage rights over the C.S.Ry. to the Pere Marquette Rd., has been ratified by the shareholders of the various companies interested. The agreement provides for giving the use of the St. Clair branch of the C.S.Ry., and the line from St. Thomas to the cantilever and International bridges over the Niagara river, for the through business of the Pere Marquette Rd. The agreement is to remain in force for 21 years, and when the necessary legislation is obtained for a further period. (Feb., pg. 41.)

Canadian Northern Ry.—Earnings:—

	1903-04.	1902-03.	Increase or Decrease.
July, 1903	\$254,800	\$132,000	\$122,800+
Aug "	250,800	131,200	119,600+
Sept "	270,800	182,300	88,500+
Oct "	334,100	276,500	97,600+
Nov "	338,300	240,500	97,800+
Dec "	279,200	201,700	77,500+
Jan., 1904	211,800	154,700	57,100+
	\$1,939,800	\$1,278,900	\$660,900+

Net earnings for Dec., \$95,300, against \$55,400 for Dec., 1902; making for six months to Dec. 31, \$597,500 against \$400,900 for the same period 1902.

There has been filed with the Secretary of State at Ottawa duplicates of the following mortgages made by the C.N. Ry. Co. to the National Trust Co.: (1) dated April 2, 1903, securing an issue of bonds on the branch line from Stanley Junction to Gunflint, Ont. (2) dated Dec. 31, 1903, securing an issue of bonds on part of the line westerly from Erwood, Sask., for about 69 miles.

Consolidated Lake Superior Co.—After a good deal of negotiation the dispute between

this Company and Sault Ste. Marie, Ont., in respect of taxes has been settled. The Company is to pay \$10,000 for taxes for 1903, and \$5,000 a year for 25 years. The properties covered by the arrangement include the Algoma Central and Hudson Bay Ry., and the International Transit Co.

Dominion Atlantic Ry.—Gross earnings for Dec., 1903, \$74,600, against \$60,362 for Dec., 1902, making for 12 months to Dec. 31, \$1,035,278, against \$978,736 for the same period 1902.

Elgin and Havelock Ry.—At a special meeting of shareholders held Feb. 8, it was decided to authorize the issue of bonds to the amount of \$50,000, and the signing of a mortgage of the Company's property in order to secure the same. The issue of bonds is for the purpose of meeting the cost of the recent improvements to the roadbed and the additional equipment provided.

Esquimalt and Nanaimo Ry.—Press reports state that this line, together with its land grant of nearly 2,000,000 acres, has been offered to the B.C. Government for \$3,500,000. J. Dunsmuir, a former Prime Minister of the Province, is President and practically the owner of the line.

Great Northern Ry. of Canada.—R. C. Brown & Co., Toronto, offer first mortgage 5% bonds of this Company at 62.

Guelph Junction Ry.—At the annual meeting recently held the report showed:

Total receipts during 1903..... \$10,525 99
Cash on hand..... 128 44
Interest..... 3 90

\$10,658 33

Paid the city..... \$10,000 00
Expenses..... 93 40
Balance..... 564 93

\$10,658 33

The net earnings for the last quarter 1903 were \$2,828.52, as against \$2,211.71, for the same quarter of 1902, an increase of \$616.81. The total income for 1902 was \$8,197.16.

Guelph Radial Railway (Electric).—For the three months ended Dec. 31, the operations of this line by the city showed a loss of about \$900. The utmost economy is stated to have been exercised in the management. The position of the railway is being given special consideration by the city council.

Hamilton Cataract Light, Power and Traction Co.—The directors and officers for the current year are as follows: President, Hon. J. M. Gibson; Vice-President, Jas. Dixon; Treasurer, J. R. Moodie; Secretary, W. C. Hawkins; other directors, J. A. Kammerer, J. Dickenson, J. W. Sutherland and Oronhyatekha.

Halifax Electric Tramway Co.—Gross receipts from railway:

	1904.	1903.	Increase or Decrease.
Jan., 1903...	\$10,677.51	\$10,867.33	\$180.82—
— Decrease.			

RAILWAY EMPLOYEES

Officers and employees of Railroad Companies are constantly asked for Fidelity Bonds. If you require one apply to us—we act as security on bonds of all descriptions.

Write Us for Particulars

The London Guarantee and Accident Co'y,
LIMITED.
D. W. ALEXANDER, Genl. Mgr., Canada,
Canada Life Bldg., Toronto

A FRIEND IN NEED

THIS IS WHAT WE AIM TO BE.

WHEN YOU ARE IN A HURRY FOR

SUPPLIES

JUST REMEMBER WE ARE AT YOUR COMMAND

IF IT'S MADE—WE'LL SUPPLY IT

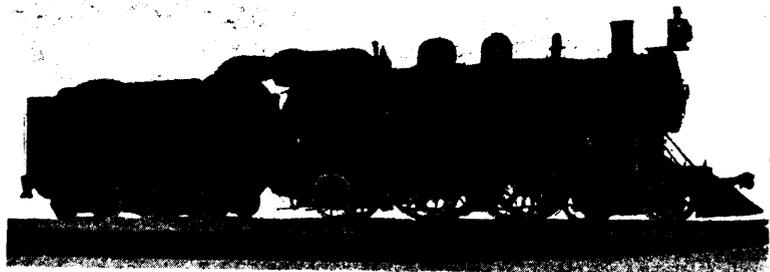
OUR STOCK CONSISTS OF

RAILS, SCRAPERS, BARROWS,
SHOVELS, TRACK TOOLS, Etc., Etc.

Send for Circulars

JAMES COOPER, Montreal.

Baldwin Locomotive Works



BROAD AND NARROW GAUGE SINGLE EXPANSION AND COMPOUND

LOCOMOTIVES

Mine, Furnace and Industrial Locomotives. Electric Locomotives with Westinghouse Motors and Electric Trucks.

BURNHAM, WILLIAMS & CO.

PHILADELPHIA, PA., U.S.A.

CODE WORD—"BALDWIN" PHILADELPHIA

Hamilton, Grimsby and Beamsville Electric Ry.—At the annual meeting the directors were re-elected and the board organized as follows: President, C. J. Myles; Vice-President, W. J. Harris; other directors: A. H. Myles, W. H. Myles, R. Ramsay, R. S. Morris and L. Bauer; Secretary and Manager, Geo. Waller. The business, the annual report stated, showed a considerable increase over 1902.

Hamilton Radial Electric Ry.—Application is being made at the current session of the Ontario Legislature for authority, among other things, to increase the Company's bonding powers.

The amount paid by the H.R.E. Ry. Co. to the city of Hamilton during 1903 was \$591.96.

Hamilton Street Electric Ry.—The amount paid to the city by the Company in respect of mileage and percentage in 1903 was \$22,491.07, an increase of \$3,535.65 over the amount paid in 1902.

Kingston and Pembroke Ry.—At the annual meeting at Kingston Feb. 10 it was reported that the gross earnings for the year were \$181,000.33, and the operating expenses \$140,968.95, leaving net earnings of \$40,031.38. It was decided to expend the surplus in making further improvements on the line. The directors were re-elected. The officers and directors for the current year are: President, W. D. Matthews; Vice-President and General Manager, C. W. Spencer; other directors: Hon. W. Hart, A. R. Creelman, W. R. Baker, H. P. Timmerman, R. V. Rogers, R. Crawford and W. S. Hart.

Levis County Ry. (Electric).—A. E. Scott, of Quebec, was recently elected a director, and was subsequently elected Secretary. H. H. Morse has been elected Treasurer, succeeding P. E. Bourassa, resigned.

London, Ont., Street Ry.—Gross earnings:

	1904.	1903.	Increase or Decrease.
Dec.	\$14,141.83	\$15,041.80	\$899.97-
Jan.	11,409.02	12,120.87	711.85-
- Decrease.	\$25,550.85	\$27,162.67	\$1,611.82-

London and Port Stanley Ry.—The directors have declined an offer of the Pere Marquette Rd., which now controls the Lake Erie and Detroit River Ry., the lessee of the L. and P.S. Ry., for an extension of the lease, making it terminate in 21 years, at \$15,000 a year and a percentage of the gross receipts, the lessee to carry out improvements on the roadbed and to strengthen the bridges.

The annual report presented to the shareholders at the recent annual meeting showed increased receipts of \$1,500. There is a matter of a few hundred dollars in dispute as to the city's share of the rental paid by the Michigan Central Rd. for running privileges over a portion of the line.

Manitoba and Northwestern Ry.—The Premier of Manitoba, in presenting the annual statement of the finances of the Province, gave the following figures relative to the M. and N.W. Ry. land accounts:

Amount owing by M. and N.W.R. Co., at May 9, 1899.....	\$479,488.06
Interest coupons paid from May 9, 1899, to Dec. 31, 1899.....	\$39,703.69
Compound interest to Dec. 31, 1899.....	15,849.48
Less amount received from sales of land, 1899.....	\$55,553.77
Debt coupons, paid from Dec. 31, 1899, to Dec. 31, 1903.....	\$531,244.43
Survey fees paid.....	\$158,285.73
Compound interest on above.....	33,112.16
Cost of management four years at \$2,000.....	135,630.13
Total.....	8,000.00
Less receipts from sales of land—	\$335,028.02
1900.....	\$866,274.45
1901.....	\$7,334.15
1902.....	41,319.11

1902.....	\$128,734.49
1903.....	128,306.00
Total.....	\$305,693.75
Interest on same.....	18,875.85
	\$324,569.60

Railway Co. land fund owes \$541,702.85
 Debenture account mature July 1, 1910, int. 5% half yearly \$787,426.67

Midland Ry. of Nova Scotia—The municipality of Colchester, N.S., voted this Company \$6,000 in lieu of right-of-way. This amount is to be paid in the following proportions: Truro, \$1,500; Clifton, \$1,400; remainder of municipality, \$3,100. The bonus is payable at the rate of \$1,000 a year, the first payment being due in 1905.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—A half-yearly dividend of 3½% on preferred stock, and a half-yearly dividend of 2% on the common stock, payable April 15, have been declared.

Montreal Street Ry.—Earnings and expenses for Jan., 1904:

	1903-04.	1902-03.	Increase or Decrease.
Passenger earnings.....	\$182,385.81	\$168,882.69	\$13,503.12+
Miscellaneous earnings.....	1,322.30	3,260.46	1,938.16-
Total earnings.....	183,708.11	172,143.15	11,564.96+
Operating expenses.....	131,487.30	119,610.98	20,876.32+
Net earnings.....	52,220.81	61,332.17	9,311.36-
Fixed charges.....	16,481.57	18,516.48	2,034.91-
Surplus.....	35,739.24	45,015.69	9,276.45-
Expenses % of car earnings.....	72.09	65.49	

	1903.	1902.	Increase or Decrease.
Passenger earnings.....	\$762,547.44	\$692,191.01	\$70,356.43+
Miscellaneous earnings.....	6,588.83	11,597.41	5,008.50-
Total earnings.....	769,136.27	703,788.42	65,347.85+
Operating expenses.....	486,837.22	424,575.83	62,261.39+
Net earnings.....	282,299.05	279,212.59	3,086.46+
Fixed charges.....	68,848.40	65,990.25	2,858.15+
Surplus.....	213,450.65	213,222.34	228.31+
Expenses % of car earnings.....	63.84	61.28	
Interest on M. P. & I. Ry. Co.'s bonds owned by Co. not included.			
+ increase. — decrease.			

Niagara, Ste. Catharines and Toronto Ry.—The sum of \$100,000 of first mortgage 5% gold bonds, dated Nov. 1, 1899, and due Nov. 1, 1929, in denominations of \$1,000, or £205 9s. 8d., was recently offered at 101 and interest, for subscription by A. E. Jarvis & Co., Toronto. The capitalization of the Company is \$1,000,000, of which \$925,000 has been issued, and bonds to the amount of \$710,000 have been issued on \$20,000 a mile on 35.53 miles of line. There is also an issue of \$200,000 of 5% bonds due Nov., 1929, of the Niagara, St. Catharines and Toronto Navigation Co. guaranteed by the N., St. C. and T. Ry. Co., and therefore are a sub-lien to the bonds of the railway Company. The report of the Company for the year ended Dec. 31, 1903, showed:

	1903.	1902.
Gross earnings.....	\$214,823	\$172,840
Operating expenses.....	139,556	126,953
Net earnings.....	\$75,267	\$45,887
Interest charges.....	43,867	35,376
Surplus.....	\$31,400	\$10,511

Pere Marquette Rd.—Gross earnings for 1903, \$11,431,901; net earnings, \$3,467,188, against \$10,590,415 gross, and \$2,581,951 net for 1902. The figures for 1903 have been issued as subject to revision, and include the operations of the Lake Erie and Detroit River Ry., the Canadian division of the line.

Qu'Appelle, Long Lake and Saskatchewan Ry.—Net profit for Dec., \$7,219.83, against \$1,274.75 for Dec., 1902.

Quebec and Lake St. John Ry.—Application will be made at the current session of the Quebec Legislature for an act authorizing the issue of promotion bonds to an amount not exceeding £500,000, including bonds already issued, and authorizing the issue of mortgage bonds on certain projected branches.

Gross earnings for Dec. \$35,406, against \$33,600 for Dec., 1902, making for 12 months to Dec. 31 \$468,012, against \$413,657 for same period 1902.

Quebec Bridge and Ry. Co.—At a special general meeting of shareholders held at Quebec recently, an issue of first mortgage bonds to the amount of \$6,678,200 was authorized, payable in 50 years at the Bank of Montreal, in Montreal or London, Eng., at 3%, payable half-yearly. The principal and interest of these bonds is secured by a mortgage trust deed dated Feb. 1, and made to the Royal Trust Co. The bonds are also guaranteed by the Dominion Government. The shareholders confirmed the various actions of the directors in connection with the carrying out of the agreement made with the Dominion Government. The board of directors as now reconstituted consists of: President, Hon. S. N. Parent; Vice-Presidents, R. Audette, J. Breakey; other directors: H. M. Price, G. Lamoine, V. Boswell, Hon. N. Garneau, Hon. J. Sharples, J. B. Laliberte, N. Rioux and P. B. Dumolin. The three last named represent the Dominion Government.

Quebec Central Ry.—Gross earnings for Dec., \$46,585.13; working expenses, \$41,581.03; net earnings \$5,004.10, against \$45,219.02 gross and \$3,346.45 net for Dec., 1902. Gross earnings for 12 months ended Dec. 31, \$681,769.17; net earnings \$189,898.19, against \$669,341.07 gross and \$201,720.29 net for same period 1902.

Quebec Southern Ry.—The special meeting of shareholders called for Feb. 16 was postponed to an unnamed date.

The Quebec Court of Appeals has given a decision in favor of H. A. Hodge, F. B. White, P. W. Clement and W. S. Webb, directors of the Company, in the action brought by A. Schaffer and others, of New York, to prevent them carrying into effect a proposal to amalgamate the South Shore Ry. with the Quebec Southern Ry. The question at issue arose largely out of some purchases and assignments of the stock of the S.S. Ry. Co. made by R. L. Meyer and others, in which the Dominion Securities Co. of New York, a company which has since been wound up, was concerned. The plaintiffs held that they were entitled to an undivided interest in 2,870 shares, and the four directors of the Quebec Southern Ry. contended that there were previous arrangements with R. L. Meyer, and the stock had been deposited with W. S. Webb as trustee in order that the amalgamation might be completed. This view has been upheld, and the amalgamation of the two lines will now be finally put through.

Temiscouata Ry.—Net earnings for Dec. \$544, making for the 12 months ended Dec. 31 a net profit of \$13,023.

Temiskaming and Northern Ontario Ry.—Replying to a question in the Ontario Legislature Feb. 6, the Commissioner of Public Works said that tenders for the railway bonds had been received as follows: Bank of Commerce, one thousand \$500 bonds, at 4% on a basis of between 93 and 94; Bank of Ottawa, 370, and Home Life, on the same basis, and W. Tasker \$3,000 for nine \$500 bonds. Certain other banks had also expressed a willingness to share in the allotment on the same basis. All the tenders had been declined, and arrangements had been made to borrow \$2,300,000 for a short term at 5%.

Toronto, Hamilton and Buffalo Ry.—Gross earnings for Jan., \$45,503.96 against \$41,379.78 for Jan., 1903, making for eight months to Jan. 31, \$387,612.00 against \$307,801.20 for same period 1902-03.

Toronto Railway Co.—Gross earnings:

	1904.	1903.	Increase or Decrease
Jan.....	\$179,359.92	\$161,538.14	\$17,821.78+
+ Increase			

Application will be made at the current session of the Ontario Legislature for an act authorizing the formation of a reserve fund; and giving the Company power to invest in the stocks and other securities of other companies, and to guarantee the bonds and debentures of other electric railway or street railway companies.

White Pass & Yukon Ry.—Gross earnings for six months ending Dec. 31, 1903, \$1,203,911. Gross earnings Jan. 1 to Jan. 14 \$7,063.

The Niagara Navigation Co.'s offices are to be removed to 14 Front st. east, Toronto, early in March.

Canadian Society of Civil Engineers.

The eighteenth annual meeting was held in Montreal Jan. 26 and following days, K. W. Blackwell, President, in the chair. At the afternoon session Dr. Stansfield read a paper on "Recent Developments in Electro-Metallurgy, with especial reference to Iron," and in the evening an illustrated descriptive paper on "The Locomotive and Machine Co.'s Works at Longue Pointe" was read by M. J. Butler, and on the C.P.R. Co.'s new shops by H. Goldmark. On Jan. 27 the members of the society visited the works of the Locomotive and Machine Co. at Longue Pointe, where they were entertained at luncheon, and also

visited the C.P.R. Angus shops, and in the evening the annual dinner was held. The election of officers resulted as follows: President, Col. W. P. Anderson; Vice-Presidents, C. E. W. Dodwell, C. H. Keefer, E. Marceau; Treasurer, H. Irwin; Secretary, C. H. McLeod; Librarian, E. G. M. Cape; Members of council: G. H. Duggan, J. Kennedy, W. McL. Walbank, M. J. Butler, H. J. Cambie, P. Johnson, P. W. St. George, D. Macpherson, W. R. Butler, R. B. Rogers, C. B. Smith, W. B. Mackenzie, R. B. Owens, E. H. McHenry, St. G. J. Boswell. The retiring President, K. W. Blackwell, delivered an address on Transportation Problems, which is given elsewhere in this issue.

JAS. W. PYKE & COMPANY

CANADIAN REPRESENTATIVES

FRIED. KRUPP, ESSEN, GERMANY.

Steel Rails.

Wrought Iron Steel-Tyred Disc Wheels

Locomotive and Car Wheel Tyres.

Axles, Crank Pins, Forgings, Etc.

FOR STEAM AND
ELECTRIC RAILWAYS.

OFFICE: MERCHANTS BANK BUILDING **MONTREAL.**
205 ST. JAMES STREET,

Pintsch System Car and Buoy Lighting.

This Company controls in the United States and Canada the celebrated Pintsch System of Car and Buoy Lighting. It is economical, safe, efficient, and approved by the railway managers and Lighthouse Board of the United States, and has received the highest awards for excellence at the World's Expositions at Moscow, Vienna, St. Petersburg, London, Berlin, Paris, Chicago, Atlanta and Buffalo. 120,000 cars, 5,000 Locomotives and 1,700 Buoys are equipped with this light. 170 Railroads in the United States, Canada and Mexico have adopted this system of lighting, applied on over 20,000 cars.

Car Heating.

This Company's Systems have been adopted by 130 of the principal Railroads of the United States and by the great Sleeping Car Company. They consist of The Steam Jacket System of hot water circulation, The Direct Steam Regulating System and Straight Steam (plain piping).

Automatic Steam Couplers. Straight Port Type.

THE SAFETY CAR HEATING and LIGHTING CO.,

General Offices: 160 Broadway, New York.

Branch Offices: Chicago, 1017 Monadnock Building - - - St. Louis, 1015 Missouri Trust Building
Montreal, 67 Lusignan Street

TENTS

FOR
Railway Construction
Tarpaulins, Canvas,
Waterproof Covers,
Etc.

THE "SONNE" AWNING, TENT & TARPULIN CO.

775 Craig Street

MONTREAL, - QUE.

— WRITE FOR QUOTATIONS —

C.P.R. Earnings, Expenses, Etc.

Gross earnings, working expenses, net profits, increases or decreases over 1902, from July 1, 1903.—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
July	\$3,997,343.75	\$2,678,816.63	\$1,318,527.12	\$144,815.86+
Aug.	4,076,153.74	2,942,051.24	1,434,102.50	71,204.05+
Sept.	3,937,001.72	2,734,735.91	1,202,265.81	208,488.69
Oct.	4,488,263.88	2,834,236.87	1,654,027.01	37,892.38+
Nov.	4,142,909.47	2,664,928.29	1,477,981.18	80,259.06
Dec.	4,264,815.39	2,683,670.13	1,581,145.26	91,296.58-

\$24,906,487.95\$16,238,439.07 \$8,668,048.88 \$128,135.04
+Increase. -Decrease.

Approximate earnings for Jan., \$2,856,000, against \$3,147,000 for Jan., 1903.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross earnings for Dec., \$190,924.69; net earnings, \$54,771.77; against \$202,265.30 gross and \$59,437.26 net for Dec., 1902. Net earnings for six months ended Dec. 31, \$463,733.66, against \$533,235.12 for the same period 1902. Approximate earnings for Jan., \$165,392, against \$197,279 for Jan., 1903.

MINERAL RANGE RY.—Approximate earnings for Jan., \$47,798, against \$45,329 for Jan., 1903.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for Dec., \$531,982.38; net earnings, \$226,889.89, against \$513,454.23 and \$232,715.81 for Dec., 1902. Net earnings for six months, \$2,127,628.25, against \$2,118,589.60 for same period 1902. Approximate earnings for Jan., \$477,426, against \$441,219 for Jan., 1903.

Canadian Pacific Railway Land Sales.

	Acres.		Amount.	
	1903-04	1902-03	1903-04	1902-03
July	207,647.32	155,344.93	\$1,020,404.70	\$672,870.50
Aug.	201,339.45	139,723.83	1,271,529.81	473,064.85
Sept.	60,441.12	145,535.83	268,757.99	542,811.11
Oct.	15,950.07	270,616.23	236,611.59	952,645.35
Nov.	22,563.95	146,687.83	107,305.21	598,788.99
Dec.	30,145.00	577,382.01	125,676.00	1,683,289.45
Jan.	116,840.78	102,581.29	376,649.88	428,611.21
	707,487.57	1,538,872.55	\$3,148,237.26	\$5,237,535.46

Grand Trunk Ry. Earnings, Expenses, &c.

The accounts for the half-year to Dec. 31, 1903, subject to audit, show the following results:

Gross receipts	£3,138,400
Working expenses, including special appropriation of £30,000 to Bridge Renewal Account	2,214,000
Net receipts	924,400
Net revenue charges for the half year, less credits	526,000
Balance	£398,400
Add Detroit, Grand Haven and Milwaukee surplus for the half-year.	400
Surplus	£398,800

This surplus of £398,800 added to the balance of £5,590 from June, 1903, makes a total amount of £404,390 available for dividend, which will admit of the payment of the full dividends for the half-year on the 4% guaranteed stock and first and second preference stocks, and a dividend of 2% for the year on the third preference stock, leaving a balance of about £2,800 to be carried forward.

The accounts of the Grand Trunk Western Co. for the half-year show a surplus of £2,200, which amount is carried forward to the current half-year.

The following statement of earnings, supplied from the Montreal office, includes the G.T. of Canada, the G.T. Western, and the Detroit, Grand Haven & Milwaukee Rys.

Jan.	1904.	1903.	Increase.	Decrease.
	\$2,253,378	\$2,634,200		\$380,822

TRAFFIC RECEIPTS OF THE SYSTEM.

	Aggregate from Jan. 1 to Jan. 31:		Increase.	Decrease.
	1904.	1903.		
Grand Trunk.	£355,356	£428,366		£73,010
G. T. Western	83,856	93,401		9,845
D. G. H. & M.	24,111	19,507		4,604
Total	£463,323	£541,274		£78,251

Congested traffic, due to extreme cold and continued storms is accountable for decreases.

The International Traction Co. of Buffalo, N.Y., recently sent representatives to Ottawa with a view of securing permission from the Government to obtain power for its lines from the power houses on the Canadian side. The Company cannot obtain sufficient power from the power companies on the U.S. side of Niagara river, and desires to supplement its present supply by drawing on Canadian sources.

TRANSPORTATION APPOINTMENTS.

Board of Railway Commissioners for Canada.—The official title of Hon. A. G. Blair is Chief Commissioner of the Railway Commission for Canada, and that of Hon. M. E. Bernier is Deputy Chief Commissioner.

J. E. W. Currier has been appointed private secretary to the Chief Commissioner.

Canadian Northern Ry.—J. M. Robb, Superintendent of Motive Power, has resigned, and the position has been abolished.

T. A. Burrows, Land Commissioner at Winnipeg, has resigned.

Canadian Pacific Ry.—W. E. Fowler has been appointed Master Car Builder, Eastern lines, with office at Montreal. He will report to the Vice-President. Mr. Fowler has been Master Car Builder, all lines, since April, 1901, reporting to the Superintendent of Rolling Stock.

H. H. Vaughan, heretofore Assistant Superintendent of Motive Power, Lake Shore and Michigan Southern Rd., has been appointed Superintendent of Motive Power, lines east of Port Arthur, with office at Montreal.

F. Lee, having been appointed Assistant Engineer Western division, with office at Calgary, Alta., the duties of Signal Engineer, heretofore discharged by him, will be attended to temporarily by F. P. Gutelius, Engineer of Maintenance of Way, Montreal.

E. H. Sewell, heretofore ticket agent at the Ottawa Union station, has been appointed city passenger agent at Sherbrooke, Que.

B. Pendleton, heretofore chargeman at Toronto Junction, has been appointed Locomotive Foreman at London, Ont., succeeding L. G. Roblin, who has been transferred to engineer.

E. Murphy, heretofore Roadmaster of the district between Lambton and St. Thomas, Ont., including the Guelph branch, has been appointed Roadmaster of the district between Woodstock and Windsor, Ont., with office at London, succeeding F. J. Holloway, transferred to the St. Thomas-Lambton district, office at Woodstock.

F. P. Brady, heretofore Assistant General Superintendent Central division at Winnipeg, has been appointed General Superintendent Lake Superior division, succeeding G. J. Bury, appointed General Superintendent Western division. Office, North Bay, Ont.

R. J. Lydiatt, heretofore accountant to F. P. Brady, Assistant General Superintendent at Winnipeg, has been appointed General Superintendent's Accountant Lake Superior division, North Bay, Ont., succeeding D. C. Coleman, transferred to Winnipeg.

J. A. Davis is reported to have been appointed accountant to the Superintendent at North Bay, Ont.

R. MacGregor, heretofore yard agent at Fort William, Ont., has been appointed Trainmaster at Rat Portage, Ont., succeeding J. D. Sullivan transferred.

G. J. Bury, heretofore General Superintendent Lake Superior division, has been appointed General Superintendent Central division, with office at Winnipeg, succeeding F. P. Brady, Assistant General Superintendent, transferred to the Lake Superior division.

J. H. Manning, heretofore Second Assistant Superintendent of Rolling Stock at Winnipeg, has been appointed to look after the mechanical part of the new work going on on the Western lines in connection with the erection of shops, round houses, etc.

S. J. Hungerford, heretofore Master Mechanic Western division at Calgary, Alta., was on Jan. 26 appointed acting Master Mechanic Central division, and on Feb. 8 was appointed Superintendent of Locomotive Works at Winnipeg.

J. Cardell, heretofore Master Mechanic Western division, has been appointed acting Master Mechanic Central division, at Winnipeg, succeeding S. J. Hungerford, promoted.

D. C. Coleman, heretofore General Superintendent's Accountant Lake Superior division, has been appointed chief clerk to the General Superintendent Central division, Winnipeg.

P. A. Benson has been appointed Roadmaster Portal section, Western division, vice F. W. Scott, transferred.

S. Phipps, heretofore Assistant Master Mechanic at Winnipeg, has been appointed acting Master Mechanic, Western division, at Calgary, Alta.

F. W. Scott has been appointed Roadmaster, Laggan section, Western division, vice G. Liggins, transferred.

W. Fraser's duties as Bridge and Building Master have been extended to include the main line, Medicine Hat to Laggan, vice J. B. McTaggart, transferred.

Capre Breton Electric Co.—W. Luxon, heretofore with the Bay City Consolidated Ry., Bay City, Mich., and formerly with the London, Ont., Street Ry., has been appointed Superintendent, succeeding G. B. Lowe, resigned.

Dominion Coal Co.—J. R. McIsaac, Traffic Manager at Glace Bay, N.S., has charge of the chartering and working of steamers as well as the transportation and shipping of coal.

Halifax and Yarmouth Ry.—Clark Cooper, heretofore Superintendent and Secretary, has been appointed General Manager. Office, Yarmouth, N.S.

Grand Trunk Ry.—Jos. Price, heretofore 1st Vice-President, and formerly Manager of the old Great Western Ry., has resigned as 1st Vice-President owing to ill-health.

In consequence of the increased work of the station agent at Brantford, Ont., it has been decided to rearrange the duties and to establish a city ticket agency, which has been placed in charge of T. J. Nelson, heretofore ticket agent at Paris, Ont. G. A. Stokes, the present agent, will in future attend to the freight business.

G. E. Walker has been appointed to take charge of the newly opened city ticket agency at Guelph, Ont., which has heretofore been under the station agent, R. E. Waugh, who will in future confine himself to the station agency.

Great Northern Ry. of Canada.—A. Malo has been appointed Contracting Freight Agent. Office, Montreal.

A. F. Dion has been appointed freight agent at Montreal.

J. E. Moran, heretofore with the C.P.R., has been appointed freight shed foreman at the Montreal station.

Intercolonial Ry.—C. F. Eurns, heretofore Travelling Auditor, is acting Paymaster, and press reports say that he will be appointed Paymaster, succeeding E. T. Trites, deceased.

J. J. Walker, heretofore chief clerk in the Treasurer's office, is reported to have been appointed chief accountant of the Mechanical Department.

I. B. Humphrey, station agent at Harcourt, N.B., has been appointed station agent at Newcastle, N.B., succeeding J. Fleming, deceased.

International Transit Co. and Trans-St. Mary Traction Co.—T. J. Kennedy, Superintendent Algoma Central and Hudson Bay Ry., has also been appointed Manager of the International Transit Co., Sault Ste. Marie, Ont., and of the Trans-St. Mary Traction Co., Sault Ste. Marie, Mich.

Lehigh Valley Rd.—T. N. Jarvis has been appointed Freight Traffic Manager. C. A. Blood has been appointed General Freight Agent. H. C. Burnett has been appointed Assistant General Freight Agent, vice C. A. Blood, promoted. H. B. Crandall has been appointed Coal Freight Agent, vice G. S. Taylor,

assigned to other duties. A. Hunter, having been assigned to other duties, the office of Through Freight Agent has been abolished. J. S. Wood has been appointed Division Freight Agent, with headquarters at Buffalo, N.Y., vice H. C. Burnett, promoted.

Michigan Central Rd.—J. B. Morford, heretofore General Superintendent at St. Thomas, Ont., has been appointed assistant General Manager. Office, St. Thomas, Ont.

H. H. Adams, heretofore Assistant Superintendent Canadian division, has been appointed Superintendent of the Canadian and Michigan Midland divisions, succeeding J. B. Morford, promoted. Office, St. Thomas, Ont.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—G. C. Conn, heretofore Assistant General Freight Agent, Pere Marquette Rd., is reported to have been appointed General Freight Agent. Office at Minneapolis, Minn.

Montreal Street Ry.—A. Stewart has been appointed Auditor, succeeding J. McDonald, deceased.

L. Robinson, Superintendent, has resigned.

Northern Navigation Co. of Ontario.—H. H. Gildersleeve, heretofore Manager of the Lake Ontario and Bay of Quinte Navigation Co., has been appointed Manager.

Capt. P. Campbell, who for the past year has acted in a sort of advisory capacity at Collingwood, has resigned.

W. Askin, Assistant Manager at Sarnia; A. B. Pratt, Assistant Manager at Collingwood, and A. Cowan, Travelling Freight Agent, have resigned.

C. H. Nicholson has been appointed Traffic Manager. Office, Sarnia, Ont.

H. A. Young, heretofore purser steamer United Empire, has been appointed Travelling Freight Agent.

H. C. Hammond, President, and the new Manager have been spending some time at Collingwood and Sarnia looking into the Company's affairs generally. It is expected other changes will be made in the staff. At the last annual meeting it was decided to remove the head office from Collingwood to Toronto, but it is likely that this will not be done at present. The bookkeeping, etc., for the two divisions will probably be consolidated at Collingwood instead of being divided between there and Sarnia as heretofore, but directors and shareholders' meetings will be held at Toronto.

North Shore Despatch and Canadian Southern Fast Freight Lines.—F. R. Sullivan, at present agent at Cincinnati, Ohio, has had his jurisdiction extended over the Blue Line, succeeding E. B. Smith, resigned.

Quebec and Lake St. John Ry.—G. Edgeley, of Hedleyville, has been appointed ticket agent at Quebec.

St. Thomas, Ont., Street Ry.—S. O. Perry has been appointed Secretary-Treasurer of the Street Railway Commission.

C. Johns has been appointed Manager.

Temiskaming and Northern Ontario Ry.—R. Jaffray has been elected Chairman of the Commission.

Trans-St. Mary's Traction Co.—See International Transit Co.

Wabash Rd.—L. J. Ferritor, heretofore joint Superintendent of the G.T.R. and Wabash Rd. at St. Thomas, Ont., has been appointed Superintendent Eastern division Wabash Rd. Office, Peru, Ind.

White Pass and Yukon Route.—R. D. Pinneo is reported to have been appointed Assistant General Freight and Passenger Agent. Office, Skagway, Alaska.

The Safety Car Heating and Lighting Co. has issued a directory of Pintsch plants and a map of Canada and the U.S. showing the location of the various plants and the railways supplied with gas therefrom; also a

catechism of steam-heating apparatus on trains. During 1903 there were equipped 2,964 cars on U.S. railways with the Co.'s system of heating. A tabulated statement recently issued shows that up to Dec. 30 last the Pintsch system of gas lighting had been

introduced into 24 countries, and that it was in use in 128,881 cars, 5,806 locomotives, 1,426 buoys and beacons, and that these were supplied from 372 gas works. In Canada the system is in use in 450 cars, 195 buoys and beacons, which are supplied from two works.

DOMINION WIRE MF'G. Co.

LIMITED

HEAD OFFICE, MONTREAL

BRANCH, TORONTO

IRON, STEEL, BRASS AND COPPER WIRE

FOR MERCHANTS' USE.

BARB WIRE, PLAIN TWIST, PLAIN GALV'D WIRE

FOR FENCING PURPOSES.

PURE COPPER WIRE

FOR

Telegraph, Telephone, Trolley AND Transmission Lines.

Wire Nails, Wood Screws, Bright Wire Goods, Cotter Pins Bright and Galvanized Fence Staples.

WRITE FOR CATALOGUE



Page Wire Fences fence in the best railroads in Canada, because Page
Fences Wear Best.

THE PAGE WIRE FENCE CO., Limited

Walkerville, Ont.

Montreal, Que.

St. John, N.B.

MAINLY ABOUT PEOPLE.

W. Hewitt, Trainmaster C.P.R., at Calgary, Alta., died there Jan. 26.

H. Donkin has been appointed Chief Engineer of the Dominion Coal Co., Glace Bay, N.S.

N. A. Rhodes, President of Rhodes, Curry & Co., has been elected Mayor of Amherst, N.S.

T. M. Kirkwood, President Algoma Steamship Co., sailed from New York, Feb. 18, for France.

R. Marpole, General Superintendent C.P.R. Pacific division, is spending a short holiday in California.

J. W. Buchanan, railway contractor, Winnipeg, is reported to be dangerously ill with typhoid fever.

R. D. Reid, Vice-President Reid Newfoundland Co., has returned to St. Johns, Nfld., from Montreal.

W. Whelan, of the I.C.R. engineering department, Moncton, N.B., died there rather suddenly Feb. 4.

C. M. Hays, 2nd Vice-President and General Manager G.T.R., sailed from New York for England Feb. 20.

C. Percy, Montreal, ex-Treasurer G.T.R., has been re-elected a director of the National Agency Co., Toronto.

J. R. Nelson, Superintendent C.P.R. at North Bay, Ont., was married in Montreal, Feb. 24, to Miss G. M. Carter.

G. Ham, of the C.P.R. advertising department, Montreal, has been absent from duty recently on account of ill-health.

Mrs. Armstrong, wife of W. Armstrong, train dispatcher Wabash Rd., St. Thomas, Ont., died suddenly there Feb. 7.

J. R. Williams, ex-Trainmaster, G.T.R., at Battle Creek, Mich., was recently found dead in his room with the gas turned on.

Miss V. Carr, youngest daughter of C. E. A. Carr, General Manager of the London, Ont., Street Ry., died there Feb. 6.

F. Polson, of the Polson Iron Works, Toronto, and Mrs. Polson, are spending some time on the shores of the Mediterranean.

The Port Arthur Board of Trade proposes to give a dinner to E. A. James, Manager Canadian Northern Ry., at an early date.

Altman, who represents the C.P.R. traffic department at Vienna, Austria, has been spending some time in Canada recently.

J. F. Ruttan, who was the leader of the movement for the building of the Port Arthur, Ont., street railway by the town, died there Jan. 21.

Lord Strathcona has promised to contribute \$1,000 towards the completion of the new quarters for the Roman Catholic Sailors' Club, Montreal.

F. J. Atkinson, C.P.R. train dispatcher at Fort William, Ont., died in the Toronto General Hospital recently from the effects of an operation.

F. A. Folger, sr., of the Kingston Light and Power Co., and largely interested in railway and steamboat interests, died at Kingston, Ont., Feb. 25.

C. Beeswanger, I.C.R. baggage master, Truro, N.S., was somewhat seriously injured in the railway accident on the I.C.R. near Halifax Feb. 3.

J. J. Long, ex-President Northern Navigation Co., sailed from Boston, Mass., Feb. 13, for a two months' trip to Europe, accompanied by his niece.

The estate of the late E. W. Rathbun, of Deseronto, Ont., President of the Bay of Quinte Ry., etc., has been entered for probate at \$216,825.

J. W. Midgeley, a member of the U.S. In-

terstate Commerce Commission, commenced life as an apprentice in a newspaper office at Woodstock, Ont.

J. W. Leonard, who recently resigned as Assistant General Manager C.P.R. Western lines, and Mrs. Leonard, will reside in Toronto for the present.

E. S. Piper, President of the N. L. Piper Railway Supply Co., Toronto, has been re-elected a director of the Holmes Electric Protection Co., Toronto.

H. M. Kingsley, night Trainmaster Chicago, Burlington and Quincy Rd., died at Chicago, Ill., recently, and was buried at his birthplace, Picton, Ont.

G. Hannah, Passenger Traffic Manager of the Allan Steamship Co., had sufficiently recovered from a severe illness to return to his office in Montreal early in Feb.

R. S. Buck has resigned his position as Chief Engineer of the Dominion Bridge Co., Montreal, to become resident engineer of the East River Bridge Co., New York.

Erastus Wiman, who died at St. George, Staten Island, N.Y., Feb. 9, was elected President of the Great North-West Telegraph Co. in 1881, which position he held until 1893.

J. S. Wood, who was recently appointed Division Freight Agent, Lehigh Valley Rd., at Buffalo, N.Y., began his railway career with the G.T.R. as messenger at Hamilton, Ont.

C. Hyman, M.P., London, Ont., who acted as Chairman of the Railway Committee in the House of Commons in the sessions of 1902 and 1903, has been appointed Minister without portfolio.

S. W. Smith, Auditor Passenger Receipts, Canadian Northern Ry., at Winnipeg, was presented with a gold-handled umbrella by the rest of the staff on being transferred to the position of rate clerk.

R. C. Carter, General Manager Bay of Quinte Ry. and Thousand Islands Ry., has sufficiently recovered from his recent illness to be on duty again. He is making his headquarters at Kingston, Ont.

J. Mills was presented with a set of library furniture by the staff at Guelph Agricultural College, on resigning the presidency to become a member of the Board of Railway Commissioners for Canada.

W. Duperow, Manager of the Huntsville, Lake of Bays and Lake Simcoe Navigation Co., is one of the incorporators of the Grunwald Resort Co. (Ltd.), recently organized under the Ontario Companies' Act.

The Nova Scotia Legislature is considering a bill providing for the retirement of Dr. M. Murphy, Provincial Engineer, on May 1, with an allowance of \$2,000 a year. He was appointed Provincial Engineer in 1875.

J. O'Mally, who has been appointed Soliciting Freight Agent Great Northern Ry., Montreal, was recently presented with a dressing case by the members of the Victoria Hockey Club, Que., of which he was Vice-President.

G. T. Smith, of the Great Lakes and St. Lawrence Transportation Co., has been elected a member of the Montreal Board of Trade. The headquarters of the G.L. and St. L.T. Co. have been removed from Quebec to Montreal.

Sir Wm. Van Horne, on arriving in Montreal from Cuba recently, denied the story cabled from Havana, by way of Winnipeg, that a train on which he was travelling in Santiago province, Cuba, had been held up by bandits.

S. R. Cameron, Travelling Freight Agent Canadian Northern Ry., Winnipeg, who was married Feb. 18 to Miss Lyall, of Portage la Prairie, was presented with two cases of cutlery by the freight and passenger staffs at Winnipeg.

H. M. Allan has been elected President, G. M. Bosworth, 4th Vice-President C.P.R., Vice-President, and H. Paton, of the Shedden Co., a member of the General Committee of the Canada Club, a new social organization in Montreal.

T. Henry, Traffic Manager of the Richelieu and Ontario Navigation Co., was offered the position of Manager of the Northern Navigation Co. of Ontario, but declined on account of personal reasons which only developed after he had practically decided to accept.

W. Gibbs, Lac du Bonnet, Man., was married to Miss E. Westcott, of Cannington, Ont., Feb. 10, at the house of Roderick Mackenzie, Winnipeg. Among the presents was a cabinet of silver from the employes of the Winnipeg General Power Co. at Lac du Bonnet.

F. W. Jones, who was assistant to W. Whyte, when the latter was Manager C.P.R. Western lines, visited Winnipeg early in Feb. and had occasion while there to state that there was no foundation whatever for the reports that he was about to return to the C.P.R. service.

W. G. Ross, who has recently become Managing Director of the Montreal Street Ry. Co., was entertained at dinner by the officers and staff of the Montreal Light, Heat and Power Co., of which he was 2nd Vice-President up to the time of taking office with the Street Ry. Co.

M. J. Haney, President Locomotive and Machine Co. of Montreal, was sufficiently recovered from his recent illness to leave Toronto, Feb. 20, for Texas, where he is now recuperating. He is accompanied by Mrs. Haney and two of their daughters, and is expected to return early in May.

Barlow Cumberland has returned to Toronto from London, Eng., where he has been for over a year on business for the Independent Order of Foresters. The staff of the London office presented him with a silver-mounted mahogany and cut glass tantalus spirit case on the eve of his departure for Canada.

L. J. Ferritor, who has been appointed Superintendent Wabash Rd. at Peru, Ind., was recently presented with an address and a pair of diamond and gold cuff links by the employes of the Southern division G.T.R. and Canadian division Wabash Rd. St. Thomas, Ont., of which he had been Superintendent since 1899.

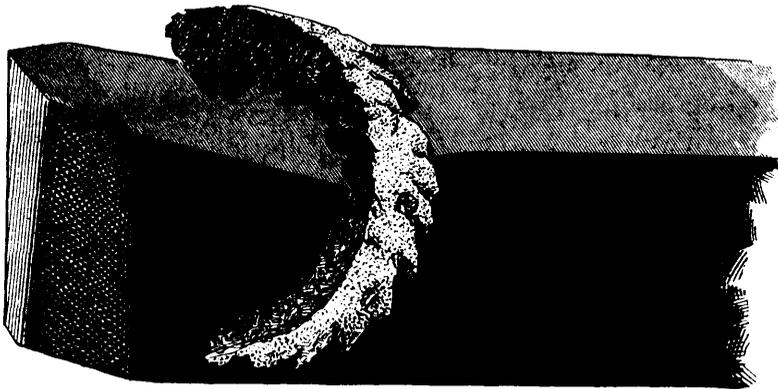
Jesse Joseph, who died in Montreal Feb. 24, was a director of the Montreal Street Ry. from 1877 to 1884, and President of that Company from 1884 to 1892, and was one of the original directors of the People's Telegraph Co.; a director of the Dominion Telegraph Co., and to the time of his death a director of the Montreal Co.

G. J. Bury, heretofore General Superintendent of the Lake Superior division of the C.P.R., was presented with addresses by the business men of North Bay and by the locomotive engineers of the C.P.R., and entertained at dinner prior to leaving North Bay, Ont., to become General Superintendent of the Central division at Winnipeg.

M. Donovan, of Doheny and Donovan, sub-contractors, Temiskaming and Northern Ontario Ry., was seriously injured by an explosion of dynamite Feb. 7 at the construction camp near Lake Fernagarni, 75 miles out from North Bay. Thirty tons of dynamite was accidentally exploded, wrecking the camp and injuring a number of men.

An item recently went the rounds of the daily press to the effect that Mrs. Hayter Reed, wife of the Manager of the Chateau Frontenac, Quebec, had been appointed to select the decorations and furnishings for the interior of the C.P.R. new hotel at Victoria, B.C.; that the work would occupy about two

The **JESSOP** High-Speed . . . **TOOL STEEL**
Self-Hardening



is
Unexcelled
for Turning
Locomotive
Tires,
Car Wheels,
Shafting,
Etc.

1/4-inch cut,
1/4-inch feed.
Speed **20 to 40**
feet per minute.
Tools hardened
by heating
white hot and
cooled in air.

CAN NOT BE
BURNED.

WM. JESSOP & SONS, Limited, Sheffield, Eng.

Chief American Office, 91 John St., New York. C. L. BAILEY, Agent, 80 Bay St., Toronto.

DOMINION BRIDGE CO., Limited
MONTREAL, P. Q.

BRIDGES TURNABLES : : :
ELECTRIC CRANES
ROOF TRUSSES : : :
STEEL BUILDINGS
Structural METAL WORK of All Kinds

Beams, Channels, Angles, Plates, Etc., in Stock

THE
ST. THOMAS BRASS COMPANY, Ltd.

MANUFACTURERS OF

Brass Castings For the Wearing Parts of Loco-
motives.

Journal Bearings For Passenger and Freight
Car Service.

Miscellaneous Brass Castings For Engine
and Car Work

Works and Office: ST. THOMAS, ONT.

THE FIRSTBROOK BOX CO.,
LIMITED.
CROSS ARMS, TOP PINS,
AND SIDE BLOCKS,
TORONTO.

T. A. MORRISON & CO.
206 St. James Street, Montreal
New and Second-Hand Contractors' Plant,
Stone Crushers, Concrete Mixers.
1 Baldwin I. C. R. Standard Gauge Locomotive,
35 tons, size 14 x 22, 110 S.P.
30 Dump Cars, narrow gauge, 2 1/2 yards.
—Boilers, Engines, Steam Shovels, etc.—

OCEAN STEAMSHIP
AGENCIES

AMERICAN LINE.

PLYMOUTH — CHERBOURG —
SOUTHAMPTON.

Sailing from New York, Saturdays, at
9.30 a.m.

PHILADELPHIA—LIVERPOOL.
Sailing from Philadelphia on Saturdays.

ATLANTIC TRANSPORT
LINE.

NEW YORK—LONDON.

Sailing from New York on Saturdays.

DOMINION LINE.

PORTLAND TO LIVERPOOL.
PORTLAND TO AVONMOUTH DOCKS,
(Bristol and Antwerp.)

LEYLAND LINE.

BOSTON—LIVERPOOL.

Sailing from Boston on Saturdays.

RED STAR LINE.

NEW YORK — ANTWERP — PARIS.

Sailing from New York, Sat-
urdays, at 10.30 a.m.

WHITE STAR LINE

NEW YORK — QUEENSTOWN —
LIVERPOOL.

Regular Weekly Service.

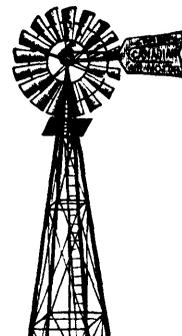
BOSTON QUEENSTOWN - LIVERPOOL.
BOSTON - MEDITERRANEAN SERVICE

AZORES GIBRALTAR NAPLES - GENOA.

Sub-agents at all principal points in Ontario,
where accommodation can be reserved and
tickets secured.

CHAS. A. PIPON

Passenger Agent for Ontario,
41 King St. East, Toronto.



WINDMILLS
(Canadian Airmotor)

TANKS
TANK
FIXTURES

RAILROAD WORK
A SPECIALTY

Ontario Wind Engine
and Pump Co., Limited
TORONTO, - ONT.

UNIFORM CAPS

FOR OFFICIALS AND
EMPLOYEES OF . . .

Railways, Steamboats, Express
and Telegraph Companies.

MILITARY AND POLICE HELMETS.

Embroidery in Gold and Silver
Bullion for all Purposes.

W. H. CODDINGTON, Hamilton, Ont.

years, and that she would be paid \$10,000 and expenses. We are advised that there is nothing in the report.

H. H. Adams, who has been appointed Superintendent of the Canadian division of the Michigan Central Rd., with office at St. Thomas, Ont., was born at Detroit, Mich., Aug. 13, 1876, and entered railway service July, 1899, as draughtsman on the M.C.R. After serving in various capacities in the engineering department he was appointed Assistant Chief Engineer Mar., 1902; secretary to the General Superintendent Nov., 1902, and Assistant Superintendent of the Canadian division Jan. 1, 1903.

H. H. Gildersleeve, who has been appointed Manager of the Northern Navigation Co. of Ontario, was born at Kingston, Ont., Dec. 15, 1865, and after spending six years in the Bank of Montreal, went into his father's office in 1890. He served as purser on one of the steamers of the line, as bookkeeper and auditor in the office of the Company, and as Freight and Passenger Agent to 1894, when he was appointed General Manager. Entire service with the Lake Ontario and Bay of Quinte Steamboat Co.

H. H. Vaughan, who has been appointed Superintendent of Motive Power on the C.P.R. lines east of Port Arthur, Ont., is a native of England and was educated at King's College, London, Eng., and served an apprenticeship with Naysmith, Wilson & Co., Particroft, Lancashire, coming to the U.S. in 1891. He worked for various companies as machinist, draughtsman and assistant engineer of tests and mechanical engineer, including the Great Northern Ry., the Philadelphia and Reading Rd., and the Queen and Crescent Route, and after a period of service with a supply house, until Mar. 1, 1902, was appointed Assistant Superintendent of Motive Power, Lake Shore and Michigan Southern Rd., which position he resigned to come to Montreal.

F. P. Brady, who has been appointed General Superintendent C.P.R. Lake Superior division at North Bay, Ont., was born at Haverhill, N.H., June 22, 1853, and entered railway service 1869, as station baggage master Passumpsic Ry., since which he has been consecutively: 1873 to 1880 train dispatcher Northern Rd., at Concord, N.H.; 1880 to 1888, Chief Train Dispatcher Southeastern Ry., at Richford, Vt.; 1888 to 1889, Trainmaster C.P.R.; 1889 to 1898, Assistant Superintendent same road, 1898 to May, 1901, Superintendent same road at Smith's Falls, Ont.; May, 1901, to Sept., 1902, Superintendent districts 10 and 11 same road at Toronto; Sept., 1902, to May, 1903, Superintendent district 19 same road at Fort William, Ont.; June 1, 1903, to Feb., 1904, Assistant General Superintendent, Central division, Winnipeg, Man.

C. H. Nicholson, who has been appointed Traffic Manager Northern Navigation Co., was born at Belleville, Ont., and was educated there, at Queen's University, Kingston, Ont., and at the University of Maryland, Baltimore. He entered transportation service with the Richelieu and Ontario Navigation Co., and subsequently became purser on one of the steamers operated by C. F. Gildersleeve, on the Bay of Quinte and River St. Lawrence. He remained as purser for three years, and became captain, having charge successively of the Hero, Hastings, Norseman and North King. When C. F. Gildersleeve organized the Lake Ontario and Bay of Quinte Steamboat Co., he became General Freight Agent, and until 1903 represented the Co.'s interests in the U.S., with headquarters at Rochester, N.Y. During the season of 1903 he was Manager of Transportation Muskoka Lakes Navigation and Hotel Co. at Gravenhurst.

A. D. Cartwright, who has been appointed Secretary to the Board of Railway Commis-

sioners for Canada, and whose portrait appears on pg. 89 of this issue, is a son of Sir Richard Cartwright. He was born at Kingston, Ont., Sept. 20, 1864, and was educated at Gore's Landing, Ont., and Queen's College, Kingston, graduating in 1885. He studied law as a student with Mulock, Tilt, Miller and Crowther, of Toronto, being articled to the present Postmaster-General, and was called to the bar in 1888. He practised in Toronto with the late Walter Macdonald as Macdonald and Cartwright, the firm name being subsequently changed to Macdonald, Cartwright and Garvey. He joined the 47th Batt. Frontenac Rangers in 1883, and in Sept., 1896, was transferred to the 10th Royal Grenadiers, Toronto, and holds the rank of Captain and Paymaster. He was Secretary of the Ontario Rifle Association from 1894 to 1900, and represented Canada at Wimbledon and Bisley, Eng., on several occasions between 1887 and 1899.

J. W. Higgins, who has been appointed Assistant Superintendent G.T.R. at London, Ont., was born at Newport, R.I., Oct. 12, 1846, and entered railway service Oct., 1879, serving until April, 1890, as messenger, sectionman, switchman, telegraph, freight brakeman, baggageman, freight conductor and chief clerk to Superintendent on the Chicago division, Illinois Central Rd., since which his record has been: April, 1890, to Dec., 1891, trainmaster same road at Cairo, Ill.; Dec., 1891, to Feb., 1892, chief clerk to General Superintendent same road at Chicago; Feb., 1892, to June, 1892, Assistant Superintendent Louisiana division same road at McComb City, Miss.; June, 1892, to April, 1893, Superintendent Louisiana division and Superintendent of Terminals same road at New Orleans, La.; April, 1893, to April, 1896, Superintendent of Terminals same road, Chicago, Ill.; April, 1896, to April, 1899, Superintendent same road at La Salle, Ill.; April, 1899, to June, 1901, Superintendent of Transportation same road; June, 1901, to June, 1903, General Superintendent of Transportation Illinois Central and Yazoo & Mississippi Valley Rys. at Chicago; June, 1903, to Feb., 1904, Assistant Superintendent G.T.R., at Island Pond, Vt.

Board of Railway Commissioners

The Board held its first sitting at Ottawa Feb. 6, when there was a large attendance of railway officials and members of the bar who have been practising before the Railway Committee of the Privy Council. Capt. R. Cartwright, Secretary, was not present, and C. Schriber, Deputy Minister of Railways, acted as Secretary.

Hon. A. G. Blair, Chief Commissioner, in the course of some opening remarks, said: "It is now something over seven months since I presided at a meeting of the Railway Committee of the Privy Council, and during that period the committee has passed away. This Board has succeeded to its powers and duties, but with these powers and duties greatly extended and enlarged. There are many who had personal knowledge of the quality of the work performed by that committee, who viewed its dissolution with regret. I could not and did not, however, fail to realize that the time at the disposal of overworked Ministers of the Crown; the increase in the volume and importance of the business to be transacted; the public demand for an enlargement of the jurisdiction of the Railway Committee of the Privy Council, and the imperative need of a speedier disposal of the business that came before it, all conspired to render necessary the creation of an independent and permanent tribunal. If I may be permitted a personal reference, I should like to say that, as the Minister charged with the preparation and carriage through Parliament of the act under which this Board is constituted, I had not until months after I had ceased to be a member of the Cabinet, the

slightest thought of being appointed to the position I am now occupying. I realize, I believe, in full measure, the grave, weighty and responsible character of the duties which my colleagues and myself are for the first time publicly entering upon to-day. Having had much to do with the framing of the law which we are to execute and administer, I can speak with perhaps a fuller knowledge than others of the aims and purposes of that legislation, and of the magnitude of the task we are undertaking to perform. The powers and the jurisdiction conferred upon this Board are comprehensive in their scope, far-reaching in their effects, and they will touch at a vital point the already immense and constantly increasing business interests of the country on the one hand, and the great and always growing railway interests on the other. It was not in the contemplation either of the framers of the bill or of Parliament, in enacting it, that it should be so administered as to jeopardize or impair the just and proper interests of either the railways or the public. We, who have cast upon us the grave responsibility of interpreting and executing this law, cannot enter upon experiments without the utmost caution, lest what we may do should prejudicially affect either general business or the proper railway interests of the country. In our judgment these interests, rightly understood and properly regulated, are not hostile or adverse, but in the largest sense complementary to one another, helpful and concurrent. In so far as we are endowed with capacity for the purpose, it shall be our endeavor in this sense so to administer the law. No member of this Board has heretofore had experience in dealing with all the classes of problems which will come before us for solution. Some of us have had but little, if any, experience as to some of these questions which will arise, but this condition was, under existing circumstances, necessarily unavoidable. We can, therefore, only bespeak for ourselves the lenient forbearance of a considerate and generous public. As to the order of business generally, I may point out that this Board succeeds to a very large accumulation of arrears of business of very great importance. No doubt that an early disposal of this business will be urgently pressed upon us from all sides, but a little reflection will convince those interested that it will be impossible for the Board until, at least, after the lapse of some few weeks, to deal with these subjects. Since we have been a Board there have been quite a number of new matters submitted to us, and we can only say that with regard to all of these it shall be our endeavor to consider them at the very earliest moment. There will be, of course, certain rules and regulations which the Board, after consideration, will determine upon and make public. It is not the purpose of the Board to prescribe any rules or regulations such as are in force in the higher courts of the land; that will not be our design. The rules framed by us will be simply with a view of facilitating business, and of furnishing such necessary guides as may be required by those who have to transact business before the Board."

Members of the bar present having made some complimentary allusions, the Board adjourned.

The Lake Superior, Long Lake and Albany River Ry. expects to be able to start construction on the first section of its projected railway from Peninsula Harbor on Lake Superior to Albany river early in the spring, and if the hopes of the promoters are realized about 50 miles will be completed within a year. The Company has completed location surveys on 12½ miles of line, preliminary surveys on 35 miles, and a reconnaissance has been completed to Shallow lake, 50 miles from Peninsula Harbor, and the officials of the Company are acquainted with the contour

and resources of the country through which the line will pass as far as the confluence of the Kenogami river with the Albany river, 200 miles from Peninsula Harbor, and at the head of deep water navigation of the Albany river from Fort Albany. Peninsula Harbor is well protected and capacious and provides deep water right at the shore, so that dredging will not be required. The 12½ miles located starts from the proposed wharf, and crosses the C.P.R. transcontinental line between mileage 810 and mileage 811 from Montreal, a little west of Peninsula station, and during the first two or three miles there will be some difficult construction, but after getting through the rock country, and into the valley of the Pic river, construction will not present any engineering difficulties. For about the first eight miles the average gradient will be about 1%, and from there to the 50-mile point, it is expected that a gradient between 0.03 and 0.04 will be obtained. On the first eight miles of line there will be a fair amount of curvature, but beyond this the curvature will generally be easy. The right of way will be cut out to permit of the construction of a double track from Peninsula Harbor to Shallow lake, and

probably as far as the Kenogami river, about 160 miles, to the point where it is expected that the G. T. Pacific Ry. will cross. It is also stated that the ties will be 8 ft. long, and 8 in. thick, and the track will be laid with 80-lb. steel rails. H. DeQ. Sewell is Chief Engineer and had charge of the surveys, and left early in March to complete the location to Shallow lake, 50 miles from Peninsula Harbor, just over the divide. (Dec., 1903, pg. 425.)

Dominion Express Co.—W. Walsh, heretofore General Agent at Toronto, has been appointed Assistant to the General Manager at Toronto. He will attend to the general detail work of the Ontario division, and will perform such other duties as may be assigned to him.

The British Columbia Legislature at its last session passed an act under which surface and under-surface rights of certain pioneer settlers within the land belt of the Esquimalt and Nanaimo Ry. have been secured to them. The settlers intended to be protected were evicted in 1895 by the E. and N. Ry. Co. and their claim to the land is now to be asserted and defended by the Province.

NOTICE.—Application will be made, at the next session of the Parliament of Canada, for an Act,—Confirming a lease from the Canada Southern Railway Company to the Michigan Central Railroad Company, dated 15th August, 1903;

Confirming a certain trackage agreement between the Canada Southern Railway Company, the Michigan Central Railroad Company and Pèrè Marquette Railroad Company; Declaring that the Leamington and St. Clair Railway Company and the Sarnia, Chatham and Erie Railway Company are works for the general advantage of Canada;

Empowering the Canada Southern Railway Company to acquire the railway, franchises and undertaking of the Sarnia, Chatham and Erie Railway Company, or to amalgamate with that company; and empowering that company to dispose of its railway, franchises and undertaking to the Canada Southern Railway Company, or to amalgamate therewith, to the intent that the Sarnia, Chatham and Erie Railway Company may be merged in and form part of the undertaking of the Canada Southern Railway Company;

Conferring on the Leamington and St. Clair Railway Company the powers it possesses under the Acts of the Province of Ontario relating to the company, to sell its railway, or make agreements with the Canada Southern Railway Company;

Empowering all said companies to do all acts and deeds necessary to carry out such agreements.

KINGSMILL, HELLMUTH,

SAUNDERS & TORRANCE,

Solicitors for and on behalf of, the Canadian Northern Railway Company, Leamington and St. Clair Railway Company, Sarnia, Chatham and Erie Railway Company.

Dated at St. Thomas, this 19th December, 1903.

NOTICE is hereby given that The Canadian Northern Railway Company will apply to the Parliament of Canada, at its next session, for an Act authorizing the said company to acquire by purchase or lease, or to make running arrangements with, or to amalgamate with The Northern Extension Railway Company.

Z. A. LASH, Solicitor,

The Canadian Northern Railway Co.

Toronto, 1st February, A.D. 1904.

NOTICE.—The Atlantic and North-West Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time within which it may complete its works.

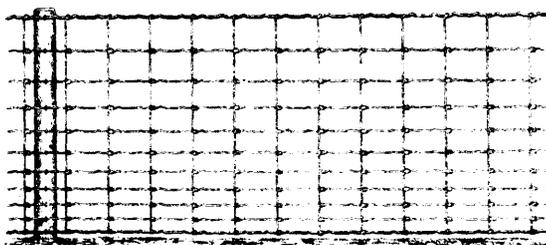
By order of the Board,

CHARLES DRINKWATER,

Secretary.

Montreal, 15th January, 1904.

“AMERICAN” WOVEN WIRE RAILWAY FENCING



Special Steel,
Special Treatment,
Special Galvanizing,
Extra Heavy Wire,
Perfect Hinge Joints.
Tension Curves amply provide requisite elasticity to successfully combat varying temperature. “AMERICAN” FENCES have a world-wide reputation; quality the best.

WRITE TO US AND WE WILL SAVE YOU MONEY.

Manufactured in Canada by

THE CANADIAN STEEL & WIRE COMPANY, Limited
HAMILTON, CANADA.

“NOVO” Air-Hardening Steel

TWIST DRILLS, REAMERS, MILLING CUTTERS

High Speed and Durability. Producing Wonderful Results.

WM. ABBOTT, Agent, 334 ST. JAMES ST.
MONTREAL

CANADIAN SHIPBUILDING COMPANY, LIMITED.

DESIGNERS AND BUILDERS OF ALL TYPES OF

STEEL SHIPS

General Offices: UNION BANK BLDG., Toronto, Ontario.

OUR SHIPYARD near BRIDGEBURG, ONT., opposite BUFFALO, on NIAGARA RIVER, is capable of building the largest vessels on the Upper Lakes.

ADDRESS ALL CORRESPONDENCE TO OFFICE OF GENERAL MANAGER, TORONTO.

Electrical Features of the C.P.R. Shops.

The C.P.R.'s Angus shops at Montreal are designed and equipped for work which does not vary in character and is adapted for the tools installed. Most of the latter are used for services that vary so little that they can be most economically operated by the constant speed electric motors, which, in most cases, have been installed for them. The work in the machine shop has been divided into different general classes, such as wheel finishing, moving parts, like links, pistons, valves, etc., heavy turning, boring and planing. Brass finishing and other light work is done in the gallery and the erection of heavy parts is done in one of the side aisles. By this arrangement variable-speed-motors have been dispensed with and in a total of about 200 electric motors only 15 are of variable speed. The system adopted is three-phase, 600 volts without transformers. This gives 550 volts at the motors, and has the advantage of requiring about 10 per cent. less copper in the conductors. There are three 500 k.w., three-phase, 600 volt, and one 375 k.w., alternating generators each of them driven by a separate direct-connected 750 h.p. engine of new type Corliss valve gear, making 150 r.p.m. All motors, except those otherwise mentioned, are of from 5 to 50 h.p. of the induction type, three-phase, 550 volt machines. There is a standard three-phase switch-board with 4 generator distributing and exciter panels. Outside wiring is done with over-head construction, bare copper main feeders running from roof to roof. In the building is a mixed system of open porcelain cleats and slow-burning water-proof wire on the ceilings, with conduits and rubber-covered wires on the side walls. Panel boxes are supplied, however, for every 10 k.w. of lighting and for every 100 h.p. of motor wire. There are 110 volt enclosed arc lamps for shop illumination, supplemented by standard 16 c.p. incandescent 110 volt lamps. There are approximately 400 arc lights and 3,800 incandescent lights in the yards and shops. In the passenger car shops the lights are spaced equi-distantly, and low tension arc lamps are installed on account of their economy and better results for general illumination. In the yards there are 50 enclosed series arc lamps of high potential. Yard transportation is provided by the 10-ton 77 ft. span-girder crane in the midway, and the 10-ton, 57 span-girder crane at right angles to it, which distribute materials back and forth between the iron foundry and machine shop, and are each operated by three direct-current 220 volt motors of 25 h.p. for the hoist and 8 h.p. for traversing. There is also a yard transfer table operated by a 20 h.p., 550 volt motor. The shops will be equipped with a complete telephone system. The C.P.R.'s electrical department is installing all of the electrical wiring. The general office at the plant is wired throughout with conduit concealed work, and in every room there is a belt line of wire running around the oak walls near the ceiling behind oak mouldings, which can be removed and a light connected to it at any point without disturbing the line. In the shops the small machine tools are arranged in groups, which, in most instances, are operated by a motor seated on an overhead platform between the roof trusses. —Canadian Electrical News.

Grain Elevator Notes.

The Ogilvie Flour Mills Co. has let a contract for the erection of a 500,000 bush. elevator at Fort William, Ont., to be ready for use by Sept.

The Montreal Grain Elevating Co. has been fined \$50 for neglecting to remove from the river at Montreal its floating elevator St. Lawrence, which was sunk May 6, 1903.

Application has been made to the Canadian Northern Ry. for sites for the erection of five elevators at Edmonton, Alta. They will have a capacity of from 40,000 to 50,000 bush. each. The C.N.R. will lay sidings to the elevator sites during the summer.

The Fort William, Ont., town council has decided to grant the Canadian Elevator Co. exemption from general taxation for 25 years, for its proposed 1,500,000 bush. elevator. It was stated to the council that the elevator would be erected during the summer.

The Barnett & Record Co., of Minneapolis, has been licensed under the Ontario acts relating to extra-provincial companies, to do a general contracting and engineering business within Ontario, and to employ therein a capital of \$125,000. W. H. Nelson, of Port Arthur, Ont., is attorney for the Company.

The Northwest Grain Dealers' Association was incorporated at the recent session of the Manitoba Legislature with a capital of \$200,000 and power to increase it to \$1,000,000, to carry on a general grain-buying and storage business, and in connection therewith to construct elevators. The provisional directors are: S. P. Clark, J. Love, W. H. McWilliams, A. Reid and W. W. McMillan, of Winnipeg, where the head office is to be located.

The winding-up of the affairs of the Prescott Elevator Co. (Ltd.) has been completed, and a final dividend was paid to the bondholders Feb. 18. The total amount realized by the sale of the elevator, tugs, barges, etc., and from other sources was \$122,039.32, out of which there was paid \$88,462.53 the expenses of the winding-up, \$12,658.23 for preferred and privileged claims, and \$100,918.51 in satisfaction of the Company's bonds which amounted to \$150,000. The bondholders lose \$49,081.49 of their investment, and the unsecured creditors do not realize anything.

The Harbor Commissioners' elevator at Montreal, which, it is expected, will be ready to receive grain May 1, is situated on Commissioner st., opposite the Custom house. The foundations are of special interest, as the total height of steel concrete from pile heads to bin bottom is 46 ft., 23 ft. being below the grade upon which two car tracks pass through the house. This lower concrete story is thoroughly braced by heavy concrete arches running entirely across the building, with buttresses extending out on either side to take the wind pressure. The space between the columns is filled by a concrete curtain wall, with a double window three sashes high in each panel, which makes a very light lower working-floor. The entire outer surface of the concrete is blocked off and bush-hammered to resemble massive masonry. Sixteen thousand barrels of cement were used in this work and 400 tons of steel bars were imbedded to give additional strength to the concrete. The bins are cylindrical in shape and built entirely of steel, being 20 ft. 3 in. in diameter and 85 ft. high. The resulting spaces between the cylindrical bins are likewise used for storage, making the total number of bins 78 and the total storage capacity 1,000,000 bush. In the construction of the bin work more than 1,000 tons of steel plates were required; 600 tons of steel structural work were used in the cupola erected above the bins, which is five stories high, with floors and roof of steel concrete. These floors, while only 4 in. thick, were tested with a load of 300 lbs. per square foot, the result showing a deflection of but 1-64 in. in a span of 7 ft. The elevator is equipped with one portable marine tower, 23 ft. wide, 33 ft. long and 150 ft. high. The tower is mounted on 20 pairs of car wheels running on four steel rails along the dock and is securely attached to the main building by means of rolling anchors. At one end of the building a stair and passenger elevator tower is located. This, like the marine tower and the sides of the cupola, is covered

with galvanized corrugated iron. The principal dimensions of the building are: length, 189 ft. 3 in.; width, 84 ft. 3 in., and height, from base of rail, 200 ft. 2 in. The general arrangement and equipment of machinery provides for receiving grain either from boats or cars and to ship by car or ocean-going vessels. The handling capacity will be as follows: Receiving from boats 18,000 bush. per hour; receiving from cars, 20 cars per hour; shipping to boats, 80,000 bush. per hour. A second portable marine tower has been provided for, which will double the receiving capacity from boats. The steel garners and scale hoppers have a capacity respectively of 2,000 and 1,600 bush. The machinery is electrically driven, 900 h.p. in motors divided into 14 units being required. All the electric wiring has been installed in steel conduits. In the marine tower, apart from the regular ship shovels, is a second independent set of small, or clean-up shovels. Both sets are operated by compressed air, and with this special equipment it will be possible to do the work with 12 men in a boat which requires from 30 to 35 men with the old system of shovels. The cleaning machines were especially designed and are built entirely of steel. A complete dust collecting system has been provided, with sweeps located on the various floors throughout the elevator, and all the dust will be discharged into a dust house outside of the building. The elevator is equipped with an electric light plant and an independent telephone system, and there are lavatories and special lockers for the employees. —American Elevator and Grain Trade.

SHIPPING MATTERS.

Dominion Marine Association.

The following additions have been made to the membership of the Dominion Marine Association since the list published in our issue of Dec., 1903:

Ottawa Transportation Co. (Ltd.), with a steam tonnage of 178 tons, and 9,464 tons for barges, or sailing vessels; total, 9,642 tons.

J. B. Fairgrieve, Hamilton, Ont.: steam tonnage, 770 tons.

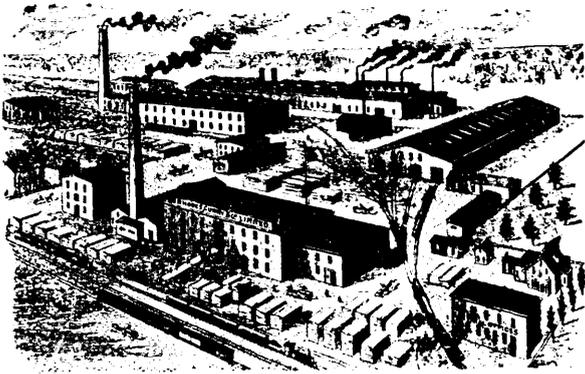
Northern Navigation Co. of Ontario (Ltd.), steam tonnage, 4,880 tons.

Niagara, St. Catharines and Toronto Navigation Co., steam tonnage, 620 tons.

Rat Portage Lumber Co. (Ltd.), steam tonnage, 500-25 tons.

St. Lawrence River Steamboat Co. (Ltd.), steam tonnage, 460 tons.

A committee of the Association was appointed at the conference at Ottawa in May, 1903, to meet the Lake Carriers' Association, and discuss the question of the rules of the road on the Great Lakes and connecting waters, with a view of securing uniformity between the Canadian and the U.S. rules. The committee, consisting of A. W. Wright, Capt. Crangle, Toronto; Capt. T. Donnelley, and F. King, M.A., Secretary, Dominion Marine Association, Kingston, went to Detroit Feb. 2, and met W. Livingstone, of Detroit, President, and H. D. Goulder, of Cleveland, Ohio, General Counsel of the Lake Carriers' Association. The whole matter was fully discussed and the various points of difference in the rules on both sides of the line considered. There was a unanimity of agreement that the rules must be brought into harmony, and there was complete agreement also that, with due regard to the easiest method of assimilation, whatever necessity might arise in the way of give and take would be obeyed in order to bring the rules into complete harmony. The feeling was expressed that the easiest way might be to adopt the U.S. statute known as the White law and put it in force in Canada. In the meantime, however, the Department at Ottawa having formulated rules intended to take effect in Canadian waters, and supposed to be



Rhodes, Curry & Co.,

Ltd.,

Railway and Street Cars

of all descriptions.

Special Cars for Coal, Ore,
* Lumber, &c., with Ball-
* Bearing Wheels. * *

Car Wheels, Axles, Castings, Forgings, &c.
AMHERST, NOVA SCOTIA.

The POLSON IRON WORKS

TORONTO, CANADA.

**Engineers, Boilermakers and
Steel Shipbuilders.**

OFFICE AND WORKS—Esplanade St. East, TORONTO.

JOHN S. METCALF CO., Engineers, Grain Elevator Builders,

620 TO 623 THE TEMPLE, CHICAGO, ILL.

A partial list of elevators which have been designed and constructed by us and under our supervision.

Burlington Elevator, St. Louis, Mo.	Capacity	1,300,000	Bushels
Grand Trunk Elevators, No. 2 and No. 3, Portland, Me.	"	2,500,000	"
Export Elevator, Buffalo, N.Y.	"	1,000,000	"
J. R. Booth Elevator, Depot Harbor, Ontario	"	1,000,000	"
Southern Pacific Terminal Co.'s Elevator, Galveston, Texas.	"	1,000,000	"
Erie R. R. Transfer & Clipping House, Chicago, Ill.	"	100 cars in 10 hrs.	"
Manchester Ship Canal Co.'s Elevator, Manchester, Eng.	"	1,500,000	"
Burlington Elevator Co., Peoria, Ill.	"	500,000	"
Canada Atlantic Railway Elevator, Coteau Landing, Que.	"	500,000	"
Northern Grain Co., Manitowoc, Wis.	"	1,350,000	"
Union Elevator, East St. Louis, Ill.	"	1,100,000	"
Montreal Warehousing Co.'s Belt Conveyor System	"		"

We make a specialty of furnishing **PLANS AND SPECIFICATIONS.**



WIRE ROPE

BALLAST PLOUGH ROPES
WRE KING ROPES
SWITCH ROPES
DERRICK ROPES
SEMAPHORE STRANDS
STANDARD AND LANG'S PATENT
LAY, Etc.

The B. GREENING WIRE CO., Limited
HAMILTON, ONT. MONTREAL, QUE.

C.P.R. LANDS.

THE CANADIAN PACIFIC RAILWAY COMPANY have 12,000,000 acres of choice farming lands for sale in Manitoba, Assiniboia, Saskatchewan and Alberta. Manitoba lands and Assiniboia lands east of third meridian, \$4.00 to \$10.00 per acre according to quality and location. Lands in South-Western Assiniboia and Southern Alberta, \$3.50 to \$8.00 per acre. Ranchings lands generally \$3.50 to \$4.00 per acre. Northern Alberta and Saskatchewan lands generally \$6.00 to \$8.00 per acre. Maps showing the lands in detail will be sent free on application.

TERMS OF PAYMENT.

An actual settler may purchase 640 acres, or less, on the 10 payment plan, by which the aggregate amount of principal and interest is divided into a cash instalment to be paid at the time of purchase and nine equal deferred instalments annually thereafter, as follows:
160 acres at \$4.00 per acre, 1st instalment \$95.85, and 9 equal instalments of \$80.
160 acres at \$4.50 per acre, 1st instalment \$107.85, and 9 equal instalments of \$90.
160 acres at \$5.00 per acre, 1st instalment \$119.85, and 9 equal instalments of \$100.
160 acres at \$5.50 per acre, 1st instalment \$131.85, and 9 equal instalments of \$110.
160 acres at \$6.00 per acre, 1st instalment \$143.85, and 9 equal instalments of \$120.00.
160 acres at \$6.50 per acre, 1st instalment \$155.85, and 9 equal instalments of \$130.00.
160 acres at \$7.00 per acre, 1st instalment \$167.85, and 9 equal instalments of \$140.00.

Purchasers who do not undertake to go into residence on the land are required to pay one-sixth of the purchase money down, balance in five equal annual instalments with interest at the rate of 6 per cent. per annum.

DISCOUNT FOR CASH.

If land is paid for in full at time of purchase, a reduction from price will be allowed equal to ten per cent. on five-sixths of the purchase money. Interest at six per cent. will be charged on overdue instalments.

F. T. GRIFFIN,
Land Commissioner C.P.R. Co., Winnipeg.

CANADA NORTH-WEST LAND CO.

This Company has 800,000 acres of selected lands in Manitoba and Assiniboia which offer excellent opportunities to settlers and investors who desire to secure good lands in well settled districts. These lands are on sale at the Company's Office at Winnipeg, and at the various land agencies of the Canadian Pacific Railway Company.

Dominion Line Steamships

FAST TWIN-SCREW SERVICE. WEEKLY SAILINGS.

HALIFAX TO LIVERPOOL **PORTLAND TO LIVERPOOL**

PORTLAND TO LIVERPOOL

Canada - - Saturday, Mar. 12th, 2 p.m.
Vancouver - " Mar. 26th, "
Dominion - " April 2nd, "
Cambroman " April 9th, "
Canada - - " April 16th, "

Spacious Promenade Decks, Electric Light. Passenger Accommodation all amidships.

For all particulars apply to the local agent of the Company or to

C. A. PIPON,
41 KING STREET EAST, - - TORONTO.
DOMINION LINE OFFICE,
17 St. Sacramento Street, Montreal.

TORONTO ENGRAVING CO.
DESIGNERS, ENGRAVERS,
ELECTROTYPERS.
92 BAY ST.

in harmony with those of the United States. The Secretary has applied to the Department of Marine for a copy of these, in order that the Association may consider them and see whether they go far enough without making a complete change in the law; and if they are furnished for the purpose named they will have full consideration.

The Marine Review referring to the meeting said: "The Canadian members of the committee are of the opinion that there are a great many imperfections in the pilot rules and White law, and are not ready to accept them entirely in the shape in which they now stand, but the purpose of the meeting was to get together as far as possible and agree upon changes which are to be made in order to bring about absolute uniformity in the rules of navigation on the lakes. While representatives of the big lake marine organizations from both sides of the international boundary were together the question of more lights in Canadian waters and more aids to navigation was also brought up, but no decided action was taken, all being referred to the future meeting."

Richelieu and Ontario Navigation Co.

The following report for the year ended Dec. 31, 1903, was presented at the annual meeting in Montreal Feb. 18:

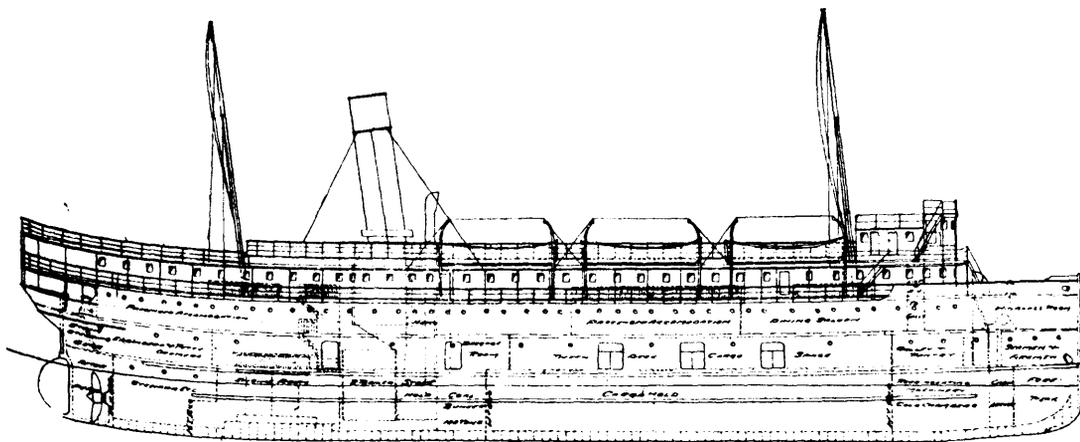
The gross earnings continue to show an increase, due to the improved facilities offered by the Company. The directors regret the loss of the steamer Montreal on Mar. 7, 1903, which was still in the hands of the builders, and the Company's interests were fully protected. The hull has been taken over, and the steamer is being reconstructed at the Company's workshops at Sorel, and will be ready for the opening of the season of navigation of 1905. The steamer Carolina, which met with an accident in the Saguenay River, on August 19 last, is also being repaired at the Company's shops at Sorel, and will be ready for the coming summer season. The directors, recognizing the great importance of modern improvements and to effect greater and permanent economy, are enquiring into the construction of a marine railway drydock to be built at Sorel. Under the deed of trust securing the Company's bonds issued in 1895, \$24,333.33 have been withdrawn and cancelled during the year, making the total bonds cancelled to date, \$167,413.31 out of the original issue of \$571,833.33, and leaving \$404,420.02 still outstanding.

The following were elected directors: L. J. Forget, W. Wainwright, R. Forget, F. C. Henshaw, G. Caverhill, C. P. Paradis, H. M. Molson, E. B. Garneau, J. K. Osborne, H. M. Pellatt, W. Hanson. R. Forget was subsequently elected President, succeeding L. J.

working order, situated as follows: St. John, N.B.; Levis, P.Q.; Sorel, P.Q.; Montreal, P.Q.; Kingston, Ont.; Toronto, Ont.; Owen Sound, Ont.; Collingwood, Ont., and Windsor, Ont.; also one in Victoria and one in Vancouver, B.C. The gain in membership last year was 120 members, and the Association now numbers 800 members, with prospects of new Councils being formed in Ottawa and Midland, Ont. The receipts for last year were \$1,106, expenditure \$762, leaving \$342 with one council to hear from. Matters of various kinds were fully discussed, and their bearing on engineers, compared with other countries where better protection is provided, were fully gone into.

A communication was sent to the Secretary of the Dominion Marine Association informing him that a delegation had been appointed by the Grand Council to meet a committee from the Marine Association, in order to secure a better understanding of the aims of each organization and, if possible, come to some understanding whereby both could work in unison to bring the matter of better protection to owners and engineers before the Government. But, owing to the short notice, the Marine Association could not arrange for a conference, and the matter had to be laid over.

The following officers were elected for the current year: Grand President, T. J. S. Milne, Kingston, Ont.; Grand Vice-President, N.



PROFILE AND SECTION OF TURBINE STEAMER FOR THE CLEVELAND AND GEORGIAN BAY LINE.

Forget, who declined re-election, and G. Caverhill was elected Chairman of the Executive.

National Association of Marine Engineers.

The fifth annual session of the Grand Council was held in Kingston, Ont., on January 26, 27, and 28. The Local Council tendered the delegates a dinner on Jan. 26, over 100 delegates and invited guests being present. The business done at the meeting was largely of the usual routine character. The Grand President, T. J. S. Milne, of Kingston, in his address mentioned the large increase of membership during the year. He referred to the bill that was before the Dominion Parliament last session, and was laid over till the ensuing, and asked for the support of all the members to uphold the executive in pressing the legislation required by the marine engineers to a vote of the House. The bill referred to asks that all boats coming under the Canadian Inspection Act, except small pleasure yachts, be required to carry licensed engineers, and that the practice of granting temporary certificates to men without any qualifications be discontinued.

The Grand Sec.-Treas., N. J. Morrison, of St. John, N.B., submitted a lengthy report, giving a detailed account of the work of his office during the year. He reported that there were 11 councils organized and in good

Ducap, Montreal; Grand Secretary-Treasurer, N. J. Morrison, St. John, N.B.; Grand Conductor, Chas. Robertson, Owen Sound, Ont.; Grand Doorkeeper, O. L. Marchand, Montreal; Grand Auditors, James Gillie, Kingston, Ont.; E. M. Garrity, Toronto.

The next meeting will be held at Collingwood, Ont., Jan. 24, 1905.

Turbine Steamers for the Great Lakes.

W. J. Brown, of Detroit, Mich., who was manager of the str. Pittsburg, formerly operated on the upper lakes in the freight and passenger trade, and which was burned early in 1903, is interested in a proposal to place a line of turbine steamers on a route between Toronto and Fort William, Ont., giving a bi-weekly service. The steamers will be operated as the Cleveland and Georgian Bay line, and it is proposed to place three in the service. Plans prepared at Newcastle-on-Tyne, Eng., and which have been received by Mr. Brown, provide for steamers having the following dimensions: length, keel, 235 ft.; over all, 250 ft.; breadth, 41 ft.; depth, 14 ft. The hull will be built of steel, and the steel will extend up the sides to the top of the first cabin deck, which will insure greater strength than is usually found in lake steamers. Berth accommodation will be provided for 250 passengers, and all the staterooms will be on the outside. The diningroom will extend the en-

Gross receipts.....	1903	1902
Operating expenses.....	\$1,104,801 97	\$1,036,666 27
Fixed charges.....	894,745 66	840,449 03
Net profit.....	20,423 74	21,632 32
	\$189,632 57	\$174,584 92
ASSETS.		
Steamers, real estate and buildings.....		\$3,465,711 79
Wharves, etc.....		9,832 83
Coal, stores, provisions, etc.....		27,517 03
Accounts receivable.....		117,255 85
Cash on deposit.....		\$3,703,817 50
LIABILITIES.		
Capital stock.....		\$3,132,000 00
Bonds 5% Sterling.....		\$571,833 33
Less cancelled.....		167,413 31
On hand.....		14,600 00
		182,013 31
Accounts payable.....		389,820 02
Unclaimed dividends.....		42,005 05
Accrued interest on bonds.....		234 00
Surplus.....		6,496 32
		133,262 11
		\$3,703,817 50
INCOME ACCOUNT.		
Dividends 6% paid May 2 and Nov. 2, 1903.....		\$187,920 00
Carried to Surplus, Dec. 31, 1903.....		1,712 57
Net income over and above expenses, fixed charges and interest, for year ended Dec. 31, 1903.....		\$189,632 57

Two semi-annual dividends of 3% each, amounting together to \$187,920.00, were paid.

tire width of the steamer and will have seating accommodation for 150 persons. Each steamer will have a freight capacity of 1,000 tons, on a 12 ft. draft. The contract speed will be 16 miles an hour, and the estimated cost is \$250,000 each. Mr. Brown recently stated that during the season June 15 to Sept. 15 the steamers will call at Cleveland, Ohio, and will stop regularly from May 1 to Dec. 1 at Windsor, Sarnia, Goderich, Kincardine, then through the north channel of Georgian bay, stopping at Manitowaning, Little Current, Gore Bay, Thessalon, Bruce Mines, Sault Ste. Marie, Fort William and Port Arthur on the north shore of Lake Superior, returning via the same route and making the same calls.

During the season of 1903 several of the steamers of the Canadian Lake and Ocean Navigation Co. were engaged in carrying freight between Montreal and Port Arthur, returning with grain, calling en route at a number of ports, but not at Toronto. It is understood that for the season of 1904 an arrangement has been made between the C.L. and O.N. Co., and the New Ontario Steamship Co., which is controlled by the Mackay Bros. of Hamilton, by which a schedule will be arranged for the operation of a number of the steamers of the two companies on fixed days between Montreal and Port Arthur and Fort William, calling at a number of ports,

including Toronto and Hamilton, on the route. It is expected that the amalgamation will enable the management to arrange for two vessels to be started from each end weekly. The steamers mentioned as being likely to form the fleet of the combination are the J. H. Plummer, H. M. Pellatt and A. E. Ames of the Canadian Lakes and Ocean Navigation Co., and the Wacondah, Neepawa and Arabian, of the New Ontario Steamship Co. The headquarters of the line will be at Toronto.

The Department of Marine has decided to establish a Lighthouse Board for Canada, and an order-in-council respecting the duties and composition of the board was passed Feb. 21. It is understood that the board will exercise the functions of the lighting necessities of the Canadian waterways, and that its membership will include the Minister of Marine (ex-officio); the Deputy Minister, Col. Gourdeau, (chairman); the Chief Engineer, Col. Anderson; Capt. Spain, Capt. Salmon, and H. M. Allan, of Montreal, to represent the shipping interests.

The Ogilvie Flour Mills Co., press reports state, is considering a proposed line of steamers of its own on the upper lakes in connection with its grain and flour carrying business, but we are advised that no decision has been reached.

Established 1849

CHAS. F. CLARK, Pres. CHARLES L. BECKWITH, Sec.

BRADSTREET'S

Capital and Surplus \$1,500,000

OFFICES THROUGHOUT THE CIVILIZED WORLD

EXECUTIVE OFFICES

NOS. 346 and 348 BROADWAY, N.Y. CITY, U.S.A.

THE BRADSTREET COMPANY gathers information that reflects the financial condition and the controlling circumstances of every seeker of mercantile credit. Its business may be defined as of the merchants, by the merchants, for the merchants. In procuring, verifying and promulgating information, no effort is spared, and no reasonable expense considered too great, that the results may justify its claim as an authority on all matters affecting commercial affairs and mercantile credit. Its offices and connections have been steadily extended, and it furnishes information concerning mercantile persons throughout the civilized world.

Subscriptions are based on the service furnished, and are available only by reputable wholesale, jobbing and manufacturing concerns, and by responsible and worthy financial, fiduciary and business corporations. Specific terms may be obtained by addressing the Company at any of its offices.

CORRESPONDENCE INVITED

OFFICES IN CANADA:

Halifax, N.S.	Hamilton, Ont.	London Ont.
Montreal, Que.	Ottawa, Ont.	Quebec, Que.
St. John, N.B.	Toronto, Ont.	Vancouver, B.C.
		Winnipeg, Man.

THOS. C. IRVING,
Gen. Man. Western Canada, Toronto.

Eugene F. Phillips Electrical Works, Limited,

MONTREAL, CANADA.

BARE AND INSULATED ELECTRIC WIRE

Electric Light Line Wire, Incandescent and Flexible Cords,

RAILWAY FEEDER AND TROLLEY WIRE

Americanite, Magnet, Office and Annunciator Wires,
Cables for Aerial and Underground Use.

E. L. DREWRY

REDWOOD BREWERY

WINNIPEG, MANITOBA.

MANUFACTURER OF THE
CELEBRATED

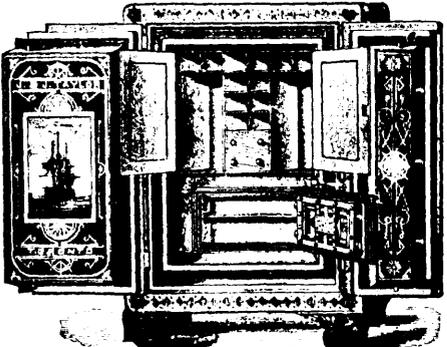
REFINED ALE,

EXTRA STOUT AND

REDWOOD LAGER.

ALSO THE . . . GOLDEN KEY BRAND

ÆRATED WATERS.



J. & J. TAYLOR

(TORONTO SAFE WORKS)

TORONTO ——— ONTARIO

MANUFACTURERS OF

Express Safes Express Boxes
Bank Safes Fire Proof Safes
Etc., Etc., Etc.

ESTABLISHED 1855

The Northern Electric and Manufacturing Co., Limited

MONTREAL

Contractors for and Dealers in

Electrical Apparatus and Supplies

Experimental and Model Work,
Fine Machinery, Special Tools,
Patterns, Gear-Cutting, Special-
ties, Repairs, Etc.

ESTIMATES PROMPTLY FURNISHED.

RAILWAY SPRINGS

Equalizing, Drawbar, Buffer and Spiral Springs of all kinds.

Locomotive, Tender and Passenger Car Springs of every description.

Electric Car Springs from the largest to the smallest.

MANUFACTURED BY

B. J. COGLIN & CO., 432 St. Paul Street, Montreal, Canada.

Notices to Mariners.

The following notices to mariners have been issued by the Dominion Department of Marine:—

No. 1. Jan. 13.—Ontario—1. Lake Superior, sailing directions. This notice contains preliminary sailing directions for portions of the Canadian shore of Lake Superior prepared by W. J. Stewart, in charge of the Hydrographic Survey of the Great Lakes, and is to replace the information contained on pages 20 and 21, 26 and 27 of bulletin No. 13 of the Survey of northern and northwestern lakes published by the U.S. War Department in 1903.

No. 3. Jan. 18.—Quebec—4. Gulf and River St. Lawrence, Gaspé to Quebec, list of ship channel buoys.

No. 4. Jan. 23.—Nova Scotia—5. Bay of Fundy, Lurcher shoal, lightship.

No. 5. Jan. 28.—Quebec—6. River St. Lawrence below Quebec, north shore Outarde bay, Outarde river, Bersimis river, buoys discontinued. 7. River St. Lawrence, Bay St. Paul, fog bell discontinued.

No. 6. Jan. 29.—British Columbia—8. Vancouver Island, east coast, Lambert channel, off Hornby island wharf, buoy established.

9. Malaspina strait, Thormanby islands, Tattenham ledge, buoy established. 10. Vancouver island, east coast, off Kelp bar, bell buoy established.

No. 7. Feb. 1.—Nova Scotia—12. Musquodoboit harbor, range lights established. New Brunswick—13. South coast, L'Etang harbor entrance, Gray Mare ledge, spindle carried away.

No. 8. Feb. 4.—North Atlantic Ocean—14. Newfoundland, off the southern and eastern coasts, currents met on the steamship routes.

The following notices have been issued by the U.S. Hydrographic Department:

No. 4. Jan. 23.—Lake Superior—118. Crip's Point, light and fog signal to be established.

No. 5. Jan. 30.—St. Mary's River.—156. Sault Ste. Marie, Vidal shoals, channel range lights to be established.

Maritime Provinces and Newfoundland.

A proposition is under consideration with a view of establishing a steam ferry service between Granville and Digby, N.S.

Six vessels have been transferred to British registry at St. John's, Nfld., since Jan. 1, the last being the steamship Euphrates.

The Dominion lightship Lurcher was placed in position on the Lurcher shoal, near Yarmouth, N.S., Jan. 29, but during a heavy storm early in Feb. got adrift, and proceeded under her own steam to Yarmouth.

The Fredericton and Woodstock Steamboat Co. held its annual meeting at Fredericton, N.B., recently, at which satisfactory reports were presented. The retiring directors were re-elected, J. S. Neill being subsequently elected President.

The Star Line has under consideration the purchase of a steamer to replace the David Weston, which was burned in 1903 on St. John river. Two or three steamers have been examined, but no decision has been reached regarding either of them.

The winter steamers Stanley and the Minto, running between Pictou, N.S., and Georgetown, P.E.I., were able to make regular trips until Feb. 15, when they were frozen in, the Stanley at Georgetown and the Minto at Pictou. The service was resumed Feb. 23.

The Plant Line is reported to be negotiating for the purchase of the str. Blue Hill, to be placed on a route between Port Hawkesbury and Sydney, N.S. The Blue Hill is owned by the Victoria Steamship Co., Bad-

deck, N.S., and was built at East Boston, U.S., in 1887.

The Department of Marine has awarded a gold medal to Capt. A. Cooke, and a silver medal each to four of the crew of the schooner Minnie M. Cooke, of Lunenburg, N.S., for the rescue of the crew of the Halifax schooner Queen of the Fleet, during a heavy gale off East Point, P.E.I.

The British built and registered str. Kilkeel has lately been acquired by Parrsboro, N.S., owners. The steamer arrived at Parrsboro recently, and has been placed in the general coasting trade. Her dimensions are: length, 120 ft.; breadth, 20.8 ft.; depth of hold, 9 ft. Capt. W. B. Nevin is in command.

A company is being formed in Nova Scotia to place a steamer on a route between Digby, N.S., and St. John, N.B., calling at Bridgetown, Annapolis, Granville Ferry, Digby and Victoria Beach, N.S., carrying passengers and freight. Capt. C. Collins, of Westport, N.S., is interested in the Company.

The Reid Newfoundland Co. is making considerable additions to its marine shops at St. John's, Nfld., and is also improving the dry dock there. A building 540 ft. by 50 ft. has been erected, fitted for the construction and repair of marine engines etc. The Company proposes to make the permanent repairs to its steamers at St. John's, instead of sending them to other places as heretofore.

The Dominion Government has invited tenders for a semi-weekly service between Dalhousie, N.B., and ports on Gaspé Basin, Que. The service is to be given by a steamer of not less than 500 tons register, having a speed of 12 knots an hour, and accommodation for 100 first-class passengers, and a proportionate number of third-class passengers; together with ample space for general cargo.

The Newfoundland Government is reported to have let a contract to Bowering Bros. (Ltd.), St. John's, Nfld., for the proposed new coastal services, the subsidy being \$60,000 a year. The report further states that a steamer is expected from Liverpool shortly to take up the west coast route, and that Hon. E. R. Bowering, who has sailed for Liverpool, Eng., will make arrangements for vessels for the services pending the building of two special steamers.

The St. John, N.B., city council has received a letter from C. M. Hays, 2nd Vice-President and General Manager G.T.R., asking that in the contemplated arrangement between the city and the C.P.R. Co. for utilizing property owned by the city of St. John, provision shall be made in such arrangement reserving to the G.T. Pacific Ry. Co. the right of usage on the same terms. He says: "You will agree with me that such reservation would only be fair and to the mutual advantage of both the city and the railway company that may hereafter desire the use of your terminals."

Province of Quebec Shipping.

The Montreal Harbor Commission has under consideration a project for the construction of a 50-ton floating crane, at a cost of \$60,000.

Hon. S. N. Parent has been asked to take the initiative in the formation of a company to run a direct line of fast freight steamers between Quebec and Liverpool or other English port.

The Montreal Elevator Co. has been fined \$40 for leaving its elevator St. Lawrence, which was sunk in May, 1903, in the river, thereby causing an obstruction to navigation. The complaint was laid by the Montreal Harbor Commission.

H. M. Allan, President of the Montreal Shipping Federation, has been appointed a

member of the Lighthouse Board of Canada. Other members of the Board, when matters affecting their interests are under consideration, will be representatives of the Pilotage Boards above and below Quebec.

The Department of Marine proposes to place a system of signalling by submarine bells at various points on the river and gulf of St. Lawrence. Vessels using the route will be fitted with receivers, and it is claimed that the notes of the bells, which are fixed at dangerous spots, can be recognized when the vessels are a number of miles off.

The Pentecoste Navigation Co. (Ltd.) has been incorporated under the Dominion Companies' Act with power to carry on a general navigation, wrecking and salvage and fishing business in Canada or elsewhere. The offices of the Company are to be at Quebec, and the capital is fixed at \$10,000. The provisional directors are: L. A. Taschereau, F. Roy, L. A. Cannon, Quebec; T. Woods, Syracuse, N.Y.; B. L. Taylor, Watertown, N.Y.

At the annual meeting of the shareholders of the Sincennes-McNaughton Line (Ltd.) a resolution expressing regret at the death of Capt. Geo. H. Matthews and F. H. Dupre, two directors, was passed. Directors for the current year were elected. The officers and directors are: President, J. O. Gravel; Vice-President, A. V. Roy; Managing Director, A. A. Larocque; other directors: C. F. Sise, H. Paton. Secretary-Treasurer, J. O. Poliquin.

By an order-in-council passed Feb. 21 the Minister of Marine has been given authority to administer the St. Lawrence canals, heretofore in charge of the Department of Railways and Canals; and the ship channel between Montreal and Quebec, including the harbors of Montreal, Three Rivers and Quebec, and the ship-yard at Sorel, heretofore under the care of the Department of Public Works. The appropriations for the current year will be expended by the respective departments so that the change will not go fully into effect until July 1.

Ontario and the Great Lakes.

The Toronto city council is receiving tenders for a tug, having a maximum draft of 4 ft. 6 in. for towing purposes.

Capt. W. A. Clark, of Collingwood, is having two tugs built to replace the Beatrice M. and the Orcadia, which he recently sold.

The annual meeting of the shareholders of the Huntsville, Lake of Bays and Lake Simcoe Navigation Co. was adjourned from Feb. 3 to Mar. 2 at Toronto.

The Shipmasters' Association of Detroit is promoting a movement for the preparation of a new chart of the Great Lakes, to be made in blocks of 10 miles square.

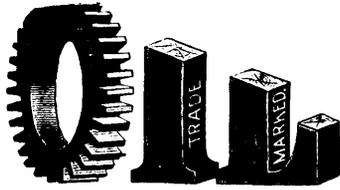
The Dominion Fish Co. is having completed at Goderich a steamer to run between Sault Ste. Marie and points on Lake Superior. Capt. Gauley will be in command.

The Western Steamship Co. (Ltd.), a Dominion company, has been licensed under the Ontario Act as an extra-Provincial company, with J. A. McKee, of Toronto, as its attorney.

The name of the Lake Ontario Steamship Co. (Ltd.), which is having a turbine steamer built in England for the Toronto-Hamilton run, has been changed to the Turbine Steamship Co. (Ltd.)

Toronto Harbormaster's report shows that during 1903 the number of vessels arriving in the port was 3,164, against 3,057 for 1902, but there was an increase in the gross tonnage represented of nearly 50,000 tons.

The Ottawa River Navigation Co.'s officers and directors for the current year are: President, H. W. Shepherd; Vice-President, H.



For Steamboats AND RAILWAYS

Vacuum Oils Reduce Friction, thus saving Coal and preserving Machinery.

- VACUUM 600 W. CYLINDER
- VACUUM No. 1 MARINE ENGINE (better than Lard)
- ELDORADO ENGINE
- RENOWN ENGINE
- ARCTIC CUP GREASE
- MINERAL SEAL OIL

300 Fire Test, for Illuminating Purposes

THE QUEEN CITY OIL CO. LIMITED
TORONTO



The Ticket Agent and General Public are reminded that all tickets reading over this line, Chicago to as far South as DuQuoin and all other points south of DuQuoin, are honored at option of passenger

via **ST. LOUIS.**

Send your friends where a diversified route and to visit World's Fair is permissible without extra charge and inconvenience. This applies in either direction.

On Wednesday, via New Orleans, Through Tourist Sleeper to California.

On Wednesday, via Omaha, Through Tourist Sleeper to California.

Homeseekers' rates twice a month to certain points at reduced rates. The Eight Track Route to St. Louis Fair. Five Stations to start from in Chicago. Ask your agent about it or write.

G. B. WYLLIE,

Canadian Passenger Agent,

210 ELLICOTT SQUARE, BUFFALO, N.Y.

OUR SPECIALTIES

RAILROAD and STEAMSHIP PRINTING

LARGEST IN CANADA

The Mail Job Printing Company, Limited

75 York Street, Toronto

Phones, Main 8 - 130 - 135

Richard Southam
Manager

5 King Street East

FURS and HATS

SPRING HATS ALL IN.
EVERYTHING UP-TO-DATE.

In Ladies' Ready-to-Wear we are showing a select stock. Prices reasonable.

Ladies, now is the time to have your Furs repaired and remodelled. Fur Show Rooms open at all seasons.

Catalogue and Price List sent on application.

Holt, Renfrew & Co.
TORONTO and QUEBEC.

NEW YORK CENTRAL

& HUDSON RIVER R. R.

THE FOUR-TRACK TRUNK LINE.

In connection with the C.P.R., T.H. & B. and M.C. Railroads operate the quickest and best trains between Toronto, Hamilton and New York.

Day Train leaves Toronto 9.45 a.m., Hamilton 10.45 a.m., connects with the

"EMPIRE STATE EXPRESS"

Arrives New York 10 p.m.

Night Train with sleeping car and dining car leaves Toronto 5.20 p.m., Hamilton 6.20 p.m., arrives New York 7.50 next morning.

ONLY ONE

station in the City of New York, the Grand Central Station of the New York Central.

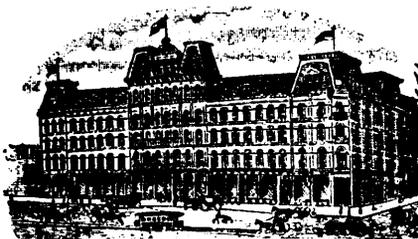
Connections at Suspension Bridge with the Grand Trunk Railway.

L. DRAGO,

Canadian Passenger Agent, 69½ Yonge Street, TORONTO, ONT.

THE RUSSELL

OTTAWA, ONTARIO.



The Leading Hotel of the Capital of Canada

F. X. ST. JACQUES - - - - Proprietor

MANITOBA

The Government Crop Bulletin issued Dec. 12th, 1902, gives the following statistics for the year:

CROPS.

ACRES.	AVERAGE YIELD.	TOTAL.
Wheat..... 2,039,940	26. bus.	53,077,267 bus.
Oats..... 725,060	47.5 "	34,478,160 "
Barley..... 329,790	35.9 "	11,848,422 "
Potatoes... 22,005	157. "	3,459,325 "

STOCK.

Number of stock in the Province, July 1, 1902:

Horses..... 146,591	Sheep..... 20,518
Cattle..... 282,343	Pigs..... 95,598
Value of Dairy Products..... \$926,314	

15,000 FARM LABORERS

Came from Eastern Canada to assist in the harvest fields of Manitoba in 1902—and the demand was not fully satisfied.

MANITOBA FARMERS ARE PROSPEROUS.

Farmers erected, this year, farm buildings valued at one and one-half million dollars.

MANITOBA LANDS—For sale by the Provincial Government. Over 1,000,000 acres of choice land in all parts of the Province are now offered at from \$2.50 to \$5.50 per acre. Payments extend over nine years. **Special Attention** is directed to 500,000 acres along the line of the Manitoba and Northwestern Railway at \$3.50 and \$4.00 per acre.

FREE HOMESTEADS are still available in many parts of the Province.

For full information, maps, etc., FREE, address **JAMES HARTNEY**, Manitoba Emigration Agent, 77 York Street, Toronto, Ont.
Or **J. J. GOLDEN**, Manitoba Emigration Agent, 617 Main St., Winnipeg, Man.

MADE IN CANADA

Mica Fire-Proof Coverings

— FOR —

Boilers, Flues, Furnaces, Heaters, Steam and Hot and Cold Water Pipes.

COLD STORAGE INSULATION
The Highest Non-Conductor in the World.

AWARDED THE GOLD MEDAL AT PAN-AMERICAN EXPOSITION, AND GRAND PRIZE AT PARIS

MICA COVERING is a Canadian invention, and a purely Canadian industry, as all the mica is procured from Canadian mines, and the material used in the manufacture of the Covering is made in Canada.

Send for particulars to the

Mica Boiler Covering Co., Limited

86-92 Ann Street, Montreal, Can.

IMPERIAL BANK OF CANADA.

Capital authorized - - - \$4,000,000
Capital paid up - - - 2,983,896
Rest - - - - - 2,636,312

DIRECTORS:

T. R. MERRITT, President; D. R. WILKIE, Vice-President; WM. RAMSAY, ROBERT JAFFRAY, T. SUTHERLAND STAYNER, ELIAS ROGERS, WM. HENDRIE.

HEAD OFFICE, TORONTO.

D. R. WILKIE - - - General Manager.
E. HAY - - - - - Asst. General Manager.
W. MOFFAT - - - - Chief Inspector.

Branches in Quebec, Ontario, Manitoba, North-West Territories and British Columbia

AGENTS—London, Eng., Lloyds Bank Limited; New York, Bank of Montreal, Bank of the Manhattan Co., Bank of America. Sterling exchange bought and sold. Letters of credit issued available in any part of the world. A general banking business transacted.

The Accident and Guarantee Co. of Canada, MONTREAL.

Capital, authorized, \$1,000,000.00
Subscribed - - - 250,000.00

Personal Accident, Sickness, Fraternal and Working Men's Benefit Insurance.

Wallis; Managing Director, R. W. Shepherd; other directors, R. Bolton, A. F. Riddell.

The contract for the construction of the extension of the south pier of the ship canal at Sault Ste. Marie, Ont., has been let to W. Birmingham, Ottawa, at a cost of \$65,000. The work will be proceeded with at once.

The St. Clair and Erie Ship Canal Co. will apply next session of the Dominion Parliament for an act extending the time for the commencement of its projected canal from the St. Clair river to near Pelee Island, Lake Erie.

The Ontario Wrecking Co., of which Capt. C. S. Perry, of Oconto, Wis., is President, proposes to place a wrecking outfit on Georgian bay, with headquarters at Owen Sound. For its U.S. business the Company is building two tugs at Manitowoc, Wis.

A number of well-known navigators on the Great Lakes and the inland lakes of Ontario have died recently, among them being Capt. J. Murphy, of Throoptown; Capt. R. Gillies, of Port Colborne; Capt. G. Crandall, of Lindsay, and Capt. H. McDonald, of Peterboro'.

The Rockport Navigation Co. recently declared a dividend of 15% for 1903. Two years ago the Company was about \$900 in debt. Following are the directors for the current year: J. Cook, J. A. Davis, M. Tennant, A. E. Haffie, C. W. M. Collough. R. Poole is Secretary-Treasurer; G. Potter and C. W. McCollough are auditors, and — Carnegie, Manager.

The Montreal, Ottawa and Georgian Bay Canal Co. will apply next session of the Dominion Parliament for an act extending the time for the commencement and completion of its undertaking. The Company proposes to construct a 20 or 25 ft. channel between Montreal and Lake Huron, utilizing as far as possible the Ottawa and Mattawa rivers, the lakes on both sides of the divide between the Ottawa valley and the Lake Nipissing valley, Lake Nipissing and the French river. Belcourt & Ritchie, Ottawa, are solicitors for the applicant.

The Keewatin Flour Mills Co. has been organized under the Dominion Companies' Act with a capital of \$2,000,000 and offices at Ottawa. The Company is given power among other things to own and operate steam and other vessels and to carry on a general navigation business on the inland lakes and rivers of Canada; also to subscribe for the capital stock of steamship or navigation companies. The provisional directors are: J. Mather, A. W. Fraser, R. M. Cox, G. Burn, E. H. Bronson, J. Coates, of Ottawa; E. C. Whitney, of Whitby, Ont.; D. L. Mather, Rat Portage, Ont.; Hon. J. D. McGregor, New Glasgow, N.S.; R. L. Borden, of Halifax, N.S.

The Grand Council of the Canadian Association of Masters and Mates held its annual meeting in Toronto Feb. 10, Capt. Wilson presiding. W. Ireland, Parry Sound, Secretary, reported that there had been an increase of 200 members during the year, and the Treasurer reported a balance of \$31.15. A number of subjects were discussed, and it was decided to urge the Dominion Government to more strictly enforce the laws regarding examinations of masters and mates, and also in regard to the qualifications of small boats carrying passengers. The following were elected officers for the current year: Grand Master, Capt. Jas. Wilson; First Officer, Capt. A. Milligan; Secretary, Capt. W. Ireland; Treasurer, Capt. M. McKay; Grand Pilot, Capt. E. A. Booth; Look-out-man, Capt. W. J. Madors; Grand Watchman, Capt. Pearsall; Auditor, Capt. MacIntyre and McCoppen. A branch of the Association has been formed in Toronto, with Capt. McGiffin as Master, and Capt. Jackson as Secretary.

Manitoba and Northwest Territories.

The Imperial Fish Co. is having a steamer built at Selkirk, Man., for its trade on Lake Winnipeg.

The Northern Fish Co. will add a steamer, now under construction on Lake Winnipeg, to its fleet early in the season.

The Dominion Fish Co. is having its steamer the City of Selkirk repaired, and is having a vessel constructed for its trade on Lake Winnipeg.

Capt. Coats, who is having a steamer built at Prince Albert, Sask., for the Saskatchewan river trade, is also having constructed wharves, docks, freight sheds and a workshop, besides houses for himself and partners at McDonald's flats, near Edmonton, Alta.

The Great Lakes and Northwest Transportation Co. will apply next session of the Dominion Parliament for an act of incorporation. Power will be asked to improve the navigation between Lake Superior and Red River at or near Winnipeg, and thence north and west through Lake Winnipeg or other lake or lakes and rivers to the Saskatchewan river and the Northwest; to improve the navigation of the Saskatchewan river and its tributaries; to construct a transportation route by water from the headwaters of the Saskatchewan river to Lake Superior, and generally to improve the navigation of other streams and waterways of the Northwest, and to charge and collect toll for the use of the same, and to do a general manufacturing and merchandise business. Authority will also be asked to develop power, to own and operate steam and other vessels, to construct wharves, elevators, etc., and to carry on a general transportation and forwarding business. German & Pettit, Welland, Ont., are solicitors for the applicants. Notice of application for a similar charter was given in 1903, but it was not proceeded with.

B.C. and Pacific Coast Shipping.

The C.P.R. new coast steamer Princess Beatrice, recently completed at Vancouver, is running between Victoria, B.C., and Seattle, Wash.

The C.P.R. Pacific coast steamer Tees struck on Trail island on a recent trip from Victoria, B.C., to Skagway, Alaska, but was floated without having received material damage.

The Fraser River Lumber Co. recently purchased the str. Hong Kong, and having had her thoroughly overhauled and refitted, has placed her in the towing service in charge of Capt. H. Young.

The Venture Steamship Co. (Ltd.) has been incorporated at Victoria under the B.C. Companies' Act with a capital of \$30,000, to purchase the str. Venture and carry on a general navigation business.

Capt. D. Butler is having built at Victoria, B.C., a steamer 90 ft. long, 18 ft. beam and 7 ft. depth of hold, for freight traffic between Victoria and Fraser river ports. The hull will be launched early in April.

The C.P.R. str. Princess Victoria has had some of her internal fittings rearranged during the winter. Some special suites of rooms have been arranged, and a number of other conveniences for the comfort of travellers added.

The B.C. Legislature at its recent session passed an act providing that the master and first officer of any coasting vessel of 250 tons and over shall be returning officer and deputy returning officer, and shall take the votes of the officers and crew of their vessels in connection with any election held, while the vessel may be at sea.

The C.P.R. proposes to construct a new steamer for the Nelson-Kootenay Landing

route, and two freight barges for the Proctor-Kootenay Landing route on Kootenay Lake, B.C. R. Marpole, General Superintendent Pacific Division, was recently at Nelson in connection with the matter and stated that the barges would be built at once; the new steamer might also be built this season. It is understood that the new steamer will be of the same type as the Rossland, and will be fitted with twin screws.

D. A. Ansell, Mexican Consul General at Montreal, is endeavoring to secure the necessary capital to establish a line of steamers to run between Canadian and Mexican ports.

The Houston Line of Liverpool, Eng., is withdrawing some of its freight steamers from the South African trade, and proposes to place them on a run between Canadian ports and Great Britain.

Press reports have recently been current that the C.P.R. had sold the Athenian and Tartar, two of its Pacific steamers to the Japanese Government, but Sir Thos. Shaughnessy says there is no foundation for the reports.

The Royal Marine Insurance Co., Montreal, declared a dividend of 15% as the result of its first year's operations. The following were elected directors: A. A. Allan, J. Carruthers, D. W. Campbell, J. B. Tresidder, S. Carsley, H. A. Allan and J. S. Bennett.

The annual meeting of the shareholders of the International Mercantile Marine was fixed for a date in Feb., but has been adjourned until June. The consolidation of the various constituent companies has not been completed, but it is stated that what has already been accomplished has resulted in a considerable reduction in the operating expenses. J. A. Ismay has been elected President, and will have his office in New York. Mr. Ismay was heretofore Chairman of the Company owning the White Star steamers.

W. Petersen & Co., Newcastle-on-Tyne, have been appointed agents in the United Kingdom and Canada for Transport Canadian, which will commence a service between Antwerp, Bordeaux and Montreal in April. The Canadian Ocean and Inland Line from Rotterdam and London to Montreal, of which W. Petersen & Co. are also managers, will be continued as in 1903, and will also work in connection with the steamers of the Canadian Lakes and Ocean Navigation Co., running between Montreal and Port Arthur.

Among the Express Companies.

The Dominion Ex. Co. has opened an office at Hartington, Ont.

The Canadian Ex. Co. is fitting up a store in the telephone building, Sydney, N.S., for a local office.

The Dominion Ex. Co. has extended its service on the Bay of Quinte Ry. on the recently completed extension from Tweed to Bannockburn, Ont.

The Dominion Ex. Co. has opened an office at Lloydminster, Sask., in the all-British colony. The first shipment was forwarded from Winnipeg Feb. 16.

The Dominion Ex. Co., owing to the recent fire, has opened an office at 130 Peter st., and at the C.P.R. station, Quebec, until permanent arrangements are made.

The Dominion Ex. Co. has extended its service on the Labelle branch of the C.P.R., between Labelle and Nominique, Que., and has opened offices at Annunciation and Nominique.

J. F. Bryce, assistant to the Vice-President Canadian Ex. Co., has recently been travelling through Nova Scotia, with a view of arranging for extensions of the Company's service there.

When You Stop to Think

How much the success of your business and the comfort of your household depend on communication with others, you will appreciate the fact that telephone service is worth a great deal more than it costs.

METALLIC CIRCUIT SERVICE
EFFICIENT, RAPID, CONSTANT.

THE BELL TELEPHONE COMPANY
OF CANADA.

The Direct Line

To New York, Philadelphia, Atlantic City, Baltimore, Washington and the South. The Grand Trunk Railway in connection with the

LEHIGH VALLEY RAILROAD

Forms the Direct Line from Toronto, Hamilton, London and all points in Canada for the above cities.

ROUTE OF THE

"Black Diamond Express"

(Handsomest train in the world.)

The Great double-track scenic highway, stone ballasted, protected by automatic electric block signals, Through Pullman Parlor and Sleeping Car Service, Dining Car Service à la carte, Everything first class. Call on Grand Trunk Ticket Agents for tickets and further information, or address

ROBT. S. LEWIS,

Canadian Passenger Agent, 88 Yonge Street, Toronto.

A. A. HEARD, CHAS. S. LEE.

Asst. Gen. Pass. Ag't, New York. Gen. Pass. Ag't, New York.

G. R. CHESBROUGH,

West'n Pass. Ag't, Buffalo, N.Y.

The Canadian Pacific Railway Company.

Dividends for the half year ended 31st December, 1903, have been declared as follows:

On the Preference Stock two per cent.

On the Common Stock three per cent.

Warrants for the Common Stock dividend will be mailed on or about 2nd April, to Shareholders, of record at the closing of the books in Montreal, New York and London respectively.

The Preference Stock dividend will be paid on Saturday, and April, to Shareholders, of record at the closing of the books at the Company's London office, No. 1 Queen Victoria Street, London, E.C.

The Common Stock Transfer Books will close in Montreal, New York and London, at 3 p.m., on Tuesday, 1st March. The Preference Stock Books will also close at 3 p.m. on Tuesday, 1st March.

All books will be re-opened on Tuesday, 5th April.

By order of the Board,

CHARLES DRINKWATER,

Montreal, 8th February, 1904.

Secretary.

NOTICE.

is hereby given that the annual meeting of the shareholders of the VICTORIA ROLLING STOCK COMPANY OF ONTARIO, LIMITED, will be held at the offices of Messrs. Osler & Hammond, 18 King st. West, Toronto, on Wednesday, March 2nd, 1904, at 12 o'clock, noon, for the reception of the annual report and election of directors for the ensuing year.

By Order,

R. A. SMITH, Secretary.

Toronto, Feb. 11th, 1904.

STEEL, PEECH & TOZER,

LIMITED.

SHEFFIELD, ENGLAND.

STEEL AXLES, TYRES, AND
SPRING STEEL.

"PHENIX" Loco. Spring Steel is the
accepted Standard in Canada.

SOLE AGENTS:

James Hutton & Co., Montreal.

JOHN J. CARTSHORE,

83 Front St. West, TORONTO.

Railway and Tramway Equipment.

New and Second-hand Rails

(All Sections.)

Locomotives, Cars, Derricks,
Hoisting Machinery, etc.

Old Material Bought and Sold.

THE PLACE VIGER MONTREAL.

A beautiful new hotel just built by the Canadian Pacific Ry., in connection with their new passenger station. The building occupies an entire block and the style of architecture is that of the Chateau period of the French Renaissance. The hotel faces the Viger Gardens, and is thoroughly up-to-date in all its appointments. American tourists will find the Place Viger a most delightful hotel home.

RATES: \$3 UPWARDS.

Special arrangements with large parties and those making prolonged stays. For further information address, Manager, Place Viger Hotel, Montreal.

"JUST A HINT ON YOUR PRINTING."

THE HUNTER, ROSE CO. Limited
TEMPLE BUILDING—TORONTO

NOTICE.—The Manitoba and North Western Railway Company will apply to the Parliament of Canada, at its next session, for authority to build a branch line one hundred miles in length from a point on its main line near Sheho, westerly and northwesterly southward of Quill Lakes; also a branch line from a point at or near Churchbridge on its said main line southerly to a junction with the Pheasant Hills branch of the Canadian Pacific Railway at or near Cutarm Creek; and also for authority to build branches not exceeding in any one case thirty miles in length from the railway first above described and from the company's main line.

By order of the Board,

H. CAMPBELL OSWALD,

Secretary.

Montreal, 21st January, 1904.

NOTICE.—The Ottawa, Northern and Western Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time within which it may construct the extension and branches authorized by section eleven of the Act 57-58 Victoria, chapter 87, namely:

(a) An extension of the main line from its present terminus at or near the Village of Maniwaki, thence northerly, northwesterly or westerly to a point at or near James Bay; (b) An extension westward from any point on its main line to Lake Temiscamingue; (c) Also any branch lines or extensions that may be necessary from any point on the main line, provided that, except for the purpose of connecting with other railways, they do not exceed a length of thirty miles.

By order of the Board,

H. L. MALTRY,

Secretary.

Montreal, 15th January, 1904.

NOTICE.—The Manitoba and North Western Railway Company will apply to the Parliament of Canada, at its next session, for authority to build a branch line from

a point on its main line between Yorkton and Prince Albert westerly and northwesterly southward of Quill Lakes to a point in the vicinity of Saskatoon, thence to a point at or near Wetaskiwin on the Calgary and Edmonton Railway; also a branch line from a point at or near Churchbridge on the said main line southerly to a junction with the Pheasant Hills branch of the Canadian Pacific Railway at or near Esterhazy; and also for authority to build branches not exceeding in any one case thirty miles in length from the railway first above described and from the company's main line.

By order of the Board,

H. CAMPBELL OSWALD,

Secretary.

Montreal, 15th January, 1904.

NOTICE.—The Canadian Pacific Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time within which the company may commence and complete the railway in the Province of Quebec from a point at or near Piles Junction on the North Shore Railway, or from a point on the Piles Branch of that railway, thence in a northwesterly direction to Shawenegan Falls, and thence in a northeasterly direction to Grand-Mère, mentioned in section 3 of the Act 2 Edward VII. chapter 52.

By order of the Board,

CHARLES DRINKWATER,

Secretary.

Montreal, 15th January, 1904.

NOTICE.—The British Columbia Southern Railway Company will apply to the Parliament of Canada, at its next session, for an Act extending the time within which the company may construct the eastern and western sections of its railway as described in the Acts 62-63 Victoria, chapter 55, and 64 Victoria, chapter 52, respectively, and extending also the time for commencement and completion of the branch lines from the company's main line and from its authorized railway from Fort Steele to Golden, mentioned in section two of the Act 1 Edward VII. chapter 49.

By order of the Board,

H. CAMPBELL OSWALD,

Secretary.

Montreal, 15th January, 1904.

H. P. Sharpe, heretofore agent of the Dominion Ex. Co. at London, Ont., has been appointed city agent at Toronto. A. E. Berube, of St. Thomas, has been appointed to the London agency.

The Dominion Ex. Co. has opened a route on the Pheasant Hills branch of the C.P.R., between Kirkella, Man., and Esterhazy, Assa., taking express matter for Quebec, Grayson, Killaly, Neudorf, Orcadia, Spring-side and Stockholm.

The lengthened spell of cold weather, with the demoralization of the train service, particularly along the branch lines, in Ontario, resulted in the express companies refusing to accept perishable goods at many points, and in the sending of cattle and other live stock by express.

The Dominion Ex. Co. proposes to erect at the C.P.R. station at Winnipeg, a temporary structure in which to take care of a portion of the business now being handled in old buildings situated on the west side of Main St. The temporary building will be taken down as soon as the new station is completed.

Telegraph and Cable Matters.

The Government telegraph line from Onion Lake to the Britannia colony at Lloydminster, Sask., has been completed.

The C.P.R. telegraph department has issued a list of telegraph offices and tariff, revised and corrected to the end of 1903.

The Western Union Telegraph Co. announces that Forest, Ont., has been added to the list of transfer offices, Class E, G. S. Perry being transfer agent.

The C.P.R. telegraph department and the G.N.W. Telegraph Co. have issued special instructions respecting the transmission of code and other messages to Japan.

Owing to the breakdown of the telegraph wires in consequence of a railway accident in Nova Scotia Feb. 4, a message was received at Halifax from St. Johns, Nfld., by way of Ireland.

The Dominion Government telegraph repair str. Tyrian has been chartered by the Direct U.S. Cable Co. to repair a break in one of its cables on Brown's Bank, 80 miles from Canada, N.S.

The cable connecting Pelee island in Lake Erie and the mainland will be restored to its former bed in the spring, the present line being in such a position as to be constantly fouled by passing vessels.

E. B. Gerard has been appointed Superintendent of the Commercial Cable Co.'s station at Hazel Hill, N.S., succeeding S. S. Dickenson, promoted. F. J. Burstall succeeds E. B. Gerard as Assistant Superintendent.

The wireless telegraph station at Belle Isle, Nfld., has been transferred from the control of the Department of Public Works to the Department of Marine, which will also take charge of the five other stations proposed to be established in the Gulf of St. Lawrence.

J. S. McDonald, Superintendent of Government telegraphs, recently went over the route between Edmonton and Athabasca Landing, selected for the proposed extension of the telegraph line. Contracts have been let for the supply of poles, so that the line may be constructed during the summer.

S. S. Dickenson, heretofore Superintendent of the Commercial Cable Co.'s station at Hazel Hill, N.S., has been appointed General Superintendent at New York, with jurisdiction over the entire system. The new General Superintendent is a native of Plymouth, Eng., and was placed in charge of the station at Hazel Hill when the Commercial Cable Co. began business over 20 years ago.

Gibbon and Mott, of Vancouver, B.C., recently interviewed members of the Dominion Government with a view of securing a lease of the Government telegraph line on the west coast of Vancouver island. A press report states that it was represented that there was at present a loss of \$4,000 a year, and that, notwithstanding this, the applicants were willing to pay \$5,000 a year for the lease of the line.

F. F. Jennings, who was recently appointed Inspector of Telegraphs, Eastern division C.P.R., entered the service of the Montreal Telegraph Co. in 1875 as check boy, and continued in the service of the G.N.W. Telegraph Co. after the organization of that company. In 1886 he joined the staff of the C.P.R. telegraph department, becoming chief operator and circuit manager at Montreal in 1890.

There are in operation 252,436 miles of ocean cables, of which 38,797 miles are owned by Governments. The first cable was laid in 1850 between Dover and Calais. British cables connecting London with all parts of the world have a length of 154,000 miles, of which 139,136 miles are owned by companies. United States companies own 44,470 miles of cables, and the U.S. government owns the Alaska cable.

H. Bott, who was recently appointed chief operator and circuit manager C.P.R. telegraphs at Montreal, entered the service of the Montreal Telegraph Co. as an operator in 1870; and from 1878 to 1880 was with the Dominion Telegraph Co. From 1880 to 1886 he was with the Western Union Telegraph Co. at Buffalo, N.Y.; from 1886 to 1901 with the C.P.R. telegraph department at Ottawa, and from 1901 to Dec., 1903, was wire chief C.P.R. telegraphs at Montreal.

The Canadian Northern Ry. will string a third wire from Port Arthur, Ont., to Winnipeg, and an additional wire from Winnipeg to Grand View, Man. This will give three wires to Port Arthur, four to Portage la Prairie, Man., three to Grand View, and two from Dauphin, Man., to Erwood, Sask. Two wires are being strung on the line from Grand View towards Edmonton, Alta., as construction proceeds. The lines are strung by the C.N. Ry. construction staff, and when completed are handed over for operation for commercial purposes to the Canadian Northern Telegraph Co.

General Telephone Matters.

The Bell Telephone Co. has offered London, Ont., \$2,500 a year for an exclusive franchise for five years.

The Nelson and Vernon Telephone Co. is establishing a metallic circuit in Trail, B.C. The new switchboard, etc., is expected to be installed early in March.

The New Brunswick Telephone Co. has completed a system whereby it can furnish a limited service to those who do not desire an unlimited telephone service.

The towns served by the Bell Telephone Co.'s long distance line between Calgary and Edmonton, Alta., are Calgary, Didsbury, Olds, Innisfail, Red Deer, Lacombe, Ponoka, Wetaskiwin and Edmonton.

The Harrietsville, Ont., Telephone Association has re-elected Dr. W. Doan President, and C. B. Adams Secretary. It is proposed to extend the line considerably during the summer and to establish a central office at Harrietsville, Ont.

The Bell Telephone Co. will, we are officially informed, continue to add to its long distance lines in the Northwest Territories during 1904, but the particular extensions which will be constructed during the year have not been definitely decided upon.

The British Yukon Ry. Co. has been granted right of way for a telephone line between

Whitehorse and Dawson, Yukon, by the Dominion Government. The Government officials are to be permitted to use the line for official business without charge.

The Bell Telephone Co. has added the following points to which its long distance service has been extended: Gordon Lake, MacLennan and Port Finlay on the mainland, and Richard's Landing, Fountain Park, Sailor's Encampment, Kentvale and Marksville on St. Joe Island, Ont.

Residents of Edmonton and Strathcona, Alta., are agitating for a better telephone service between the two towns, and also for an all-night service. There are three wires at present on the line connecting the towns, and the residents ask for the stringing of a couple of additional wires.

F. J. Leonard, General Manager Canadian Telegraph and Telephone Co., made a formal application to the Toronto city council for a franchise Feb. 6, and the matter was left in the hands of the Mayor for investigation and report. The company is also applying for franchises in Hamilton, London and Ottawa.

The Charlotte Telephone Co. (Ltd.) has been incorporated under the New Brunswick Companies' Act to establish a telephone system in the county of Charlotte, N.B., with a capital of \$7,500 and head office at St. Stephen. The provisional directors are: F. W. Andrews, J. E. and A. E. Ganong, L. F. and N. M. Mills, all of St. Stephen.

The Grand Trunk Ry. is extending its telephone service along the line from Sarnia to Suspension Bridge, Ont. A press report states that the work will be completed early in April. The telephone will be used as an auxiliary to the telegraph, and not in place of it. The G.T.R. has also in operation yard telephone systems at various points.

The town councils of Port Arthur and Fort William, Ont., have asked the Board of Railway Commissioners for an order to permit them to connect their municipal telephone systems with the C.P.R. stations. The Bell Telephone Co., which has an agreement with the C.P.R., is co-operating with the railway company in resisting the application. The hearing of the case was fixed for Feb. 29.

At the recent session of the Manitoba Legislature an act was passed confirming an agreement between the village of Boissevain and J. J. Millege and others, giving the latter an exclusive franchise for an electric light power and telephone service. At the expiration of five years from the installation of the service the village may purchase the plant at actual cost plus 10% per annum, and may purchase the plant at a valuation after a period of 25 years.

The investigation into the circumstances attending the passing of the by-law granting a franchise to the Bell Telephone Co. in Hamilton, has been completed before the local Master. In the course of the examination for discovery of some of the Aldermen, one of them alleged that he had been approached with a view to getting him to promise to support the by-law. The Mayor has made an affidavit in the case to the effect that the agreement with the Bell Telephone Co. is of decided advantage to the city. The court has decided that the by-law must stand.

The Central Telephone Co. (Ltd.), has been incorporated under the New Brunswick Companies' Act, with a capital of \$10,000, to establish a telephone system in St. John and Fredericton, and between these points via Rothesay, Perry Point, Kingston, Belleisle and White's Cove; and also between other points in the counties of St. John, Queens, Sunbury and York. The incorporators are: G. G. Scovil, Belleisle Creek; J. M. Scovil, K. J. MacRae, St. John; W. Pugsley, K.C., Jas. Domville, Rothesay; L. P. Faris, White's Cove; and E. G. Evans, Hampton.

PURCHASING AGENTS' GUIDE.

(Continued from third page of Cover.)

SemaphoresThe Hiram L. Piper Co. Montreal.
The N. L. Piper Railway Supply Co. Toronto.**Shafting**

Rice Lewis & Son. Toronto.

Shaking Grates

Babcock & Wilcox (Ltd.). Montreal.

Shipbuilders' Tools and Supplies

Rice Lewis & Son. Toronto.

Ship LampsThe Hiram L. Piper Co. Montreal.
The N. L. Piper Railway Supply Co. Toronto.**Ships**

Polson Iron Works. Toronto.

ShovelsJames Cooper. Montreal.
The Hudson's Bay Company. Toronto.
Rice Lewis & Son. Toronto.**Side Bearings**

Simplex Railway Appliance Co. Montreal.

Signal House Numbers

Acton Burrows Co. Toronto.

SignalsThe Hiram L. Piper Co. Montreal.
N. L. Piper Railway Supply Co. Toronto.**Signs**

Acton Burrows Co. Toronto.

Snow Ploughs

Rhodes, Curry & Co. Amherst, N.S.

Spikes

Rice Lewis & Son. Toronto.

SpringsB. J. Coghlin & Co. Montreal.
Montreal Steel Works. Montreal.**Station Name Signs**

Acton Burrows Co. Toronto.

Steamboats

Polson Iron Works. Toronto.

Steamboat Signs

Acton Burrows Co. Toronto.

Steam Couplers

Safety Car Heating and Lighting Co. New York.

Steam ShovelsJames Cooper. Montreal.
W. H. C. Mussen & Co. Montreal.**Steam Traps**

The James Morrison Brass Mfg. Co. Toronto.

SteelW. Abbott. Montreal.
James Cooper. Montreal.
B. J. Coghlin & Co. Montreal.
Wm. Jessop & Sons. Sheffield, Eng.
Rice Lewis & Son. Toronto.**Steel Buildings**

Dominion Bridge Co. Montreal.

Steel for Springs

James Hutton & Co. Montreal.

Steel Plate

Jas. W. Pyke & Co. Montreal.

Steel TyresB. J. Coghlin & Co. Montreal.
James Hutton & Co. Montreal.
Jas. W. Pyke & Co. Montreal.**Stop Cocks, Iron and Brass**

The James Morrison Brass Mfg. Co. Toronto.

Structural Metal WorkDominion Bridge Co. Montreal.
Locomotive and Machine Co. of Montreal. Montreal.
Jas. W. Pyke & Co. Montreal.**Superheaters**

Babcock & Wilcox (Ltd.). Montreal.

Switches

Montreal Steel Works. Montreal.

Switch LampsThe Hiram L. Piper Co. Montreal.
The N. L. Piper Railway Supply Co. Toronto.**Switch Locks**

The Hiram L. Piper Co. Montreal.

Switch Ropes

The B. Greening Co. Hamilton, Ont.

Switch Targets

Acton Burrows Co. Toronto.

Tanks and Tank Fixtures

Ontario Wind Engine and Pump Co. Toronto.

Tarpaulins and Waterproof Covers

Sonne Awning, Tent and Tarpaulin Co. Montreal.

Telegraph and Telephone Office Signs

Acton Burrows Co. Toronto.

Tents

Sonne Awning, Tent & Tarpaulin Co. Montreal.

Tie Plates

B. J. Coghlin & Co. Montreal.

Tobacco and Cigars

The Hudson's Bay Company. Toronto.

Toilet Paper

The Hudson's Bay Company. Toronto.

Tools

Rice Lewis & Son. Toronto.

Track JacksJames Cooper. Montreal.
Montreal Steel Works. Montreal.
W. H. C. Mussen & Co. Montreal.
A. O. Norton. Coaticook, Que.**Track Tools**Canada Switch and Spring Co. Montreal.
James Cooper. Montreal.
Rice Lewis & Son. Toronto.
Montreal Steel Works. Montreal.
W. H. C. Mussen & Co. Montreal.
The Hiram L. Piper Co. Montreal.**Tramway Equipment**James Cooper. Montreal.
W. H. C. Mussen & Co. Montreal.
J. J. Gartshore. Toronto.**Trucks (Electric Car)**Baldwin Locomotive Works. Philadelphia, Pa.
Montreal Steel Works. Montreal.**Trucks (Warehouse and Express)**

Rice Lewis & Son. Toronto.

Turnbuckles

Montreal Steel Works. Montreal.

Turntables

Dominion Bridge Co. Montreal.

Valves, Iron and Brass

The James Morrison Brass Mfg. Co. Toronto.

Varnishes

McCaskill, Dougall & Co. Montreal.

Vessels

Polson Iron Works. Toronto.

WasteB. J. Coghlin & Co. Montreal.
Rice Lewis & Son. Toronto.
N. L. Piper Ry. Supply Co. Toronto.
The Queen City Oil Co. Toronto.**Water Softeners**

Babcock & Wilcox (Ltd.). Montreal.

WheelbarrowsJames Cooper. Montreal.
Rice Lewis & Son. Toronto.**Windmills**

Ontario Wind Engine and Pump Co. Toronto.

Window Bilinds

The Hudson's Bay Company. Toronto.

Wines and Liquors

The Hudson's Bay Company. Toronto.

Wire and Wire RopeDominion Wire Rope Co. Montreal.
The B. Greening Co. Hamilton, Ont.
Rice Lewis & Son. Toronto.
W. H. C. Mussen & Co. Montreal.
The Wire and Cable Co. Montreal.**Wire, Brass and Steel**

Dominion Wire Manufacturing Co. Montreal.

Wire Cloth

The B. Greening Co. Hamilton, Ont.

Wire, CopperDominion Wire Manufacturing Co. Montreal.
E. F. Phillips Electrical Works, Ltd. Montreal.
The Wire and Cable Co. Montreal.**Wire, Electric**Dominion Wire Manufacturing Co. Montreal.
E. F. Phillips Electrical Works, Ltd. Montreal.
The Wire and Cable Co. Montreal.**Wire Goods**

Dominion Wire Manufacturing Co. Montreal.

Wire, Insulated CopperE. F. Phillips Electrical Works, Ltd. Montreal.
The Wire and Cable Co. Montreal.**Wire, Telegraph and Telephone**Dominion Wire Manufacturing Co. Montreal.
E. F. Phillips Electrical Works, Ltd. Montreal.
The Wire and Cable Co. Montreal.**Wire, Transmission and Trolley**Dominion Wire Manufacturing Co. Montreal.
The Wire and Cable Co. Montreal.**Wood Screws**

Dominion Wire Manufacturing Co. Montreal.

Wrought Steel Piping

Babcock & Wilcox (Ltd.). Montreal.

Yachts

Polson Iron Works. Toronto.

The Canadian Customs authorities at St. John, N.B., recently held for duty a consignment of stoves, etc., from London, Ont., which had been carried in bond through the U.S. to Boston, Mass., and shipped on board a steamer of the Eastern Steamship Co. to St. John. If the consignment had reached St. John in a British vessel no question would have arisen. The U.S. authorities propose to make representations to the Canadian Government with a view of having the regulations somewhat modified to meet such cases as this.

BABCOCK & WILCOX

LIMITED

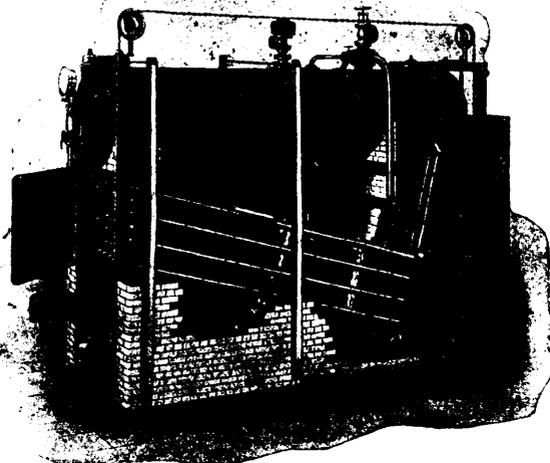
Patent Water Tube Boilers and Superheaters

Economizers, Shaking Grates and Complete Boiler Room Accessories

HEAD OFFICE FOR CANADA:

NEW YORK LIFE BUILDING, . . . MONTREAL

BRANCH:—114 King St. West, Toronto



Babcock & Wilcox Patent Water Tube Boiler
with Superheater.

The Purchasing Agents' Guide

To the Manufacturers of & Dealers in Steam & Electric Railway, Steamship, Express, Telegraph & Telephone supplies, &c.

Accident Insurance

Accident & Guarantee Co. of Canada, Montreal.
Canadian Ry. Accident Ins. Co. Ottawa, Ont.
Travelers' Insurance Co. Montreal.

Aerated Waters

E. L. Drewry Winnipeg.

Air Brakes & Fittings

Canadian Westinghouse Co. Hamilton, Ont.

Ales

E. L. Drewry Winnipeg.

Anchors

Rice Lewis & Son Toronto.

Awning

Sonne Awning, Tent & Tarpaulin Co. Montreal.

Axles

James Hutton & Co. Montreal.
Jas. W. Pyke & Co. Montreal.
Rhodes, Curry & Co. Amherst, N.S.

Babbitt

Rice Lewis & Son Toronto.

Blankets & Bedding

The Hudson's Bay Company

Block & Tackle

Dominion Wire Rope Co. Montreal.
Rice Lewis & Son Toronto.

Boat Fittings & Hardware

Rice Lewis & Son Toronto.
Sonne Awning, Tent & Tarpaulin Co. Montreal.

Boiler Covering

Mica Boiler Covering Co. Montreal

Boilers

Polson Iron Works Toronto.

Boilers, Stationary

Babcock & Wilcox (Ltd.) Montreal.

Boiler Tubes

B. J. Coghlin & Co. Montreal.
Jas. W. Pyke & Co. Montreal.

Bolsters

Simplex Railway Appliance Co. Montreal.

Bolts

Rice Lewis & Son Toronto.

Brake Beams

Simplex Railway Appliance Co. Montreal.

Brass and Copper Cloth

The B. Greening Co. Hamilton, Ont.

Brass Castings

St. Thomas Brass Co. St. Thomas, Ont.

Bridge Numbers

Acton Burrows Co. Toronto.

Bridges

Dominion Bridge Co. Montreal.

Buoy Lighting

Safety Car Heating and Lighting Co., New York

Cables, Electric and Feeder

E. F. Phillips Electrical Works, Ltd., Montreal.
The Wire and Cable Co. Montreal.

Car Heating

Safety Car Heating and Lighting Co., New York

Car Jacks

James Cooper Montreal.
W. H. C. Mussen & Co. Montreal.

Car Lighting

Safety Car Heating and Lighting Co., New York

Carpets

The Hudson's Bay Company

Cars

Rhodes, Curry & Co. Amherst, N.S.

Car Wheels

Jas. W. Pyke & Co. Montreal.
Rhodes, Curry & Co. Amherst, N.S.

Castings (Steel)

Montreal Steel Works Montreal.
Rhodes, Curry & Co. Amherst, N.S.

Cement Machinery

Jas. W. Pyke & Co. Montreal.

Chains

Rice Lewis & Son Toronto.

Coal Haulage Ropes

The B. Greening Co. Hamilton, Ont.

Concrete Mixers and Rock Crushers

W. H. C. Mussen & Co. Montreal

Contractors' Plant

James Cooper Montreal.
T. A. Morrison & Co. Montreal.
W. H. C. Mussen & Co. Montreal.

Getter Pins

Dominion Wire Manufacturing Co. Montreal.

Cross Arms, Top Pins & Side Blocks

The Firstbrook Box Co. Toronto.

Crossing Gates

The N. L. Piper Railway Supply Co. Toronto.

Curtains

The Hudson's Bay Company

Cuts

Acton Burrows Co. Toronto

Derrick Ropes

The B. Greening Co. Hamilton, Ont.

Derricks

James Cooper Montreal.

Door Signs

Acton Burrows Co. Toronto.

Drills

W. Abbott Montreal.

Dry Goods

The Hudson's Bay Company

Economizers

Babcock & Wilcox (Ltd.) Montreal.

Electric Car Route Signs

Acton Burrows Co. Toronto.

Electric Cranes

Dominion Bridge Co. Montreal.
W. H. C. Mussen & Co. Montreal.

Enameled Iron Signs

Acton Burrows Co. Toronto.

Engineers' Supplies

The James Morrison Brass Mfg. Co. Toronto.

Engines, Stationary & Marine

Polson Iron Works Toronto.

Engraving

Acton Burrows Co. Toronto.
Toronto Engraving Co. Toronto.

Express Office Signs

Acton Burrows Co. Toronto.

Feedwater Heaters

Babcock & Wilcox (Ltd.) Montreal.

Fencing

Canadian Steel and Wire Co. Hamilton, Ont.
Dominion Wire Manufacturing Co. Montreal.
Page Wire Fence Co. Walkerville, Ont.

Flags

Rice Lewis & Son Toronto.
The Hudson's Bay Company

Flour

The Hudson's Bay Company

Foghorns

Rice Lewis & Son Toronto.

Gas and Electric Fixtures

The James Morrison Brass Mfg. Co. Toronto.

Gates

Page Wire Fence Co. Walkerville, Ont.

Gauges, Steam and Vacuum, etc.

The James Morrison Brass Mfg. Co. Toronto.

General Supplies

The Hudson's Bay Company

Grain Elevators

John S. Metcalfe Co. Chicago, Ill.

Groceries

The Hudson's Bay Company

Hardware

Rice Lewis & Son Toronto.
The Hudson's Bay Company

Headlights

The Hiram L. Piper Co. Montreal.
N. L. Piper Railway Supply Co. Toronto.

Hose

Rice Lewis & Son Toronto.

Illustrations

Acton Burrows Co. Toronto.

Injectors

The James Morrison Brass Mfg. Co. Toronto.

Interlocking Signals

Montreal Steel Works Montreal.

Iron

Rice Lewis & Son Toronto.

Iron Signs

Acton Burrows Co. Toronto.

Japans

McCaskill, Dougall & Co. Montreal.

Journal Bearings

Jas. W. Pyke & Co. Montreal.
St. Thomas Brass Co. St. Thomas, Ont.

Lager Beer, &c.

E. L. Drewry Winnipeg.

Lamps & Lanterns

The Hudson's Bay Company

Life Insurance

Travelers' Insurance Co. Montreal.

Lights, Contractors and Wrecking

James Cooper Montreal.
W. H. C. Mussen & Co. Montreal.

Linoleum and Floor Coverings

The Hudson's Bay Company

Locomotive Brass Work

The James Morrison Brass Mfg. Co. Toronto.

Locomotives (Compressed Air)

American Locomotive Co. New York, N.Y.
Baldwin Locomotive Works Philadelphia, Pa.
Locomotive and Machine Co. of Montreal

Locomotives (Electric)

American Locomotive Co. New York, N.Y.
Baldwin Locomotive Works Philadelphia, Pa.
Locomotive and Machine Co. of Montreal

Locomotives (Raek)

American Locomotive Co. New York, N.Y.
Baldwin Locomotive Works Philadelphia, Pa.
Locomotive and Machine Co. of Montreal.

Locomotives (Steam)

American Locomotive Co. New York, N.Y.
Baldwin Locomotive Works Philadelphia, Pa.
Canadian Locomotive Co. Kingston, Ont.
James Cooper Montreal.
Lima Locomotive and Machine Co. Lima, Ohio.
Locomotive and Machine Co. of Montreal
The Saxon Engine Works, Chemnitz, Germany.

Machine Tools

W. Abbott Montreal.
The Saxon Engine Works, Chemnitz, Germany.

Manganese Steel Castings

Montreal Steel Works Montreal.

Marine Boilers

Babcock & Wilcox (Ltd.) Montreal.

Matches

The Hudson's Bay Company

Mechanical Draft Fans

Babcock & Wilcox (Ltd.) Montreal.

Milepost Numbers

Acton Burrows Co. Toronto.

Milling Cutters

W. Abbott Montreal.

Mohair

The Hudson's Bay Company

Nails, Wire

Dominion Wire Manufacturing Co. Montreal.

Numbers

Acton Burrows Co. Toronto.

Oakum

Rice Lewis & Son Toronto.
The Hudson's Bay Company

Oils

Galena-Signal Oil Co., Franklin, Pa., & Toronto.
The Queen City Oil Company Toronto.

Office Signs

Acton Burrows Co. Toronto.

Packing

The N. L. Piper Railway Supply Co. Toronto.

Pinch Bars

The Hiram L. Piper Co. Montreal.
The N. L. Piper Railway Supply Co. Toronto.

Pipe Covering

The James Morrison Brass Mfg. Co. Toronto.
Mica Boiler Covering Co. Montreal.

Pushes

The Hudson's Bay Company

Porter

E. L. Drewry Winnipeg.

Portable Boilers

Babcock & Wilcox (Ltd.) Montreal.

Portland Cement

Rice Lewis & Son Toronto.

Printing

The Hunter, Rose Co. Toronto.
The Mail Job Printing Company Toronto.

Pumps

Rice Lewis & Son Toronto.

Rail Benders, Roller

Montreal Steel Works Montreal.

Railway Supplies

The Hiram L. Piper Co. Montreal.
The N. L. Piper Railway Supply Co. Toronto.

Rails (New)

James Cooper Montreal.
Drummond, McCall & Co. Montreal.
J. J. Gartshore Toronto.
W. H. C. Mussen & Co. Montreal.

Rails (for relaying)

James Cooper Montreal.
J. J. Gartshore Toronto.
T. A. Morrison & Co. Montreal.
W. H. C. Mussen & Co. Montreal.
Rice Lewis & Son Toronto.
Jas. W. Pyke & Co. Montreal.

Reamers

W. Abbott Montreal

Roof Trusses

Dominion Bridge Co. Montreal.

Rope

Rice Lewis & Son Toronto.
The Hudson's Bay Company

Safes

J. & J. Taylor Toronto.

Safety Valves

The James Morrison Brass Mfg. Co. Toronto.

Semaphore Arms

Acton Burrows Co. Toronto.

(Continued on preceding page.)

Hudson's Bay Company

INCORPORATED 1670



THE COMPANY OFFERS FOR SALE

Farming and Grazing Lands in Manitoba and the North-West Territory

ON EASY TERMS OF PAYMENT AND WITHOUT ANY CONDITIONS OF SETTLEMENT OR CULTIVATION DUTIES.

Town lots for sale at Winnipeg, Rat Portage, Victoria, Ft. William, Edmonton, Ft. Frances, Portage la Prairie, Prince Albert, Ft. Qu'Appelle, etc.

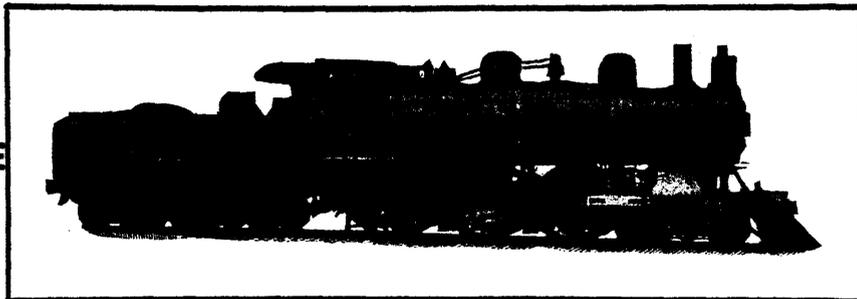
The Company has General Stores at Winnipeg, Vancouver, Victoria and other places where intending purchasers will find the best goods of every description at moderate prices.

Full information will be given at the offices of the Company in Canada, or at the London office, 1 Lime Street, E.C.

American Locomotive Company

BUILDERS OF LOCOMOTIVES FOR ALL CLASSES OF SERVICE.

President, S. R. CALLAWAY. Secretary, LEIGH BEST. Treasurer, C. B. DENNY.
Vice-President, A. J. PITKIN. Second Vice-President, R. J. GROSS. Mech. Engr., J. E. SAGUE.



SCHENECTADY WORKS, Schenectady, N. Y.
BROOKS WORKS, Dunkirk, N. Y.
PITTSBURG WORKS, Allegheny, Pa.
RICHMOND WORKS, Richmond, Va.

COOKE WORKS, Paterson, N. J.
RHODE ISLAND WORKS, Providence, R. I.
DICKSON WORKS, Scranton, Pa.
MANCHESTER WORKS, Manchester, N. H.

GENERAL OFFICE ————— **25 Broad Street, NEW YORK CITY.**