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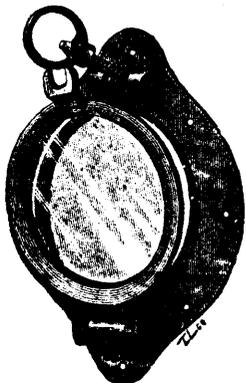
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NEW SERIES, NO. 16.

TORONTO, CANADA, JUNE, 1899.

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Central Vermont Reorganization.

A special general meeting of proprietors of the Grand Trunk was held in London, Eng., May 29th, to approve an agreement made May 1 between the Co. & the Central Vermont Ry. Co. for working arrangements between the two companies for 22 years. The notice of the meeting gave the following particulars: The C.V. system forms the chief connection of the G.T. Co. with Boston & the New England States. In 1895, for the protection of the interests of the G.T. Co., & also on account of its valuable traffic relations with the C.V. R.R. Co., it was found necessary in conjunction with E. C. Smith, the President, to apply to the courts for a receivership of that Co., & C. M. Hays & Mr. Smith were appointed Joint Receivers.

The President of the G. T., when in Canada in Aug., 1897, arranged with a committee of C. V. bondholders a plan for placing that Co. on a sound financial footing, & after prolonged & anxious negotiations, the reorganization of the Co. has been completed, & unencumbered by unprofitable leases, it has been incorporated by the laws of the State of Vermont under the title of the Central Vermont Ry. Co. The capital of the reorganized Co. consists of \$3,000,000 common stock, & \$12,000,000 twenty-one-year 1st mortgage bonds bearing 4% interest. Of these bonds \$1,000,000 will be set apart & applied as required for improvements in the property, & the remainder will be issued by the C.V.R. Co. in exchange for the bonds & in the payment of certain liens, charges & equities upon the property of the old C.V.R. Co. The G.T. Co. will receive \$1,186,000 of the said 4% bonds; \$435,000 being in payment of that amount of traffic balances due by the C.V.R.R. Co. at the date of the receivership, & the remaining \$751,000 on account of investments made by the G.T. Co., in the securities of the C.V.R.R. Co. The G.T. Co. will also receive \$2,180,000 of the common stock of the reorganized company. In consideration of this settlement the agreement provides for the interchange of traffic between the two companies to continue during the currency of the 4% mortgage bonds, the G.T. Co. undertaking, in the event of the net receipts of the C.V. Co., as defined in the agreement, being in any year insufficient to meet the interest on such bonds as may from time to time be outstanding, to make good such deficiency, provided that the G.T. liability payable in any year shall not exceed 30% of its share of the gross earnings from traffic interchanged between the two companies.

In moving a resolution approving the agreement Sir C. Rivers Wilson detailed at length the history of the C.V., which was

chartered in 1843, opened in 1849, & gradually grew by extensions & by the acquisition of leased lines to 772 miles. When the G.T. management changed in 1895 it was found that the previous board, rightly appreciating the importance of the G.T. having a connection with the C.V., & securing access to Boston, had in 1883 begun to purchase a considerable amount of C.V. securities. By 1885 the G.T. had \$1,768,000 of securities, comprising \$751,300 of 1st mortgage bonds, \$114,775 of notes given by the C.V. on account of traffic balances & preferred & common stock amounting to \$902,000, which though a large majority of the stock did not

decided to put it into the hands of receivers as explained in the notice of the meeting. In Jan., 1897, there was default on the bonds & foreclosure followed. Negotiations with the bondholders followed, a new company was chartered & took over the line on May 1, making with the G.T. Co. the agreement under consideration. The G.T. Co. has a majority of the stock & a controlling influence in the new company. Several of the unproductive leased lines have been surrendered, reducing the system to about 470 miles. The main line has a few branches, some of which have been acquired by purchase by means of issue of bonds. Three small lines, aggregating 77 miles, for which \$90,000 a year rental was paid, have been secured for \$1,000,000, saving \$50,000 a year. Judging by results while in the receivers' hands it is estimated there will be a very considerable surplus over the fixed charges, admitting, it is hoped, of something material for the common stock. The line had been worked in interests which were not those of the G.T. Henceforth it would be run on a business basis, & the undue extravagance of the past would be stopped. The President warmly commended Mr. Hays' services in connection with the reorganization, & referred approvingly to the appointment of E. H. Fitzhugh as Vice-President & General Manager, & to that of G. B. Reeve as Traffic Manager. The agreement was unanimously approved of.



DAVID MCNICOLL,
Assistant General Manager, Canadian Pacific Railway.

give the G.T. control, as the Vermont Legislature passed an act prohibiting any holder of stock, no matter how large the holding, to have more than one-tenth voice in the meetings of the Co. In 1895 the C.V. had an issue of \$7,000,000 1st mortgage bonds, an indebtedness of about \$360,000 equipment bonds, a floating debt of about \$2,000,000 & a 2nd mortgage of \$15,000,000, made to extinguish liabilities, but only partly issued. There was a liability of \$900,000 a year for leased lines, many of which were unproductive & traffic balances of \$400,000 due to the G.T.R. The C.V. Co. being practically bankrupt, it was

forward from 1897, makes an available balance of \$69,775, out of which a dividend of 1 1/2% has been declared on the income bonds, leaving a balance to carry over of \$12,203. The percentage of working expenses was 69.24, against 69.64 for 1897. The decrease in the gross earnings was due mostly to the falling off in the lumber traffic to the U. S. It was known at the close of 1896 that on July, 1897, there would be a duty of \$2 upon every 1,000 ft. of lumber sent to the States from Canada, & the consequence was that owners sent every ton they could during the first 6 months of 1897. The traffic, therefore, for the first 6

Quebec Central Railway Co.

At the annual meeting in London, Eng., June 5, the President, E. Dent, said:—"The gross earnings for 1898 were \$450,249, against \$457,643 for 1897, a decrease of \$7,394. The working expenses were \$303,908, against \$309,555 for 1897. The net earnings were \$146,341, against \$148,088 for 1897, to which is added \$1,013 for interest earned, making total net earnings \$147,354. After paying \$85,166 for interest on prior lien bonds & writing off \$5,863 for settlement of some old claims, there remains a net balance of \$56,325, which, added to the \$13,450 brought

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NEXT ANNUAL MEETING at Toronto, Sep. 20, 1899.

Canadian Ticket Agents' Association.

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PRESIDENT, S. O. Perry, St. Thomas, Ont.; 2nd VICE-
PRESIDENT, G. Duncan, Quebec; 3rd VICE-PRESIDENT,
W. H. C. McKay, St. John, N.B.; SEC.-TREAS., E. de la
Hooke, London, Ont.; AUDITOR, S. H. Palmer, St.
Thomas, Ont.

EXECUTIVE COMMITTEE, J. A. Macdonald, Arnprior,
Ont.; W. H. Harper, Chatham, Ont.; C. E. Morgan,
Hamilton, Ont.; T. Long, Port Hope, Ont.; A. Calder,
Winnipeg.

NEXT ANNUAL MEETING at Winnipeg, Oct. 13, 1899.

Canadian Marine Engineers' Association.

HONORARY PRESIDENT, O. P. St. John, Toronto;
PRES., H. Parker, Toronto; 1st VICE-PRES., A. J. Wood-
ward, Toronto; and VICE-PRES., D. F. Campbell, To-
ronto.

COUNCIL, T. W. Good, W. Harwood, R. Binch, To-
ronto; P. J. Carr, Port Dalhousie; J. E. Kane, King-
ston.

TREASURER, H. Brownley, Toronto; SECRETARY, S.
A. Mills, Toronto; GUARD, H. Bowler, Toronto; AUDI-
TORS, D. L. Foley, Toronto; E. J. O'Dell, Owen Sound.

months of 1898 compared unfavorably with
the corresponding period of 1897. It is satis-
factory to know that from August onwards,
when the traffic compared with what may be
called the normal traffic, increases were again
shown. The Manager says that generally,
with the exception of lumber shipments to the
U. S., business has been good, trade in a
healthy condition, & the prospects for the
future encouraging. He has sent a telegram
announcing the earnings up to the end of
May this year, which were \$168,512, an in-
crease over the corresponding period of \$29,-
069. The net earnings for the same period
were \$50,824, an increase over those of the
corresponding period of \$8,168. He ends his
telegram by saying, 'The outlook is good.'

The report was adopted, & the retiring
directors, other than the Provincial Govern-
ment one, were re-elected. Special meetings
of the prior lien bondholders, income bond-
holders & shareholders were afterwards held
to approve the Act obtained from the Quebec
Legislature for the purpose of rearranging
the bonded debt of the Co.

The President stated that by the Act the prior
lien bonds would be repayable at par Feb. 1,
1908, and that it authorized the creation of first
debenture stock bearing interest not exceed-
ing 4% per annum, the total interest upon which
shall not exceed an annual sum of £20,000.
It was proposed to offer now to the holders
for their 5% prior lien bonds 4% 1st debenture
stock at par, exchangeable up to Aug. 1, 1899,
& to pay in cash £3 as a bonus, besides £2,-
10s. for the ½ yearly coupon due on that
date. For the past two years the net revenue
of the Co. had exceeded £30,000 a year,
being £10,000 or 50% more than the interest
on the total amount of 1st debenture stock
which the directors were enabled by the Act
to issue. Assuming that the future net
revenue continued at the present rate of
£30,000, there should be a surplus of about
£15,000, or sufficient to pay increased inter-
est on the income bonds. The directors were
authorized to exercise the power conferred
by the Act.

General Manager Grundy states that the
shipments of dairy produce over the line are
increasing rapidly. The shipments of butter
& cheese for export to Great Britain
amounted in 1898 to nearly 3,800 tons, an
increase of 400 tons over 1897. The ship-
ments of asbestos show an increase, while
those of chrome ore show a reduction of some
600 tons.

Traffic receipts for May, \$42,127.44; in-
crease over May, '98, \$358.92. Receipts
Jan. 1 to May 31, \$168,511.60; increase over
corresponding period \$9,825.53. There is a
variation between these figures & those at-
tributed to the Chairman above, which is
probably owing to an error in reporting.

Michigan Central Railway.

The annual report of this Co.'s subsidiary,
the Canada Southern, for 1898, just issued,
shows that the Co. has 457.30 miles of 1st
track, 97.56 of 2nd track & 238.06 miles of
sidings, which does not include the 15 miles
of the London & Port Stanley, over which its
trains run between St. Thomas & London,
Ont. The financial statement is as follows:

RESOURCES OF THE YEAR 1898.

Net earnings.....	\$300,666.69
Received from M. C. R. R. Co.	
balance of 1897 account....	132,244.07
Receipts from other sources....	1,859.12
Cash & cash assets, Dec. 31,	
1897.....	24,241.95
	\$459,011.83

DISPOSITION OF RESOURCES.

Dividends 26 & 27, paid Feb. 1	
& Aug. 1, 1898.....	\$300,000.00

Balance net earnings, 1898, due	
from M. C. R. R. Co.....	150,666.69
Cash & cash assets, Dec. 31,	
1898.....	8,345.14
	\$459,011.83

The annual meetings of the C. S. & other
subsidiary companies were held at St. Thomas,
June 7, when the following directors were
elected:

CANADA SOUTHERN RY.—C. Vanderbilt, W.
K. Vanderbilt, C. M. Depew, S. F. Barger,
E. A. Wickes, J. E. Brown, C. F. Cox, New
York; H. B. Ledyard, Detroit; N. Kings-
mill, Toronto.

LEAMINGTON & ST. CLAIR RY.—C. Vande-
bilt, W. K. Vanderbilt, C. M. Depew, C. F.
Cox, New York; N. Kingsmill, J. J. Kings-
mill, Toronto; James Ross, Montreal.

NIAGARA GRAND ISLAND BRIDGE.—C. Van-
derbilt, W. K. Vanderbilt, C. M. Depew, S.
F. Barger, E. A. Wickes, E. D. Worcester,
C. F. Cox, New York; H. B. Ledyard, De-
troit; N. Kingsmill, Toronto.

NIAGARA RIVER BRIDGE.—C. Vanderbilt,
W. K. Vanderbilt, C. M. Depew, S. F. Barger,
E. A. Wickes, E. D. Worcester, C. F. Cox,
New York; H. B. Ledyard, Detroit; N.
Kingsmill, Toronto.

SARNIA, CHATHAM & ERIE RY.—C. Vande-
bilt, W. K. Vanderbilt, C. M. Depew, C. F.
Cox, New York; N. Kingsmill, Toronto.

Grand Trunk Earnings, Expenses, &c.

The following statement of earnings sup-
plied from the Montreal office, includes the
G.T. of Canada, the Chicago & G.T., & the
Detroit, Grand Haven & Milwaukee Rys.:

	1899	1898	Increase	Decrease
Jan.....	\$1,956,281	\$1,916,332	\$39,949	
Feb.....	1,824,434	1,674,453	149,981	
Mar.....	2,186,359	2,048,970	137,389	
April.....	1,942,543	1,918,477	\$24,066	
May.....	2,039,239	1,940,980	98,259	
	\$9,948,856	\$9,499,212	\$449,644	

The following figures are issued from the
London, Eng., office:

GRAND TRUNK RAILWAY.

Revenue statement for Apl., 1899:

	1899	1898	Increase	Decrease
Gross receipts.....	£321,700	£218,000	£3,700	
Working expenses.....	205,700	203,902	1,798	
Net profit.....	£116,000	£114,098	£1,902	

Aggregate for 4 months, from Jan. 1 to
Apl. 30, 1899:

	1899	1898	Increase	Decrease
Gross receipts.....	£1,288,900	£1,238,006	£50,894	
Working expenses.....	893,900	877,955	15,945	
Net profit.....	£395,000	£360,051	£34,949	

CHICAGO & GRAND TRUNK RAILWAY.

Revenue statement for Apl., 1899:

	1899	1898	Increase	Decrease
Gross receipts.....	£62,600	£61,280	£1,320	
Working expenses.....	56,400	49,754	6,646	
Net profit.....	£ 6,200	£11,526	£7,966	£5,326

Aggregate for 4 months, from Jan. 1 to
Apl. 30, 1899:

	1899	1898	Increase	Decrease
Gross receipts.....	£279,700	£255,331	£24,369	
Working expenses.....	234,800	205,095	29,705	
Net profit.....	£44,900	£50,236		£5,336

DETROIT, GRAND HAVEN & MILWAUKEE RY.

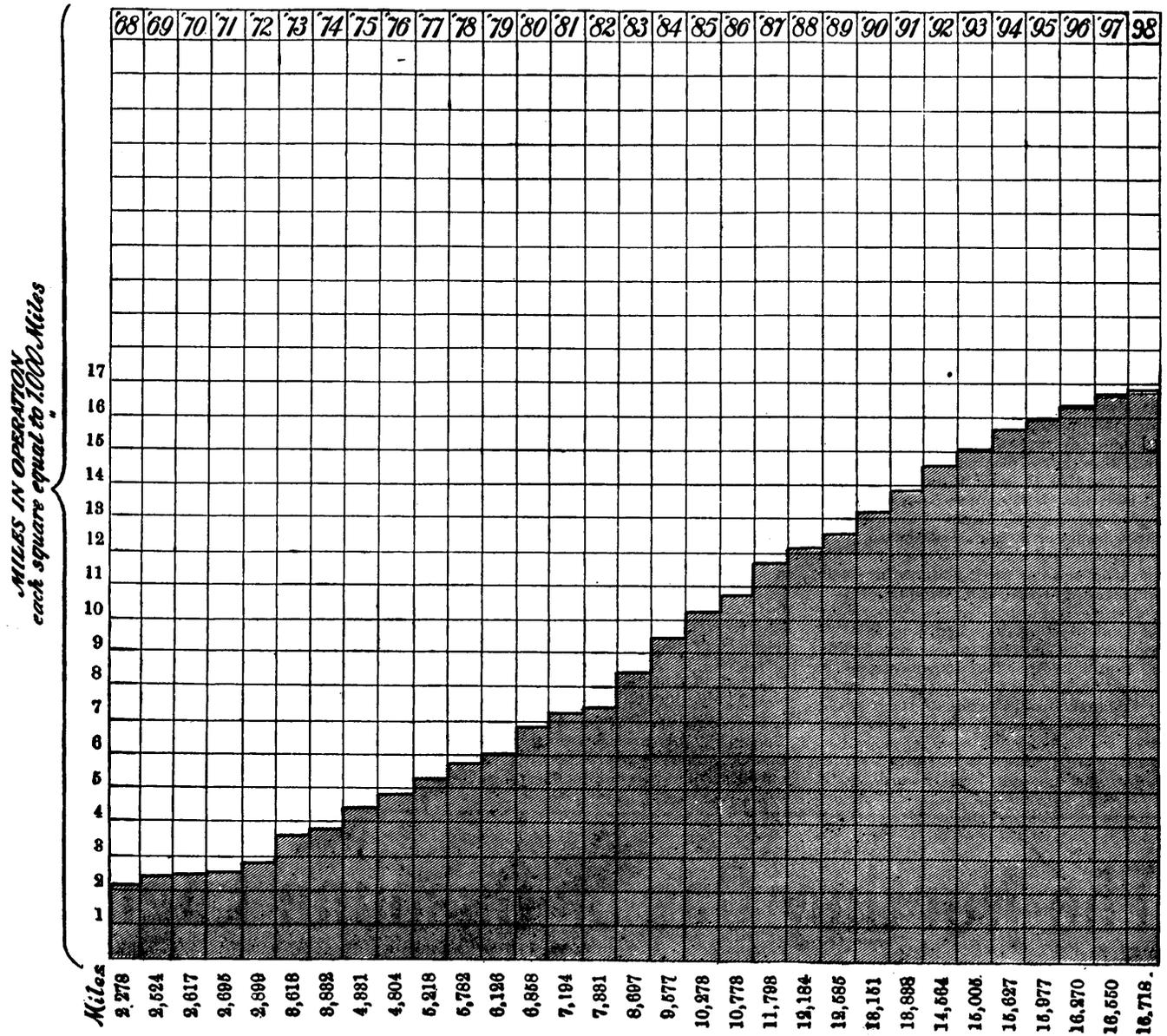
Revenue statement for Apl., 1899.

	1899	1898	Increase	Decrease
Gross receipts.....	£14,700	£14,926		£ 226
Working expenses.....	12,300	10,910	£1,390	
Net profit.....	£2,400	£ 4,016		£1,616

Aggregate for 4 months, from Jan. 1 to
Apl. 30, 1899:

	1899	1898	Increase	Decrease
Gross receipts.....	£56,400	£59,434		£3,034
Working expenses.....	49,500	48,800	610	
Net profit.....	£6,900	£10,544		£3,644

RAILWAY MILEAGE IN CANADA 1868 TO 1898.



DETAILS OF G.T.R. RECEIPTS JAN. 1 TO APL. 30.

	1899.	1898.
Passengers, number	1,728,569	1,849,755
Immigrants, number	298,971	278,525
Mails, express, &c. amount	£ 793	£ 892
Freight, tons	3,211,253	3,104,099
Miscellaneous receipts	£ 889,591	£ 873,598
Total receipts	£ 1,289,012	£ 1,238,126
Increase	£ 50,886	

TRAFFIC RECEIPTS OF THE SYSTEM.

Traffic receipts, Jan. 1 to May 31.	1899.	1898.	Increase.	Decrease.
Grand Trunk	£1,633,350	£1,561,058	£72,292	
Chicago & G.T.	338,983	317,092	21,891	
D. G. H. & M.	71,952	73,740		£1,788
Total	£2,044,285	£1,951,890	£92,395	

C.P.R. Earnings & Expenses.

Gross earnings, working expenses, net profit and increases or decreases over 1898, from Jan. 1, 1899.

	Earnings.	Expenses.	Net Profits.	Increase or decrease.
Jan.	\$1,864,570.36	\$1,247,036.50	\$ 617,533.86	\$101,906.27+
Feb.	1,753,382.82	1,153,681.34	599,701.48	176,034.12+
Mar.	2,109,667.58	1,280,772.01	828,895.57	75,662.06+
Apr.	2,190,312.40	1,276,008.91	920,303.49	203,212.80+
Total	\$7,923,933.16	\$4,957,498.76	\$2,966,434.40	\$556,815.25+
Increase.				

Approximate earnings for May, \$2,375,000, against \$2,229,000 in May, 1898; increase, \$146,000.

SUBSIDIARY LINES.

DULUTH, SOUTH SHORE & ATLANTIC.—Approximate earnings for May, \$204,182; increase over May, 1898, \$31,091.

Net earnings for March, \$53,385, increase over March, 1898, \$3,609.

MINERAL RANGE, HANCOCK & CALUMET.—Approximate earnings for May, \$36,589; increase over May, 1898, \$7,458.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—Approximate earnings for May, \$337,765; increase over May, 1898, \$2,078.

Net earnings, 9 months, to Mar. 31, \$164,396.45. April gross earnings, \$348,912.97; expenses, \$184,516.52; net, \$164,396.45.

Canadian Pacific Railway Land Sales.

	Acres.		Amount.	
	1899	1898	1899	1898
Jan.	14,718	22,044	\$46,411.35	\$72,924.83
Feb.	13,747	20,650	43,371.00	66,399.00
Mar.	24,045	33,421	74,430.00	109,010.00
April	36,626	43,145	116,835.00	140,276.00
May	39,573	43,148	125,862.00	137,835.00
Total	128,709	162,408	\$406,909.35	\$526,444.83

RAILWAY FINANCE, MEETINGS, &c.

Calgary & Edmonton net earnings for Apl. \$9,482.89, against \$25,721.96 for Apl. '98.

The Cassiar Central Ry. Co. gives notice that a power of attorney given by it to E. D. Self, of the District of Cassiar, B.C., May 10, 1898, has been revoked.

Canadian Pacific.—Last month the Co. offered for subscription in London, Eng., at £196 per bond of \$1,000, an issue of \$3,500,000 4% 2nd mortgage 50-year gold bonds of the Minneapolis, St. Paul & Sault Ste. Marie Ry., the interest on which is guaranteed unconditionally by the C.P. Co., & which is payable in gold in New York, or by the C.P. Co. in London, at the fixed exchange of 4s. 1½d. per dollar, less income tax. The prospectus announced that the total amount of bonds secured by the 2nd mortgage is \$5,000,000, of which only \$3,500,000 will be certified at present by the trustees & delivered to the M. St. P. & S. Ste. M.R. Co., to be disposed of. The remaining bonds to the par value of \$1,500,000 will only be certified by the trustees, & delivered by them from time to time in such amounts as the C.P. Co. may approve in writing. The agreement between the C.P. Co. & the M. St. P. & S. Ste. M. Co. provides that the proceeds of the bonds shall be applied for terminal yards & facilities at

Minneapolis, permanent bridges, & general additions & improvements, redemption of interest-bearing securities coming due for payments on accounts of rolling stock equipment already purchased, for additional equipment, & for payment of floating debt incurred for additions & improvements to the property. The lists were opened in London May 15 & closed May 16. Speaking of it the Canadian Gazette says: "By this issue the 'Soo' Co. will clear off all capital engagements, & have the means of providing the additional facilities of business which the prevailing activity has shown to be necessary, while its surplus revenue will at the same time be set free for dividend or reserve purposes. The C.P. Co. is to be congratulated upon having thus got its important connection into a secure situation."

The Chignecto Marine Transport Ry. Co.'s annual meeting was held in London, Eng., June 14. The Chairman stated the meeting was purely formal, there being no accounts to present. Negotiations were being followed up, but the reply of the Canadian Government was not altogether of a satisfactory character. A. D. Provand, M. P., said he went to Ottawa in Oct. last, saw the Premier, & arranged to make proposals for a settlement. These were submitted by letter in Jan., and the reply recently received was very unsatisfactory. The matter could not be dealt with at the shareholders' meeting, because all the questions relating to the negotiations had been considered at a joint meeting of debenture-holders & shareholders. The correspondence would be printed & circulated. The Chairman said the works had been kept in constant repair, money advanced from various sources, chiefly by debenture-holders, having been used therefor.

Duluth, South Shore & Atlantic.—At a meeting of stockholders, June 1, Lord Strath-

cona & R. B. Angus, Montreal, were elected directors.

Dominion Atlantic receipts for Apl., \$45,179 increase over Apl., '98, \$4,453. Four months to Apl. 30, \$156,367, increase over corresponding period \$15,429.

Manitoba & Northwestern.—On May 31 the General Manager issued a circular stating that the Co. hoped to be in a position very shortly thereafter to settle the outstanding working expense claims contracted prior to the appointment of the Receiver on June 7, 1893, & requesting statements of claims from creditors.

The trustees of the 1st mortgage bondholders announce that, having received a refund of certain expenses originally debited against the trustees, the distribution announced in the notice of May 29 will be increased from £3 10s. 6d. to £3 12s. per bond in respect of the proceeds of the sale of land warrants & rights to land.

Minneapolis, St. Paul, & St. Ste. Marie.—

At the annual meeting in Minneapolis, June 6, the following were elected directors: T. Lowry, J. Martin, W. D. Washburn, J. S. Pillsbury, Sir Wm. Van Horne, T. G. Shaughnessy, C. H. Pettit, F. H. Peavy, W. B. Dean, W. H. Bradley, R. B. Angus. The old officers were re-elected.

The Ontario & Rainy River Ry. Co.'s bill, empowering it to buy the Port Arthur, Duluth & Western Ry., has passed the Railway Committee at Ottawa, having been amended so as to protect the creditors & to protect the town of Port Arthur, which gave a bonus of \$25,000 in consideration of the terminals & shops being located there.

Port Arthur, Duluth & Western.—D. F. Burke, Port Arthur, has taken action against this Co., the Toronto General Trusts Co., as executor of the late John Leys, of Toronto,

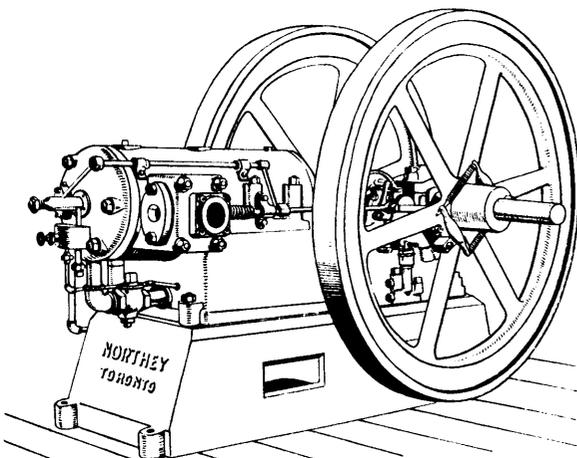
& several mortgagees of the Co. Mr. Burke, who is one of the biggest bondholders of the Co., claims \$62,556 for moneys advanced & for services rendered to the Co. He asks for \$155,000 worth of bonds which he claims to own, or a declaration that the Toronto General Trusts Co. holds them as trustee for him. As a creditor, shareholder & bondholder, he sues to set aside a consent judgment entered in an action on Feb. 14 last, which amounted to an agreement between the bondholders to sell the road, on the ground that it was obtained by fraud & misrepresentation, that the Ry. Co. had no power to give a consent judgment, & that the court had no jurisdiction to direct a sale of the road under the statute. Mr. Burke also attacks the mortgage, holding that it covers property which the Co. had no power to mortgage, its powers of mortgaging its assets being expressly limited by statute. He asks that the mortgage be set aside in so far as the power of sale was given, & in so far as the mortgage purports to cover the property & assets of the Co. other than the undertaking as defined by the statute of incorporation. He also asks for an order restraining defendants from selling the railway, for an account of the dealings with the railway, for damages for the alleged fraudulent dealings with the railway through which he claims to have sustained loss, or in the alternative he asks the court to set aside the whole issue of bonds by the Ry. Co. to its co-defendants, on the ground that it was obtained by fraud & misrepresentation.

Pembroke Southern.—A mortgage given by this Co. Mar. 20 last, to the Ottawa Trust & Deposit Co., as trustee, to secure an issue of bonds, has been deposited with the Provincial Secretary, Toronto.

Qu'Appelle, Long Lake & Saskatchewan net earnings for Apl. \$2,371.66, as against net loss of \$677.99 in Apl. '98.

The Northey Gas or Gasoline Engine.

In Connection with Pumping Machinery for Tank Duty.



"BUILT FOR HARD WORK."

Railway Officials will find the Northey Engine to be a marked improvement over steam or other forms of power for this duty. It is simple of construction, and easily managed, necessitating only the turn of a fly-wheel to start, while it can be going at full speed in a few seconds and be shut down on the instant. Needs no engineer to look after it, the station hands can do all that is required, while it will run for hours at a time with little or no attention. The Engine is compactly built and of the best materials; it uses either gas or gasoline for fuel, and its safety and economy with either have proved it to be the most satisfactory power in the market.

We will cheerfully send Booklet and every information upon request.

The Northey Mfg. Co., Limited, 1082 KING ST. SUBWAY, Toronto, Ont.

Seattle & Northern.—This line, which runs from Hamilton to Anacortes, Wash., 35 miles, & has been owned by the Pacific Coast Co., is said to have changed hands. In Seattle it is asserted that it has been secured by J. J. Hill, of the Great Northern (U.S.A.)

Toronto, Hamilton & Buffalo.—At the annual meeting in Toronto, June 6, the following were elected directors:—W. K. Vanderbilt, New York; J. N. Beckley, Rochester, N.Y.; T. G. Shaughnessy, Montreal; S. R. Callaway, New York; S. E. Peabody, Boston; H. B. Ledyard, Detroit; C. F. Cox, New York.

Wellington, Grey & Bruce.—The estimated earnings for the ½ year ended June 30, applicable to meet interest on the bonds, will admit of the payment of £2 1s. %. This payment will be applied as follows: 1s. in final discharge of coupon 37, due Jan., 1889, & £2 on account of coupon 38, due July 1, 1889. Payment will be made on & after July 1 at the offices of the G.T.R. Co., in London, Eng. The numbers of bonds, amounting to £2,200, drawn to be paid off at par on July 1, are announced.

This line is worked by the G.T.R., which gives the W.G. & B. bonds 30% of the gross receipts as interest, and sets aside a further percentage for redeeming the bonds by drawings in May & Nov. Coupons subsequent to those mentioned above are in arrear.

RAILWAY APPOINTMENTS, Etc.

Alberta Railway & Coal Co.—W. D. Barclay, C. E., General Manager, has resigned to enter the service of Foley Bros., railway contractors, St. Paul, Minn. Mr. Barclay, who was engaged on C.P.R. surveys & construction for some years, had charge of the construction of the A.R. & C. Co.'s line from Lethbridge to the International Boundary, & of the Great Falls & Canada Ry. from the Boundary to Great Falls, Montana. On the completion of these lines in 1890, he was appointed General Superintendent of both, & then became General Manager. The President, E. T. Galt, will discharge the duties heretofore devolving upon Mr. Barclay, it not being the intention to appoint another Manager.

Canadian Pacific.—At the monthly meeting of directors, June 12, Sir Wm. Van Horne resigned the Presidency & was elected Chairman of the Board, the Vice-President, T. G. Shaughnessy, being elected to succeed him as President. No one was elected to the vacant Vice-Presidency. After the meeting Sir Wm. made the following statement:—"The reason for the change from a railway standpoint is the need of providing for the enlargement of the executive organization of the Co., the vast growth of its system & the wide extent of its operations having resulted in an amount of executive work quite beyond the powers of endurance possessed by any two men. As to myself I am not cutting loose from the C.P.R. & I shall take just as much interest in its affairs as I ever did; but I shall now be free from every-day duties & able to see something of the world should I feel like it. This is my 42nd year of continuous railway work & my 18th with the Canadian Pacific. In all these years I have had but two short holidays & I have felt for a good while back that I ought to free myself from the many demands of business & at the same time make way for the younger men. The present seems a most favorable time for such a change, for the Co. is in a splendid position in every way & its prosperous future seems quite assured. But one of my chief reasons for asking our directors to permit me to relinquish the duties of the office of President was to secure the well-earned promotion of Mr. Shaughnessy, whose services to the Co. have been beyond estimation & whom I look upon as all that could be wished for as the chief executive officer of a

great corporation, honorable, capable, energetic & fair-dealing. I have known him intimately for many years & have never yet discovered a fault in him, unless it be injustice to himself. The warmth of my feelings towards him can only be imagined by those who know him well. The shareholders of the C.P.R. Co. are to be congratulated on having such a man in command."

A portrait & short biographical sketch of Mr. Shaughnessy appeared in our issue of Oct. last. His first official act as President was to appoint as Assistant General Manager, D. McNicoll, heretofore Passenger Traffic Manager. Mr. McNicoll was born at Arbroath, Forfarshire, Scotland, April, 1852. He entered the railway service in Aug., 1866, as clerk in the Goods Managers' office of the North British Ry. In 1873 he removed to England & obtained a similar position with the Midland Ry. At the age of 21 he came to Canada. He first worked on the Northern Ry. at Meaford & Collingwood, & in less than a year became chief clerk, removing to the general office of the Toronto, Grey & Bruce Ry. at Toronto. He remained in this position until 1881, when he became General Freight & Passenger Agent of the same railway & General Traffic Agent of the Owen Sound Steamship line trading on the upper lakes. In 1883 he became General Passenger Agent of the Credit Valley, Toronto, Grey & Bruce, & Ontario & Quebec Rys., & he retained this position when these lines became amalgamated with the C.P.R. In 1885 he was removed to Montreal & became the General Passenger Agent of all the lines of the C.P.R. east of Port Arthur. On Jan. 1, 1896, he was appointed Passenger Traffic Manager.

For the present at least, & probably until the completion of the extension to the Windsor St. station & general offices building, Sir Wm. Van Horne & Mr. Shaughnessy retain their old offices. Mr. McNicoll has moved into the 1st room of Sir William's suite, heretofore occupied by A. R. G. Heward, who has gone into the room made for Mr. Osborne when he was Assistant to the Vice-President. Mr. McNicoll's clerks are located in the 2nd room of Sir William's suite, which is also occupied by the Chairman's Secretary. G. Hodge, heretofore Mr. Shaughnessy's Chief Clerk, has been given a similar position in Mr. McNicoll's office.

R. Kerr, heretofore Traffic Manager of the Western Lines, with headquarters at Winnipeg, has been appointed Passenger Traffic Manager at Montreal to succeed Mr. McNicoll. Mr. Kerr was born in Toronto in Aug., 1845, & entered railway service at the age of 21, being first employed as warehouse clerk, & afterwards filling various positions with the Northern Ry. In 1879 he was appointed Passenger Agent of that line, afterwards becoming General Freight & Passenger Agent of the Northern & North-Western Ry., which position he filled until June, 1884, when he was appointed General Freight & Passenger Agent of the lines of the C.P.R. west of Lake Superior, with headquarters at Winnipeg, his title being subsequently changed to Traffic Manager of Western Lines. Consequent on the promotion of Mr. Kerr to Montreal the following changes have been made in the traffic department of the lines west of Lake Superior, the position of Traffic Manager having been abolished.

Passenger Department.—C. E. McPherson, heretofore Assistant General Passenger Agent at Toronto, is appointed General Passenger Agent of Western Lines, headquarters at Winnipeg. E. J. Coyle, heretofore District Passenger Agent at Vancouver, is appointed Assistant General Passenger Agent of Pacific Division, Kootenay & Pacific Coast, headquarters at Vancouver, authority extending west of Laggan & Fernie. W. Stitt, heretofore Chief Clerk of the passenger branch at Winnipeg, is appointed Assistant General

Passenger Agent of Western Division, office at Winnipeg, authority extending from Port Arthur to Laggan & Fernie inclusive.

Freight Department.—W. R. MacInnes, heretofore General Agent Freight Department at Chicago, is appointed General Freight Agent of lines west of Lake Superior, headquarters at Winnipeg. G. H. Shaw, heretofore Chief Clerk Freight Branch at Winnipeg, is appointed Assistant General Freight Agent of Western Division, main line & branches, Port Arthur to Laggan & Fernie, headquarters at Winnipeg. A. Cameron, heretofore District Freight Agent at Vancouver, is appointed Assistant General Freight Agent, Pacific Division, main line & branches, west of Laggan, headquarters at Vancouver. F. W. Peters, heretofore District Freight Agent at Nelson, B.C., is appointed Assistant General Freight Agent Kootenay & Boundary Creek districts, comprising lines west of Fernie & south of Golden, Arrowhead & Penticton, headquarters at Nelson, B.C. W. A. Kittermaster, heretofore District Freight Agent at Detroit, Mich., is appointed General Agent Freight Department, at 234 La Salle St., Chicago. M. H. Brown, heretofore Chief Clerk in Freight Traffic Manager's office at Montreal, is appointed District Freight Agent at 11 Fort St. West, Detroit, Mich.

A. H. Notman, heretofore Assistant General Passenger Agent at St. John, N.B., succeeds Mr. McPherson as Assistant General Passenger Agent at Toronto, with authority extending west of Kingston & Sharbot Lake to Detroit, & south of North Bay. This is a curtailment of the district, which under Mr. McPherson included the province of Ontario west of & including Kingston & Sharbot Lake, & the line of the K. & P. Ry. between those points; all south of the C.P.R. main line west of Renfrew, the C.P.R. main line North Bay to McLeans, also the Sault Ste. Marie branch, the town of Sault Ste. Marie, Mich., Mackinac Island, & Detroit, Mich. The territory which has been detached from the Toronto office will come under the direct control of C. E. E. Ussher, General Passenger Agent, Montreal. Mr. Notman has been succeeded at St. John, N.B., by A. J. Heath, heretofore Chief Clerk in his office, & formerly General Passenger Agent of the New Brunswick Ry., which was absorbed by the C.P.R. Mr. Heath is given the title of District Passenger Agent Atlantic Division, with authority extending east of Lake Megantic, the Maritime Provinces, & State of Maine, Oldtown, & north.

Circulars issued by Freight Traffic Manager Bosworth in connection with some of the above mentioned appointments are approved by Mr. Shaughnessy. Those issued by Passenger Traffic Manager Kerr are approved by Mr. McNicoll.

G. W. Smith, heretofore Secretary to the Traffic Manager at Winnipeg, has been appointed District Passenger Agent at Seattle.

D. McLean, fuel inspector, at Moose Jaw, Assa., has been transferred to Calgary, Alta., with jurisdiction over the main line from Swift Current to Laggan & the Crow's Nest branch. J. Armstrong has been given a similar position between Fort William, Ont., & Swift Current, Assa.

J. E. Parker, City Ticket Agent at Ottawa, has resigned owing to continued ill health. He started with the G.T.R. in Ottawa in 1874, then was Canadian Agent of the Union Pacific, with office in Montreal, & has been with the C.P.R. 15 years. He is succeeded by G. Duncan, heretofore Passenger Agent at Quebec, who is succeeded by E. H. Crean, heretofore City Ticket Agent at Sherbrooke, Que.

Central Vermont.—J. A. Allen, Trainmaster, has resigned, & the office is abolished. H. Brainerd, General Baggage Agent, has resigned, the office is abolished, & the duties will be performed by the General Passenger Agent. F. S. Holbrook has been appointed

Commercial Agent at 88 Wall Street, New York City.

Grand Trunk.—J. A. Sheedy, Master of Bridges & Buildings, Middle Division, having resigned to accept a more lucrative position with a Philadelphia shipbuilding company, has been succeeded temporarily by J. Wilson, heretofore District Inspector at London, who is said to be likely to be appointed to the position. Mr. Wilson is succeeded at London by W. Kirkpatrick, heretofore District Inspector at Hamilton, who is succeeded there by J. Kennedy.

Spokane Falls & Northern.—H. A. Jackson has been appointed Commercial Agent of the Great Northern Ry., & General Freight & Passenger Agent of the Spokane Falls & Northern Ry. at Spokane, Wash., vice C. G. Dixon, who died suddenly June 10 of heart disease. Mr. Dixon was born at Indianapolis, Ind., in 1854, & entered railway service in 1883 as Assistant District Passenger Agent of the Cincinnati, Indianapolis, St. Louis & Chicago, which position he held for a number of years. In 1892 he went to the Great Northern as Travelling Freight & Passenger Agent of the coast lines, & was City Passenger & Ticket Agent of the same road at Seattle, Wash., from May to Dec., 1893, when he was appointed General Agent at Spokane. On Aug. 10, 1898, he was appointed General Freight Agent & General Passenger & Ticket Agent of the Spokane Falls & Northern, in addition to his duties with the Great Northern.

Mainly About People.

J. R. Joughins, Mechanical Superintendent of the Intercolonial, has gone with his family on a trip to Virginia.

Major Girouard, Chief of the British Government Railways in Egypt, is expected in Montreal in Aug. to visit his father.

L. A. Hamilton, Land Commissioner, C.P.R., Mrs. & Miss Hamilton, have returned to Winnipeg after a 5 months' European trip.

A. D. Hewat, until recently General Passenger Agent of the Dominion Atlantic Ry., died at Annapolis, N.S., June 28, of consumption.

Lord Strathcona has offered \$10,000, \$15,000 or \$20,000 if necessary towards the \$100,000 fund which is being raised for Sir Wilfrid Laurier.

F. L. Wanklyn, Manager Montreal Street Ry., has purchased the summer residence of

the late H. Abbott, Q.C., at Ste. Anne de Bellevue, Que.

Roadmaster Bruce, of the G.T.R., at Sarnia, had a shoulder dislocated & his head injured by being thrown from a gasoline velocipede near Sarnia recently.

At the recent convention of the Association of American Railway Accounting Officers in Montreal, I. G. Ogden, Comptroller C.P.R., was elected 1st Vice-President.

B. D. Caldwell has resigned the chairmanship of the Western Passenger Association at Chicago to become General Traffic Manager of the Delaware, Lackawanna & Western Ry.

T. Tait, Manager C.P.R. Eastern Lines, is expected to return to Montreal from England early in July. Mrs. Tait & her father, G. R. R. Cockburn, are staying at Ocoquit, on the Maine coast.

Sir Wm. Van Horne started railroading at 14, Mr. Shaughnessy at 16 & Mr. McNicoll at 13. Evidently they have to be caught young if they are going to succeed at the business.—Montreal Herald.

The Hamilton, Ont., Board of Trade seems partial to ex-railway men. S. Barker, formerly of the Northern Ry., is its President; and C. Stiff, formerly of the Great Western, is Secretary-Treasurer.

R. G. Reid, proprietor of the Newfoundland Ry., who has been spending the winter in Northern Africa, has returned to Montreal accompanied by Mrs. & Miss Reid, & is greatly benefited in health.

On leaving St. John, N.B., recently for Toronto, A. H. Notman, Assistant General Passenger Agent of the C. P. R., was presented with a handsomely fitted suit case by the St. John Passenger staff.

On leaving the service of the G.T.R. recently J. A. Sheedy, who had been Master of Bridges & Buildings of the Middle Division for a little over a year, was presented by the staff with a silver tea service, a cabinet of silver & a pair of gold cuff links.

J. Mooney, Superintendent of the Brockville, Westport & Sault Ste. Marie Ry., had his horse run away on May 16. The animal went for 5 miles before the buggy collided with a telegraph pole. Mr. Mooney, who is 75 years of age, has suffered very much from the shock.

J. M. Graham, at one time General Manager of the Northern Pacific & Manitoba Ry., with headquarters at Winnipeg, & latterly General Superintendent of the Trans-Ohio

divisions of the Baltimore & Ohio, has been appointed Chief Engineer of that system, with headquarters at Baltimore, Md.

President Sir C. Rivers Wilson, of the G.T.R., sailed from Liverpool on the Lucania, June 5, & arrived in Montreal June 11, accompanied by Lady Wilson, A. Hubbard, one of the directors, & W. Lindley, Secretary of the Co-General Manager Hays & Traffic Manager Reeve met them at New York. They are now making a trip over the system.

Alex. Milloy, formerly Traffic Manager of the Richelieu & Ontario Navigation Co., died in Montreal June 1, aged 77. He was born in Kintyre, Argyleshire, Scotland, & went into the service of the Canadian Steamboat & Mail Coach Co. in 1840. In 1875 this Co. was amalgamated with the R. & O. N. Co. Mr. Milloy only resigned from the latter Co. a little over a year ago.

H. B. Plant, President of the Plant Investment Co., controlling the great system of railways and hotels in Florida, the steamers between Tampa & Havana & the Canada Atlantic & Plant Steamship Co., operating steamers between Boston, Nova Scotia & Prince Edward Island, died suddenly in New York, June 23, aged 80. He was engaged in business till within a few hours of his death.

Sir Wm. Van Horne went to his summer residence at St. Andrews, N.B., recently, to make arrangements for spending the summer there. A Montreal paper says Sir Wm., when not actively engaged in railroading, is a country gentleman of the best type, & devotes much attention to farming pursuits, to the rearing of the choicest cattle, & the finest breeds of horses; & he will be able to gratify his tastes in these directions more than he has been in the past.

Some changes are said to be imminent in the Mechanical Department of the C.P.R.'s Western Lines. It is said to be probable that W. Cross at present General Master Mechanic of the Western & Pacific Divisions, will be appointed Assistant Mechanical Superintendent, & that he will have special charge of the Winnipeg shops, & that a Master Mechanic will be appointed for the Western Division. It is also thought some re-arrangement of the engineering staff of the Western Lines is in contemplation.

T. Ridgedale has been appointed Canadian Freight & Passenger Agent for the Chicago Great Western Ry., with headquarters at Montreal. He entered the G.T.R. service in 1868, & after filling several positions, the last

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of which was that of Travelling Passenger Agent, he resigned to accept the Canadian passenger agency of the Wisconsin Central lines, which he held for about 8 years, when it was closed. He then entered the service of the Chicago & Alton Ry.'s General Passenger & Ticket Department, from which he has just resigned.

Sir Wm. Van Horne is establishing a large farm near East Selkirk, Man. F. W. Barber, of Georgetown, Ont., has been appointed Superintendent. A residence & large farm buildings will be erected at once. Sir Wm. says his chief object in starting the farm is to stimulate the cultivation of the unoccupied lands in the vicinity & about Winnipeg by showing what results can be obtained from them. The farm extends about 5 miles along the railway on both sides, & is so situated that he thinks it will, with proper cultivation, make a good advertisement.

J. W. Brewster, formerly agent for the C.P.R. at Trail, B.C., & J. H. Sinclair, his assistant, have been found guilty of embezzle-

ment of the funds of the Co., & sentenced respectively to 15 & 30 months' imprisonment with hard labor. Brewster's sentence was somewhat mitigated, as the evidence showed he was largely influenced by Sinclair. The latter fled to Spokane, but was extradited, whereas the former was arrested in Trail shortly after the discovery of the shortage. Strenuous efforts were made by Brewster's friends to effect a settlement with the C.P.R., but without avail, as the case had been put in the hands of the Crown Attorney.

Major Bennett, of Toronto, who died at Parkhill, Ont., early in June, was born in Cornwall, Eng., in 1823, being the only son of Capt. Bennett, & nephew of Sir John Bennett, of London. When a boy he was apprenticed to Sir John Rennie to learn engineering. He came to this country in 1846 & took the management of the Northern Ry. shops at Toronto. In 1871 he was appointed Deputy Collector of Inland Revenue. He was captain of no. 3 company, Q. O. R., at the Fenian raid in 1866. He was an Orangeman, held the office of Grand Master of Ontario West, & was also elected Vice-President of the Triennial Council of the World. He was also a Freemason.

Before leaving Toronto for Winnipeg, to assume the General Passenger Agency of the C.P.R. Western lines, C. E. McPherson received numerous marks of appreciation. His fellow-members of the Toronto Club tendered him a dinner, the staffs of the passenger & ticket offices presented him with a cut glass liqueur set, and a number of personal friends gave him a gold watch. His farewell card, a clever adaptation, read:

"To the west, to the west! to the land of the free.
Where the mighty Red River rolls down to the sea:
Where a man is a man if he's willing to toil
And the humblest may gather the fruits of the soil.
Good-bye."

The career of Lucius Tuttle, President of the Boston & Maine, furnishes an excellent example of how ability & hard work will come to the front in the traffic department. Mr. Tuttle began railway life in 1865, when he was 19 years old, as a clerk in the ticket office of the Hartford, Providence & Fishkill R.R. He became General Ticket Agent of the road in the following year & held that position for 12 years, until in 1878 he became Assistant General Passenger Agent of the New York & New England. In Feb., 1879, he was made General Passenger Agent of the Eastern Railway, & in 1885 went to the Boston & Lowell with the same title. In 1887 he became Passenger Traffic Manager of the Canadian Pacific, which place he left in 1889 to take the Commissionership of the Passenger Department of the Trunk Line Association. In the following year he was appointed General Manager of the New York, New Haven & Hartford, & in Oct., 1893, was elected to the Presidency of the Boston & Maine, which position he still holds. It is evident from the foregoing that Mr. Tuttle must be thoroughly

pany may advance money, & the business of the railway be resumed.

Canadian Pacific.—The Imperial Privy Council has reversed the judgment of the courts of British Columbia, & has granted an injunction restraining Parke & Pritchard, owners of a ranch in the Thomson River Valley, from irrigating in a manner injurious to the C.P.R. track.

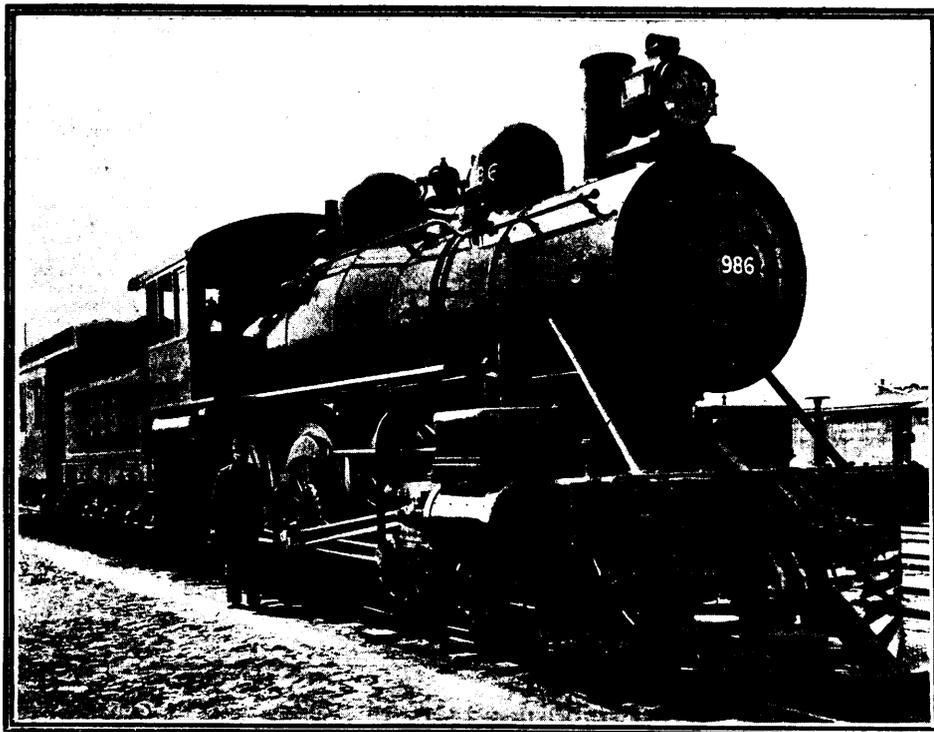
The Woods Motor Co. has been organized in New Jersey, with a capital of \$1,000,000, to manufacture automobiles under the patents of C. E. Woods. A factory will be established in Canada. F. Nicholls, of Toronto, is Vice-President of the Co., & H. P. Dwight, President of the G.N.W. Telegraph Co., is one of the directors.

The Hudson's Bay Route.—Sir Wm. Van Horne, in a recent interview in Winnipeg, referred to the question of a railway to Hudson's Bay, & said that though he did not think that its construction would be easily attained or that it would soon be begun, yet he did not doubt its ultimate construction without

regard to its usefulness as a through route of transportation. With reference to its value as a route of grain transportation, Sir Wm. was unable to give other than an adverse answer, saying that until a feasible scheme was devised to open up the straits to navigation for a longer season than is at present possible, the proposal was untenable. "The real trouble," he said, "is not in Hudson's Bay itself, but in the fact that ice packs drift in from Fox & Inlet block Davis Straits."

The Chilkoot Pass Route to the Yukon, which is composed of the lines of the Chilkoot R.R. & Transportation Co., the Alaska Ry. & Transportation Co. & the Dyea-Klondike Transportation Co., is a system of aerial tramways or cables over

the Chilkoot Pass, Alaska. These cables extend from Canyon City, at the entrance to Dyea Canyon, over the summit of the pass to Crater Lake, a mile beyond. Freight is transported on these tramways by means of buckets suspended from a stationary cable & propelled by a traction cable. The weight limit of a single article is about 400 lbs., & the length limit about 40 ft. The cables are propelled by 2 power plants, 1 at Canyon City & the other at Sheep Camp, about half-way from Canyon City to the Summit of the Pass. From Dyea to Canyon City, freight is transported by waggon, & from the terminus at Crater Lake to Lake Lindeman, the head water of the Yukon River, in part by pack horses & in part by boat, on a chain of 3 or 4 small lakes. At Lake Lindeman the freight is placed on barges & transported one mile to Lake Bennett, where the Yukon steamers leave for Dawson City. The distance from Dyea to Lake Bennett is about 30 miles. The average time consumed in transit is about 3 days, but this time is sometimes extended by reason of storms.



GRAND TRUNK 10-WHEELED PASSENGER LOCOMOTIVE.

familiar with traffic affairs in New England, while his former connection with the C.P.R. of course peculiarly adapts him to his present position with a road with which it has such close association. Apart from his experience, however, Mr. Tuttle is a man of great natural ability, of a vigorous & forceful personality, & is cordially liked by those who know him well.—Railway Age.

The Hamilton, Ont., Incline Ry., at the east end of the city, with about 40 acres of land adjoining it on the mountain, will be sold July 14 under mortgage.

Prescott Elevator Co.—In our last issue the capacity of this Co.'s elevator at Prescott, Ont., of which an illustration was given, was stated as 1,000 bus. Of course, the mistake was obvious. The capacity is 1,000,000 bus.

Montreal Incline Ry.—It is said that holders of mortgages on the East End Incline Ry. are pressing for their money, & that the property may be sold. The cars have not been running since last fall. A Montreal loan com-

Grand Trunk Equipment.

The 10-wheel passenger locomotive illustrated on page 167 is the first of an order for 6 recently turned out at the G.T.R. shops, Montreal. Following are the general dimensions :-

CYLINDERS.—Diameter	20 in.
Stroke	26 in.
BOILER.—Diameter	62 in.
Working pressure	200 lbs.
FIRE BOX.—Material	Steel.
Length	120 in.
Width	40 3/8 in.
Depth, front	76 3/4 in.
HEATING SURFACE.—Grate area	33.43 sq. ft.
DRIVING WHEELS.—Diameter, outside	72 in.
Journals	9 1/2 x 12 in.
WHEEL BASE.—Driving	15 ft. 8 in.
Total engine	26 ft. 11 in.
Total engine & tender	53 ft. 9 in.
WEIGHT.—Total engine	166,000 lbs.
Total engine & tender	268,000 lbs.
TENDER.—Tank capacity	4,500 gallons.

These monster locomotives are 64 3/4 ft. long & in order to pass under the bridges are 14 3/4 ft. high.

The Co. is also building 6 moguls for freight service, the general dimensions being as follows :-

CYLINDERS.—Diameter	20 in.
Stroke	26 in.
BOILER.—Diameter	62 in.
Working pressure	200 lbs.
FIRE BOX.—Material	Steel.
Length	120 in.
Width	40 3/8 in.
Depth, front	73 3/4 in.
HEATING SURFACE.—Grate area	33.43 sq. ft.
DRIVING WHEELS.—Diameter, outside	62 in.
Journals	9 1/2 x 12 in.
WHEEL BASE.—Driving	15 ft. 8 in.
Total engine	24 ft. 1 in.
Total engine & tender	50 ft. 11 in.
WEIGHT.—Total engine	153,000 lbs.
Total engine & tender	253,000 lbs.
TENDER.—Tank capacity	4,500 gallons.

A little while ago the Co. called for tenders for 500 box cars, but the prices quoted were so high that they will be built at its Montreal shops.

The Co. has recently placed on the day run between Montreal & Toronto, both ways, 2 magnificent vestibuled trains, entirely built in the Montreal shops; each train consists of parlor car, composite cafe-parlor car, 1st class car, & composite baggage & 2nd class car, with compartment for smokers. The parlor compartment of the composite cafe-parlor car has 10 revolving chairs covered in peacock blue plush, & 2 wicker chairs. Large windows are another feature. The dining-room has seat-

ing capacity for 12. It is handsomely carpeted, & furnished with leather-covered movable chairs. The kitchen, pantry, refrigerator, wine locker, gas range & buffet, are arranged in a most compact way with a view to quick service & a saving of space. At the further end of the car are the smoking room & men's saloon with large open lavatory. The smoking room is supplied with 5 arm chairs & a sofa, the latter accommodating 3 persons.

Intercolonial Equipment.

Following is a list of orders placed during the past few months for I.C.R. equipment, most of which has already been delivered :

1 locomotive, with Cleveland cylinders, built by Baldwin Locomotive Works; 5 express locomotives.

8 sleeping cars, 4 dining cars, 10 1st class cars, 9 2nd class sleepers, 6 baggage cars, the latter by Rhodes, Curry & Co., Amherst, N.S.; 4 postal and baggage cars, by Rhodes, Curry & Co.

100 flat cars, & 250 box cars, by Rhodes, Curry & Co., also 150 box cars.

The Dominion estimates for 1899-1900 provide \$343,000 for rolling stock chargeable to capital, against \$600,000 in 1898-9. To apply air brakes to freight cars \$20,000 is provided, the same as for the current year. \$5,000 is provided for machinery at Moncton. The P.E.I. Ry. is to get \$8,000 for rolling stock, against \$3,500 this year.

Canada Atlantic Equipment.

The Ottawa, Arnprior & Parry Sound Ry. has had a number of locomotives for both passenger & freight service built at the Baldwin Locomotive Works, Philadelphia, during the past few months. No. 631, illustrated on page 169, has been in service for some little time. Following are the general dimensions of some of the locomotives :

FOR FAST PASSENGER SERVICE.

CYLINDERS.—Diameter, (high pressure)	13 in.
(low pressure)	22 in.
Stroke	26 in.
Valve	Balanced Piston
BOILER.—Diameter	60 in.
Thickness of Sheets	11-16 in.
Working Pressure	200
Fuel	Soft Coal.
FIREBOX.—Material	Steel.
Length	103.3-16 in.
Width	42 1/2 in.

IREBOX.—Depth	F, 71 1/2 in.; B, 69 in.
Thickness of Sheets, sides	5-16 in.
back	5-16 in.
crow	3/8 in.
tube	1/2 in.
TUBES.—Number	20
Diameter	14 ft.
Length	13 ft.
DRIVING WHEELS.—Diameter Outside	78 in.
of Centre	72 in.
Journals	8 x 12 in.
ENGINE TRUCK WHEELS.—Diameter	36 in.
Journals	5 1/2 x 10 in.
TRAILING WHEELS.—Diameter	54 in.
Journals	8 x 12 in.
WHEEL BASE.—Driving	6 ft. 9 in.
Total Engine	25 ft. 6 in.
Rigid	13 ft. 9 in.
TENDER.—Diameter of Wheels	36 in.
Journals	5 x 9 in.
Tank Capacity	6,000 gals.

FOR FREIGHT SERVICE.

CYLINDERS.—Diameter, (high pressure)	14 in.
(low pressure)	24 in.
Stroke	26 in.
Valve	Balanced Piston
BOILER.—Diameter	60 in.
Thickness of Sheets	5/8 & 11-16 in.
Working Pressure	180
Fuel	Soft Coal.
FIREBOX.—Material	Steel.
Length	102 1/2 in.
Width	42 in.
Depth	F, 69 1/2 in.; B, 58 1/2 in.
Thickness of Sheets, sides	3/8 in.
back	3/8 in.
crow	1/2 in.
tube	1/2 in.
TUBES.—Number	20
Diameter	14 ft.
Length	14 ft. 4 1/2 in.
DRIVING WHEELS.—Diameter outside	56 in.
of centre	50 in.
Journals	8 1/2 x 11 in.
ENGINE TRUCK WHEELS.—Diameter	30 in.
Journals	6 x 10 in.
WHEEL BASE.—Driving	13 ft.
Total Engine	24 ft. 9 in.
WEIGHT.—On Drivers	116,850 lbs.
On Truck	33,930 lbs.
Total Engine	150,780
TENDER.—Diameter of Wheels	33 in.
Journals	5 x 9 in.
Tank Capacity	4,000 gals.

FOR FREIGHT SERVICE.

CYLINDERS.—Diameter (high pressure)	15 1/2 in.
(low pressure)	26 in.
Stroke	30 in.
Valve	Balanced Piston
BOILER.—Diameter	68 in.
Thickness of Sheets	11-16 x 3/4 in.
Working Pressure	180
Fuel	Soft Coal.
FIREBOX.—Material	Steel.
Length	120 1/2 in.
Width	42 in.
Depth	F, 72 1/2 in.; B, 69 1/2 in.
Thickness of Sheets, sides	3/8 in.
back	3/8 in.
crow	1/2 in.
tube	1/2 in.



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Annual Capacity 1,000.

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SINGLE EXPANSION AND COMPOUND LOCOMOTIVES.

Broad and Narrow Gauge Locomotives; Mine and Furnace Locomotives; Compressed Air Locomotives; Steam Cars and Tramway Locomotives; Plantation Locomotives; Oil Burning Locomotives.

Adapted to every variety of service, and built accurately to gauges and templates after standard designs or to railroad companies' drawings. Like parts of different engines of same class perfectly interchangeable.

Electric Locomotives and Electric Car Trucks with Approved Motors.

Burnham, Williams & Co., Philadelphia, Pa., U.S.A.

Sydney & Louisburg Equipment.

This Co. has recently placed an order for 3 freight locomotives, 2 moguls & 1 consolidation, the principal dimensions being as follows:

	Consolidation.	Mogul.
Gauge.....	4 ft. 8½ in.	4 ft. 8½ in.
Fuel.....	Bituminous coal.	Bituminous coal.
Cylinders.....	22 in. x 28 in.	19 in. x 26 in.
Drivers.....	55 in. diam.	55 in. diam.
Rigid wheel base.....	36 ft. 3 in.	13 ft. 2 in.
Total wheel base.....	33 ft. 6 in.	33 ft. 6 in.
Weight in working order, 243,000 lbs.	172,000 lbs.	122,000 lbs.
" on drivers.....	172,000 "	122,000 "
Tubes.....	348, 2 in. diam., 13 ft. 6 in. long.	236, 2 in. diam., 12 ft. long.
Firebox.....	114 in. x 41½ in.	90 in. x 41½ in.

The Co. has ordered 3 passenger cars & 12 flat cars from Rhodes, Curry & Co., Amherst, N.S., & has also placed an order for 50 steel coal cars of 100,000 lbs. capacity.

Equipment Notes.

The Esquimalt & Nanaimo Ry. has ordered a 10-wheel locomotive from the Baldwin Works.

The Bay of Quinte Ry. recently placed an order for 5 box cars.

The Quebec Central Ry. is having built two 8-wheel passenger engines with 18 in. x 24 in. cylinders.

repair no more jimmies." The General Superintendent of the Lehigh Valley informs us that this is not correct. The 4-wheel coal cars were not sold to a Canadian road, but to a Detroit car company which proposes cutting them down & utilizing the scrap material. He understands the New Jersey Central has also disposed of its similar cars to car-builders, & not to a Canadian line.

The C.P.R. Co.'s saw-mill at Fernie, B.C., has been swept away by a freshet on Elk River.

Canadian Freight Association.—At a meeting of the Tariff Committee at Toronto, June 1, special rates & arrangements 1,605 to 1,625 were agreed to.

R. Marpole, General Superintendent C.P. R., Vancouver, writes:—"THE RAILWAY & SHIPPING WORLD proves very interesting indeed & contains much useful information pertaining to railway matters. If there is anything I can do to encourage or further the interests of your paper please command me."

The Transportation Question.—At the recent annual meeting of the Bank of Commerce, General Manager Walker, in referring to what he termed the ever-pressing question of transportation, said: "It would be well for all of us to consider that we have ahead of us responsibilities in transportation not only

TUBES.—Number.....	321
" Diameter.....	2 in.
" Length.....	13 ft. 6 in.
DRIVING WHEELS.—Diameter Outside.....	56 in.
" of Centre.....	50 in.
" Journals.....	8½ x 11 in.
ENGINE TRUCK WHEELS.—Diameter.....	30 in.
" Journals.....	6 x 10 in.
WHEEL BASE.—Driving.....	15 ft. 1 in.
" Total Engine.....	23 ft. 9 in.
WEIGHT.—On Drivers.....	164,585 lbs.
" On Truck.....	19,325 lbs.
" Total Engine.....	183,910 lbs.
TENDER.—Diameter of Wheels.....	33 ft.
" Journals.....	5 x 9 in.
" Tank Capacity.....	4,500 gals.

A large amount of work is being done at the Canada Atlantic shops in Ottawa. Twenty-five stock cars have recently been completed, 25 refrigerator cars are being built & 500 box cars have been commenced at.

Entirely new trains, with thoroughly up-to-date cars, have been put on between Ottawa & Montreal, both ways.

We are officially informed that the report recently published in some daily papers to the effect that this Co. had built car shops in Ottawa was unfounded, as a start has not yet been made at the permanent shops. The report probably arose from the erection of some temporary buildings, put up for the construction of a lot of freight cars pending the construction of the permanent shops. The first temporary building is to be used as an erecting shop and is 450 x 80 ft. The second one, which contains the machinery, is 225 x 90 ft.



BALDWIN LOCOMOTIVE FOR OTTAWA, ARNPRIOR AND PARRY SOUND RAILWAY.

Canadian Pacific Equipment.

There are being built at the Montreal shops six 10-wheel passenger engines, of which the following are the principal dimensions:—Weight in working order about 140,000 lbs.; cylinders 19 by 24 ins.; boiler of Belpaire type, with working pressure of 200 lbs.; fire-box, 9 ft. 1⅞ ins. long, 3 ft. 6⅜ ins. wide, 5 ft. 6½ ins. deep at front, & 4 ft. 3 ins. at back; heating surface, tubes, 1,717 sq. ft.; steel fire-box, 155 sq. ft.; total, 1,872 sq. ft.; tender frame, cast-steel driving wheel centres. Two simple consolidation engines are being built with cylinders 20 x 26 ins., & 57 in. driving wheels, also 8 compound consolidation engines, cylinders 21 & 33 x 26 ins.; weight about 150 lbs. An order has also been placed outside for 6 large engines.

At the Montreal shops are being built 4 1st class cars, 1 smoking car, 1 2nd class car, 5 mail & express cars, & 5 baggage & smoking cars, all 57 ft. 2 ins. long, also 2 parlor cars 70½ ft. long.

At the Perth shops there are being built 10 ventilated fruit cars, 50 ft. long, 40 stock cars of 80,000 lbs. capacity, & 500 box cars of 60,000 lbs. capacity.

Under the title of "Locomotive Data," Burnham, Williams & Co., Baldwin Locomotive Works, Philadelphia, have issued a handy little book for the pocket which contains a lot of valuable information & tables compressed into a small compass.

The Canadian Northern Ry. has recently bought 3 consolidated engines, cylinders 20 x 24 ins., with 50 in. driving wheels, for freight traffic, & 4 1st class coaches, standard size, finished inside in cherry, with plush seats; orders have also been placed for a number of box & platform cars.

The Minister of Railways recently stated in the House of Commons that no private car had been purchased or constructed by the Department of Railways since July 1, 1896, but the official car Montreal had been purchased for the use of the Traffic Manager at a cost of \$4,500.

The Railway World, Philadelphia, recently published the following item: "To avoid the expense of putting patent couplers on their six-ton jimmy cars, the Lehigh Valley & Jersey Central have sold their thousands of these cars to a Canadian road & as soon as possible will use only gondolas, equipped as the law requires. Shops have instructions to

pressing, but requiring us to hold wider views of our national destiny than we are in the habit of holding. Russia, according to a recent report, had in 1897 about 25,000 miles of railroad in operation, against our 16,000 miles, & there were in 1898, according to the Journal de St. Petersburg, in course of construction & authorized to be commenced shortly, over 8,000 miles. Of this total, additions to over 20 existing lines of over 3,700 miles are actually under construction. In Canada we are not building more than 200 or 300 miles of new railway per annum. Russia, therefore, with only 50% more railway in 1897, is building at more than 10 times the rate of Canada. There is, perhaps, not much value in comparing two countries, one with 5,000,000 people, & the other with over 100,000,000, but territorially there is certainly some room for comparisons. Clearly we need more railways, more inland ships, & on entirely new models, quicker transportation at sea, deeper canals, better terminal facilities at our seaports. If we were carrying our own products to the European countries where they are consumed, these needs would still exist, but they would not be so pressing, their absence would not be so much in the nature of a national shame."

Passenger Traffic Matters.

The Ottawa & New York Ry. has increased its service to 3 trains each way daily between Ottawa & Cornwall.

Tourist travel to Cape Breton will be very heavy this summer. Newfoundland will also get a good many tourists.

On July 1 the Northern Pacific will reduce passenger rates on its branch lines in Manitoba from 4c. to 3c. a mile.

I. C. R. sleepers now run through between Halifax & Ottawa, going over the G. T. R. & Canada Atlantic west of Montreal.

Passenger rates between Victoria, B.C., & Dawson, Yukon, via St. Michael's, have been raised to \$200 1st class & \$150 2nd.

Some months ago the Northern Pacific put on a second daily train between St. Paul & the Pacific Coast, but has withdrawn it, business not having proved sufficient.

The members of the Canadian Ticket Agents' Association, who will meet at Winnipeg in Oct., will return through the U.S., going south from Winnipeg over the Northern Pacific.

The G. T. R., the Maine Steamship Co., & the Lehigh Valley R.R. ticket offices have resumed business in new & large quarters at the corner of Broadway & Reade St., New York.

The C.P.R. Passenger Traffic Department is equipping a number of its ticket agencies with handsome enamelled iron signs, in blue & white, for outdoor use, supplied by the Acton Burrows Co., Toronto.

A recent number of the New York Outlook contains an article by Geo. Kennan, in which he refers to the advertising of Canada in distant lands by the C.P.R., mentioning more especially the case of a Cuban school, where the pupils got their knowledge of geography from one of the Co.'s charts.

"Summer Homes in the green hills of Vermont, islands & shores of Lake Champlain, Adirondacks & Canada," is a charmingly written, well printed & beautifully illustrated pamphlet of over 100 pgs., describing the summer resorts reached by the Green Mountain route, the Central Vermont Ry., from the Passenger Department of which it can be obtained.

The C.P.R. has imported three of Switzerland's most experienced & intrepid Alpine climbers, & has sent them out to help visitors tackle the Rockies in the vicinity of Banff, The Lakes in the Clouds & the Great Glacier. They are sturdy, picturesque fellows, wearing

grey suits & broad-brimmed hats, set off with black cock feathers. They are decorated with the gold & enamel medal of the Alpine Club & other trophies of their calling.

"The Montreal Witness pays a compliment to Sir W. Van Horne as the author of what used to be called in a half-jocular way, Parisian politeness, the courteous, & even kindly, treatment of its passengers, which has been the rule of conduct from the first among officers & employes of this Co., & has resulted in reforms in the same matter in other companies serving the public. We think that the compliment is well deserved, & that it is largely due to the officers of the Co. that passengers travel in much greater comfort to-day than was obtainable some years ago."—Toronto Globe.

W. A. D. Lees, an Ottawa barrister, who has a branch office in Russell, 20 miles distant, which he visits once a week, is suing the Ottawa & New York Ry. for \$49.55 for alleged excessive charges on tickets & \$148.65 for damages. The return fare to Russell, 20 miles, is \$1.20. The Co. has stopped giving 2nd class fares, but maintains 2nd class cars on the line. Mr. Lees says the Co. has refused to give him commutation tickets, & charges him at the rate of 3½c. a mile. He enters his action under clauses of the Railway Act dealing with unjust charges, & says the tariff of rates charged by the Co. has not been approved by the Governor-in-Council, as required by the Act, & consequently the Co. has no right to charge fares.

From June 5 to 12 General Passenger Agent Davis, of the G.T.R., took about 30 of the Co.'s principal ticket agents & a few others on an educational trip from Toronto to Lakes Simcoe & Couchiching, the Muskoka Lakes, the Lake of Bays, The Magnetawan River & Georgian Bay. On every hand were seen evidences of additional & improved accommodation for tourist travel, which will undoubtedly be very large to all that region this year, as the result of the elaborate & extensive advertising the G.T.R. has done. This year the Muskoka Express from Toronto will run through to Scotia Jct., on the O.A. & P.S. Ry., instead of only to Muskoka wharf. Mr. Davis says he believes that the Muskoka business will increase so much that in a short time the G.T.R. will receive \$1,000,000 a year out of it.

The most important recent event in passenger matters is the inauguration by the C.P.R. of its fast service between Montreal & Vancouver. Heretofore the journey has taken 5 days, now it has been reduced to 99 hours &

45 minutes, & a daily transcontinental service takes the place of the 6 days a week trains, the daily service not having hitherto extended east of Winnipeg. The increased & quicker service has been rendered necessary by the congestion of through travel, & will undoubtedly largely augment the Co.'s business. Montreal is left at 9.30 a.m., Vancouver being reached at 1.15 p.m. on the 4th day. Vancouver is left at 1.15 p.m., Montreal being reached at 6.10 p.m. on the 4th day. It must be remembered that there are 3 changes in time between Montreal & Vancouver of 1 hour each at Fort William, Brandon & Laggan, so that when it is 9.30 a.m. in Montreal it is 6.30 a.m. in Vancouver. The new service was inaugurated June 18, trains starting from Montreal & Vancouver. They crossed at Burrows, Assn., 1,667 miles from Montreal & 1,239 miles from Vancouver, on June 20, & reached the terminal points promptly on time on June 22. The distance between Montreal & Vancouver is 2,906 miles. Of course but few stops are made by the Imperial Limited, & the local travel is provided for by additional train service. The new service places Vancouver within 10 days of London, Eng., & Japan within 3 weeks of London, & has attracted great attention in England. Besides its practical utility, it will prove a most valuable advertisement for the Co.

Freight Traffic Matters.

The Transcontinental Freight Rates Bureau has appointed inspectors at Vancouver & Victoria, B.C., to enforce uniform freight rates.

The Sun Oil Refining Co. has instituted proceedings against the G. T. R., to recover \$184,86, alleged to have been collected illegally in freight rates on oil under the discriminatory tariff.

The offices of the Central Vermont Ry., in the Board of Trade Building, Montreal, have been abolished, & all matters pertaining to freight traffic affecting Montreal will hereafter be managed by F. J. Watson, Division Freight Agent G. T. R., Board of Trade Building, Montreal.

The statistician of the New York Produce Exchange gives notice that from July 1 the stock of grain at Fort William & Port Arthur, Ont., will be included in the report of the visible supply. The entire change contemplated is to drop Albany, Oswego & Cincinnati & add Fort William, Port Arthur, New Orleans & Galveston. The change is significant of the wonderful development of the Canadian west and the progress of the new south.

Edward L. Drewry

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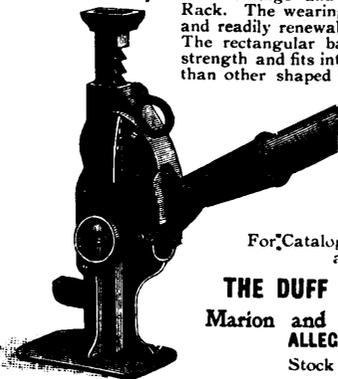
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THE BARRETT TRACK JACK.

Recommended as a standard by the

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These Jacks are made with Malleable Iron Frames, Steel Pawls, Machinery Steel Bearings and Pivots, forged Steel Rack. The wearing parts are removable and readily renewable at slight expense. The rectangular base gives great lifting strength and fits into close quarters better than other shaped stands. Adaptable to either high or low set loads.



No. 2 Automatic Lowering.

The Barrett Jack is the safest, best and strongest known to the railroad world to-day. Lifting capacity, 10 to 15 tons.

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Stock carried by
JAMES COOPER, Agent,
299 St. James St., Montreal.



No. 1 Trip.

The C.P.R. has made a reduction of from 20 to 40% in the rate for live stock shipments from the North West Territories to Kootenay points. The 40% reduction applies to live stock shipped from Macleod, & is due to the fact that former shipments from the southern points had to go round by way of Calgary, whereas now they go over the Crow's Nest road.

The customs complications until recently attendant on the shipment of merchandise from B. C. ports to Dawson, Yukon, will for the future be avoided by an arrangement recently concluded. The White Pass & Yukon Ry. Co. & the Canadian Development Co. have in conjunction put up the necessary security with the customs collector at Victoria, & have become bonded carriers, authorized to take dutiable goods through to Dawson without any customs detention.

The C. P. R. has given notice that in the shipment of bulk wheat from Fort William to Montreal for export by its steamers via Owen Sound, it will deliver to barges at Montreal or to ocean steamships (if the grain is loaded direct from the elevator to the steamer) the exact quantity of grain specified on the bill of lading, but will not assume any responsibility for any difference in outturn from the barges to the ocean vessel in the port of Montreal. On all rail shipments the Co. will deliver to barges or to steamers if alongside the elevators the actual inturn of the car & will not assume any responsibility for subsequent shortages.

Heavy reductions in rates have been made on the Western Division of the C.P.R., & on the Northern Pacific lines in Manitoba. From Winnipeg to Brandon 1st class freight has been reduced from 37c. to 20c. per 100 lbs.; 2nd class, 31 1-2c. to 18c.; 3rd class, 26c. to 16c.; 4th class, 19 1-2c. to 14c.; 5th class, 14 1-2c. to 9c. From Winnipeg to Brandon 1st class is reduced from 57c. to 37c.; 2nd class, 48c. to 32c.; 3rd class, 39c. to 27c.; 4th class, 29c. to 22c.; 5th class, 23c. to 16c. From Winnipeg to Portage la Prairie the reduction is, 1st class, 40c. to 20c.; 2nd class, 34c. to 18c.; 3rd class, 28c. to 16c.; 4th class, 21c. to 14c.; 5th class, 16c. to 9c.

The Michigan Central issued a tariff to take effect June 28, making the rate from Chicago to New York 13c. per 100 lbs. on oats, & 11c. per 100 lbs. on corn, the respective reductions being 4c. & 6c. The G.T.R. followed & made the cut. The M.C.R. holds that in making this cut it was only issuing a public tariff to meet the secret cutting of other systems. Mr. Loud, of the G.T.R., thinks the trouble will not last long, & that the sweeping cut will have the result of quickly restoring the rates to their old basis. The C.P.R. freight authorities state they do not propose to be dragged into this war, which is causing a good deal of bitterness in railway circles in Chicago.

G. T. R. Trackmen's Strike.

On May 22 the trackmen generally on the G. T. R. system struck work, giving as a reason that demands made on the management had not been complied with. The demands were as follows:—

That all permanent employes under a roadmaster be granted a raise of 25c. a day on present wages.

That all permanent employes are to be regarded as in line of promotion, seniority to have preference where merit & other qualifications are equal.

That all trackmen who resume duty after hours, as on Sunday, receive time and a half for the same.

That the permanent staff on each section be 1 man to every 2 miles of track, or fraction of 2 miles, not including foreman. All terminal points & yards to have 1 man to every 10

switches in addition to 1 man to every 2 miles of main line track.

That the wages of men employed on snow-ploughs & scrapers be:—Foremen, \$3 a day of 10 hours; trackmen, \$2 a day of 10 hours.

That the hours of work on Saturday be from 7 a.m. to 12 m., & from 1 p.m. to 4 p.m., with a full day's pay for the same.

That trackmen be given all reasonable leave of absence to attend monthly meetings, & a pass be given to attend the annual conventions.

That there shall be no discrimination against trackmen for being members of the Order of Railroad Trackmen, & when called to serve on boards of adjustment they shall be relieved without unnecessary delay for such purpose, but only on request of the Chairman of their Executive Committee.

During the strike the men, with very few exceptions, behaved in a most orderly way; some demonstrations took place but they were most likely got up by indiscreet sympathisers. On Saturday, June 3, as the result of conferences between General Manager Hays & two members of Parliament, Messrs. Taylor & Powell, the men's committee called the strike off & told the men to report on Monday, June 5, for work. On going to resume work the men were told they were out of the Co.'s service & would have to make formal application for re-employment. This they contended was a breach of faith & most of them resumed the strike which continued until June 19, when as the result of negotiations between J. Sutherland, M.P., representing the Dominion Premier & Mr. Hays they resumed work, the arrangement being that within 30 days Mr. Hays would discuss the whole question with a committee of 5 representing the trackmen, that none of the strikers be refused employment unless they had been guilty of acts of violence or of having used menacing language towards the new men or the foremen & others who refused to go out. During the strike the operating department did splendid work, trains being run on time & there being nothing to show that things were not going on in the usual way.

Railway Operating Matters.

It is said the Wabash will oil its road bed between Detroit & Buffalo.

Coke made in Halifax is being used experimentally on locomotives on the Dartmouth branch of the I.C.R., also between Halifax & Truro.

Negotiations are going on between the G.T.R. locomotive drivers & the management in regard to an increase in wages & some other matters.

The C.P.R. has been experimenting with an automatic mail catcher on its main line near Ottawa, with a view to use it on the Imperial Limited.

Negotiations in regard to the running of the C.P.R. trains over the I.C.R. between St. John, N.B., & Halifax appear to be at a standstill; at all events no progress has been made public.

A handsome set of the Acton Burrows Co.'s enamelled iron signs is now being used at Winnipeg station as sign boards to show the destinations of the various trains departing from the station.

Dominion Railway Legislation.

A bill introduced in the House of Commons by the Minister of Railways to amend the general Railway Act, proposes to amend section 90, relating to general powers of railway companies; to add as sec. 192a, a section providing that power under a special act to construct & use a bridge shall be exercised, subject to the provisions of the section to be added; and to substitute new provisions for

sec. 273, subsections 2 and 3, relating to trespasses, damages, etc. The most important features of the bill are the two last clauses.

One of these provides that if it appears to the Railway Committee of the Privy Council that for the public convenience a station should be located at any point on a railway subsidized by the Parliament of Canada or of any province in which the railway is constructed, the Committee (with the approval of the Governor-in-Council) may order the Co. to erect, maintain & operate a station at that point, & may define the accommodation to be provided in connection therewith, & the Co. shall obey every such order whether there be or be not any covenant on the subject in any agreement relating to the subsidy.

The last clause provides that the Railway Committee may, from time to time, make rules & regulations, not inconsistent with the Railway Act, for the operating of all or any of the railways subject to the jurisdiction of Parliament, & such rules & regulations shall supersede all previous rules & regulations made by the Co. operating any of such railways in so far as they differ therefrom. It will be remembered that the new rules framed by the G.T.R. on the basis of the rules of the American Railway Association were approved by the Government last year, but subsequently the Minister of Railways requested the management to defer putting them in force. It is now probable that they will not go into effect, but that their place will be taken by rules to be framed by the Railway Committee.

Vancouver Island Railway Projects.

Several schemes are on foot to give Vancouver Island, or more properly speaking the city of Victoria, improved connection with the mainland & connection with more railways. The matter is occupying the attention of a committee of 50 citizens, numerous meetings have been held, & the local press is devoting much space to the subject. One proposal comes from the Port Angeles Eastern Ry., which is projected from Port Angeles, Wash., on the Strait of Juan de Fuca. It was at first intended to build to a connection with the Port Townsend Southern Ry., which runs from Port Townsend southerly 27 miles & is owned by the Pacific Coast Co., but the projectors now talk of building to Olympia, Wash., 111 miles, where connection can be made with the Northern Pacific. The estimated cost of the line is \$2,250,000. Port Angeles is aiding the project to the extent of \$50,000, including land, & through the Squim Valley the Co. will receive timber grants. A survey of a portion of the route has been made & some six miles have been built. The promoters claim that Port Angeles has exceptional advantages as a port, being 80 miles nearer the Pacific than Seattle & 120 miles nearer than Tacoma, being naturally the 1st port of call from the Orient & having a splendid harbor. The promoters want to secure connection with Victoria, B.C., across the Strait, the distance from dock to dock being between 18 & 19 miles. They propose to operate a twin screw ferryboat with a capacity of 10 loaded freight cars, or 6 to 8 passenger coaches, with accommodation for broken freight, making one or more trips a day at the rate of about 9 miles an hour, also to operate a steel passenger steamer, to also carry fast freight & express matter, with a speed of 18 knots, to provide the necessary wharves & other accommodation for the traffic, & to give Victoria transcontinental connection at Olympia, for which the Co. asks a bonus of \$350,000 from the city of Victoria.

The Esquimalt & Nanaimo Ry. has also made a proposition to the city to operate a steam freight & passenger ferry between Vancouver & some point on the E. & N. line

most suitable for connection with the C.P.R. transferring freight to & from Victoria in the original cars, the service to be 1st class, freight to be handled promptly & at a saving of \$1 a ton on wharfage charges. For passenger service 2 round trips daily 6 days a week, each trip to be made in 3½ hours, & one trip by a relief steamer on the other day. The E. & N. management says the scheme would require a large outlay to provide facilities for transferring cars at Vancouver & at a point on its line, steam ferry, relief steamer, additional railway equipment, terminal buildings, &c., & asks the city for \$700,000 in cash & to secure about 19 acres of land situate on the Indian reserve at Victoria for terminal grounds, with exemption from taxation for 15 years, also to secure permission for the construction of a bridge across the harbor from the Indian reserve to the outer wharf, the Co. to convey its present terminal grounds & bridge to the city.

Other schemes are for the route advocated by the late Premier DeCosmos via Swartz Bay to the nearest point on the mainland, & for the utilizing of the Victoria & Sidney Railway as a link in the chain of communication.

Canadian Pacific Betterments, &c.

Mattawamkeag to Princeton.—Unconfirmed reports say that surveys are being made for a connecting line from the Co.'s main line at Mattawamkeag, Me., some 50 miles southeast to Princeton, Me., to connect with the St. Croix & Penobscot.

Windsor St. Station, Montreal.—The plans for the extension of this building have been practically settled on, & work is expected to start very shortly. (May, pg. 138.)

Owen Sound Branch.—Surveys are being made by H. W. D. Armstrong, C.E., on which to base estimates for the improvement of the northern portion of this branch. Between Rockford & Flesherton, some 28 miles, some of the present gradients are as much as 106 ft. to the mile, & it is the intention to reduce them to 43 ft. The line must necessarily cross the ridges of the country, the summit at Dundalk being 1,050 ft. above the track at Owen Sound station. To reach this summit in crossing these ridges the gradient cannot be reduced without deviations from the present alignment, unless by extensive excavations & filling. To overcome the present expense of haulage of freight, it is proposed to make some detours by building pieces of new line at different points, which will reduce the gradients to 43 ft. per mile. With the present gradient in places a consolidated locomotive

will not haul more than 400 to 450 tons, whereas with the proposed reduction of gradients it will be possible to haul 1,000 tons.

The Fort William Round House, recently destroyed by fire, is to be replaced by a much larger solid structure, which is likely to be located near the Co.'s coal wharves there.

Bonnet Lake Branch.—A survey is being made for this proposed branch from Tyndall, 29 miles east of Winnipeg, some 40 miles to Bonnet Portages, on the Winnipeg River a little north of Bonnet Lake. The decision of the Co. to build an hotel in Winnipeg is likely to hasten the construction of this branch, as there is magnificent clay on its route from which the brick for the hotel could be manufactured to great advantage. (May, pg. 139.)

Winnipeg Terminals.—We are officially informed that the Co. has decided on expenditures on its terminals at Winnipeg which will aggregate about \$850,000. At present the tracks at the station are laid on Point Douglas Avenue, which is owned by the city, so that it is impossible to close them in, & there is not sufficient track accommodation for the business, there being but 2 main tracks & 2 sidings. The present station building will be taken down & a number of tracks laid on its site, the whole to be covered in by a train shed. Immediately south of this a building for station purposes, divisional offices, etc., will be erected, then immediately south again will be reared a magnificent hotel structure which will far eclipse the Manitoba hotel destroyed by fire last winter & will have rooms for 250 guests. The western front of the hotel will be on Main St. & the south front on Fonseca St., along which it will run some 300 ft. Sir Wm. Van Horne has very kindly shown us a perspective view & floor plans of the hotel & station buildings which will be of Renaissance architecture.

The Winnipeg stock yards are to be entirely roofed over & provided with floors.

Winnipeg Cemetery Spur.—The Winnipeg City Council is endeavoring to get the Co. to build a spur from its main line to Brookside Cemetery & to run funeral trains.

Stonewall Branch.—It is not probable that any extension will be made this year beyond Teulon, to which point the branch was extended last year. The Parliamentary Railway Committee at Ottawa recently refused an application of the Co. for power to build from a point on this branch near Foxton to Sifton's Landing, on the east side of Lake Manitoba, on the ground that it would interfere with the Canadian Northern Ry., which has acquired the charter of the Winnipeg & Hudson's Bay Ry.

Snowflake Branch.—The Co. has let a contract for the construction of a short line from La Riviere, on its Pembina Mountain Branch, 112 miles southwest of Winnipeg, a distance of some 20 miles southerly to the Snowflake district. The southern terminus of the branch will be very near the International Boundary.

Deloraine to Waskada.—The Co. is applying to the Manitoba Legislature for power to build a line from or near Deloraine southerly & westerly, in townships 1, 2 & 3, to the western boundary of the province. This line would pass through the Waskada district, & much, if not all, of the right of way has already been secured. (May, pg. 139.)

Crow's Nest Pass Branch.—A large force of men are at work putting this line in shape & making improvements where the operation so far has shown them to be necessary. No decision has been announced as to the completion of the line from Kootenay Landing to Nelson. (May, pg. 139.)

Vancouver Station.—In our issue of Nov. last we published a perspective view of this building, & a pretty complete description of it supplied by the architect. As it is now practically completed, it may be of interest to reproduce another description of it, recently given by the Vancouver World:—The general style of the architecture is of the French Renaissance period, with the famous portal towers & huge roof that form the features of that model. Artistic & symmetrical as the building is, viewed from the city side, its imposing appearance is particularly striking as viewed from the harbor. The north side is perhaps somewhat plain, but it is from this splendid extent of architecture, set off by shapely bands & cornices of stone, that the building is gaining its reputation as a handsome structure. In appearance, as well as for general utility, the new station will be one of the finest railway buildings in Canada. In modern convenience it will be second to none in the country. Approaching the station from Cordova St. the design of the two towers & the archway is particularly striking. The west tower is round, & the east one octagonal. The width of the arch is over 40 ft., & there is some fine carved stonework at either end, giving the entrance in detail a very handsome appearance. The main floor opposite the entrance is one of the special features. For half the length of the building, about 100 ft., & nearly the same in width, are the general waiting-room & ticket office, the latter a circular box office in the centre. This corridor is very handsomely fitted up, & is flanked on one side by a special room for ladies. Toward the opposite end of the room is the ele-

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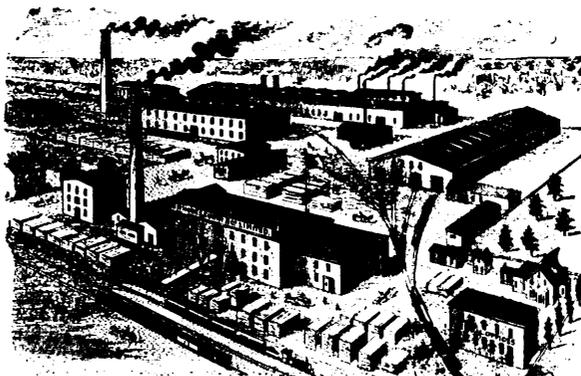
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vator. The design of the columns & windows, which give a very fine view of the harbor, is very attractive, & the appearance of the room is enhanced by the winding staircases that descend to the floors below. The office in one of the towers on this floor will be devoted to the commercial telegraph department, specially for business that will naturally come from people passing through the building; while the apartment in the west tower will be used as a parcel room. In the eastern wing of the main floor are the offices of the General Superintendent, & across the hall are those of the Local Treasurer, as well as those of the Accountant, Purchasing Agent & Car Accountant. The Local Superintendent's & the train despatchers' rooms occupy the east wing on the intersol floor, while in the main building is a bonded-warehouse for ship's stores. The officials of the steamship service will also be on the intersol floor, with offices overlooking the Inlet. All these are fitted with vaults & the other arrangements are of the most convenient kind. The corridor of the ground floor will be one of the features of the building, & every convenience will be furnished there for passengers coming in & going out. Two huge stairways lead from it to the main floor above, & all the fittings are very artistically arranged. In the west wing will be the Dominion Express office & the offices of the Land Commissioner & Auditor, while in the east wing a restaurant with smaller rooms attached, conductors' & baggage rooms, besides another bonded-warehouse for foreign baggage will occupy the space. The 2nd floor will be occupied by the Engineer's department, the 3rd as a telegraphic department, the 4th & 5th have not yet been allotted. The building is replete with modern conveniences. It will be heated by steam & the same plant will operate an electric generator, which will supply all the Co.'s offices on the wharves & elsewhere. There are a hydrant & hose appliances on each floor. The grounds will be neatly arranged in front of the building. There will be a retaining wall on the east side, & on the west it will be on the slope of the street, capped with granite & an iron fence. Along the track front & western end, there will be a covered walk 15 ft. wide. British Columbia material has to a large extent been used in the construction of this building, which is 200 ft. long by 80 ft. width. Even taking its size into consideration, the quantity of material is remarkable. Sixty-five carloads of stone were brought from Calgary, while 3,000 yards of granite were used. There are 13,500 yards of plastering in the building, & the 240 squares of slate were obtained from B.C. quarries. Two million bricks were used, these being purchased in Victoria.

New Westminster.—Work on the station building is progressing satisfactorily. If the city will grant certain concessions, it is said the Co. will make extensive improvements on the water front, including additional tracks, & a stone sea wall.

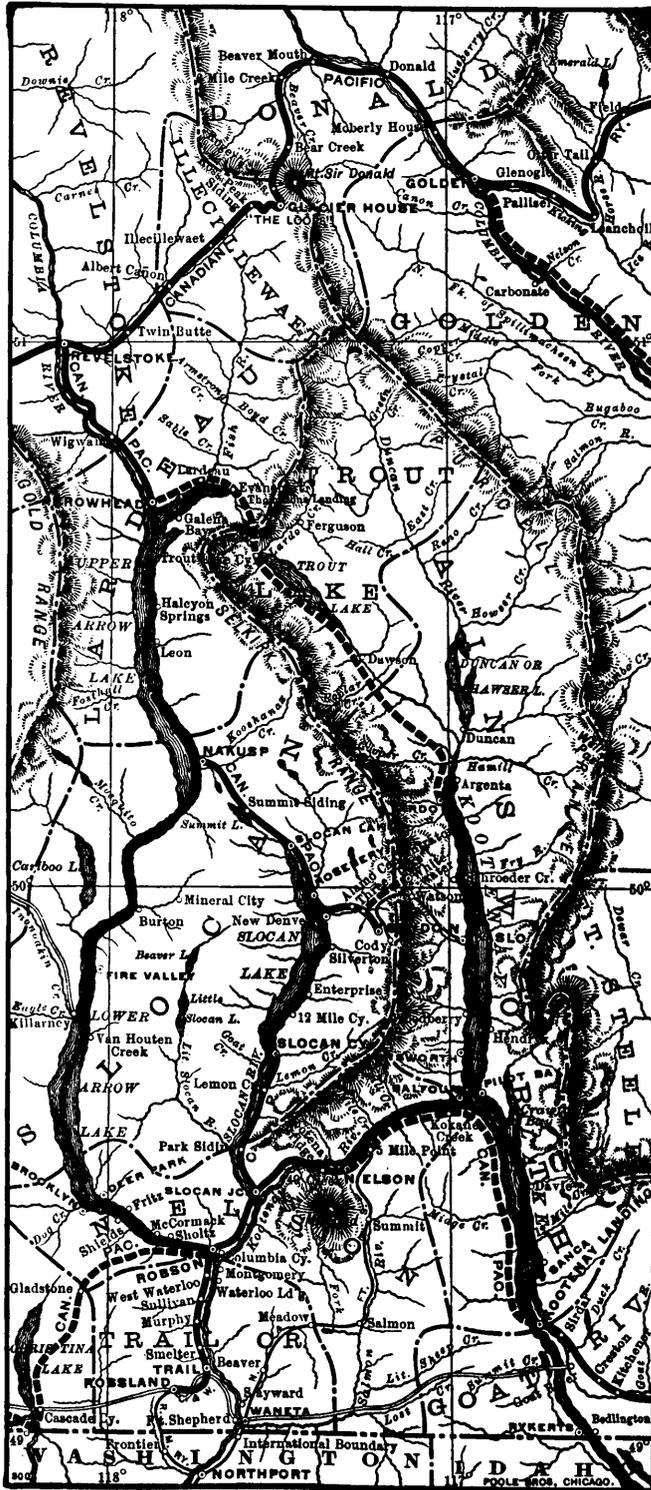
Rossland Branch.—The narrow gauge portion of the Columbia & Western Ry. from Trail to Rossland, B. C., 13.6 miles, was built in the winter of 1895-6. Its peculiar features were its steep grades & sharp curves, rising

2,300 ft. from the wharf track at Trail to the railway ore bunkers at Le Roi mine, Rossland. The grade on all tangents was 4% & the curves were compensated .04 per deg. The maximum curves were 25 degrees, of which there were 38, whose aggregate length was approximately 3 miles. There was a switch-back between Smelter Jct. & Trail, &

nal trestles have been filled & the others strengthened. The grading was done during Sept., Oct. & Nov., 1898, by Winters, Parsons & Boomer, contractors. Track laying was deferred until the spring on account of the severity of the winters in that locality, when it was done by the Ry. Co. The work was done under the immediate direction of F.

P. Gutelius, Superintendent of the Co.'s Rossland branch, to whom we are indebted for the data of this article. He was General Superintendent of the road under the old management & had charge of its original construction. The entire work of grading & track laying was completed without delaying traffic for an hour, except that all freight & passenger trains were scheduled to run at night. The new track, which follows the same general alignment & has the same grades, is laid with 6 ft. ties & 60 lbs. steel rails, the material for which was delivered along the track by narrow gauge work trains, & by laying towards Trail, the supply point for track material, these trains were able to deliver the material just ahead of the tracklayers in the day time. The system of renewing out of face was adopted, thus allowing joint ties to be properly placed & rails to be full spiked as new track was being laid. By this method a gang of 40 men would remove 2,500 ft. of old track & replace it with standard track in a day. The greatest record for any one day was 3,800 ft. Upon the new track a 3rd narrow gauge rail half spiked was laid. Each evening the track so laid was connected to the undisturbed narrow gauge track, over which the narrow gauge trains were run during the night. The operation of narrow gauge trains on one 28 lbs. rail & one 60 lbs. rail was not attended with any difficulty or accident, so that to the successful use of the one 28 lbs. rail in maintaining the narrow gauge track must be attributed the ease with which the change in gauge was executed. Rails were cut for standard gauge switches for all spurs, passing sidings & switch-backs, although temporary narrow gauge switches were laid as the work progressed, except in case of Smelter Jct. yard where the tracks were arranged for use of both gauges. Here a combination switch was used. On June 14 the entire standard gauge track was laid except the substitution of standard for narrow gauge switches, of which there were 14. On June 15, Roadmaster Sullivan divided his 100 trackmen into 6 gangs, & the work of changing the switches was started at 7 o'clock, after all the narrow gauge equipment was unloaded & taken to Smelter Jct., where it was stored. At 13 o'clock the first passenger train started from Smelter Jct., arriving at Rossland at 15 o'clock. The train consisted of a consolidated locomotive & 2 passenger cars, rounding successfully the thirty 20 degree curves, whose

aggregate length is nearly 3 miles. These curves are laid with gauge widened 1 in. & with only 1 in. elevation to outer rail. No guard or check rails are used & running rails are laid on service tie plates with 3 spikes in each, which are holding the track to gauge without the use of rail braces. Passenger trains are run up & down this incline at the rate of 12 miles an hour & freight trains at 8



C.P.R. LINES IN KOOTENAY DISTRICT, BRITISH COLUMBIA.

another at Tiger Gulch. The track was laid with 6 ft. ties & 26 lbs. steel rails. The cuts were 10 ft. wide & embankments 9 ft. wide. The line was sold to the C.P.R. Co., which has just completed the widening of the gauge, or rather the reconstruction of the line, whereby the maximum curvature is reduced to 20 degree cuts made 16 ft. wide, & embankments 14 ft. wide. Four of the 11 origi-

miles an hour. In the passing of this narrow gauge railway, it may be interesting to know that during its original construction, 3 years of operation & its reconstruction, not a single fatality on account of accident to passenger or employe has occurred.

A station 64 ft. long, 33 ft. wide, & 1½ stories high, is being built at Rossland. A round-house will also be built there.

West Robson to Boundary Creek.—In a recent interview W. F. Tye, Chief Engineer of Construction, said this is the most difficult piece of road-building ever attempted in Canada. Mr. Tye landed at the mouth of Dog Creek, on Lower Arrow Lake, Feb. 1, 1898, with a force of engineers, & began the work of running the location lines. Some idea of the difficulties to be overcome by the engineers may be gained when it is stated that on this survey 100 pairs of snowshoes were worn out. The contract for 105 miles was let to Mann, Foley Bros. & Larson in June, 1898, & active construction at once begun. Mr. Tye divided the engineers into 4 divisions, with about 25 miles each to deal with. The 1st was under F. M. Young, whose work is now done, & he is out near Penticton; the 2nd is under G. Farr, with a camp at the Summit; the 3rd is in charge of O. England, at Cascade, while F. M. Rice, located at Greenwood, is division engineer for the balance of the line. The grading of the whole line to Midway is nearly completed, track laying is progressing rapidly, & the whole line is expected to be completed by the fall. (May, pg. 139).

Work is being pushed as fast as possible on the branch lines to the various mining camps,

which were described in our May issue, pg. 139.

Branch to Republic, Wash.—President Shaughnessy gives an emphatic denial to the report that the C.P.R. & Great Northern have arrived at an agreement to build a joint line to connect the Boundary Creek district of B.C. with the Republic mining camp in Washington, saying that he knows absolutely nothing concerning the reported agreement, that no conference bearing upon the subject has been held, & that the story has evidently been manufactured out of whole cloth. (May, pg. 139).

On to Pentleton.—It is evident that the Co. intends to examine the country lying between the Kettle River & Okanagan valleys. It is reported that a party is working eastwards from the Okanagan Valley. Recently a party under J. J. Odell passed through Midway en route, it is thought, for the West Fork of Kettle River, in the valley of which stream he was at work nearly all last winter. Whether this party will work up to the summit of the divide forming the watershed of the creeks running westwards to the Okanagan Valley or eastwards to the Kettle River Valley has not been made public, but it is probable that either the survey of the line from Midway to Beaver Creek—a tributary of the West Fork, was not completed before Mr. Odell's last party was recalled, & is to be finished now, or, if it were completed, the work now being undertaken is a survey from Beaver Creek over the divide to Okanagan Lake at either Penticton or the outlet of the Mission Valley.

Arrowhead to Kootenay Lake.—The legal fight between the C.P.R. & the Kootenay

Valley Ry. Co.'s subsidiary, the Kaslo & Lardo Duncan Ry., for the possession of the Duncan Pass, has been settled. The C.P.R. is pushing construction from Kootenay Lake to Trout Lake, some 600 men being at work. H. B. Walkem, C.E., is in charge. (May, pg. 140).

Grand Trunk Betterments, Etc.

Work was commenced on the general office building in Montreal May 30. P. Lyall & Sons, Montreal, have the contract for masonry, amounting to over \$250,000. The lower part of the buildings will be of grey granite from Stanstead Jct., & the balance of the structure of Oolithic limestone from Bedford, Ind.

It was the intention of the management to have had the Victoria Jubilee Bridge opened on Dominion Day, but as the work was not completed, the opening had to be postponed, & it is not likely there will be any ceremony in connection with it.

Owing to the height of the locomotives recently constructed, & the lowness of the tubular span over the Ottawa river at St. Annes, the Co. is unable to use them on the western section. This difficulty will be remedied by the demolition of the tube & the erection of an open span bridge similar in height to the Victoria bridge. The engines are now running on the eastern & southern divisions out of Montreal.

The superstructures of all the iron bridges between Montreal & Island Pond are being renewed. It is said contracts have been let for the renewal of the superstructure of the

C. P. R. LANDS.

The Canadian Pacific Railway lands consist of the odd-numbered sections along the Main Line and Branches, and in Northern Alberta and the Lake Dauphin District. The Railway Lands are for sale at the various agencies of the company in Manitoba and the North-West Territories at the following prices:

Lands in the Province of Manitoba average \$3 to \$6 an acre.

Lands in Assiniboia, east of the 3rd meridian, average \$3 to \$4 an acre.

Lands west of the 3rd meridian, including the Calgary District, generally \$3 per acre.

Lands in Northern Alberta and the Lake Dauphin District, \$3 per acre.

TERMS OF PAYMENT.

The aggregate amount of purchase money and interest is divided into ten instalments, as shown in the table below; the first to be paid at the time of purchase, the second two years from the date of purchase, the third in three years, and so on.

Interest on the outstanding purchase money is payable in one year, except in case of an actual settler who breaks up at least one-sixteenth of the land within that time. No rebate of interest is allowed on hay or grazing lands.

The following table shows the amount of the annual instalments on a quarter section of 160 acres at different prices under the new conditions:

160 acres at \$3.00 per acre, 1st instalment \$71.90, and nine equal instalments of \$60.
160 acres at \$3.50 per acre, 1st instalment \$83.90, and nine equal instalments of \$70.
160 acres at \$4.00 per acre, 1st instalment \$95.85, and nine equal instalments of \$80.
160 acres at \$4.50 per acre, 1st instalment \$107.85, and nine equal instalments of \$90.
160 acres at \$5.00 per acre, 1st instalment \$119.85, and nine equal instalments of \$100.
160 acres at \$5.50 per acre, 1st instalment \$131.80, and nine equal instalments of \$110.
160 acres at \$6.00 per acre, 1st instalment \$143.80, and nine equal instalments of \$120.

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. of the amount paid in excess of the usual cash instalment.

Purchasers paying any instalment, or more, one full year before the date of maturity, will be allowed a discount on the amount of the instalment or instalments so paid at the rate of six per cent. per annum.

Interest at six per cent. will be charged on overdue instalments.

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Ladies' Waiting Room	Baggage Room	Ticket Office	Smoking Room
Men's Waiting Room	Agent's Office	Telegraph Office	No Admittance

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 28 Broad Street, Victoria, B.C., D. H. Macdowall, Resident Agent.

Manitoba & Southeastern.—Construction from La Broquerie, last year's terminus, towards the International Boundary was delayed in the spring by wet, but is now progressing satisfactorily. W. Mackenzie states that this line, and its connection, the Minnesota & Manitoba R.R., will be completed to Rainy River this season, & that he expects the connection between Rainy River & Thunder Bay, the Ontario & Rainy River Ry., will be finished in time to carry wheat of the 1901 crop. (May, pg. 134.)

Nanaimo-Alberni.—It is said that a start has been made on the construction of a line to connect these two places on Vancouver Island.

Northern Pacific.—Early in June it was announced that the Co. had decided not to rebuild the Manitoba Hotel in Winnipeg, but simply to re-erect the station & divisional offices, the reason given being that the Co. had failed to come to an agreement with the Provincial Government as to the extension of its lines in the province. It has since been stated that, as the result of further negotiations, an arrangement has been arrived at with the Government, but it is hardly likely that the hotel will be rebuilt in view of the decision of the C.P.R. to build a large hotel, most of the business of the Manitoba Hotel having been derived from C.P.R. passengers. No announcement has been made as to the terms of the arrangement with the Government, but it is believed that a branch will be built from Portage la Prairie northerly to Clandeboye Bay or some other point on the east side of Lake Manitoba, & another branch from Portage la Prairie westerly towards Hamiota, with a spur to Brandon, & that the Government will guarantee bonds to the extent of \$8,000 a mile. The Co. has applied for power to build a line from its main line at Morris, east or southeasterly to the International Boundary, & it is thought that this is with a view of getting an air line to Duluth. (May, pg. 135.)

Ontario & Rainy River.—The number of men employed on construction has been largely increased, & several additional contracts have been let. W. Mackenzie states

that it is expected to have the line completed by the fall of 1901. It is considered certain that the Dominion Parliament will increase the bonus to \$6,400 a mile irrespective of the cost of construction. In giving the Co. power to secure the Port Arthur, Duluth & Western Ry., Parliament has protected the town of Port Arthur, which gave \$25,000 bonus for the shops of the P. A. D. & W. being located there. (May, pg. 136.)

Ottawa & Gatineau Valley.—No definite information is obtainable as to whether the proposed extension from the present terminus at Gracefield, 60 miles from Ottawa, to Maniwaki, 28 miles, will be gone on with this year. Settlers beyond Maniwaki have petitioned for a further extension north to Eagle Bay on Great Victoria Lake. (May, pg. 136.)

Rutland & Noyan.—This Co. has been chartered by the Dominion Parliament to build some 3 or 4 miles of track to connect the Rutland with the Canada Atlantic. The connection will be made from Alburg, Vt., the portion of the line on the Canadian side to be built under the R. & N. charter.

Wabash.—It is said the Co. has bonded some farm property in the east end of St. Thomas, Ont., with a view to the erection of shops. At present much of the repairing work of the Canadian Division has to be sent to the works at Fort Wayne, Ind.

The Tilsonburg, Lake Erie & Pacific now runs from Port Burwell, Ont., to Tilsonburg, 20 miles, connecting at the latter place with the G. T. R., M. C. R., & the Wabash. The Co. wants to extend to Woodstock, & is endeavoring to secure a Government subsidy.

White Pass & Yukon.—On June 12 we were officially advised as follows: "Construction is now actively in progress between the summit of the White Pass & Lake Bennett; 12 miles of roadbed from Lake Bennett southerly towards the summit is completed up to the foot of Middle Lake, ready for the laying of rails, leaving about 5½ miles of rock work along Summit & Middle Lakes to complete; when track laying will be commenced, & continued to Lake Bennett, to which point it is hoped to have rails laid by July 10 at latest,

when train service will be immediately started the whole way from Skagway to Lake Bennett." (May, pg. 137.)

It is reported that as soon as the rails are laid from Skagway to Lake Bennett, construction will be commenced on the line from the latter place to White Horse Rapids, with the intention of ultimately going to Fort Selkirk, at the mouth of Lewis River. All the first surveys of this extension have been made & surveyors & construction engineers are said to be now in the field getting ready for the grading.

Capt. W. Langley is said to have completed arrangements to build a narrow-gauge line from Taku City to Atlin, N.W.T., in connection with the W.P. & Y. The road is to be about 3 miles long. This information somewhat conflicts with the information about the Atlin Short Line Ry. & Navigation Co. on pg. 175.

G.T.R. Clearing House.—A prominent Chicago railway man writes, with reference to the recent meeting of the Association of Railway Accountants in Montreal, that it was then stated that although the association was established in 1888, it was only this year that the New York Central created a clearing house for its through freight. He points out that as far back as 1882 the G.T.R. instituted this method of arriving at the proportion due to the several companies it did business with, as far as possible. It thus not only saved the junction staff for the G.T., but a duplicate thereof for each of the companies concerned, which must, in the past 18 years, have saved the companies hundreds of thousands of dollars. The companies embraced in this clearing house, which was established in the auditor's office of the G.T.R. by the then Auditor, T. B. Hawson, were the G.T.R., Chicago & G.T.R., Detroit, Grand Haven & Milwaukee, Canada Atlantic, Intercolonial, Central Vermont, & other railways. The traffic earnings amounted to many thousands a year, while the staff required to do the work consists of a few clerks. The system does away with the need for the employment of scores of men.—Witness.

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Recent Dominion Legislation.

Among the acts passed at the current session of the Dominion Parliament, & assented to by the Governor-General, are the following:—

To amend the Act respecting certain works constructed in or over navigable waters.

To incorporate the Edmonton & Slave Lake Ry. Co.

To incorporate the St. Clair & Erie Ship Canal Co.

To confirm an agreement between the C.P. Ry. Co. & the Hull Electric Co.

Respecting the British Columbia Southern Ry. Co.

Respecting the Canada Southern Ry. Co.

Respecting the Pontiac Pacific Jct. Ry. Co.

Respecting the Brandon & South-Western Ry. Co.

Respecting the Ottawa & Gatineau Ry. Co.

Respecting the Columbia & Western Ry. Co.

Respecting the Atlantic & North-West Ry. Co.

Respecting the Central Counties Ry. Co.

Respecting the Cobourg, Northumberland, & Pacific Ry. Co.

Respecting the Lindsay, Bobcaygeon, & Pontypool Ry. Co.

Respecting the Lindsay, Haliburton, & Mat-tawa Ry. Co.

Respecting the Northern Pacific & Mani-toba Ry. Co.

Respecting the Richelieu & Ontario Navi-gation Co.

Respecting the Quebec Steamboat Co.

Respecting the Nipissing & James Bay Ry. Co.

Respecting the Saskatchewan Ry. & Min-ing Co.

Respecting the C.P.R. Co.

Respecting the James Bay Ry. Co.

Respecting the Great North-West Central Ry. Co.

To incorporate La Compagnie du Chemin de Fer de Colonization du Nord

To incorporate the Russell, Dundas & Gren-ville Counties Ry. Co.

To incorporate the Arthabaska Ry. Co.

To authorize the incorporation of the Erie & Huron Ry. Co., & the Lake Erie & Detroit River Ry. Co.

Respecting the Ottawa Electric Ry. Co.

Respecting the Hudson's Bay & Yukon Ry. & Navigation Co., & to change its name to the Hudson's Bay & North-West Rys. Co.

To incorporate the Edmonton & Saskatch-ewan Ry. Co.

To incorporate the Klondike Mines Ry. Co.

To incorporate the Canadian Inland Trans- portation Co.

Respecting the Northern Commercial Tele- graph Co.

Respecting the Bedlington & Nelson Ry. Co.

To incorporate the Sudbury & Wahnapita Ry. Co.

Respecting the Quebec, Montmorency & Charlevoix Ry. Co., & to change its name to the Quebec Ry., Light & Power Co.

To incorporate the Rutland & Noyan Ry. Co.

Respecting the Canadian Northern Ry. Co.

Respecting the Red Deer Valley Ry. & Coal Co.

Respecting the jurisdiction of the Exchequer Court as to railway debts.

D. W. Newcombe, Superintendent C.P.R., Woodstock, N.B., writes: "THE RAILWAY & SHIPPING WORLD is a very interesting publication, & contains much useful information."

Atlantic & Lake Superior.—In response to a recent complaint in the House of Commons about the failure of the Atlantic & Lake Superior Railway Co. to operate the short line between Lachute & St. Andrews, Que.,

the Minister of Railways said there was little hope of the Government being able to compel its operation.

The Maritime Board of Trade, at a meeting to be held in St. John, N.B., Aug. 16, will, among other things, discuss the development of the iron & steel industries; the proposed increase in marine insurance rates in connection with Canadian ports on the Atlantic coast; tourist travel & the development of accommodations for summer visitors, & their attraction to points of interest; encouragement of trade relations between Canada & the West Indies.

The Hudson's Bay Co. has had a most successful year, the directors having recommended a dividend of 13s. a share, a bonus of 7s. a share, & the setting aside of £10,000 out of the profits of the year towards a provident fund for the employees of the Co., leaving to be carried forward £41,968, as against £26,372 last year. The dividend above mentioned is the highest paid since 1883-4 when it was 22s. a share, but the capital then consisted of shares of £14, while now they are of £13. The up-to-date business methods introduced into the management of the Co. by Commissioner Chipman are proving thoroughly successful.

Canada Atlantic.—In the appeal case of this Co. vs. Henderson, recently heard by the Supreme Court in Ottawa, the action was brought against the Co. to recover compensation for injuries sustained by Dr. Henderson in consequence of his horse being frightened by a train approaching the crossing at Elgin Street, in Stewarton. The jury found that no bell was rung, & the signalman did not give warning. Counsel for the Co. contended that the statute did not require the bell to be rung by engines shunting in a yard & less than 80 rods from a crossing, & also that the evidence did not warrant the findings, & that there should be a new trial. The court dismissed the appeal with costs.

Yukon Railways.—The Premier, Sir Wilfrid Laurier, recently announced that, pending the settlement of the Alaska boundary question, no more charters will be granted by the Dominion Parliament for railways into the Yukon which start from points on the coast now in possession of & claimed by the U.S. Most of the charters applied for at this session were for lines to run from Pyramid Harbor, along the Dalton trail to Dawson. Pyramid Harbor is in disputed territory. By allowing one of these lines to be built, a U.S. city would be built up at Pyramid Harbor, as has been done at Skagway by the building of the White Pass & Yukon Ry. The influence of such a city would be against Canada in the settlement of the dispute. Should it be determined by arbitration that Pyramid Harbor does belong to the U.S., the policy of the Dominion Government will be to get access to the Yukon not by the Lynn Canal, but by railways from the Yukon to where there is indisputable Canadian coast water, probably to Observatory Inlet.

Canadian Press Association.—The members will start Aug. 1 on a trip to the Pacific coast, leaving in two sections, one from Montreal via C.P.R., the other from Toronto via G.T.R., combining at North Bay, from which point they will travel by special train, consisting of sleeping, dining, & baggage cars. The Toronto section will make a few hours' stop at some Muskoka point, from which the Muskoka Navigation Co. will take the members for a short lake trip. Stops of a day each will be made at Port Arthur, Rat Portage, 2 days at Winnipeg & various short stops at prairie points, & from 3 to 4 days in the mountains. The trip to Vancouver will be made by the main line, & the return by way of Kootenay district & the Crow's Nest Pass Ry. Toronto & Montreal will be reach-

ed on the return journey on Aug. 27 & 28. Free railway transportation will be provided, the members of the party merely paying for sleeping cars & meals. The Minister of Marine has placed the Government steamer *Quadra* at the disposal of the party for a few days' cruise on the Pacific coast.

G.T.R. Suit about Passes.—The Co. has filed its defence to the action brought by the Niagara Falls Suspension Bridge Co. & the Niagara Falls International Bridge Co. to compel the G.T.R. to secure passes for the directors & officials of the bridge companies from all the railways using the bridge. The G.T. states that the plaintiffs have not at any time demanded these tickets. The agreement of Feb. 27, 1875, between plaintiffs & the G.W.R. is referred to as providing for the release of the G.T. from every demand except that of the annual rent. Therefore, defendant says, it is not obliged to make plaintiffs any further or other compensation for the use of the bridge. The statement adds that the bridge companies are not under obligation to pay the rates or fares of their own directors & officials when travelling for pleasure or on their own business, & that the bridge companies can suffer no loss by reason of their directors not having such free tickets. The defendant then says that if it was bound at all to give free tickets it was only on requisition from the bridge companies from time to time, as required. Lastly, the G.T. says that these directors or officials gave no consideration for any such free transportation, & that it was not called upon to pay for the same.

A Great Railway's Progress.

With the establishment of a limited flyer across the continent the C.P.R. gives another proof of a determination to keep abreast of the demands of the traffic and to expand with the growth of the Dominion. This is a piece of most commendable enterprise & is in keeping with the policy that has been pursued by the road since its construction was first undertaken. The new flyer shortens the trip from ocean to ocean by 24 hours, which, considering the speed of the ordinary service, is a marked achievement in railway operation. The "Imperial Limited" leaves Montreal every morning at 9.30 and reaches Vancouver on the afternoon of the 4th day thereafter at 1.15, reducing the time to a little over 4 days. The east-bound flyer leaves Vancouver at 1.15 in the afternoon, reaching Montreal at 6 p.m. on the 4th day thereafter. In contemplating this achievement it is hard to realize that but 13 years have elapsed since the first through train left Montreal for the Pacific terminus. In 1886, when the first transcontinental train was started, the total length of all the Co.'s lines was 4,500 miles. During the interval the railway has expanded with the Dominion till to-day the Co. operates a system, including leased lines, of 9,600 miles. Equipment has kept pace with the extension of the system operated. The number of engines has increased from 336 to 644, & passenger & baggage cars from 289 to 622. In freight & cattle cars there has been an increase from 7,858 to 16,942, & in all essentials of operation & maintenance there has been the same rapid expansion.

Growth & development have been even more remarkable in the marine department of the service. The traffic of the Pacific Ocean has been served by splendid lines of steamships, the "three white Empresses" being regarded as the best passenger ships afloat. These lines reach out from the railway terminus at Vancouver to China, Japan & Vladivostok, they turn south to Hawaii, to Fiji & Australia, & cover the newly-established traffic to the golden Klondike. In addition to the three Empresses, the *Tartar* & the *Athenian* on the Pacific routes,

the company has the Alberta, Athabasca & Manitoba on the upper lakes, two great ferry steamers on the Detroit River, more than a score of freight & passenger steamers & many adjuncts to the service on the inland waters of southern British Columbia. Some interesting figures as to the growth of the road & its business since the initial through train was despatched in 1886 are given in the Montreal Star. At that time 3 tracks sufficed for the Co. at Montreal, but now there are 13 at the Place Viger & 7 at Windsor station. In that year the railway carried 1,809,319 passengers & 2,046,195 tons of freight, the number of passengers carried 1 mile being 150,466,149, & the number of tons of freight hauled 1 mile being 555,438,159. Last year the number of passengers carried reached 3,674,502, the number carried 1 mile being 430,493,139. The freight traffic increased to 5,588,038 tons handled, or 2,148,319,867 tons carried 1 mile. This expansion has been accompanied by a reduction of rates, the earnings per mile having decreased from 2.10 to 1.52 on each passenger, & from 1.10 to 0.75 cent on each ton of freight. The earnings increased from \$10,018,803 to \$26,138,977, & the operating expenses from \$6,378,317 to \$15,663,605.

In 1886 the Co. commenced the erection of its first hotel at Banff Springs, in the Rockies. That line of enterprise has kept pace with the general development, until now the hotel at Banff is but one in a complete chain extending along the Canadian highway. These hotels include the Chateau Frontenac at Quebec, the Kaminstiqua at Fort William, the Mount Stephen House at Field, the Glacier House, the Revelstoke, the Fraser Canyon House & the Hotel Vancouver. In the spirit of enterprise that never fags the Co. is now planning the erection of a palatial hotel at Winnipeg that will equal or surpass any of its present magnificent hostelries. In addition to these enterprises the Co. has developed a telegraph service across the continent, with wide ramifications. It owns and operates its own express system, & has also an extensive grain elevator business. It builds its own cars & locomotives, has its own sleeping car service, & employs a force of men estimated at close on 30,000. All this has been the development of 13 years from a line between Quebec & Port Moody at the head of Burrard Inlet, built as a necessity to the new political organization of the Dominion. The first trans-continental train over the new road required 136 hours to make the trip, which time has been reduced by the Imperial Limited to 99 hours 45 minutes. This brings London within 10 days of Vancouver & within 21 days of Japan, drawing the Dominion still closer to the mother land, & increasing our importance as a link in world-circling traffic.—Globe.

New Brunswick Legislation.

At the last session of the Legislature the following Acts were passed among others:

To amend 54 Vic. Chap. 2, so far as it relates to the Gulf Shore Ry.

To confirm an agreement between St. John City & the C.P.R. Co., & to enable the city to make tax exemptions in favor of the Co.

To aid in the construction of a graving dock at St. John.

To revive the Act incorporating the Fredericton, Gibson, and Marysville Electric Ry. Co.

To incorporate the Imperial Dry Dock Co. of St. John.

To continue the Act incorporating the St. Louis, Richibucto & Buctouche Ry. Co.

To confirm a conveyance from St. John City to the C.P.R. Co. & for other purposes.

To incorporate the Shediac Coast Ry. Co.

Questions About Locomotives.

At the recent annual meeting of the American Ry. Master Mechanics' Association at old Point Comfort, in the discussion on the question, "Can the ordinary marine salinometer be used to advantage in districts where alkali water has to be used, in order to avoid excessive concentration & damage to firebox?" R. Atkinson, Mechanical Superintendent C.P.R., said: "The possibility of a salinometer was brought to my attention by having a piece of firebox plate sent in which was cracked & apparently burned, with no indication of scale having formed, & as we know that when the steam is distilled from the water in the boiler the salts remain behind, they must concentrate. Suppose a locomotive boiler holds 1,000 gals. of water. In the course of one division, running 120 miles, it is refilled about 6 times, & therefore the contents of 7,000 gals. are concentrated into 1,000 gals., & doubled on the returning trip; so that if the water contains 20 grains per gallon of impurities we have 13 times that amount at the end of the return trip. If this is soluble impurity, the water necessarily is much more dense than it was previously, & its boiling point raised, & possibly the firebox sheets may be injured by the increased heat necessary to evaporate water from that solution."

In the discussion on the best method of applying stay bolts to locomotive boilers, including making the bolts & preparing the stay-bolt holes, Mr. Atkinson said: "I put myself on record as not being in favor of drilling or punching stay bolts. It appears to me wrong in principle—that the point where the stay-bolts fail most is near the outside sheet. It is misleading to have anyone think they could rely on getting a certain result from them, when they would fill up with scale & leave us in the dark as to the condition of the box."

Historical Sketch of the G.T.R.

The following was written by J. J. Lanning, formerly Asst. General Manager of the G. T. R., shortly before his death in the summer of 1897, & was supplied by Gen. Manager Hays for publication in Canada, an Encyclopædia of the Country, edited by J. Castell Hopkins, & published by the Linscott Pub. Co., Toronto, from which it is now reproduced by permission, being copyrighted.

When it is remembered that the reports issued by the large railway corporations of this continent each year, detailing the receipts & expenditure of vast sums of money, & recording the particulars of all important events & transactions occurring in connection with their respective companies during the twelve months, usually contain from 25 to 50 pages of closely printed matter, the reader will understand the difficulty experienced in recounting in anything like an intelligible form, in a paper of this kind, the history of the G. T. R. Co. from its inception in 1852 up to the present time. If reference be made to lines in existence prior to the building of the G. T., but now incorporated in that Co.'s system, we must go back to 1832, when the Champlain & St. Lawrence Ry. Co. received its charter, bearing the royal assent of William IV.

The problem of transportation of passenger & freight traffic by means of wheeled vehicles propelled by steam over 2 lines of rail had been only recently successfully demonstrated by Stephenson, & the news of its success had the effect of inducing the prominent men of Montreal to establish a line of railway running from a point as near to that city as prac-

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ticable in the direction of New York, & the result was the construction of the railway under the name, Champlain & St. Lawrence, from Laprairie to St. Johns, Que. The line was opened for traffic in 1836, being laid with wooden rails & worked by horse-power during the first year of its existence. But one winter's experience satisfied the promoters that these two features of the undertaking would have to be improved upon by the substitution of something more substantial, & in the following year the wooden flanges, as the rails were termed in the act of incorporation, were replaced by iron, & the horse supplanted by the more enduring steam-motor.

The line was shortly afterwards extended from St. John's to Rouse's Point, N.Y., & in connection with this it may not be out of place to mention that in an early edition of the Biographical Directory of Railway Officials—a semi-official publication—appears a sketch of the late Jay Gould's career in which it is stated that his first experience in railway work was as a surveyor in the location of this line. The political disturbances during 1837 & 1838, together with business depression, put a damper, however, on further Canadian railway construction, & there is no record of any railway charter being granted or applied for until 1845. In that year the Atlantic & the St. Lawrence Ry. Co. obtained incorporation for the purpose of building a line from Portland, Me., running west through that state, New Hampshire & Vermont, to a connection at the international boundary with the St. Lawrence & Atlantic Ry., also organized the same year.

The Great Western Ry. Co. was also incorporated in that year under the name of the Hamilton & Sandwich Ry., for the purpose of securing connection between Hamilton & Detroit. In the following year, 1846, the Montreal & Lachine Ry. Co. was organized & incorporated, & the next year saw its line between the two points mentioned an accomplished fact. It also established a ferry service between Lachine & Caughnawaga in Quebec, & at the latter place connected with a short railway chartered as the Lake St. Louis & Province Line Ry., running from Caughnawaga, opposite Lachine, south-easterly to the International Boundary Line. Another important line known as the Toronto, Simcoe & Lake Huron secured incorporation as a company in 1849 & commenced the construction of a railway from Toronto northward to Collingwood. Its name was subsequently changed to Ontario, Simcoe and Huron, & again to that of the Northern Ry., being like all the other companies just mentioned, finally merged in the G.T. System.

On Aug. 10, 1850, the Quebec & Richmond Ry. Co. was incorporated with power to construct a line from Richmond to Point Levis via Chaudiere Junction, & twelve months after the Toronto & Guelph Ry. Co. was granted authority to build between these points. On Oct. 11 following the St. Lawrence & Atlantic Co.'s line was opened from Longueuil to Richmond, & the Champlain & St. Lawrence Co. carried its road from LaPrairie to St. Lambert in the early months of 1852. Charters were also obtained in 1852 for the construction of a railway from Chaudiere Junction to Trois Pistoles by the G.T.R. Co. of Canada East; one from Montreal to Toronto, & this was really the parent stem, by the G.T.R.; & a third from Toronto to Hamilton by the Toronto & Hamilton Ry. Co. In the meantime the principal lines under construction, viz., The Great Western, The Northern & the St. Lawrence & Atlantic were struggling under financial difficulties owing to the want of capital. Canada was then very young & but thinly populated. Owing to improvement in the inland navigation the cost of transportation had been materially lessened, but the closing of navigation during the winter months made it necessary on the part of the Government of the day to find a remedy, & it was deemed an

important measure of public policy to secure access to the sea-board at all periods of the year.

It was believed that there would be sufficient Canadian traffic to maintain a line of railway connecting the principal cities & towns of the old Province of Canada, now Ontario & Quebec. Their policy being quite in accord with public opinion, the Government determined on aiding the railway companies, & an Act (12 Victoria, cap. 29, 1849) was passed affording Government assistance in the shape of loans to railways of not less than 75 miles in length. The conditions of this Act were found to be in some respects unworkable, & too onerous, & further legislation of a more liberal character was passed in 1851 (14 Victoria, cap. 73). This Act was entitled "An Act to make provision for the construction of a main trunk line of railway throughout the whole length of this Province." In the first section of the Act it is declared that "Whereas it is of the highest importance to the progress & welfare of this Province that a main trunk line of railway should be made throughout the length thereof, & from the eastern frontier thereof, through the provinces of New Brunswick & Nova Scotia to the city & fort of Halifax: It is, therefore, expedient that every effort should be made to secure the construction of such railway," etc. Briefly, the Act provided for three eventualities. 1st, The construction of an intercolonial road from Halifax to Quebec, in conjunction with the provinces of New Brunswick and Nova Scotia, on a loan under Imperial guarantee, or from funds advanced by the British Government. 2nd, That if the Imperial guarantee was obtained, the road should be continued as part of the main trunk line to Hamilton or some other point on the Great Western; but failing the Imperial guarantee the road was to be constructed jointly by the Province of Canada (now Ontario & Quebec) & the Municipal Corporations, which should subscribe for half the cost—the whole to be completed & managed as a provincial public work. 3rd, If neither of these projects proved practicable, the work might be undertaken by chartered companies, which would be entitled to the provincial aid in a guarantee extended from the interest to the principal on loans amounting to one-half of the cost of the railway.

(To be continued in next issue.)

SHIPPING MATTERS.

The Teslin Lake Route.

The report of the Chief Engineer of the Public Works Department, L. Coste, was recently submitted to Parliament. The first report was dated July 10, 1898, & in it he says he has learned that the Stikine is navigable for powerful boats from its mouth to Glenora, about 140 miles. The river is tolerably free from snags, but at sharp bends there are heavy currents. Lake Teslin is navigable for vessels of light draught, not more than 3½ ft. Teslin River can be navigated by small river steamers. Lewes River is navigable to its confluence with the Yukon, but great difficulty is experienced in running the Five Finger rapids. The Yukon, while shallow, is navigable for small river boats. On Apl. 25, he reports, after having examined the mouth of the Stikine, "I believe the Stikine route will be the cheapest & best inlet into the Yukon territory for all provisions & mining supplies required in that country during the summer season." He suggests building a wharf at Wrangel, although it is in U. S. territory.

On December 7, he reports very fully on the Skagway route, saying: "The Skagway route is bound to remain for years yet the favorite route into the Yukon country, & inasmuch as it is almost entirely in Canadian territory, I feel justified in recommending

these improvements to the earnest attention of the Minister." Following are the improvements recommended:

At Cariboo crossing, dam required to increase depth of water by 1 ft. at least, estimated cost.....	\$6,000
Removal of rocks in Six Mile River between Lake Tagish & Lake Marsh, say.....	2,000
Removal of rocks in the Thirty Mile River from Lake Laberge to the confluence of the Lewes & Teslin Rivers, say.....	10,000
Removal of rocks at the Five Finger Rapids, say.....	5,000
Removal of rocks at Rink Rapids.....	1,000
Total.....	\$24,000
Add for contingencies & superintendence.....	6,000
	<hr/> \$30,000

On December 9, he reports on the inlets on the Pacific coast, & the Stikine River. Of this he says: "After a most careful examination of the Stikine River I concluded that it was not necessary to make a thorough survey of that river, owing to the ever-changing course of the navigable channel & the fact that I realized that a survey would cost at least \$25,000. On the whole, while the Stikine River is navigable for three months in the year by powerful steamers of light draught, it is evident that if the proposed railway between Glenora & Teslin Lake had been built, the Stikine River would only have served temporarily as the first link in this route, & that it would have been necessary to extend the railway in a southerly direction to a point on the Pacific in Canadian territory."

List of Lights & Fog Signals.

The Department of Marine has issued a list of lights & fog signals on the coasts, rivers & lakes of the Dominion, corrected to Apr. 1, 1899. The lights in the Bay of Fundy & on the southern & eastern coasts of Nova Scotia, those required for the winter passage of either steamers or ice boats to Prince Edward Island, & all the lights in British Columbia, are exhibited all the year round. All other lights under the control of the department are maintained in operation whenever the navigation in the vicinity is open. Lights used solely as harbor lights are not exhibited when the harbor is closed, although the general navigation may remain open. Fishing lights are maintained only during the fishing season. In any case where there is reasonable doubt whether the light is required it is kept in operation. All the lightships in the River St. Lawrence below Quebec leave Quebec each spring for their stations as early as ice will permit. The Red Island & White Island lightships leave their stations for winter quarters on Nov. 15 annually. All the gas buoys in the River St. Lawrence are set out as soon as possible after May 11 each spring, & taken up as soon as convenient after Nov. 10 each autumn, when they are replaced by wooden can buoys. All buoys in the River St. Lawrence below Quebec are removed after Nov. 14, excepting those replacing the gas buoys at each end of the Beaujeu Bank & at the Channel Patch, one at the west end of Middle Bank, & one at St. Roch, East Point, in the Traverse, which are left when possible until the last ocean vessel has passed out.

The following points are emphasized: The intrinsic power of a light should always be considered when expecting to make it in thick weather. A weak light is easily obscured by haze, & no dependence can be placed on its being seen. Coloured lights are also inferior in power to bright or white lights, & are more quickly lost under unfavorable circumstances.

In some conditions of the atmosphere, white lights may have a reddish hue. The mariner should not trust solely to color where there are sectors, but verify the position by taking a bearing of the light. On either side of the line of demarcation, between white & red, & also between white & green, there is always a small arc of uncertain color.

Having in view the varying distances at which a fog signal can be heard at sea, & the frequent occurrence of fog near to, but not observable from, a fog signal station, mariners are cautioned that, whilst they are entitled to assume that every endeavor will be made to start fog-signals as soon as possible after signs of fog have been observed, they should not, when approaching the land in a fog, rely implicitly upon these fog-signals, but should always use the lead, which, in nearly all cases, will give sufficient warning. Mariners are strongly cautioned that they must not judge their distance from a fog-signal by the power of the sound. Under certain conditions of the atmosphere the sound may be lost at a very short distance from the station, & these conditions may vary at the same station within very short intervals of time. The expression "foggy weather" means that the state of the atmosphere is such as to make objects indistinct.

R. G. Reid states that 2 of the steamships constructed for the Newfoundland service will be completed this year, the remaining 5 to follow next year.

At the opening of navigation it was considered probable that the Soulanges canal would be ready for traffic early this summer, & that then the 14-ft. waterway of the Upper St. Lawrence would show the country what could be done in the transportation of some of this season's grain from the Western prairies & the Western States. This hope, however, would seem to be doomed to disappointment, as much work remains to be done before the Soulanges canal is finished, & boats of 9-ft. draught will probably have to do the whole of the trade for 1899.

Hamilton is asking government aid to the extent of \$500,000 for improvements to Hamilton harbor. The improvements requested are the deepening of the harbor, the dredg-

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MATCHES

ing of the approach thereto, the extension of the piers & the erection of a red range light. Hamilton is becoming an important center in the iron smelting industry, & as the supply of ore is brought by lake vessels, the harbor must be deepened to give these vessels, drawing fourteen to sixteen feet of water, admittance. The coal & other supplies for the Hamilton manufactories are also brought in by water to a great extent, & hence another necessity for the deepening of the harbor.

Yukon & Northern Navigation Matters.

We are indebted to the Klondike Miner for a lot of information about Yukon navigation matters.

The str. Scotia, 80 ft. long, 20 ft. beam & 4 ft. hold, was built this spring by Capt. E. W. Spencer, of Portland, Ore., on Atlin lake. She will run to all points on Atlin lake.

Vancouver has at last secured a direct weekly steamship service to northern ports by an arrangement between the Union Steamship Co. & the Bennett Lake Steamship Co., under which the s.s. Cutch of the former line, & the s.s. Amur of the latter, will perform the service.

The telegraph construction party sent by the Dominion Government to build the telegraph line between Lake Bennett & Dawson, is also looking after the improvement of navigation. A wing dam 335 ft. long, 10 ft. wide & 6 ft. high has been built at Cariboo to throw the water all into the main channel. It is built of logs on brush mattresses & filled with stone, & is faced with plank to make it water-tight. It had to be built in water 3 1/2 ft. deep. Three beacon piers have also been built on that river 12 ft. square & filled with stone for the guidance of vessels. Two lifting barges have been constructed, & are used in removing all rocks from Six Mile River.

On the Upper Yukon River, i.e., above Dawson towards White Horse, the British America Corporation will run 2 or 3 steamers, probably the Tyrrell & Lightning. There will also be the str. Willie Irving & the strs. Clara, Gold Star & Florence, which wintered at

White Horse. The Canadian Development Co. will put all its boats on the up river trade—the Canadian, Victorian, Columbian & Anglian. It also has the Australian operating from White Horse to Bennett City, & has 2 fast steel launches in the same service. The Bennett Lake & Klondike Navigation Co. will run the strs. Ora, Nora & Flora same as last season, the Ora & Flora to White Horse Rapids, & the Nora from White Horse to Bennett City.

Lake Bennett has been a busy boat-building point during the past winter & spring. Six river steamers & over 100 scows & barges have been built there, & 2 river steamers have been overhauled & repaired. The Canadian Development Co. has built a steel steamer, the Australian, at a cost of \$75,000. She is 115 ft. long, 24-ft. beam, & 3 ft. draught. She has accommodation for 175 passengers & 100 tons of freight, & has a speed of 15 miles an hour. The same Co. will operate 2 twin-screw steel launches, designed to run 16 miles an hour, & 2 steel barges, 100 ft. long by 20 ft. beam. The Co. will also operate 6 steamers on the river below White Horse rapids. The Bennett & Atlin Lake Transportation Co. has built a lake & river steamer, the s.s. Bailey, costing \$60,000. She is 110 ft. keel, or 126 ft. over all in length, 22 ft. beam, with hold depth of 4 1/2 ft. She has a draught of 16 inches. The Northern Lakes & Rivers Navigation Co., of Victoria, has built the steamer Ruth. She is 60 ft. long, 16 ft. beam. Capt. J. Irving, of Victoria, has built The Gleaner, 115 ft long, 24 ft. beam & 5 ft. hold. She will accommodate 100 passengers. She will run between Bennett & White Horse, & also to Taku City, connecting there with the tramway & Capt. E. W. Spencer's Atlin Lake str. Scotia.

Following are particulars of the steamers which will ply this season on what may be called the Lower Yukon River, below Dawson, i. e., towards the sea & St. Michaels. The Seattle-Yukon Transportation Co. will run its 3 steamers Seattle nos. 1, 2 & 3. The Standard Oil Co. has one boat on the river, the Oil City, carrying its own freight. The Alaska Commercial Co. will run its 9 steamers,

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the Louise, Hanna, Sarah, Susie, Alice, Leah, Belle, Marguerette & Victoria, together with the 8 barges wintered at Androski. Some of the boats were expected in Dawson about June 15, while the others would wait for outside traffic. The North American Transportation & Trading Co. has 7 steamers & 3 barges. Its powerful tug Klondike will operate from St. Michaels to Ft. Hamilton. The Alaska Exploration Co. will operate 6 steamers & 6 barges on the lower river. The Mary F. Graff wintered at the Dahl River, the Linda & F. K. Gustin at St. Michaels, & the Herman just below Rampart City. This Co. also owns the Clara Belle & the Arnold. The Empire Line will operate 9 steamers on the lower river, the Tacoma & Victoria were recently reported on the way up the river, the Seattle is taking a load of government supplies, & the St. Michaels is loaded for the Standard Oil Co. The Dawson, Munook, Tanana, Yukon & Empire were to leave Seattle June 10 & steam to St. Michaels under their own steam. The Co. will operate ocean liners to accommodate its business. It is building warehouses at Dawson.

It is to be war to the death between the companies catering for the Klondike business via St. Michael & the lower Yukon river, & those which aim to control this trade by way of the White Pass & Yukon Ry. & the river steamers, the latter combination being favorite in the betting. Numerous conferences preliminary to a determination of through freight & passenger rates have been held by the four companies controlling the rail & river system, & as a result it is announced that the rates by the all-water route will be met in every particular while the four-sided combination has the advantage in being able to land passengers or consignments in Dawson in 10 days or less from Victoria, the round-about sea & river journey requiring the better part of two months, with a chance that shallows may prevent freight sent in that way from ever reaching its destination. The companies named in the combination are the Canadian Pacific Navigation Co., the Alaska Steamship Co., the Canadian Development Co. (in connection with which Capt. Irving's lake & river steamers will be operated), & the White Pass & Yukon Ry. Co., covering the land link from Skagway to Bennett. The adopted rate scale provides for a 1st class fare from any Puget Sound or B. C. port to Dawson, of \$135, or \$127.50 2nd class. Half rate tickets will be sold for children of from 5 to 12 years. On the full ticket 150 lbs. of baggage will be carried free, & on the ½ ticket 75 lbs. From Dawson to B. C. or Puget Sound ports the rate of the upper river combination is \$185 1st class or \$177.50 2nd class, these rates paralleling closely the rates announced by the round-about all-water route. The latter involves a journey of almost as many weeks as the former requires days. Besides, the connections have been so perfected with the completion of the railway link that one does not require to walk a foot of the way. The adopted freight tariff for Atlin, on all commodities, regardless of class, is \$100 a ton from Vancouver, Victoria or Puget Sound points, on less than 10-ton lots; for 10 tons or more, a cut of \$10 on the ton is made. A classification scale is made for the Klondike freights, 3rd class merchandise including provisions such as beans, bacon, flour, sugar, etc., for which the through rate is \$136 a ton. Second-class freight embraces dry-goods, general supplies, etc., with a rate thereon of \$155 a ton; & 1st class freight, consisting of perishable and breakable goods, commands a transportation charge of \$160. Live stock for Dawson will be accepted in carload lots of 14 or more at \$82 each. These rates stand out in marked contrast with the figures prevailing a year ago. The freight rate then was 60c. a pound, or \$1,200 a ton from Skagway to Bennett, & 20 to 30c. more for the haul to Dawson, a total

of at least \$1,600 a ton through to the Klondike capital, a month or 6 weeks being at that time required for the carriage of merchandise even as far as Bennett.—Victoria Colonist.

The Plant Steamship Line.

The passenger traffic between the Maritime Provinces & the New England States has assumed such proportions that the Plant Co. has placed on the route its magnificent 5,000 ton steamship La Grande Duchesse. She made her first trip on the route in the middle of June, running from Boston light to Meagher's Beach light, near Halifax, in 21 hrs. 45 minutes, the previous best record being the s.s. Olivette's, 23 hrs. 40 mins. For the balance of the season she will run direct between Boston & Halifax, calling also at Hawkesbury, N.S., & Charlottetown, P.E.I.

La Grande Duchesse, which was built at Newport News in 1896, is fitted with every modern appliance known to the art of shipbuilding, including electric lights, searchlight, & telephone connection between staterooms & the purser's office. Her furnishings, from staterooms en suite, with bath, to the berths in the cabin, are in perfect taste. Her dining & main saloons are equally attractive, & her immense size is a guarantee of plenty of deck room even for her full quota of passengers. She is built entirely of steel, & is of the following dimensions: 404 ft. long over all, 380 ft. between perpendiculars, 47 ft. 9 ins. beam, 37 ft. 4 ins. deep from top of deck to base line, & is fitted with 2 steel masts fore-and-aft rigged. She has a water bottom extending from her stuffing box bulkhead to her collision bulkhead, also numerous steel decks; all the houses are of steel. The stern & rudder frames are made of cast steel, & the steering gear consists of a steel apparatus operated by a telemotor; also heavy Napier steering gear. The vessel is fitted with a steam windlass & capstan & hoisting engines for handling cargo, & has steam elevators in two of the hatches.

On the main deck forward is the dining saloon, with seating capacity for 125. This is handsomely fitted up & decorated in white & gold. Forward of the dining room is a reception room, forward of which are sleeping accommodations for passengers. In the after end of the dining saloon is a grand stairway leading to the social hall above. On the main deck aft of the dining saloon is the pantry, & aft of this is the large gallery. On this deck are located cold storage for provisions, officers' mess room, baker & porter shop, telephone exchange room, stewardess' room & a number of staterooms abreast of the boilers & engine hatches for oilers, water tenders, etc. Aft of the machinery is the main saloon with 2 tiers of staterooms on each side; in the forward end of this saloon is the grand stairway leading to the social hall above. Immediately aft of the main saloon are toilets, bathrooms etc., for ladies and gentlemen. In the forward end of the upper or promenade deck is a social hall for 2nd class passengers, with a stairway leading to the dining room. This social hall has quite a number of staterooms for 1st class passengers. On the pilot-house deck forward is the pilot-house, aft of which is the captain's room & 2 tiers of state rooms continuing to the smoke stack. Over the social hall aft is a large steel house fitted up as a ladies' observatory. The 2nd class social hall & reception room are finished in quartered oak.

The vessel is equipped with 12 life boats, 6 life rafts & the necessary life preservers, etc. There is a complete ventilating system connected to every compartment & stateroom in the vessel; she is also fitted with a complete fire alarm system, & is lighted by electricity, which is furnished by 2 generators direct

driven, also search light, etc. The machinery consists of 2 inverted, direct acting service condensing, quadruple expansion engines, driving twin screws; wheels made of manganese bronze. The total horse-power of the engines is 7,000. Steam is supplied by 8 boilers built for a working pressure of 250 lbs. of steam, fitted with 1 smoke stack. In addition there are numerous pumps for ballast, bilge, sanitary fire & feed purposes. Unusual precaution has been used in every part in the construction for the safety & comfort of passengers, having accommodations for 500 1st class & 200 2nd class. The vessel has also been designed in compliance with U.S. government requirements for auxiliary cruisers.

Since the Mascotte was built in 1885, the Plant line has steadily extended its service. From the system about the Florida coast, & between Port Tampa, Cuba & Jamaica, catering in hotels & steam communication to winter tourists & travellers, the line a few years ago extended its service eastward & absorbed the Canada Atlantic Steamship Co., with its ocean str. Halifax, plying between Boston & Halifax, & also the Old Colonial line between Boston, Halifax, the Strait of Canso & Charlottetown, with its str. Carroll & Worcester, which were retired or broken up, the service being improved in summer by the Olivette or Florida, the latter also another large addition to the line. This eastern business has developed very extensively, with demands by summer tourists often exceeding accommodations.

Using Oil in Stormy Weather.

A circular on this subject recently issued by Lieut. W. J. Wilson, nautical expert in charge of the Branch Hydrographic office at Chicago, is attracting a good deal of attention. It reads: "Masters of vessels cannot be reminded too often of the use of oil in stormy weather. Its importance is well illustrated by the fact that it is now recognized in standard books on seamanship. The international marine conference at Washington recommended that the several governments require all their seagoing vessels to carry a sufficient quantity of animal or vegetable oil for the purpose of calming the sea in rough weather, together with suitable means of applying it. Thick & heavy oils are the best. Mineral oils are not so effective as animal or vegetable oils. Raw petroleum has given favorable results, but not so good when it is refined. Certain oils, like cocoanut oil & some kinds of fish oil, congeal in cold weather, & are therefore useless, but may be mixed with mineral oils to advantage.

"As a general rule, probably the best way to use oil is by filling the wash bowls forward with oakum & oil, letting the oil drip out slowly through the waste pipes. Another simple & easy way to distribute oil is by means of canvas bags about 1 ft. long, filled with oakum & oil, pierced with holes by means of a coarse sail needle & held by a lanyard. Running before a gale, use oil from bags at the cathead or from forward waste pipes; if yawning badly & threatening to broach to, use oil forward & abaft the beam on both sides. Lying to, distribute oil from the weather bow. With a high beam sea, use oil bags at regular intervals along the weather side. In a heavy cross sea, have bags along both sides. Steaming into a heavy sea, use oil through forward waste pipes. There are many other cases where oil may be used to advantage, such as lowering & hoisting boats, riding to a sea anchor, crossing rollers or surf on a bar & from lifeboats & stranded vessels."

Lieut. Wilson further says: "If captains could be made to understand the many advantages offered by the proper use of oil in rough weather & in case of accidents, there would not be a boat leave port without a sup-

ply of oil & the necessary equipment. The application of the fluid to quiet the waves is no longer an experiment. It is a positive success. Within a few years all captains will, I think, use oil as a safeguard. The cost is comparatively small, & there is no reason why it should not come into general use on the lakes. I could recall a dozen cases where the timely use of oil saved boats & their crews. The effect of oil dripped from a boat in a rough sea is not generally understood by landsmen. Some people seem to think that huge mountains of water should be instantly calmed by the application of oil. Of course, that is not expected. The oil quiets the waves to a certain extent & prevents them from breaking over the craft. When oil is used the waves, instead of crashing over the deck, & in extreme cases tearing away the cabin, demolishing the hatches & flooding the boiler-room, come in long swells & are thus rendered less harmful."

Shipbuilding in Nova Scotia.

P. T. McGrath, in writing from St. John's, Nfld., about the proposed operations of the Dominion Steel & Iron Co., says:—"The plans of the syndicate comprehend nothing less vast & ambitious than the creation of a second Clyde bank or Belfast at the Sydney inlet, in Cape Breton, for the construction of iron steamers for commercial & maybe for warlike purposes. The erection of an immense shipbuilding plant in that region might be regarded at first sight as a visionary scheme, but the practical, business-like character of the men identified with the movement warrants the belief that they will make it a financial success. Though the U.S. possesses some dockyards along the Atlantic coast, need of a commercial shipbuilding plant has been greatly deplored, & the conditions under which the Whitney syndicate can produce the materials for such an industry encourage them in the hope that they can defy competition from any quarter whatever.

"The essentials to the attainment of this end are an unlimited supply of iron ore sufficiently rich in quality, an abundance of cheap labor, coal & limestone in close proximity, & transshipping facilities & watercarriage to comprehend the varied phases of a large shipyard. The iron deposits of Newfoundland & the low rate of wages prevailing here enabled the first 2 conditions to be met here; the coal & limestone abound in Cape Breton, & North Sydney forms one of the finest harbors in the world, with foreshore conditions most advantageous for the purpose had in view by these enterprising capitalists."

North Sydney has offered a free site for the erection of the plant & exemption from city taxes, etc.; in fact, there is spirited bidding among all the Cape Breton towns for the establishment of such a prosperity-promoter among them. It is estimated that the various undertakings in connection with such an enterprise—steamer crews, longshoremen, labor-

ers, smelters, coal miners & shipbuilders eventually—will call for the employment of quite an army of men, some thousands at least, & it is not difficult to imagine the benefit which will react upon the Dominion & on the various other industries associated with it, directly or otherwise.—Globe.

Canadian Shipping Statistics.

The report on shipping just issued by the Dominion Department of Marine shows that the number of vessels remaining on the register books of the Dominion on Dec. 31, 1898, including old & new vessels, sailing vessels, steamers & barges, was 6,643, measuring 693,782 tons register tonnage, a decrease of 41 vessels & of 37,972 tons register from 1897. The number of steamers on the registry books on the same date was 1,909, with a gross tonnage of 267,237 tons. Assuming the average value to be \$30 a ton, the value of the registered tonnage of Canada, on Dec. 31 last, was \$20,813,460.

Following are the figures by Provinces:—

	Sailing Ships and Steamers.	Steamers.	Gross Tonnage of Steamers.	Net Tonnage of Sailing Ships and Steamers.
New Brunswick	903	117	9,858	80,257
Nova Scotia	2,167	146	19,747	262,176
Quebec	1,378	322	75,349	144,447
Ontario	1,452	924	99,419	134,180
P. E. Island	178	21	4,043	15,979
British Columbia	444	209	52,129	40,304
Manitoba	121	80	6,692	7,439
Total	6,643	1,909	267,237	693,782

Following is a statement of vessels built & registered in 1897 & 1898:—

	1897.		1898.	
	Vessels.	Tons.	Vessels.	Tons.
New Brunswick	33	1,738	31	790
Nova Scotia	54	4,259	07	4,962
Quebec	49	4,227	51	4,139
Ontario	50	3,850	46	1,872
P. E. Island	3	226	5	372
British Columbia	26	2,429	74	12,228
Manitoba	16	305	6	159
Total	231	17,094	278	24,512

Estimating the value of the new tonnage at \$45 a ton, it gives a total value of \$1,103,490 for new vessels.

A statement giving the net tonnage of each of the maritime States of the world, shows that Canada holds 7th place, as follows:—

British, including Canada and the Colonies	9,760,043
American	1,837,729
German	1,572,665
Norwegian	1,545,822
French	801,164
Italian	730,953
Canadian	693,782

Richelieu & Ontario Navigation Co.

The Co. is operating 26 steamers. The Dominion Parliament has given the Co. power to increase its capital from \$2,000,000 to \$5,000,000 & to build & operate hotels.

It is intended to make daylight trips between Quebec & Montreal, starting about the middle of July. The strs. Caspian & Columbian will do the service. The orchestras will be transferred from the night to the day boats.

It is said plans have been prepared for additional steamers for the Co., one to run through between Toronto & Montreal & the other for service on the St. Lawrence alone, but no decision has been come to about building them.

The new str. Toronto, already described in these columns, went into service June 1 & is making tri-weekly trips between Toronto & Prescott via Charlotte, N.Y. The officers are Capt. H. Esford, formerly of the Corsican; 1st officer, W. Booth, Jr.; Chief Engineer, W. Black; Purser, J. B. Tinning. The str. Bohemian meets her at Prescott & takes the passengers down the Rapids.

Early in May an agreement was entered into between the R. & O. N. Co. & the American line by which competition between the two companies between Clayton & Alexandria Bay & Montreal was withdrawn. The Richelieu Co. in return withdraws its boats from the islands. By the new arrangement the Richelieu Co. secures a monopoly of the through traffic, & the announcement of the arrangement had an appreciable effect on the Co.'s stock.

The Co. has purchased for \$80,000 the Virginia, a steamer owned by the Baltimore Packet Co., of Baltimore. The Virginia will

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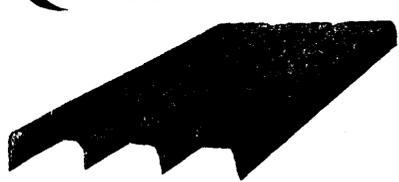
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replace the *Carolina* on the Saguenay route. She is a side-wheeler with capacity for about 350 passengers.

British Columbia Shipping.

The str. *Victoria* has succeeded the str. *City of Kingston* on the Victoria-Seattle run.

G. D. Bowles, R.N.R., is commanding the C.P.R. Co.'s R.M.S. *Empress of Japan* during the absence of Capt. Lee on a holiday. Mr. Bowles was formerly chief officer of the *Empress of India*.

The Dominion Steamboat Line Co. has been incorporated with \$45,000 capital, & head office at Bennett City, Cassiar District, to acquire the str. *Clifford Sifton* & to take over the business of the Dominion Steamboat Line.

An English Co. is said to have made an offer for Armstrong & Morrison's foundry, etc., in Vancouver, with a view of establishing a marine railway with larger ways & more up-to-date accommodation than the present one in Vancouver.

The liquidator of J. Huddart's Canadian-Australian Steamship Co. offers for sale by tender in one lot as a going concern the steamships *Miwera*, *Warrimoo* & *Aorangi*, & all the business goodwill & property of the Co. This is a mere formal stage in the reconstruction of the Co., & is not likely to affect the continuance of the service.

Capt. John Irving, having retired from the management of the Canadian Pacific Navigation Co., as recently mentioned in this paper, has gone into steamboat business for himself between Bennett & Atlin & Bennett & Dawson City. F. W. Vincent is at present Assistant Manager of the C.P.N. Co. We were recently informed that there was nothing new to report in regard to a new steamer for the Victoria-Vancouver route.

A recent traveller by one of the C. P. R.'s *Empress* steamers, writes from Yokohama: "The resident in the East has one advantage of his brother at home, & that is, he can at times travel on an *Empress* of the C. P. R. line. He who has not done so has surely missed one of the pleasures of life. For it is a pleasure to travel at anything from 15 to 17 knots on a huge yacht, whose means of propulsion, in the entire absence of vibration, can only be guessed at; where faultless meals are served up, with the attendance of clean, silent & picturesque Chinamen; & where a walk through the carpeted & steam-heated alleyways below, gives the impression of a first-class hotel on shore."

Maritime Province Shipping.

The str. *Grand Lake* has been purchased by the Newfoundland Ry. to ply in connection with it.

The *Victoria S.S. Co.* has been incorporated with a capital of \$12,000, & headquarters at Baddeck, N.S.

It is said the str. *Harlaw* will not continue on the Cape Breton-Newfoundland route this season, owing to a large reduction in her subsidy.

The s.s. *Mayflower* has been put on the route between Pictou, N.S., & Magdalen Islands & Cape Breton, in place of the s.s. *St. Olaf*.

The str. *Nyanza*, recently built at Hantsport, N.S., has been placed on the *Peticodiac* River, & is running between Moncton, N.B., & river & bay points.

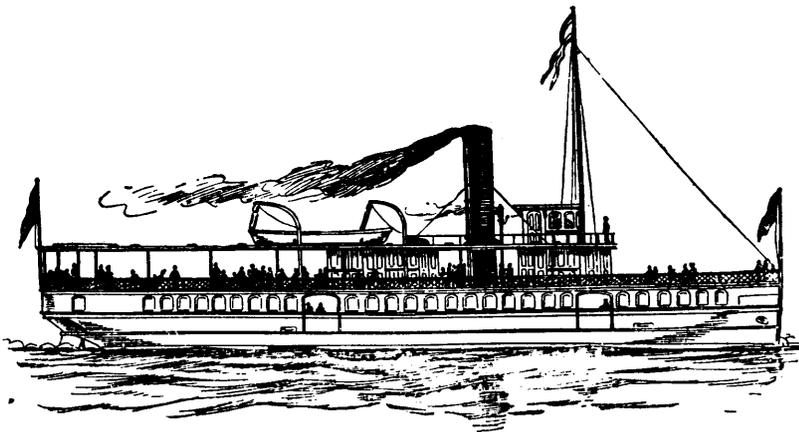
The *Star Line S.S. Co., Ltd.*, has been incorporated under the New Brunswick Companies Act to acquire the vessels, business, &c., of the *Star Line S.S. Co.* on the St. John River & its tributaries.

The Washington County R.R. announces that next season it will put on steamers between Eastport, Me., & Digby, N.S., with a view to diverting the Nova Scotia traffic over its line & on to the Maine Central.

The str. *Lunenburg* has been purchased for the mail service between Pictou, N.S., & Magdalen Islands. The Maritime Transportation Co. has chartered the str. *Acadia* to take her place on the Halifax-Lunenburg trip.

The incorporation of separate joint stock companies for a single vessel goes on apace, the latest being the s.s. *Tanagra Co.*, & the *Ship Charles Co.*, in New Brunswick, the *Ship Canada Co.*, & the *Ship Harvest Queen Co.*, at Wolfville, N.S.

The Dominion Atlantic Ry. has received the latest addition to its fleet, the s.s. *Prince Arthur*, which was built at Hull, Eng. She is as nearly as possible identical with the Co.'s s.s. *Prince George*, & on her trial trip



OTTAWA RIVER NAVIGATION CO.'S STEAMBOAT VICTORIA.

slightly exceeded the latter's speed, attaining a mean speed of 22 knots. Both these steamers are heated by electricity.

The first step has been taken in what looks like the beginning of a war between the Dominion Atlantic Ry. & the International Steamship Co., for the St. John, N.B., & Boston passenger & freight business. The International has had the business for 30 years, & has provided a service which was slow, as stops were made at Eastport. Recently the D.A.R. announced 2 trips a week direct by the s.s. *Prince Edward*. The International Co. followed by announcing that steamer *St. Croix* will not call at Eastport in future, but will make 2 direct trips each week. The next step in the fight will probably be the placing of another boat on the route by the D.A.R.

The scheme for a dry dock 800 ft. long at St. John, N.B., is taking shape. The New Brunswick Legislature has incorporated the *Imperial Dry Dock Co.* with a capital of \$1,000,000, & has given a subsidy of \$5,000 a year for 40 years, on consideration that the Dominion & Imperial Governments also grant substantial aid. The Dominion Minister of Finance has given notice of a resolution to grant an annual subsidy of \$20,000 for 20 years. Under the present statute the Dominion Government can only give aid to the extent of 2 per cent. per annum on \$500,000.

The promoter, G. Robertson, will probably go to England at once to interview the Admiralty in regard to an Imperial subvention, having last year obtained Mr. Goschen's promise that such would be forthcoming. The Minister of Finance also proposes to take power to grant \$10,000 a year for 20 years to assist in lengthening existing dry docks. This would apply to Halifax & Quebec.

Ontario & The Great Lakes.

The lighthouse supplies for the Great Lakes are this year being delivered by the str. *Saturn*.

The *Signal Towing & Rafting Co.*, of Wiar-ton, has been incorporated under the Ontario Companies Act, capital \$3,000.

The Dominion Government has granted permission for the change of the name of the str. *Eurydice*, of Toronto, to the *Donnelly*.

The *Rainy River & Pioneer Steamboat Lines* on Lake of the Woods, have been amalgamated as the *Rainy River Navigation Co.*, with a capital of \$100,000.

At the annual meeting of the *St. Lawrence River Steamboat Co.* in Kingston, recently, the old directors & officers were re-elected & 6% dividend declared.

The str. *Lincoln*, of the *Lakeside Navigation Co.*, formerly known as the *Greyhound*, which was rebuilt & enlarged last winter, is running between Toronto & St. Catharines.

A. Mackenzie has purchased the str. *Sir W. C. Van Horne* & fleet of barges from Boucher, Langstaff & Holmes, & is doing a passenger & freight business between Rat Portage & Fort Francis.

The *Oakville Navigation Co.* has been incorporated under the Ontario Companies Act, capital \$40,000. It is empowered to establish a summer hotel & resort, as well as to do navigation business.

At the recent annual meeting of the *Westcott Wrecking Co.* in Sarnia these officers

were elected: President & Manager, J. W. Westcott, Detroit; other directors: F. F. Pardee, Sarnia; I. Watt, Windsor.

The *Ottawa Forwarding Co.* has built, at Ottawa, a freight steamer 112 ft. long, 24 ft. beam, & 9 ft. deep. She will have a speed of 12 miles an hour, & will run between Oswego & Montreal. The Co. now has a fleet of 6 freighters, 2 on the St. Lawrence route & 4 on the Ottawa & Rideau Rivers.

A. T. Wood, W. E. Sanford, W. Southam, C. E. Doolittle, C. W. Wilcox, W. D. Long, & A. B. Mackay, have applied for incorporation as the *Quebec, Hamilton & Fort William Navigation Co.*, capital \$1,000,000, head office Hamilton. It is proposed to build 2 steamers at Hamilton this year & others later on.

There is no passenger war on the St. Lawrence this year, the R. & O. N. Co. handling the through business exclusively, & the Folger boats attending to the local Thousand Island business. The Folger fleet consist of the strs. *New York*, *Empire State*, *America*, *St. Lawrence*, *New Island*, *Wanderer*, *Islander*, & *Jessie Bain*.

The *Northern Navigation Co.* of Ontario, with headquarters at Collingwood, has had its capital increased from \$350,000 to \$1,000,000. The officers recently elected are: J. Scott, President; J. J. Long, Vice-President; C. E. Stephens, Treasurer; T. Long, Secre-

tary; J. J. Long, C. E. Stephens, C. Cameron & M. Burton, Managing Board; A. Miscampbell, Manager.

The Lake Ontario Navigation Co.'s str. Argyle, built at Picton last winter, & in which the old Empress of India's engines, etc., have been used, is running tri-weekly between Toronto, Charlotte, Sodus Point, Oswego, Kingston, Rockport & Alexandria Bay. The citizens of Picton presented a set of flags for her, accompanied by a congratulatory address to Capt. Hepburn.

The tug Walker, which foundered last fall near Nicholson's Island, Lake Ontario, has been raised. She was hoisted & bound firmly with chains to the bottom of the schr. Graham. When fastened together this way the boats drew 35 ft. of water. They were then towed to Kingston. While searching for the Walker the wreckers found the wreck of the propeller Zealand, which was lost in 1880 with a valuable cargo & entire crew.

The Polson Iron Works, Toronto, at which the str. Majestic, described under the head of Quebec, is being built, has negotiations for the construction of other steamers pending, & it is expected to have another large vessel under way at the works in a short time. It is the intention of the Co. to enlarge its docks by filling in the marine railway adjacent to the main workshops & making an extension out into the bay as far as the new windmill line, giving a space of about 7 acres.

The Canada Atlantic Ry. has leased some 15 barges for 3 years from the Kingston & Montreal Forwarding Co. to run between Coteau & Montreal with grain. It is announced that the Canada Atlantic will add 2 freighters of from 4,500 to 5,000 tons to its fleet next season, one for the Chicago & the other for the Duluth trade. The Co. also expects to run a boat to Fort William next season. The 5 steamers of the Menominee fleet, running between Chicago & Parry Harbor, the charter of which, to the Canada Atlantic, expires at the close of this season, have not been sold to that Co., as reported.

The Northern Navigation Co. of Ontario, has bought from the Montreal & Cornwall Navigation Co., the str. Rocket, a side-wheel steel boat built for the Gulf trade. She is 150 ft. 8 in. long, 25½ ft. wide & 9 ft. 2 ins. deep. Gross tonnage 428, registered tonnage 228. In part payment the N. N. Co. gave its screw str. City of London, 120 ft. long, 27 ft. wide & 7 ft. 8 in. deep, gross tonnage 516, registered tonnage 294. The M. & C. N. Co. will put on the Montreal-Cornwall run the side-wheel steamer Filgate, recently purchased. She is 158 ft. long, 25 ft. 4 ins. wide, & 7 ft. 8 ins. deep, gross tonnage 263, registered tonnage 153.

The Dominion Parliament has passed the bill to incorporate the Canadian Inland Transportation Co., the principal incorporators of which are Senator Forget, Montreal; A. Lumsden & J. McRae, Ottawa; & W. Christie, Toronto. The Co. proposes to place on

the upper lakes a fleet of steel steamships which will be able successfully to compete with the U.S. carriers. Ten solid steel vessels, measuring 276 ft. in length by 43 ft. beam, will be constructed. Their capacity will be 78,000 bus. of wheat with a 14 ft. depth in the canals, which could be increased to 108,000 bus. with an 18 ft. canal system. The Co. will build its own elevators & terminals, & it is believed that a large business can be done in return freights of coal & other commodities from Montreal & intermediate points. The Co. intends also to go into the business of carrying ore from the head of Lake Superior to the blast furnace at Hamilton.

Quebec Navigation Matters.

The Lake Labelle Navigation Co. has been incorporated; capital \$10,000. Headquarters Labelle.

A. Lumsden, M. L. A., Ottawa, has bought the boats & interests of the Lake Temiscamingue Navigation Co.

It is said a company is being formed in Quebec to run a line of steamers between Roberval, Peribonca and the parish of Honfleur, for the purpose of trading in those districts.

The Quebec Steamship Co. has been empowered by the Dominion Parliament to do a mercantile business. This exceptional privilege was given because the Co. does a large trade with the Windward Islands & proposes tendering for the contract for carrying the Imperial mails, which requires the company holding it to purchase all fruit offered at certain ports.

The Ottawa River Navigation Co.'s steamer Victoria, recently built in Toronto, the machinery being made at the Polson Engine Works, is 100 ft. long, with 20 ft. beam, with a speed of 14 to 15 knots. She is specially intended for excursion traffic, having accommodation for 300 passengers, & has been put on the run between Ottawa & Thurso. She cost about \$20,000. A view of her is given on page 183.

A recent Quebec press despatch said: "As soon as the new steamship for the winter ferry across the Straits of Northumberland arrives from Europe the s.s. Stanley will be taken to Quebec & placed at the disposal of the I.C.R. authorities. It will be used in winter in keeping open a communication between Quebec & Levis. The present winter ferry boats at Quebec do not cross to Levis after 5 p.m., though the down I.C.R. train only leaves Levis at midnight." The Deputy Minister of Marine recently advised us that he was not aware of any such arrangement as above mentioned.

The Richelieu River Navigation Co. has been incorporated under the Dominion Companies Act, with a capital of \$30,000 & headquarters at St. John's Que., to carry on a navigation business, with power to acquire

land for picnic purposes. The Co. will run a steamboat, the Majestic, on the Richelieu River between St. John's & the Noyan wharf at the Lacolle-Clarenceville bridge. The Majestic, which is now nearly completed, is being built by the Polson Iron Works, Toronto. Her dimensions are: length over all, 112 ft.; beam, extreme, 22½ ft.; draught, aft, 6 ft. She has fore & aft compound engines, jet condensing cylinders 14 x 28, with a 16 in. stroke; Fitzgibbon boiler, with a working pressure of 160 lbs. of steam, & has a speed of 16 miles an hour. She has a carrying capacity of from 600 to 700 people, & will cost about \$25,000. Ten staterooms have been built on the upper deck for the use of her captain & officers.

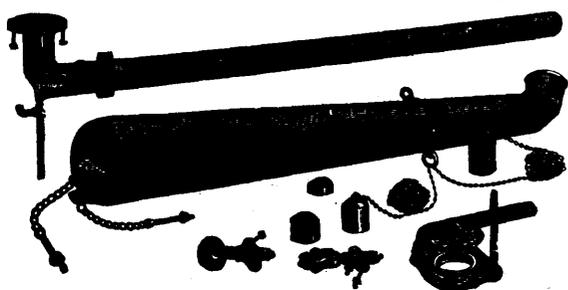
New Winter Steamer for P.E.I.

A very full description of this vessel & copious extracts from the specifications were published in our issue of July, 1898, pg. 131. The illustration on page 185 shows the out-board profile of the steamer. We are indebted to Major Gourdeau, Deputy Minister of Marine, for a tracing of the plan from which the illustration has been made. The recently issued report of the Department of Marine has the following references to the winter service:

The Stanley has been engaged in the winter service every season since 1887, & has proved a most excellent ice steamer. The severe strain which she has undergone in battling with heavy ice in the Straits of Northumberland has had its effect. She needs extensive repairs, which can only be made in Great Britain, in order to make her thoroughly efficient for winter service. An examination of the hull & machinery has shown it would not be prudent to force her through heavy ice as formerly where lives & property are at stake. It being considered in the public interests to construct a larger & improved steamer, Capt. McElhinney, Nautical Adviser, was instructed to proceed to Great Britain to examine ice vessels under construction there, & to obtain tenders from shipbuilders, for building a steel steamer according to specifications & plans, to class 100 A1 at Lloyd's. The tender of Gourlay Bros. & Co., Dundee, being the most advantageous, Capt. McElhinney recommended its acceptance, & a contract was entered into with them to build the steamer & have her completed by the end of Aug., 1899.

The accommodation of the Stanley for freight & passengers was insufficient at times. The new steamer will afford greater & better accommodation for passengers, & will have more space for freight. The dimensions of the new steamer will be 225 ft. in length between perpendiculars; breadth moulded, 32½ ft.; depth moulded, 20½ ft. She will be heavily stiffened about the water line with heavy plating & intermediate angle iron framing. Similar plating will be placed on the bows & bottom, extending 70 ft. towards

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midships. The engines will be exceptionally strong, of the triple expansion type, having cylinders 26 ins., 41 ins. & 65 ins. diameter, to develop not less than 2,900 indicated h.p. under forced draught. This will exceed the Stanley's power by about 600 h.p. The stern has been specially designed for backing astern in the ice, & will have an ice cutter to protect the rudder stock; the rudder will be solid cast steel. The vessel will be provided with water ballast tanks in the bottom & trimming tanks forward and aft. Experience has been gained by the service of the Stanley, & in designing the new steamer improvements were kept in view. Instead of berths, as in the Stanley, 8 state-rooms will be provided, with 2 berths & a lounge in each. One specially large state-room will be fitted up with beds & other conveniences. The dining saloon will be sufficiently spacious & will be neatly furnished, upholstered & well lighted with incandescent electric lamps. Part of the saloon will be furnished specially for the comfort of ladies, & will have the latest improvements in heating apparatus. The main objects, however, have been to secure strength of hull & powerful engines. The steamer will cost about £38,000, without furnishings.

The schooner Prince Edward, built in 1887, being now unserviceable for delivering light-house supplies, a steamer is being built & will

No. 35, June 12. British Columbia. Shoals southeastward of White Rock, Trincomalie Channel.

No. 36, June 13. Nova Scotia. 1, Automatic buoy off Liscomb. 2, Signal buoy off Beaver Harbor.

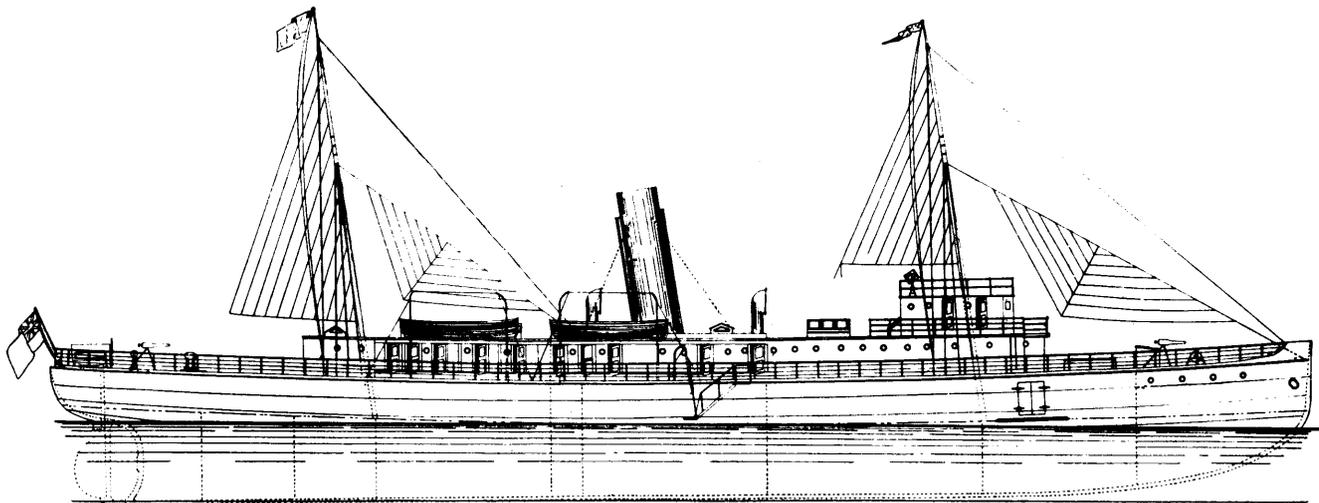
No. 37, June 15. Prince Edward Island. Whistling buoy off West Point replaced.

Great Lakes Insurance Policies.

On the 2nd class vessels insurance formerly expired at noon of Nov. 30, & Judge Swan, District Court of Detroit, Mich., some time ago based a decision on the fact, & called that hour the close of navigation on the Great Lakes. Since that time it has held as a precedent in law suits. But since that decision the insurance syndicate have made a concession to the 2nd class boats by calling Dec. 1, or the midnight of Nov. 30, the hour of ending their policies. If these vessels happen to be out at that time they are given an insurance extension, but the rate is much greater than charged the A1 boats. With the 1st class vessels the insurance expires, if they are in port, on the midnight of Dec. 11. If the vessel happens to be on the lake with a cargo contract, departure having been made prior to the expiration of the insurance, her insurance policy is extended

sels are the same. Their keels are 500 ft. long, their length over all or from knight-heads to taffrail being about 520 ft., their beam 60 ft. & their depth 36 ft., with a registered tonnage of 10,000 tons. The engines are of the triple expansion type, 2 sets in each ship driving twin screws. They will be powerful enough to send the mammoth vessels through the water under favorable conditions at a speed of 16 knots. The calculation is that leaving Liverpool on Thursday, say at 4 p.m., they will arrive at Quebec on the following Thursday evening; allowing for delay in landing steerage passengers at Quebec & a loss of 8 hours during darkness in the river, they will reach Montreal on Friday afternoon, or 8 days from Liverpool. For passengers to Canada this will be really as fast a service as a 20 knot ship to New York, not considering the large additional outlay experienced by those who take that route. Indeed, it may be safely said that when the Bavarian, Tunisian, Parisian & Californian are running, not only will Canadians use their own ships, but they will attract a good share of the Western & Southwestern United States passenger business to the more favored Canadian route.

It is intended, too, that these vessels will be models of excellence of the shipbuilder's craft. The hotel portion of a modern steamer



OUTBOARD DRAWING OF STEAMER BUILDING FOR PRINCE EDWARD ISLAND WINTER SERVICE.

be ready early in June. The length will be 95 ft., breadth 19 ft. & depth of hold 8 ft.; speed 9 knots. The cost will be \$15,100 for hull & engines. Both are being constructed in P.E.I.

Dominion Notices to Mariners.

The Department of Marine has issued the following notices:—

No. 29, May 20, Ontario.—Platform buoy south of Duck Islands, Lake Huron.

No. 30, May 20, New Brunswick.—1. Improvements in Jemseg light, St. John River.

2. Improvements in Indian Point range lights, Shiffegan Gulley.

No. 31, May 26, Quebec.—1. Gas buoy on St. Thomas Bank. 2. Uncharted shoal off Ste. Felicite, Nova Scotia. 3. Erratum.

No. 32, June 1, British Columbia.—1. Uncharted dangers off Kinghorn Island, Strait of Georgia. 2. Rocky ledge off Three Islets, east point of Cortes Island. 3. Shark Spit & Channel Rock beacons, Mary Island. 4. Nanaimo Harbor, additional spar buoy. 5. Beacons in Baynes Sound re-erected.

No. 33, June 8, Ontario. Removal of wreck of schooner Ganges, Lake Erie.

No. 34, June 10, Manitoba. 1, Gull Harbor lighthouse. 2, Black Bear Island lighthouse.

at pro rata rate, which is the smallest the insurance syndicates have been willing to grant & which is so small that the owners have never protested against paying it. The extension continues until her arrival at destination, even if it takes 10 days after the nominal time of ending. If she is held up at a way port by ice & compelled to stay there all winter, insurance ceases on her arrival at that point.—Marine Record.

Additions to the Allan Line.

The following circular has been issued by the Allan Line:—

The S.S. Bavarian, 10,000 tons, twin screw, was successfully launched from the yards of Denny & Co., Dumbarton, on the Clyde, on May 11. The Bavarian is the largest of 606 vessels built by this firm, and is the 12th built by them for the Allan Line. She is in all respects a duplicate of the S.S. Tunisian, now under construction by another Clyde shipbuilding firm, Alexander Stephens & Son, of Linthouse, near Glasgow. The Bavarian & Tunisian were ordered in Oct., 1897, & their keels were laid down shortly after. Neither time, skill nor money has been spared to produce in these two vessels the finest types of their kind. The specifications for both ves-

has reached a stage of perfection undreamt of "by those who went down to the sea in ships" a quarter of a century ago. The brightest light then was a paraffine candle or an oil lamp. Now thousands of incandescent lights illuminate every part of the ship, even the stoke hole. Then a smoking-room or a bath-room was only found on the best steamers. In these steamers even the steerage passengers are to be provided with smoking-rooms, & the 1st cabin bath-rooms, some of them with needle-bath attachments, & toilet-rooms, with the sumptuously-arranged smoking-rooms, seem as if they were arranged for a nobleman's castle rather than a sea-going vessel, sometimes in legal parlance denominated a "common carrier."

The whole 1st class accommodation of these steamers is arranged on a two-storied steel structure, extending about 180 ft. fore & aft, or say 90 ft. forward & 90 ft. aft, of the exact centre, & the whole width of the vessel, 60 ft. It will thus be seen that the 1st cabin passengers have at once the steadiest and widest part of the ship, & owing to this structure being above the ordinary decks, the cabins will be lighted by large port holes or with oblong windows, giving the possessors of these staterooms a homelike feeling, as well as securing the most ample ventilation. The maximum number of 1st cabin passengers to be carried will be 162,

& there will be a seat for each at one sitting in the dining saloon, thus maintaining the rule at present observed in the Allan fleet. The library & music-room on the bridge deck will be found a marvel of beauty & convenience. Here are many quiet nooks, with lights finding their way through oriel windows, & ports shaded with soft Japanese curtains. The floors covered with rugs of oriental looms, softening the footfalls & giving that quiet elegance & repose that will enable many a wayfarer to really enjoy "his home on the ocean deep." The smoking-room, situated on the aft part of the central house, & therefore as remote as possible from the library, but on the same deck, is an apartment sufficiently spacious for half a dozen whist parties as well as for many other passengers who love the weed. The space outside the house on the bridge deck is devoted to a covered promenade, & the shade deck or upper promenade, unencumbered in any way, is entirely reserved for 1st class passengers. To adapt them specially for the North Atlantic trade in winter they will be heated throughout with steam, arranged with cut-off valves so that passengers may have their cabins warmed in accordance with their own wishes without reference to others.

But the projectors of these ships have not given their whole attention to the 1st cabin arrangements. The plans show many wonderful improvements in this department of the vessel. Indeed, there is nothing for the comfort of the passengers in the 1st cabin that will not be found in a modified form in the 2nd cabin. There is a ladies' conversation room with piano; smoking room for men; bathrooms of most modern types, with white marbleized toilet rooms, running water in staterooms, dining room on spar deck, electric lights & bells in staterooms—all these, with a good table, will be provided for 2nd cabin passengers. The rates will be so low that a trip to the Old Country will be feasible to many whose purses do not afford the higher rates of the 1st cabin, & yet whose tastes lead them to require superior arrangements to those found in the steerage, or 3rd class. The demand for this middle class accommodation has been steadily on the increase during recent years. It can be truly said that on no Trans-Atlantic steamer has this demand been met in a more complete manner than on the new Allan liners.

"The poor we have always with us," i.e., that class who perforce must take the cheapest & travel not for the love of it. Well, they have not been forgotten, as may be seen from an examination of the plans. It is not usual to find an apartment denominated "Third class smoke-room," nor "Women's sitting-room," on ocean steamers, but here it is; besides there are small rooms for men & their wives, & for families, & no room to accommodate more than 6 persons. Space is also reserved for dining accommodation, & the Allan line rule again observed of a seat at the table for each passenger carried.

The passenger accommodation provides for 300 1st & 2nd class, and say 500 steerage, there is room for 8,000 tons of cargo, water ballast sufficient to make the vessels seaworthy without cargo; & refrigerator chambers for a large quantity of perishable provisions to supply the growing demands of this comparatively new & growing industry. The vessels will be provided with the latest & most improved devices for the handling of cargo,

as well as for the navigation & management of the ships. The twin screws, it is expected, will be of great assistance in the rapid manipulation of the ships in the tortuous river channels, as well as offering an additional security against delay from accidents to the machinery at sea.

These steamers, like the others of the Allan line, are built with bilge keels; these with their great width of 60 ft. will, it is thought, insure great steadiness even in a heavy sea. In addition the vessels are built throughout their entire length with a double bottom, which with the numerous bulkheads, will offer the highest guarantee for safety in case of accident.

The Bavarian is intended to sail from Liverpool July 27, & from Montreal Aug. 10, & every 4 weeks thereafter throughout the season. The Tunisian is expected to be ready the last part of September, the exact date will be announced later, & until that time her place in the fleet will be filled by the R. M. S. S. Tainui, now under charter. The Tainui is a vessel of the highest class, about same size & speed as Parisian. Having been built for the Australian trade her cabins are of more than the ordinary size on Trans-Atlantic vessels & special care has been taken to secure ample ventilation.

The S. S. Parisian, after an almost unprecedented career of successful voyages across the Atlantic, was placed in the hands of the Belfast builders & engineers, Workman, Clark & Co., in Jan. last, to receive new engines & boilers, & to bring her entire passenger accommodation up to date. The contract calls for her delivery early in July, when she will resume her place in the service practically a new steamer. Her speed will be increased by 1 knot an hour, so as to ensure regularity in running with the new steamers. Her 1st & 2nd cabin passengers' accommodation have been greatly improved, especially the latter. A new dining saloon has been added extending the width of the ship. New ladies' room on the spar deck, & also a new smoking room on the promenade deck for the 1st cabin, & one on the spar deck for the 2nd cabin passengers. The 3rd class, known formerly as steerage, has been reorganized. Small rooms for families have been created—a sitting room for the women, play rooms for the children, & a smoke room for the men are amongst the new features. The toilet & sanitary arrangements in all classes have been rearranged after the most recent & best types, all of which will retain for the Parisian the hold she for so long enjoyed on the affections of her patrons.

The S. S. Californian, built in 1891 by A. Stephens & Sons, builders of the Tunisian, has a registered tonnage of 4,500 tons. She is 400 ft. long, 46 ft. beam & 32 ft. 8 ins. deep. She is divided into 8 water-tight compartments, the bulkheads in all coming up to the spar deck, affording the best obtainable protection in case of accident. The engines are on the triple expansion principle, & the speed of the vessel is a little better than 14 knots an hour. She has made the passage from Quebec to Liverpool in 8 days. Her accommodation for all classes of passengers is such as to give the highest satisfaction. During the winter of 1898-99 entirely new 2nd cabin accommodation has been arranged so that the entire appointments of this vessel are equal to the Parisian, but not on quite so large a scale.

ELECTRIC RAILWAYS.

British Columbia Electric Ry. Co.

The 2nd annual report for the year ended Mar. 31 last, has been issued, the main points being summarized as follows:—In Nov., 1898, an issue was successfully made at £11 per share of 12,000 non-cumulative 5% preference shares of £10 each, preferential as to capital as well as dividend, & ranking for additional dividend rateably with the ordinary shares, after such ordinary shares have received 7% per annum. The £60,000 non-cumulative 6% income bonds have been paid off at par out of the proceeds of this issue. The balance of the proceeds is being devoted to the purposes set forth in the prospectus. Most of the extensions & improvements set out in the recommendations of the General Manager & Chief Engineer have been taken in hand, & it is anticipated that they will almost all be completed by Sept. 1 next, from which time the increase in annual profits which is expected from them should commence to accrue. Some of the less important items, such as the 125-light arc dynamo, the new power metallic circuit, the lighting extensions, the re-arrangement of the circuits, the installation of additional & new feeders in Vancouver, & most of the lighting extensions in Victoria were completed about the beginning of 1899. The installation of the plant for utilizing the water-power from the falls of Goldstream at Victoria, has been completed. Much difficulty was experienced in getting it into satisfactory working order, before it could be taken over from the contractors. It was not until the beginning of Sep., '98, that the machinery was first started, & troubles were experienced until the end of Mar., '99. The difficulties have now been got over, & the plant has been running satisfactorily since the beginning of April, but, owing to the delays, no benefit was realized in the year under review. The directors anticipate the benefit will be felt this year.

With a view of enabling the Co., not only to handle the present load, but also to have a considerable margin of power for increase in business, without exceeding the consumption of 4,000,000 gals. of water per day, which, under the lease, is the maximum allowable at the minimum rental, the directors propose the erection of a storage battery to be worked in connection with the water-power plant, & are now taking the best expert advice obtainable as to which of many now in the market is the most efficient & economical form of accumulator for the purpose.

The gross profit for the year amounts to £30,188 14s. 1d. From this the directors have paid the debenture interest & the 6% dividend due on the income bonds up to the date of redemption. Including £207 19s. 9d. brought forward from last year, the accounts show a net balance of revenue of £16,575 10s. 6d., & after deducting from this the sum required to meet that part of the dividend on the preference shares which had accrued due to Mar. 31, viz., £1,018 17s. 5d., there remains £15,556 13s. 1d. available for distribution. From this sum the directors have decided to write off a further 20% of preliminary expenses, £1,218 8s. 6d. To recommend the payment of a dividend of 4% per annum (free of income tax) on the ordinary shares of the

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Co., absorbing £8,000. To transfer to reserve account, £6,148 19s. 10d., & to carry forward to the next account £189 4s. 9d. In addition to £6,148 19s. 10d., above mentioned, the directors have transferred to reserve account the surplus of premium received over the expenses of the preference share issue, £1,349 5s. 2d., bringing the reserve fund up to £12,000.

The disastrous fire at New Westminster in Sept., '98, only affected the Co. by the burning down of about 1/2 a mile of track equipment. The Co. donated \$2,100 to the relief fund. Owing to the large number of sight-seers carried at the time, & the large amount of building materials & general freight carried since, the receipts of the Westminster branch have suffered comparatively little, notwithstanding that the return fare between Vancouver & Westminster has been reduced from 75c. to 60c.

Although the percentage of operating expenses has been considerably reduced, compared with last year, it is not yet satisfactory, but the water power installation at Victoria is looked to to reduce the expenses, & the directors anticipate that on the completion of the works now being erected in Vancouver, the percentage will compare favorably with that of other undertakings of a similar nature. Following is a comparison with the statistics of other leading companies on the London market carrying on the same business :

COMPANY.	Receipts.	Expenses.	Profit.	Percentage of working expenses to gross receipts.	
				1898-9.	1897-8.
Montreal St. Ry.....	\$1,471,939	\$ 794,884	\$ 797,055	51.99	55.05
Ottawa Electric Ry.....	231,802	159,158	74,643	68.66	67.07
Toronto Railway.....	1,210,618	578,857	631,761	47.81	48.81
London St. Ry.....	113,811	65,665	48,146	57.61	57.66
Twin City Rapid Transit.....	2,179,716	1,019,392	1,151,323	46.96	53.18
B. C. Electric Ry. Co.....	412,368	249,798	162,600	60.57	68.01

Detailed reference is made to the lighting & power branches of the Co.'s business.

The rolling stock has been maintained in good condition, all necessary repairs have been made, & 4 new fully equipped cars with motors have been added. The road bed & track on the Vancouver & Westminster branches have been maintained in excellent condition, & on the Westminster branch works have been commenced with a view to replacing the 4 small bridges by culverts & a permanent railway embankment. This will reduce the cost of maintenance in future. The directors have decided to entirely relay the road bed of the Victoria branch, as it is not in good condition & the rails are light, & they have decided that it will be more economical & wiser to put the track in first-rate permanent condition at once than to follow the system of improvement which was commenced last year, by which the road bed & track were to be renewed over a period of several years. The Co.'s land grants & town lots have again increased in value during the year, owing to the extension of trade which has been experienced. Building operations have been on a large scale throughout the cities in order to satisfy the continued demands for business premises & residences. The population is still increasing along the line between Vancouver & Westminster, & business, consequently, continues to develop in that direction. A complete reorganization & consolidation of the plant & machinery of the Vancouver & Westminster branches has been taken in hand, & will, it is expected, be finished about Sept. 1st. When this is accomplished, with the new installation just completed at Victoria, the Co. will have throughout thoroughly efficient machinery of the latest type, with all the most recent economical improvements, whilst the old plants at Victoria & Westminster will, as heretofore, be carefully maintained for the purposes of reserve. Beyond the regular lighting extensions, the installation of a storage battery, & the reconstructions of the road bed at Victoria al-

ready referred to, there are no new improvements or extensions at present proposed or needed.

EARNINGS & EXPENSES YEAR ENDED MAR. 31, 1899.

Railway, Vancouver	\$75,166
" Westminster	84,214
" Victoria	85,672
Lighting, Vancouver.....	106,392
" Victoria	60,176
Total earnings.....	\$412,368
Expenses.....	249,768
Net earnings.....	\$162,600

The chief officers of the Co. in Canada are: General Manager, J. Buntzen, Vancouver; Chief Engineer & General Superintendent, J. M. Campbell, Vancouver; Assistant Engineer & Superintendent, R. H. Sperling, Victoria; Assistant Comptroller, E. H. Wilcox, Vancouver; Local Manager, A. T. Howard, Victoria; Superintendents of Traffic, H. Gibson, Victoria, D. A. Shiles, Vancouver.

In Vancouver the Denman St. extension & the double tracking between Davie & Georgia Sts. have been completed.

A movement is on foot to secure the building of a line from Government St., Victoria, by Humboldt St., to Ross Bay Cemetery, & another line to the Gorge, by way of Gar-

bally Road. The movers want to induce the heavily interested property owners to build the lines on condition that they will be continuously operated summer and winter, with a 5c. fare.

Earnings and expenses for April :

	1898.	1899.	Increase or Decrease.
GROSS EARNINGS.			
Railway—Vancouver branch	\$5,620	\$6,471	\$ 651 +
Victoria "	6,426	6,239	196 -
Westminster "	6,599	6,637	38 +
Lighting—Vancouver "	6,512	6,751	239 +
Victoria "	3,524	3,819	295 +
Total gross earnings	\$28,681	\$29,708	\$1,027 +
Working expenses	\$19,327	\$19,112	\$215 -
Net profits.....	\$9,354	\$10,596	\$1,242 +
Aggregate gross earnings	\$28,681	\$29,708	\$1,027 +
Aggregate net profit.....	\$9,354	\$10,596	\$1,242 +

Cast-Welded Joints.

F. L. Wanklyn, Manager & Chief Engineer Montreal St. Ry. Co., has, in response to an enquiry, given us the following information respecting these joints:—"Last autumn 1,000 joints of this kind were made by us in different parts of our tracks, some in paved areas & some where the roadbed is simply macadam, the percentage of failures, due to expansion & contraction, being very small—less than 1/2 of 1%, & these occurred entirely in that portion of the track running in macadamized streets. We consider the experiment so satisfactory that we are now putting 5,000 joints in. The effect of these joints on tracks which have been in service for some years is most gratifying, as it entirely overcomes the low-joint trouble, which gives so much bother in street-railway systems, & I have no doubt that the introduction of cast-welded joints, if properly made, will materially increase the life of the rails. Electrically as well as me-

chanically we find the joints all that could be desired, the resistance being no greater than that of the solid rail; so that by using it it is possible to dispense with the usual copper bond. We have at present one furnace at work, with which we make 75 joints per night on an average. On construction work, where there is no interference from traffic, the number of joints from one furnace per day should be at least 100.

The Montreal Star thus describes the work: "Formerly plates were used at the ends of the rails to make the connection. It is claimed, however, that there is a loss of power or voltage by this arrangement. Hence the Co., to save the power thus lost, is making a solid joint or weld by placing a mould around the ends of the rails, & pouring in molten metal. This can only be done where the streets are paved. A huge portable furnace is brought near the place where the joints are to be made. A wire is thrown over the ordinary street car wire, & power is thus obtained to operate a fan which soon reduces the cast iron thrown into the furnace together with coal to a liquid state. This is run out of the spout into large metal buckets which are carried, everyone by 4 men, to where the joint is to be made. It takes just about a bucket of metal to fill the mould around each joint. The intense heat of the molten iron affects the ends of the rails, & the whole makes a perfect weld. An asbestos covering is used over the mould, & through a hole in this covering the metal is poured into the mould. A few minutes after the iron is poured in the mould is pried off & the red hot mass allowed to cool."

The Sao Paulo R., L. & P. Co.

J. Gunn, Superintendent; J. M. Smith, Comptroller; H. E. H. Vernon, Transfer Clerk; R. S. Gossett, Stenographer, all of the Toronto Ry. Co.; A. J. Sinclair, C.E., of Mackenzie & Mann's staff; A. W. Mackenzie, son of the President of the Toronto Ry. Co., & E. W. McNeill, of Blake, Lash & Cassells' law office, Toronto, have been incorporated under the Ontario Companies Act as the Sao Paulo Railway Light & Power Co., Ltd., with a capital of \$6,000,000, & head office at Toronto, the incorporators to be the first directors. The Co. has sweeping powers to operate in Canada or elsewhere, among them being power to construct & operate works for the production of steam, gas & electricity, & steam, gas, electrical, pneumatic, mechanical, hydraulic & other power elsewhere than in Canada, to obtain governmental, municipal or other authority, to construct & operate railways & branches for cars & other vehicles; also telegraph & telephone lines & works in connection therewith; & to carry telegrams, messages, passengers, mails, express & other freight by power of animals, or by animal, steam, pneumatic, electric or mechanical power; & also there to acquire & operate lines of railway, telegraph & telephone, gas-works & lines, electric light works & lines, steam, gas, electrical, pneumatic, mechanical, hydraulic & other power, works & lines, & the assets, powers, etc., connected therewith, & shares in the capital stock & bonds, debentures etc., of any company owning or operating any of the same, & to acquire real & personal property & estates & interests therein, including water-powers, lakes, ponds, streams & water-courses; to acquire rights, franchises, etc., to enable the Co. properly to exercise & carry on all or any of its rights, & powers; to enter into contracts with governmental, municipal or other authorities, bodies & private individuals, respecting the exercise by the Co. of any of its rights, etc., & respecting the acquisition by the Co. of rights, etc., to obtain from governmental, municipal & other authorities, etc., confirmation, registration & recognition of the Co. & of its rights,

objects, etc., within any place outside of Canada, & such additional rights, etc., as may be considered expedient; & to do whatever may be necessary to comply with laws, etc., in any such place; to sell to any persons or corporations any of the works, properties, rights, etc., of the Company.

The Lines in Western Canada.

Nelson.—At a recent meeting the City Council considered the application of the British Electric Traction Co. of London, Eng., for a charter for a tramway system in Nelson. During the term of the previous Council this matter was broached by Capt. Duncan & C. S. Drummond, & the Council passed a resolution setting out that no obstacles would be placed in the way of the Co. securing a charter. Since then the matter has been taken up by the British Electric Traction Co., & W. A. Macdonald, solicitor, asked the Council to again pass in favor of the franchise. He explained it was the desire of the promoters to cable to the directors meeting in London that the Council was favorably inclined to the granting of the franchise, and that it would submit a by-law to the ratepayers authorizing the granting of the charter. If such a resolution was passed he said that the Co. would feel warranted in undertaking a great deal of the preliminary work at once, & so soon as the ratepayers consented to the granting of the franchise work would be proceeded with vigorously, & cars would be running as soon as possible. The Co. desired a charter for 35 years & exemption from taxation upon its property. Mr. Macdonald explained that the British Electric Traction Co. would be the parent company of the company to be incorporated in B.C., & as an evidence of its strength he said that it already controlled about 40 different tramway lines in Great Brit-

ain & other countries. The Council decided to comply with the request to submit a by-law to the ratepayers for their approval, upon the understanding that the Co. should give satisfactory evidence of its ability to carry out the work, & that within 2 months after the granting of the charter the Co. should commence work & continue the same without delay until at least 2 miles of tramway was completed. This was satisfactory to the promoter's solicitor & at a future meeting details of the agreement to be made between the Co. & the city will be gone into when a purchase clause will be inserted, & other conditions deemed necessary will be imposed.—Nelson Miner.

The Winnipeg Electric St. Ry. Co. is equipping its cars with fenders.

Winnipeg to St. Norbert.—C. H. Allen, solicitor, Winnipeg, gives notice of application to the Manitoba Legislature for the incorporation of a company to construct & operate a steam or electric railway from St. Boniface to St. Norbert, on the east side of Red River, with a branch to St. Anne, & to cross any bridges between St. Boniface & Winnipeg, also to build from St. Norbert on the west side of Red River to Winnipeg. It is understood the intention is to build electric lines & to operate pleasure parks.

Ontario Electric Railways.

Ayr to Paris.—A meeting was held recently to consider the question of connecting these points by an electric railway, & possibly extending it to Brantford. Considerable divergence of opinion manifested itself, but a majority favored the proposal.

Brantford St. Ry.—In reply to complaints from the City Council the management states that the track & poles are being attended to & that everything within reason is being done to improve the facilities of the line.

Mohawk Park, owned by this Co. is a delightful resort. It has the only water-chute in Canada, & which cost \$1,200. The base ball grounds & bicycle track are drawing cards. Last year 68 picnics were held there, it being a favorite resort for Sunday schools. The refreshment privileges & those for merry-go-round, water toboggan, boats, etc., are rented. No theatricals are presented, but such attractions as tight-rope walking, tumbling & slack-wire performances drew fairly well last year.

Cornwall Electric St. Ry.—On Queen's birthday some 12,000 passengers were carried. Manager Talbot thinks the prospects very good.

Hamilton.—It is said the Cataract Power Co., represented by J. Patterson, has now secured a majority of the stock of the Hamilton St. Ry. & the Hamilton Radial Electric Ry. & that it is likely to also get control of the Hamilton & Dundas Electric Ry. The stock of the Hamilton St. Ry., is \$205,000, & the bonded indebtedness some \$500,000. It is in contemplation for the amalgamated systems to be added to by the building of lines from Hamilton to Guelph & Waterloo, & by the extension of the Radial to Oakville. Other lines are also talked of, including an extension from Guelph to Owen Sound, the Hamilton, Ancaster & Chedoke project, a line from Hamilton via Brantford to Paris & Ayr, & a line from Brantford to Port Dover.

London St. Ry.'s gross earnings for May, \$5,352.10, a decrease of \$2,542.20 from May, 1898. The strike took place May 23, 1899, & is still in progress. The cause of the difficulty is the refusal of the Co. to formally recognize the union. The Co. offered to submit to arbitration the question as to whether it had or had not lived up to the agreement which settled the strike of 6 months ago, but the men replied that the agreement was unworkable & demanded a new one, which had for its first

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clause a provision that none but union men be employed. This the Co. refused to consider.

The Ottawa Electric Ry. has got its desired legislation through the House of Commons despite vigorous attempts to change it. The Co. is given power to extend its line from some point on its present line in the municipalities of Hintonburg or Nepean to Bell's Corners, the extension to be begun within 18 months & completed within 3 years. The most important clause in the Act reads:—"Notwithstanding anything contained in the statutes of 1892, chap. 53, sec. 6, it is hereby declared & enacted that the following words in the Ontario statutes of 1898, chap. 45, sec. 2: 'no car of any description shall be run between midnight of Saturday & midnight of Sunday,' are not & shall not be applicable to the Ottawa Electric Ry. Co."

Owen Sound.—The matter of a summer resort at Balmy Beach, on the Georgian Bay, is being earnestly discussed. It is said that New Orleans & Cincinnati capitalists are looking into the matter, & the people are very hopeful that by next year the plans at present outlined will be put into effect. Property owners at the point named are active in their endeavors to interest outsiders, & offer all the ground & help possible to further the enterprise. One great feature of the culmination of this resort plan will be the construction of an electric railway to the proposed spot. The connection of Owen Sound & Balmy Beach has for a long time been talked of, & if the resort plans go through there will be no question of the road being built at once.—Street Railway Review.

The foregoing refers to the Owen Sound & Georgian Bay St. Ry. Co., particulars of which were given in our April issue, pg. 120.

The St. Thomas St. Ry. Co. has planned to give its patrons one of the most delightful pleasure resorts in the entire Dominion. Yarwood Farm has long been noted for its beautiful lakes & its natural & picturesque scenery. It lies 6 miles from St. Thomas & is reached by the railway. The Co. has recently purchased the farm & has had expert landscape gardeners at work laying out the grounds, & by the combination of art & nature has made a series of parks & amusement grounds rivalling anything in Canada. At the entrance to the resort is Yarwood Park. This is what constituted the handsome grounds around the old family residence. This needed no embellishing at the hands of the gardener; it had already been laid out as attractively as possible. The old farm house is a part of the purchase & from it such supplies as hot water & other aids to the comfort of the picnicker can be obtained. From this point, too, there is a splendid view of Lake Pinare, a large body of clear, pure water which affords the most ample facilities for boating & bathing. The lake is large enough to make the use of steam launches & sailing yachts entirely convenient. The car line, after winding around & half encircling Yarwood Park, leads up to the pretty station the Co. has built at the entrance to Central Park. Here is where the artist has shown his skill. This park is one of the most delightful spots imaginable. Just enough trees have been left standing to afford shade, while the smooth walks are bordered on either side with the gayest & the choicest flowers. One end of this park reaches to the bank of Lake Pinare & here has been built a large & airy pavilion which can be used as a lanching room for those who prefer it to eating out of doors. Over to the right from Central Park is the bicycle track & athletic grounds & close by are the golf links, the tennis court & the baseball grounds. The whole section is indeed but a series of parks & play grounds, the whole constituting one beautiful resort, the equal of which it would be hard to find. The Co. owns & controls it all & takes its passengers there, a pleasant ride in comfortable cars for a 5c. fare.—Street Railway Review.

Toronto Railway.—The gross earnings are:

	1899.	1898.	Increase.
Jan.	\$95,690.12	\$86,502.36	\$9,187.76
Feb.	91,860.30	82,402.19	9,458.11
Mar.	103,234.88	92,318.42	10,916.46
April.	95,212.37	86,898.83	8,313.54
May.	104,806.62	92,670.35	12,136.27
	\$490,804.29	\$440,792.15	\$50,012.14

The City Treasurer's report shows that the city received as percentage from the Co. last year \$162,631, an increase of \$16,958 over the previous year. The estimated percentage revenue for this year is \$164,000.

On Queen's Birthday 158,700 passengers who paid fares were carried, exclusive of transfers. On the King street route there were over 10,000 more people carried than on the same day in 1898.

A proposal to run cars between College & Bloor sts., by way of the University ravine, has been blocked by the University authorities.

Woodstock.—The Council has refused the application of a United States promoter for a 99-year street railway franchise.

Quebec Electric Railways.

The Hull Electric Ry. Co. has met its third defeat since 1896 in its attempt to secure power to bridge the Ottawa River & extend its railway from Hull to Ottawa. On May 16 the Railway Committee of Parliament rejected the Co.'s bill empowering it to build a bridge from Hull to Kent Street, Ottawa. The bill was supported by the Ottawa City Corporation & opposed by the Ottawa Electric Ry. Co. & the Beemer interests.

Montreal Island Belt Line Ry.—After a protracted fight between this Co. & the Montreal St. Ry. Co., the Railway Committee of the Privy Council has granted the M. I. B. L. Co.'s application to cross the Montreal St. Ry. Co.'s tracks on St. Catherine & Notre Dame Sts. in order to build a line to the Dominion Cotton Mills. The M. S. R. Co. wanted the M. I. B. L. Co. restricted to the carrying of freight on this line, but permission to carry passengers was also given. The road, which will be known as the Davidson St. line, is already under construction.

Montreal Park & Island Ry.—M. Conolley, contractor, has taken action against H. S. Holt, Hon. A. A. Thibaudeau, W. Strachan, D. Morrice, A. Brunet & L. S. Beaubien directors of this Co. He says that in 1894 he bought 22 of the Co.'s 1st mortgage bonds of \$1,000 each. The interest warrants upon the bonds were regularly paid until Jan., 1898, when default was made, & has continued since. He alleges the directors informed him that neither the principal nor the interest of the bonds would be paid, as the issue of which they formed part was defective & did not carry any mortgage upon the property of the Co., & that the Co. was insolvent & unable to meet these unsecured liabilities. The declaration sets forth that the defendants, to further their own private interests, have fraudulently hypothecated the property of the Co. with new encumbrances for the express purpose of creating a charge that should have priority over plaintiff's claim & make his recourse against the Co. valueless. The Co. having been authorized to further increase its bonded obligation, the defendants, in 1887, issued certain bonds purporting a 1st charge, & declaring them free & clear of previous encumbrance. To carry out the completion of the road a Co. has been organized called the Montreal Construction Co., which entered into a contract for the construction of the railway & covenanted to receive in part payment bonds of the railway company for \$25,000 a mile. The directors of the Montreal Construction Co. were directors of the M. P. & I. Ry. Co., the President of the M., P. & I. R. Co. was President of the Montreal Construction Co., the Secretary was also Secretary of the other company, & the defendants were the chief

proprietors & shareholders of the Construction Co. The issue of bonds at the rate of \$25,000 a mile is alleged to have been excessive, & calculated to render the railway company unable to meet any other liability, & in fact, rendered it virtually insolvent.

Montreal St. Ry.—The gross earnings are:

	1898-9.	1897-8.	Increase.
Oct.	\$133,419.69	\$116,093.09	\$17,326.60
Nov.	125,126.10	110,698.98	14,427.12
Dec.	127,678.00	113,029.33	14,648.67
Jan.	125,276.04	110,155.96	15,120.08
Feb.	113,838.02	102,425.99	11,412.03
Mar.	123,754.11	114,476.98	9,277.13
April.	130,403.96	110,619.27	19,786.69
May.	145,466.38	123,308.08	22,158.30
	\$1,024,964.30	\$900,807.68	\$124,156.62

The Co. has voluntarily increased the pay of motormen & conductors, who have been in its service for two years & over, to 15c. an hour. Those who have been 5 years & over will get free uniforms. The Co. has also decided to insure all its operating department & workshop employes in an accident insurance company for \$1,000 each, in case of death from accidents either on or off duty; \$500 for total disablement, & \$5 weekly indemnity for disablement through injuries or specified diseases. Hitherto employes have had to pay their own insurance.

The Co. has decided to double-track the Verdun extension out to Queen's Park, to vestibule all cars front & rear, & to build 3 car sheds with a combined capacity of 224 cars.

Superintendent McDonald, who recently returned from visiting a number of U. S. cities, said he had been investigating the fender question particularly, & would prepare a report on it. His opinion is that a combination fender, which will unite the best points of several of those now in use, will eventually be adopted. In a recent conference with the City Surveyor of Montreal, Manager Wanklyn said the Co. would subject to a thorough trial all the fenders submitted to it, & would adopt for all its cars the one proved by the tests to be the best for the public protection. The present fender was adopted after thorough trial & mature consideration, because the management considered it the best available. Mr. Wanklyn considers it has done its work well, for it has saved many lives. Most of the accidents which have occurred could not have been prevented by any possible kind of fender.

The action of the Railway Committee of the Privy Council in giving the Montreal Island Belt Line Ry. Co. access into the city for passengers, as well as freight, has dispelled the idea that the Montreal St. Ry. Co. has a monopoly, & has somewhat depressed the stock lately. The \$100 shares were up to \$335 early in May, but went down to \$312, since which they have been climbing up again. It is said the Co. is trying to absorb the Montreal Park & Island Ry. Co., which has exclusive franchises from a number of suburbs. It reaches Montreal by 4 different points, & enters by a friendly arrangement over the M. S. Ry. Co.'s rails. But it is in a bad condition financially, & it is obvious that a change in the management might rupture this friendly arrangement. It is understood that it has been offered \$800,000 for all its property & franchises, but it is said to be holding out for a round million. Such a purchase would dispose of a good slice of the new stock of the M. S. R. Co., which at the last session of the Legislature was given permission to increase its capital from \$5,000,000 to \$10,000,000 for the purposes of extensions but has not yet found an opening for the extra capital.

Quebec, Montmorency & Charlevoix Ry.

—We are officially informed that the Co. has abandoned, for the present, its intention to construct the upper road or line on the top of the cliff to Montmorency Falls. (Apl. pg. 121.)

The name of this Co. is to be changed to the Quebec Light & Power Co.

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THE SPLENDID RECORD OF THE I. O. F.

Cost to Join the I.O.F.

(For \$1,000 Mortuary Benefit.)

Initiation fee (minimum).....	\$1 00
Certificate fee.....	1 00
Registration fee.....	1 00
Medical Examination fee.....	1 50
Total minimum cost.....	\$4 50

(For more than \$1,000 Mort. Benefit.)

Cost to take \$2,000 Mort. Benefit.....	\$6 00
" " \$3,000 " " " " " "	7 00
" " \$4,000 " " " " " "	9 00
" " \$5,000 " " " " " "	10 00
Sick benefits, when required, cost extra.	

Benefits given by the I.O.F.

- 1.—**Social and Fraternal Privileges** of the Court Room.
- 2.—**Free Medical Attendance** by Court Physician where not dispensed with by Court by-law; also trained nurses in certain cases.
- 3.—**A Sick Benefit** of \$3 to \$5 per week, subject to provisions of the Constitution and Laws of the Order; optional, and when taken costs extra.
- 4.—**A Total and Permanent Disability Benefit** of one-half of face value of policy, with exemption from further payment of premiums or Court Dues.
- 5.—**An Old Age Benefit** consisting of exemption from payment of premiums and Court dues after age 70.
- 6.—**An Old Age Disability Benefit** of one-tenth of face value of policy payable yearly for ten years, on being declared totally and permanently disabled by infirmities of age after the seventieth birthday.
- 7.—**An Old Age Pension** payable during disability, which may be taken as a substitute for the Old Age Disability Benefit.
- 8.—**A Burial Benefit** of \$100 at death of a Pensioner.
- 9.—**A Funeral Benefit** of \$50 at death of a member enrolled in Sick and Funeral Benefit Department.
- 10.—**The Mortuary Benefit** of \$500, \$1,000, \$2,000, \$3,000, \$4,000 or \$5,000.

The Members, the Benefits, and Their Assurance

At 31st December Each Year.

Year.	Total Membership.	Benefits Paid.	Total Surplus.	Surplus per Capita.	Death Rate per 1,000.
1881	1,019	\$ 1,300 00	\$ 4,568 55	\$ 4 48	4.50
1882	1,134	12,058 86	2,967 93	2 61	11.00
1883	2,216	9,493 68	10,857 65	4 91	4.73
1884	2,538	13,914 31	23,081 85	9 01	4.23
1885	3,042	26,576 99	29,802 42	8 18	7.76
1886	5,804	28,499 82	53,981 28	9 30	4.85
1887	7,811	50,014 67	81,384 41	10 44	5.78
1888	11,800	89,018 16	117,821 96	9 98	6.43
1889	17,349	116,787 82	188,130 36	10 84	5.85
1890	24,604	181,846 79	283,967 20	11 54	5.18
1891	32,303	261,436 21	408,798 20	12 65	6.40
1892	43,024	344,748 82	580,597 85	13 49	6.25
1893	54,484	392,185 93	858,257 89	15 76	5.47
1894	70,955	511,162 30	1,187,125 11	16 94	5.47
1895	86,521	685,000 18	1,590,733 46	18 03	5.67
1896	102,838	820,941 91	2,015,484 38	19 60	5.30
1897	124,685	992,225 60	2,558,822 78	20 52	5.36
1898	144,000	1,176,125 14	3,186,370 36	22 12	5.67

For Further Information Respecting this Great Fraternal Benefit Society, Apply to

Oronhyatekha, M.D., S.C.R., Toronto, Ont.

James Marshall, 24 Charing Cross, London, Eng.

John A. McGillivray, Q.C., S.S., Toronto, Ont.

A. E. Stevenson, 6436 Kimbark Ave., Chicago, Ill.

Or Any Officer or Member of the Order.

Three Rivers to Grand Mere.—The Three Rivers Board of Trade is endeavoring to secure the construction of an electric railway from that town to Grand Mere.

Jamaica Electric Ry.—Lieut.-Col. Henshaw, of Montreal, who has been in Jamaica recently, states that the electric railway, in which J. Ross, Montreal, W. Mackenzie, Toronto, & others are interested, has started operation & is proving decidedly satisfactory.

The Canadian Electrical Association will hold its convention at Hamilton, Ont., June 28 & 29. Among the features will be trips over the Hamilton Radial & the Hamilton, Grimsby & Beamsville Electric Railway & a visit to the Cataract Power Co.'s works.

Tramways in Shanghai.—A cablegram from Shanghai says: "Sir Chas. Ross, representing an American syndicate, has offered to purchase the municipal electric light plants, on condition that the purchaser is given the right to establish tramways." The Sir Chas. Ross mentioned is probably the one who is interested in electric power works & mines in British Columbia, & if so the syndicate is more likely to be a Canadian than a U.S. one.

International Electric Railways.—G. Johnson, Dominion statistician, says the 1st international electric railway operating between Canada & the U. S. was the Calais & St. Stephen, the 1st car of which crossed the bridge over the St. Croix river from Calais, Maine, to Milltown, N.B., in July, 1894; & the 1st car over the bridge between Calais & St. Stephen, N. B., crossed in June, 1895. On July 1, 1898, the Niagara Falls Park & River Ry. sent its first car over the bridge spanning the Niagara river from Niagara Falls, Ont., to Niagara Falls, N.Y.

Street Railway Advertising.—In the recent case of Macdonald vs. Stuffman, in Montreal, the plaintiff had contracted with defendant to have advertisements placed for him in 117 cars of the Montreal St. Ry. for \$350, payable in quarterly instalments. Some cars having been destroyed by fire, the advertisements did not appear in the number of cars mentioned during the 1st quarter, & defendant only tendered a portion of the amount. After the 2nd quarter, however, although the advertisements had appeared in more than 117 cars, he refused payment, alleging he had cancelled the contract. The Court held that he could not thus cancel a contract on his own account, & rendered judgment in favor of plaintiff for \$87.75, full amount due for the 2nd quarter.

St. John, N.B., Ry. Co.—The Supreme Court of N.B. has granted a new trial in the case of Prof. Hesse vs. the Co. In the Lower Court Hesse was given a verdict for \$25,000 on account of an accident by jumping from a car of which the conductor had lost control. Hesse had to have his foot amputated. The Co. appealed. The reason for the judgment is the misdirection of the trial judge as to the inference the jury might draw from defendant's objection to a witness stating the result of his inquiries at Providence, respecting Prof. Hesse's position, & from defendant's not using evidence taken under commission at Providence. The majority of the court held that Judge VanWort's comments in reference to the features of the case were improper, & calculated to affect the jury judicially from defendant's standpoint. Chief Justice Tuck held that the damages were out of proportion to the injuries sustained.

The Gorge Line.—The Niagara Falls & Lewiston Ry. has seen a lot of changes recently. J. R. Megrue resigned the receivership, being succeeded by G. Morgan, of Syracuse, N.Y. Then the line was sold at sheriff's sale at Lockport, N.Y., to H. P. Bissell, of Buffalo, for \$6,184, subject to a mortgage of \$1,000,000 held by the Knickerbocker Trust

Co., Bissell being said to represent 95% of the creditors & 75% of the stockholders of the old company. This was followed by an announcement that the Co. had been re-organized with Gen. F. V. Greene, of New York, as President & G. Morgan, General Manager, & that an agreement had been made with the International Traction Co., owners of the Niagara Falls Park & River Ry. for the cars of the Gorge line to cross the new bridge from Lewiston, N.Y., to Queenston, Ont., run over the N.F.P.R. Ry. to Niagara Falls, Ont., cross to Niagara Falls, N.Y., & on to the Gorge line again, making a belt line.

Cuban Street Railway.—The Havana, Cuba, street railway system, now owned & controlled by three syndicates, the International Bank of Paris, the Harvey Syndicate of New York, & one in Canada, is to be fully equipped with electricity. Capt. Burrowe, who won considerable reputation as a Rough Rider in the recent war, is General Manager of the system, having been placed in charge shortly after the purchase by the syndicates. He has been introducing American methods as far as possible, but it has been decided to wait until fall, after the rainy season, before beginning the work of equipping the road for electricity. The roads, even under the old methods, have been paying good dividends, & Capt. Burrowe believes that, with the adoption of electricity, the Havana street railways will be among the best paying investments in Cuba.—Street Railway Review.

A recent report that W. Mackenzie & other Torontonians had secured the street railway franchise in Havana, & that the New York syndicate, in which Montreal capitalists are interested, had lost it on the production of proof of bribery, is denied by Hanson Bros., representatives of the syndicate which holds the franchise, who says the report is absolutely untrue. They operate the street railway at the present time, & they give an emphatic denial to the statement of bribery. No such action as that described could be taken before such a charge was investigated by the courts, & at present there are no courts sitting.

TELEGRAPHS & CABLES.

The Yukon Telegraph Line.

On May 22 Sir Adolphe Caron, J.H. Turner, ex-premier of British Columbia, directors; W. V. Laugh, M.P., & Alderman Barker, trustees of the debenture stock of the Canadian, British Columbian & Dawson City Telegraph Co. had a long interview in London, Eng., with Lord Strathcona & Mount Royal, High Commissioner for Canada, in respect to the breach of the charter by the Dominion Government. It is understood that Lord Strathcona was strongly impressed by the representations made by the deputation, especially in regard to the importance of the government keeping faith with investing capitalists under chartered rights. He promised the deputation to forward a full statement of the Co.'s claim to Ottawa.

A petition addressed to the Governor-General-in-Council states that an act was passed by the Dominion Parliament in 1898 incorporating the Co., & sets forth as follows: "On Dec. 9, 1898, an English joint stock company, entitled the Canadian, British Columbian & Dawson City Telegraph Co., Ltd., was organized at great expense to carry out the objects of the above mentioned charter & subscriptions for debentures were opened to the English public. On Dec. 16, 1898, the Co. proceeded to allotment, having arranged with the contractor to construct the line of telegraph as detailed in the prospectus, and as provided in the construction contract. All the foregoing arrangements & contracts have been seriously prejudiced, & it is apprehended

will be rendered null & void by the announcement that the Canadian government has decided to construct a telegraph line to connect the Yukon territory with British Columbia, & that the franchise for a telegraph line to Dawson is too valuable a one, & too important from the standpoint of national safety to be allowed to go into any but government hands. The route selected by the government is said to be practically the same as that provided by the aforesaid act. Your petitioners therefore pray that government work on the telegraph line be stopped forthwith & abandoned, & any authority permitting construction withdrawn. In the alternative, it is submitted that adequate & proper compensation to both companies, viz.: The Canadian, British Columbian & Dawson City Telegraph Co. & The Dawson City & Victoria Telegraph Co. should be awarded."

This is just what we predicted would happen when the Government decided to build the line.

About the middle of May, J. B. Charleson, who is in charge of construction of the Dominion Government telegraph line from Bennett Lake to Dawson City, sent a message from Skagway to Vancouver by steamer to be wired to the Minister of Public Works at Ottawa, stating that the line had been built from Bennett City to Tagish, 52 miles, making with the White Pass & Yukon Ry. Co.'s line from Skagway to Bennett, a total distance of 97 miles from the coast. Mr. Charleson stated he expected the line would be completed to Dawson City by the end of Nov.

C.P.R. Company's Telegraph.

NEW OFFICES:—Noyan Jct. & Rockland, Que.; Port Dalhousie, Queenston, Dinorwic, & C.A.Ry., Station, Ottawa, Ont.; Cowan & Makinok, Man.; Estevan & McLeod, N.W.T.; Moyelle, B.C.

OFFICES CLOSED:—St. Joseph de Levis, Que.; Byron, Colgan & Rockliffe, Ont.; Myrtle, Oakville & Rosebank, Man.

Manager Hosmer has presented the C.P.R. Telegraphers' Institute at Winnipeg with the Encyclopedia Britannica.

Superintendent Wilson, of the Pacific Division, who had a serious illness in the Kootenay district recently, has been granted leave of absence to recuperate & has gone to California.

P. A. Perron, civil engineer of the Dominion Public Works Department, & his assistant, who were engaged last winter in surveying the coast of Labrador for the extension of the telegraph line from Esquimaux Point to the Strait of Belle Isle, have returned to Ottawa, having completed the work. They had a very hard winter in Labrador. It is said the laying of the line is to be proceeded with shortly.

The Dominion Railway Committee has passed the bill to incorporate D. C. Corbin, Spokane, Wash.; Duncan Ross, Greenwood, B.C.; John Dean, of Rossland B.C., & others as the Northern Telegraph Co. The capital stock is placed at \$50,000. The head office is to be at Greenwood, B.C. The Co. may construct and operate lines between such points in Yale, West Kootenay & East Kootenay as it may desire. There was considerable objection to giving a blanket charter, & the bill was greatly amended. Authority was given to connect with or sell out to the Spokane Northern Telegraph Co.

Construction has been started on the Dominion Government telegraph line from Albern to Cape Beale, B.C., 38 miles. It is to follow the coast line as closely as possible, a trail being cut the entire distance, & the no. 6 standard Government gauge wire being stretched on poles all the distance, except where it skirts Nikasmus Bay, where it will

run on iron brackets fixed in the solid rock. The new line will make, with the existing Government wire to Alberni, an alternate loop line, to relieve the pressure on the Carmanah wire, & ensure a connection from the danger points on the West Coast when they are most in demand. It is expected to have the work completed by midsummer.

TELEPHONE MATTERS.

The Bell Telephone Company.

This Co.'s. new exchange building in Quebec, which fronts on 3 streets, is 3 stories high, including basement. The whole of the exterior is of granite. The foundation wall up to the base course is of a dark grey, pick-faced granite; the ground floor is a dark grey rock-faced rustic granite; the rest of the building above the string course at the 1st floor level being of rose-tinted, pick-faced coursed granite. The whole of the interior is carried out on a slow burning principle; the joists being carried by steel columns & girders.

The main entrance, which is on St. John St., gives the public access to the Stores Department, the Long Distance & Toll Line Department, the General Office & the Manager's office. At the rear of the building on this floor is placed the room which contains the main distributing frame & power plant. The whole of the 1st or top floor is taken up by the operating room, the operator's retiring & cloak rooms, etc. In the basement are, room for stores department, furnace room & coal cellars, lineman's & inspectors' rooms & their store room. The building is heated by hot water; the plumbing is of a high quality & a special system of interior ventilation is applied which keeps the whole building supplied with fresh air. It is lighted with combination gas & electric light fixtures.

The telephone wires enter the building underground by means of lead-covered cables; each cable containing 150 pairs of wires. These cables are equipped with rubber covered wire ends, which are connected to the main distributing rack. On each rack are

placed the strong current protectors, consisting of carbon air gap arrester & a heat coil for sneak currents. In the same room are the storage batteries used in connection with the switchboard, & the dynamos for charging them. The charging machines are belted to several small induction motors. The wires from the main distributing frame & the lower plant are carried up through the ceiling into the operating room at a point situated under the switchboard, thence they are distributed to the proper points on the switchboard, which is of a type known as the branch terminal self-restoring drop switchboard, the same as in use in Montreal, Toronto & very many large cities in the United States & elsewhere. The switchboard has an ultimate capacity for 3,000 subscribers' lines with the necessary trunk & long distance lines, & the present capacity of 1,800 subscribers' lines & 20 long distance lines.

The Co. is erecting a heavy copper long distance metallic line between Ottawa & Brockville, Ont.

The Columbia Telephone Co. has poles distributed for its line from Cascade to Camp McKinney, B.C., & is setting them up & stringing wires.

The Victoria Telephone Co. has been incorporated with head office at Woodville, Ont., to operate in Lindsay & through Victoria County. J. G. Eyre & C. E. Weeks, Woodville; A. Campbell, Lindsay; J. J. Cave, Beaverton; & W. H. Johnston, Pefferlaw, are the provisional directors. The capital stock is \$20,000.

Application is to be made under the Manitoba Joint Stock Companies Act for the incorporation of the Carman Telephone Exchange Co. to apply a telephone system for the village of Carman, with outside connections. The capital is \$2,000, & the 1st directors are J. E. Campbell, F. D. Stewart, M. E. DeMill, W. H. Hemenway, W. H. Smith, S. McClain & J. H. Haverson, of Carman.

In our last issue, pg. 160, we mentioned some instruments invented by A. T. Smith,

District Superintendent of the Bell Telephone Co. at Kingston, Ont., for communicating between attendants on the surface & divers at the bottom of the river. Mr. Smith, to whom we wrote for detailed particulars, replies: "I am sorry to say that Capt. Lesslie informs me the diving bells are not a success, owing to the heavy pressure of current at that point on the river. While this does not in any way affect the working of the telephones as arranged by me, still I do not care to enter into details under the circumstances."

Among the Express Companies.

The Dominion re-opened its Niagara River Line route May 15.

The Dominion will open offices at Emo & Fort Francis, Rainy River district, Ont.

The Dominion has taken over the business on the St. Catharines & Niagara Central Ry., heretofore handled by the American.

J. C. Stewart has been appointed agent at Sault Ste. Marie, Mich., of both the Western & Dominion, vice T. E. Foard, promoted.

The American has started an express service on all trains on the St. Clair branch of the M.C.R., from St. Thomas, Ont., to Court-right, Ont.

The Canadian has issued General Circular no. 1, recapitulating general circulars nos. A to 24, & containing all the live information in them.

The Alaska Pacific has issued a new tariff between Seattle, Wash., & Skagway, White Pass, Alaska, Atlin Jct., Log Cabin & Bennett, Alaska; Tagish, B.C., White Horse Rapids, N.W.T., Atlin City, B.C., & Dawson City, Yukon, & intermediate points.

The Newfoundland Ry. Express is operating over R. G. Reid's Newfoundland Ry. The rate on all matter from North Sydney, N.S., to all points in Newfoundland, along the lines of the Ry., is \$2 per 100 lbs. The Newfoundland Ry. Express will not handle money.

THE HUNTER, ROSE CO.,
All kinds of... Limited.
PRINTING, BOOKBINDING,
OFFICE STATIONERY
AND ACCOUNT BOOKS
Temple Building, • • Toronto.

STEEL
LaBelle Steel Co.
Pittsburgh, Pa.

MANUFACTURERS OF
FINE TOOL STEEL
For Railway Purposes
Track Tools,
Punches, Dies,
Drills, Magnets, etc.

And all purposes where requirements are exacting.
Steel Forgings. Case Hardening Steel.

W. G. BLYTH,
Agent for Canada,
29 Melinda St. - Toronto

ADVERTISING

ON THE

CANADIAN PACIFIC RAILWAY.

The exclusive privilege of advertising in the Stations, Ticket Agencies and Hotels of the CANADIAN PACIFIC RAILWAY, and on that Company's buildings, premises, telegraph poles and fences, is controlled by THE ACTON BURROWS COMPANY.

The franchise embraces the whole of the C. P. R. System, including all branches and leased lines, comprising 7,178 miles of railway, 69th stations, and a number of ticket agencies and hotels.

Advertising on the C. P. R. is like every department of that Company's service, modern, up-to-date and reliable.

FOR RATES AND FURTHER PARTICULARS APPLY TO

The Acton Burrows Company,
29 Melinda St., Toronto, Canada

BRANCH OFFICE:

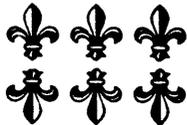
197 Lombard Street, Winnipeg—S. A. Erskine, Resident Agent.

The Purchasing Agents' Guide

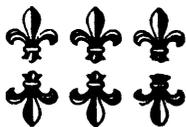
To the Manufacturers of & Dealers in Steam & Electric Railway, Steamship, Express, Telegraph & Telephone supplies, &c.

Accident Insurance	Foghorns	Shipbuilders' Supplies
Canadian Ry. Accident Ins. Co. Ottawa, Ont.	Rice Lewis & Son. Toronto.	Rice Lewis & Son. Toronto.
Travelers' Insurance Co. Montreal.	Forgings	Ship Carpenters' Tools
Aerated Waters	Rhodes, Curry & Co. Amherst, N.S.	Rice Lewis & Son. Toronto.
E. L. Drewry. Winnipeg.	Gates	Ships
Air Brakes & Fittings	Page Wire Fence Co. Walkerville, Ont.	Polson Iron Works Toronto.
Westinghouse Mfg. Co. Hamilton, Ont.	Gas & Gasoline Engines	Shovels
Ales	Northey Manufacturing Co. Toronto.	Rice Lewis & Son. Toronto.
E. L. Drewry. Winnipeg.	General Supplies	The Hudson's Bay Company.
Aluminum	The Hudson's Bay Company.	Signal House Numbers
Rice Lewis & Son. Toronto.	Grease	Acton Burrows Co. Toronto.
Anchors	Eureka Min. Wool & Asbestos Co. Toronto.	Signals
Rice Lewis & Son. Toronto.	Groceries	Noah L. Piper & Sons. Toronto.
Anti-Friction Metal	The Hudson's Bay Company.	Signs
Canada Metal Co. Toronto.	Half Tones	Acton Burrows Co. Toronto.
Asbestos	Acton Burrows Co. Toronto.	Snow Ploughs
Eureka Min. Wool & Asbestos Co. Toronto.	Hardware	Rhodes, Curry & Co. Amherst, N.S.
Axles	Rice Lewis & Son. Toronto.	Solder
Rhodes, Curry & Co. Amherst, N.S.	The Hudson's Bay Company.	Canada Metal Co. Toronto.
Babbit	Headlights	Speed Indicators
Canada Metal Co. Toronto.	Noah L. Piper & Sons. Toronto.	Rice Lewis & Son. Toronto.
Rice Lewis & Son. Toronto.	Hose	Spikes
Badges	Rice Lewis & Son. Toronto.	Rice Lewis & Son. Toronto.
John Martin, Sons & Co. Montreal.	Illustrations	Springs
Beams	Acton Burrows Co. Toronto.	Rhodes, Curry & Co. Amherst, N.S.
Rice Lewis & Son. Toronto.	Iron	Station Name Signs
Bellows	Rice Lewis & Son. Toronto.	Acton Burrows Co. Toronto.
Rice Lewis & Son. Toronto.	Iron Signs	Steamboats
Bells	Acton Burrows Co. Toronto.	Polson Iron Works Toronto.
Rice Lewis & Son. Toronto.	Japans	Steamboat Signs
Belting	McCaskill, Dougall & Co. Montreal.	Acton Burrows Co. Toronto.
Eureka Min. Wool & Asbestos Co. Toronto.	Lager Beer, &c.	Steam Whistles
Rice Lewis & Son. Toronto.	E. L. Drewry. Winnipeg.	Rice Lewis & Son. Toronto.
Blankets and Bedding	Lamps	Steel
The Hudson's Bay Company.	Rice Lewis & Son. Toronto.	W. G. Blyth Toronto.
Block & Tackle	Noah L. Piper & Sons. Toronto.	Rice Lewis & Son. Toronto.
Rice Lewis & Son. Toronto.	The Hudson's Bay Company.	Switch Targets
Blocks	Lanterns	Acton Burrows Co. Toronto.
Rice Lewis & Son. Toronto.	Rice Lewis & Son. Toronto.	Tanks and Tank Fixtures
Boat Fittings & Hardware	Launches	Ontario Wind Engine & Pump Co. Toronto.
Rice Lewis & Son. Toronto.	Polson Iron Works. Toronto.	Telegraph Office Signs
Boiler Covering	Life Insurance	Acton Burrows Co. Toronto.
Eureka Min. Wool & Asbestos Co. Toronto.	Independent Order of Foresters. Toronto.	Telegraph Spoons
Mica Boiler Covering Co. Toronto.	Travelers' Insurance Co. Montreal.	Rice Lewis & Son. Toronto.
Boilers	Linoleum and Floor Coverings	Telephone Office Signs
Polson Iron Works. Toronto.	The Hudson's Bay Company.	Acton Burrows Co. Toronto.
Boiler Tubes	Locomotives	Tie Plates
Rice Lewis & Son. Toronto.	Baldwin Locomotive Works Philadelphia.	F. E. Came. Montreal.
Bolts	Lubricators	Tobacco and Cigars
Rice Lewis & Son. Toronto.	Rice Lewis & Son. Toronto.	The Hudson's Bay Company.
Bridge Numbers	Matches	Tollet Paper
Acton Burrows Co. Toronto.	E. B. Eddy Co. Hull, Que.	Rice Lewis & Son. Toronto.
Buckets	The Hudson's Bay Company.	The Hudson's Bay Company.
Rice Lewis & Son. Toronto.	Milepost Numbers	Tools
Bunting	Acton Burrows Co. Toronto.	Rice Lewis & Son. Toronto.
Rice Lewis & Son. Toronto.	Mohair	Track Jacks
The Hudson's Bay Company.	The Hudson's Bay Company.	Duff Manufacturing Co. Allegheny, Pa.
Carpets	Numbers	Track Tools
The Hudson's Bay Company.	Acton Burrows Co. Toronto.	Rice Lewis & Son. Toronto.
Cars	Oakum	Trucks
Rhodes, Curry & Co. Amherst, N.S.	Rice Lewis & Son. Toronto.	Rice Lewis & Son. Toronto.
Car Wheels	The Hudson's Bay Company.	Typewriters
Rhodes, Curry & Co. Amherst, N.S.	Oils	Creelman Bros. Typewriter Co. Toronto.
Castings	Eureka Min. Wool & Asbestos Co. Toronto.	Uniforms
Rhodes, Curry & Co. Amherst, N.S.	Galena Oil Co. Franklin, Pa.	John Martin, Sons & Co. Montreal.
Chains	Office Signs	Uniform Caps
Rice Lewis & Son. Toronto.	Acton Burrows Co. Toronto.	W. H. Coddington. Hamilton, Ont.
Cross Arms, Top Pins & Side Blocks	Packing	John Martin, Sons & Co. Montreal.
The Firstbrook Box Co. Toronto.	Eureka Min. Wool & Asbestos Co. Toronto.	Valves
Curtains	Pipe	Rice Lewis & Son. Toronto.
The Hudson's Bay Company.	Rice Lewis & Son. Toronto.	Varnishes
Cuts	Pipe Covering	McCaskill, Dougall & Co. Montreal.
Acton Burrows Co. Toronto.	Eureka Min. Wool & Asbestos Co. Toronto.	Vessels
Door Signs	Mica Boiler Covering Co. Toronto.	Polson Iron Works Toronto.
Acton Burrows Co. Toronto.	Plushes	Waste
Dry Goods	The Hudson's Bay Company.	Rice Lewis & Son. Toronto.
The Hudson's Bay Company.	Porter	Eureka Min. Wool & Asbestos Co. Toronto.
Electric Car Route Signs	E. L. Drewry. Winnipeg.	Noah L. Piper & Sons. Toronto.
Acton Burrows Co. Toronto.	Portland Cement	Water Meters
Electric Car Trucks	Rice Lewis & Son. Toronto.	Westinghouse Mfg. Co. Hamilton, Ont.
Baldwin Locomotive Works Philadelphia	Printing	Water Supply Material
Enameled Iron Signs	The Hunter, Rose Co. Toronto.	Ontario Wind Engine & Pump Co. Toronto.
Acton Burrows Co. Toronto.	Mail Job Printing Co. Toronto.	Wheelbarrows
Rice Lewis & Son. Toronto.	Pumps	Rice Lewis & Son. Toronto.
Engines, Stationary & Marine	Ontario Wind Engine & Pump Co. Toronto.	Windmills
Polson Iron Works. Toronto.	Rice Lewis & Son. Toronto.	Ontario Wind Engine & Pump Co. Toronto.
Engraving	Rails	Window Blinds
Acton Burrows Co. Toronto.	Rice Lewis & Son. Toronto.	The Hudson's Bay Company.
Toronto Engraving Co. Toronto.	Rivets	Wines and Liquors
Express Office Signs	Rice Lewis & Son. Toronto.	The Hudson's Bay Company.
Acton Burrows Co. Toronto.	Rope	Wire & Wire Rope
Fencing	Rice Lewis & Son. Toronto.	Rice Lewis & Son. Toronto.
Page Wire Fence Co. Walkerville, Ont.	The Hudson's Bay Company.	Yachts
Ferry Signs	Semaphore Arms	Polson Iron Works Toronto.
Acton Burrows Co. Toronto.	Acton Burrows Co. Toronto.	
Flags	Shafting	
Rice Lewis & Son. Toronto.	Rice Lewis & Son. Toronto.	
The Hudson's Bay Company.		

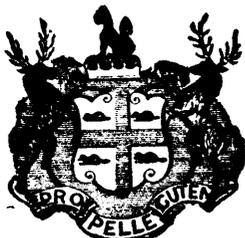
INCORPORATED
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The Hudson's Bay Company

HAS GENERAL STORES

In Manitoba, the Northwest Territories,
and British Columbia, where the best
goods can be obtained at the Lowest
Prices.

The Hudson's Bay Company

HAS LANDS FOR SALE

Farming and Grazing Lands on Easy
Terms of Payment and without any
conditions of Settlement.

The Hudson's Bay Company

MAKES THE BEST FLOUR

Highest Awards at the Winnipeg Indus-
trial Exhibitions. Mills at Winnipeg and
Prince Albert.