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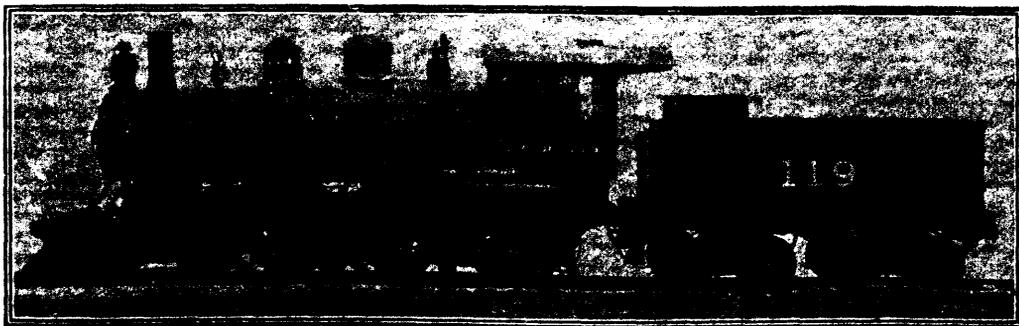
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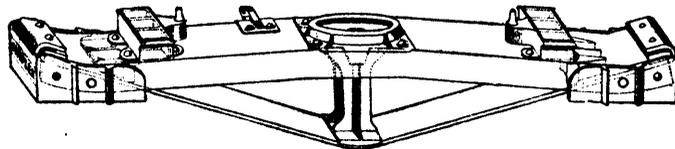
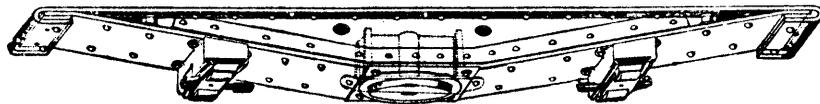
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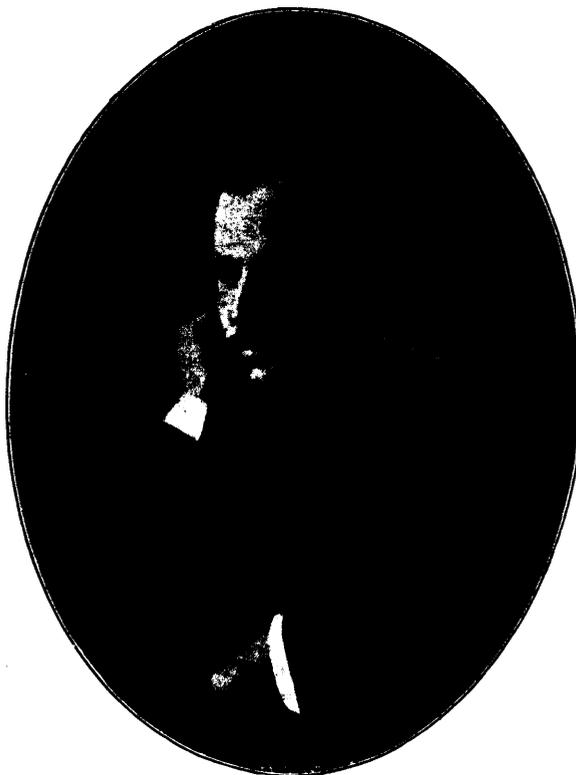
## G. T. R. SEMI-ANNUAL MEETING.

At the semi-annual meeting in London, Eng., Oct. 9, the President, Sir C. Rivers Wilson, moved the adoption of the report and accounts, which were published in our last issue. Following are extracts from his remarks:

The principal feature of the last half-year's accounts is that, although we have received a very large increase of revenue, there has been a large corresponding increase of expenses, which has gone far to neutralise the beneficial results which we might have expected under ordinary conditions. The gross receipts were £2,778,080, an increase of £400,879, or 16.86%. The receipts from passengers and mails and express traffic increased £92,425, or 13.06%, and the freight and live stock receipts increased £306,735, or 19.19%. There has been also a slight increase in miscellaneous receipts. The number of passengers carried increased by 434,639, or 12.33%, accompanied by a slight increase in the average fare received per passenger from 3s. 5d. in 1902, to 3s. 5¼d. in 1903. The freight and live stock traffic showed an increase of 1,070,016 tons, or 18.85%, and there was also a small increase in the rate received per ton, from 5s. 7½d. in 1902, to 5s. 7¾d. in 1903. I have on previous occasions referred to the improvement which has been made in the capacity of the locomotives and cars, and it is owing to that improvement more than to anything else—an improvement which is still progressing—that we have been able satisfactorily to deal with the enormous increase which has taken place in the traffic. The working expenses for the half-year were £1,995,032, or 71.81% of the gross receipts, compared with £1,603,612 or 67.45% in the corresponding period, an increase of £391,420, or of 4.36 in percentage to gross receipts. Of the total increase of £391,420 in expenses, £330,601, or 84.46%, has taken place under the head of conducting transportation; the other principal item of expenditure, the maintenance of way and maintenance of equipment, showing a reduction in their proportion to gross receipts. Of this increase in the cost of conducting transportation, £199,129 represents fuel for locomotives, of which £146,350 was caused by increased price or by the inferior quality of coal obtainable, £43,555 by increased train mileage run to accommodate the traffic, £5,885 by increased rates of wages paid for labor in handling coal, and £3,338 caused by additional delays on the road and at terminal points owing to the congestion arising from the large increase in the traffic. During the past half-year we have been enabled to make our fuel contracts for the ensuing year on terms which, though

higher than in previous years, are considerably less than the prices we were compelled to pay from last Nov., when our trouble in this respect commenced, to the end of April. There is another serious increase in the cost of transportation, viz., wages, which amount to £77,017. The continued prosperity of Canada has naturally led to increases of the wages of all classes of workmen, and railway companies, with their increasing revenues are, of course, not exempt from demands of their employes to participate in the improved conditions, and, in addition, there is, in prosper-

in the amount of work done, is inconsiderable. The amount expended in the maintenance of way and structures increased £35,548, a decrease of 0.19% in proportion to gross receipts. There has been charged to this account, and credited to the renewal of bridges account, £15,000, which was not included in the corresponding period, and which accounts for a considerable proportion of the increase under this head. Two years ago it was arranged that we should set aside for a period of five years £66,000 a year for the improvement and renewal of bridges, and we have, owing to the prosperity of the company, been able to somewhat anticipate that, and we have now over and above this special allocation, set aside an additional £45,000, thereby curtailing, pro tanto, the period over which these excessive expenditures will be incurred. Maintenance of equipment increased £11,440, but the proportion to gross receipts decreased 2.23%. The maintenance of locomotives decreased £2,573, and of cars increased £14,013. During the year we have completed in our own shops 20 freight locomotives, as against 17 old engines which have been sold or broken up. We have also been able to make satisfactory progress in renewal and construction of passenger and freight car stock, which had been delayed owing to the difficulty of obtaining materials, and instead of a deficiency in the passenger car stock of 104 cars, as in 1902, there is now only a deficiency of 79, and instead of a deficiency of 683 freight cars of a year ago, we had at June 30 last a surplus of 1,119, all of much greater capacity than those which they replaced. The result of these increases in expenses is that our net traffic receipts show only an increase of £9,459. The expenditure on capital account during the half-year was £123,481, which was reduced by the premium on debenture stock sold to £104,397. The principal item of the expenditure was £65,581, on account of double track, of which £44,159 was in respect of the line between Whitby and Port Hope on the main line between Montreal and Toronto, and £21,422 for the line between Hamilton and Niagara Falls. The work on the last-named section has been completed, and we are having the full benefit of it in the handling of the traffic, and we have been able during the past six months to make more satisfactory progress with the work between Whitby and Port Hope, which is more in the nature of a diversion of the line than of simple double-tracking. The grading of this portion has been practically finished, and it is expected that the whole work will be completed this season, and that before the close of the year we shall have the use of the new tracks. When this has been completed, the



G. J. BURY,

General Superintendent, Lake Superior Division, Canadian Pacific Ry.

ous times, considerable difficulty in obtaining and retaining the men necessary to carry out efficiently the working of the traffic. Under these circumstances we have been compelled to make considerable increases in the pay of different classes of our employes. Deducting these two items of £199,129 for the increased cost of fuel, and £77,017 for increased wages, which are practically beyond the control of the board, from the total increase of £330,601 for conducting transportation, there only remains an increase of £54,455 in the other items, which, looking to the very large increase

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de Martigny; Owen Sound, J. M. Wilson.

NEXT ANNUAL MEETING of the Grand Council in  
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## G. T. R. Semi-Annual Meeting.

(Continued from page 401.)

company will have a continuous double track  
from Montreal to Niagara Falls, 415 miles.  
When the double-tracking work now in hand  
is completed, we shall have in operation over  
the various portions of our system about 888  
miles of double track. During the half-year  
we expended £52,017 in the acquisition of land  
for improving our terminal and siding facili-  
ties at various places, of which the principal  
item is £40,220 for land at Montreal West.  
There is £5,683 charged on account of the  
Brantford deviation.

A general review of the situation affords  
conclusive evidence of the wisdom of the  
course we have steadily been pursuing of  
bringing up the condition of the property to  
the highest standard of efficiency. It has en-  
abled us not only to hold our own, but large-  
ly and profitably to improve our business, and  
it offers the best security for the consolida-

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tion and maintenance of the strong posi-  
tion which the company has acquired, and  
here let me say to any of you who feel disap-  
pointed because a more profuse distribution  
of dividends has not attended the improved  
fortunes of the company (although I may ob-  
serve in passing that, since Jan. 1, 1898, £2,-  
540,080 have been so distributed), that a time  
will certainly arrive when you will not regret  
the liberal expenditure of the last few years. I  
am satisfied the G. T. R. will derive lasting ad-  
vantages from the policy pursued in these pros-  
perous times, and of which, indeed, we are al-  
ready enjoying some of the fruits. Already there  
are cautious observers who bid us prepare for  
the reaction which, experience teaches, follows  
almost invariably on a period of great prosper-  
ity. For the moment, however, there seems  
to be no appreciable slackening of the flow of  
business. For the first three months of the  
current half-year the revenue of our system,  
including the G. T. Western and Detroit,  
Grand Haven and Milwaukee Railway, ex-  
ceeded by £302,925 that for the correspond-  
ing quarter of 1902. The impression which  
I received during my recent visit to Canada  
and the U.S. was that the industries of both  
countries are progressing, and that under or-  
dinary conditions, apart from harvest failures  
and labor or political troubles, there seems no  
reason why their continued development  
should not be maintained.

I have but a few words to say about the  
G. T. Western, but it is satisfactory. There  
has been a gross increase of income of £89,-

366; but for the same reasons as applied to the G.T.R. and other railways, there has been a considerable increase of expenses, amounting to £77,211. The balance of net revenue available for interest on the bonds is increased by £12,155, and after paying the interest charges there is a surplus for the half-year of £2,995, which, added to the surplus for the half-year ended Dec. 31 last, and the balance carried forward on June 30, 1902, makes 1% available on the income bonds of the company for the year. As to the Detroit, Grand Haven and Milwaukee, there is nothing to be said; the circumstances are almost entirely on all fours with those of last year. A system of ferry boats for carrying the cars across Lake Michigan has been established between Grand Haven and Milwaukee. This will have the great advantage of enabling traffic to go to and fro between Grand Haven and Milwaukee without breaking bulk, and we expect that there will be a considerable accretion of business on that account.

During the summer I visited Canada, being accompanied by Sir Wm. Young and Mr. Smithers. We brought back a most favorable impression of all that we saw. The whole of our system is alive with activity, progress and improvement. At Montreal it was really a great satisfaction to transact business at our new offices. We were extremely pleased with the new purchase of land in the proximity of Montreal for the extension of our yards. We have acquired a site of 187 acres only a few miles from Point St. Charles, extremely well situated on both sides of the line; it has all been acquired and paid for, and Mr. Hays proposes almost immediately to set to work to utilize it. We visited Toronto, and there also there has been a considerable extension of our yards. We have acquired some extremely valuable plots of land in close juxtaposition to our present terminals, in the very centre of the city, and this accommodation also will very much improve our facilities for moving traffic. We proceeded to Detroit to inspect the new acquisition of the G.T. Western—the Detroit, Toledo and Shore line, which has been acquired half by the G.T. Western, and half by what is called the Clover Leaf line. We have since learned that on Sept. 1 the new line was inaugurated, and Mr. Hays writes very encouragingly as to the possibilities of traffic which will result from the acquisition of this road. Passing on via Chicago, we visited the G.T. Western, and were exceedingly pleased to see how much the work had progressed. In the course of this autumn the whole of the double tracking of the 335 miles between Chicago and Sarnia will be accomplished, with the exception of a small portion in the neighborhood of the town of Valparaiso.

We made up our minds it would be desirable, in view of future events, to visit Winnipeg. We went there in order to satisfy ourselves by conversation with leading personages at Winnipeg, and also by making our observations with regard to the place itself and its approaches and the intervening country. We wished to acquaint ourselves with all these things with a view to an ultimate intimate connection which very likely the G.T.R. may have when the new line, which is contemplated to be constructed very shortly into that region, is finished. All that we saw was of a distinctly encouraging nature. It had been my expectation that it might have devolved upon me to-day to have given you some details of the progress of the proposed measure for the construction of this new road which I have just referred to. But it would be inopportune, it would be premature for me to speak, excepting in very general terms to-day, because the legislation connected with this scheme is still incomplete. The idea which the Grand Trunk had when it undertook the promotion of what is called "The G.T. Pacific Ry." was to acquire a connecting interest with some separate corporation which

would construct the road through the prairie districts. The primary idea was that starting from North Bay such a line might be constructed running to Winnipeg, or further west, and it was with that intention that we promoted a bill for the incorporation of this company. The bill was introduced into the Dominion Parliament, and it was soon found that it would raise a great question in the public mind, and on the part of the government, as to whether advantage should not be taken of this scheme to obtain still larger advantages in the interests of Canada. At the wish of the Dominion government, and of popular opinion, there has been grafted upon the original idea a much larger scheme contemplating the construction of a road straight across from New Brunswick in the east to the Pacific Coast in the west. The charter, as conferred, gives very large powers for the construction of a road; but it became necessary, in order to give effect to the views of the government, that also another bill should be introduced under the auspices of and by the government itself, for carrying out their portion of the undertaking. And their portion of the undertaking would be this, that the government would themselves be the owners of the whole of the line from New Brunswick to Winnipeg, and that that line should be leased to and worked by the G.T. Pacific, and that the G.T. Pacific should be restricted in its ownership to the road west of Winnipeg. It would be inopportune for me to allude to any future connection which the G.T.R. may have with this scheme, only bearing in mind, of course, that nothing will be done without the assent of the shareholders.

Sir Rivers concluded by moving the adoption of the report, etc., and that the following dividends be paid: 4% guaranteed stock, 2%; 1st preference stock, 2½%; 2nd preference stock, 2½%, which was carried.

**British Columbia Electric Ry. Co.**

The report for the year ended June 30, presented at the annual meeting in London, Eng., Oct. 30, showed that the business of the Co. has largely increased in all departments, and the profits made during the year show a corresponding increase. The gross receipts increased over the preceding year \$95,717, and the net earnings, after charging renewals, increased \$39,172. The following charges have been made against the revenue account of the year:

Provision for renewals maintenance.....	£10,446	3	8
Bonus to employes.....	1,494	16	11
Written off preliminary and issuing expenses.....	1,000	0	0
Added to capital amortization fund.....	1,594	18	6
<b>Net profit for year, after making above deductions.....</b>	<b>£37,864</b>	<b>16</b>	<b>0</b>
Add balance brought forward from last year.....	533	11	7
	<b>£38,398</b>	<b>7</b>	<b>7</b>
Deduct debenture interest to June 30, 1903.....	£11,119	10	2
Dividend on preferred ordinary stock for 9 months to Mar. 31, 1903.....	7,500	0	0
Interim dividend on deferred ordinary stock for 6 months to Dec. 31, 1902.....	4,000	0	0
	<b>22,619</b>	<b>10</b>	<b>2</b>
Leaving available for distribution and reserves.....	£15,778	17	5
From this the directors have decided—			
To provide for dividend on cumulative perpetual preference shares to June 30, 1903.....	£1,241	16	11
To provide for dividend on preferred ordinary stock for 3 months to June 30.....	2,500	0	0
To recommend payment of dividend on deferred ordinary stock at rate of 3% making 5% for the year, which, including income tax, will absorb.....	6,938	1	0
To transfer to contingency fund.....	1,000	0	0
To transfer to reserve fund.....	3,000	0	0
	<b>14,679</b>	<b>17</b>	<b>11</b>
To carry forward to next account.....	£1,098	19	6

Deductions have been made from the earnings in B.C. to provide for renewals maintenance, instead of, as in previous accounts, making provision for this in a total amount at the end of the year. The number of lights in use at June 30, 1903, was 93,099, an increase of 18,739 over the number in use at June 30, 1902.

The Manager in B.C. reports that the rolling stock has been substantially added to and maintained in excellent condition; that there has been a marked increase in the power business during the year, and that the outlook generally is bright. During the year 6,000 5% cumulative perpetual preference shares of £10 each have been issued by the company, and a further 1,500 were issued in Aug. last, making a total of £75,000. The construction of the Vancouver power installation by the Vancouver Power Co., (Ltd.), which commenced in July, 1902, has proceeded satisfactorily. Considerable progress has been made with tunnelling; the site for the dam has been prepared; the foundations of the power house have been laid; the building of the power house commenced; and the installation of the pole line for transmitting current to Vancouver and New Westminster is well in hand. The General Manager reports that he expects the Power Co. will be in a position to deliver 2,000 electrical h.p. by the beginning of Dec. next. On the advice of the engineers, the scheme, as originally designed, has been enlarged so as to provide for the supply of an initial 9,000 h.p., with power of expansion to 30,000 h.p., instead of an initial 6,000 h.p., with expansion to 15,000 h.p.; the size of the tunnel has been increased by 25%, and machinery and transmission plant of greater electrical capacity are being provided. This enlargement of the original scheme will involve an additional expenditure of about £60,000, but the directors are satisfied that the importance of being fully prepared to meet the rapid increase in the demands for electrical power in Vancouver and New Westminster justifies the increased expenditure. Funds for carrying on the works of the Vancouver Power Co. have been raised by the sale of £175,000 4½% Vancouver power debentures, part of a total authorized issue of £220,000, and the board proposes at an early date to offer the remaining £45,000 to the stockholders and debenture holders to provide further funds as required. The directors have for some time past been carrying on negotiations for the purchase of the undertaking of the Vancouver Gas Co., which, if brought to a successful issue, should materially add to the value of the Co.'s lighting business. The directors record their high appreciation of the very valuable services of the General Manager, J. Buntzen, and of the staff in B.C. After the first year's trial of the profit-sharing scheme referred to in last year's report, the directors record with satisfaction that most cordial relations continue to exist between the employes and the manager, who attributes the satisfactory results attained during the past year largely to the hearty co-operation and loyal assistance of all the employes. The directors have had brought to their notice instances of valuable assistance rendered quite voluntarily by employes, who have shown an intelligent appreciation of their own pecuniary interest in the Co.'s success. The share of profits distributed to the employes for the year amounts to \$7,250. During the year E. L. Evan-Thomas has been elected by the directors to fill a vacancy on the Board. R. K. Spurling and E. L. Evan-Thomas, the directors retiring by rotation, being eligible, offer themselves for re-election.

Following are comparisons: Railway earnings, Vancouver, \$158,083 against \$129,130; New Westminster, \$119,318 against \$102,199; Victoria, \$113,842 against \$109,056. Electric light, Vancouver, \$189,257; Victoria, \$92,402. Total earnings, \$672,882 against \$577,165; total expenses, \$448,535 against \$391,990; net

# **Galena-Signal Oil Company,**

**Franklin, Pa., and Toronto, Ont.**

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

**CHARLES MILLER,  
PRESIDENT.**

earnings, \$224,347 against \$185,175. Percentage of expenses to gross earnings after charging for renewals, 66.65% against 67.92%.

G. P. Norton presided at the annual meeting in the absence of R. M. Horne-Payne, chairman of the company, and moved the adoption of the report and the declaration of the dividends as recommended, which was approved. R. K. Sperling and E. L. Evan-Thomas, the retiring directors, were re-elected, and a resolution was passed constituting the directors of the B.C. Electric Ry. Co. directors of the Vancouver Power Co.

**Quebec Ry. Light and Power Co.**

In our last issue we published a report and statement of accounts received from the Company's offices in response to a request for a copy of the report presented at the annual meeting held Oct. 9. By some oversight a copy of the report for the year ended June 30, 1902, was forwarded instead of that for the year ended June 30, 1903, and this was not noticed in our office. Following are extracts from the report for the latter year:

The net profit for the year was \$18,204.85, which, added to the balance of profit and loss account carried forward from 1902, increases the amount at the credit of that account to \$117,357.40. The business of the year had to suffer largely from the loss of the revenue derived from the city lighting contract which terminated in Oct., 1902. Kent House and the passenger elevator at Montmorency have together yielded a fair profit, as much as was anticipated from the first year's operations. The result of the operations of the Montmorency division is on the whole satisfactory, and shows increases in the number of passengers, and of freight carried; it has yielded good net profits and fair increases over the profits of previous years. The Citadel division has made good progress; it has yielded satisfactory results and also shows an increase in net profits. Reference was made to the cancellation of 5,000 shares of common stock in the treasury, and the issue, in place thereof, of 5,000 shares of 7% preference stock. This stock had been offered to the shareholders and 2,186 shares had been taken up by the end of the financial year. The dividends are payable in Nov. and May. E. E. Webb resigned from the Board of Management during the year, and F. W. Ross was appointed in his place.

The report of E. A. Evans, General Manager, in connection with the railway portion of the Company's undertaking, follows:

**CITADEL DIVISION.**—During the past year 4,424,127 passengers have been carried, an increase of 231,328 over the previous year. The number of transfers issued was 1,472,645, an increase of 12,360. The car mileage has been 1,179,031, an increase of 70,344 miles; the sweeper mileage, 10,276, an increase of 4,476 miles. Notwithstanding the slight increase in wages made to long service employes, the operating expenses have been reduced from 11.35c. a car mile to 10.85c. All cars have been kept in a thorough state of repair, painted and revarnished when necessary, and the electrical equipment has also been maintained in a high state of efficiency.

**MONTMORENCY DIVISION.**—The passengers carried on this division are as follows: On electric trains, 666,460; on steam trains, 131,481; a total of 797,941 passengers, an increase of 148,854 over the previous year. The steam passenger trains made 129,276 miles, being 20,884 less than the previous year; the electric cars made 195,234 miles, an increase of 44,577, making a total increased mileage of 23,693 over the previous year. There were 103 organized pilgrimages to Ste. Anne de Beupré, as against 99 last year, and 61 special excursions, as against 33. The new sidings placed at Petit Pré, Rivière des Chiens

and Beupré have had the effect of increasing the freight by 622 carloads, 1,912 carloads having been handled this year, as against 1,290 the previous year. The rapidly increasing freight business necessitates my recommending the purchasing of six additional box cars and 10 more flat cars, at a cost of about \$9,200. Three new flag stations were constructed during the year. An express freight service was established during the year. The Kent House elevator continues to give satisfaction and has shown an earning of 13½% upon the investment. The rolling stock, roadbed, buildings and other property of the Company have all been maintained in the most efficient working order.

**ASSETS.**

Road and equipment, real estate, buildings, etc., including Kent house.....	\$5,351,851 03
Cash on hand and in bank.....	10,525 95
Power division, operating, including accounts due, stores for operating equipment.....	36,415 05
Kent house—operating account.....	8,292 23
Montmorency division—operating account, stores, etc.....	23,153 07
Citadel division—operating account, represented by stores on hand.....	12,123 35
Accounts receivable.....	9,556 07
Bills receivable.....	2,082,30
	<u>\$5,453,999 05</u>

**LIABILITIES.**

Capital stock.....	\$2,500,000 00
Bonds.....	2,500,000 00
Preferred capital stock.....	\$500,000 00
Less in treasury \$281,400 00	
Balance of instalments on stock subscribed for.....	5,980 00
	<u>287,380 00</u>
Bills payable.....	212,620 00
Accrued interest.....	53,116 67
Accounts payable.....	11,868 17
Profit and loss account.....	59,036 81
	<u>117,357 40</u>
	<u>\$5,453,999 05</u>

**PROFIT AND LOSS ACCOUNT.**

Balance carried from June 30, 1902....	\$99,152 55
Net earnings for year 1902.....	
1903.....	\$158,510 79
Less—Interest on bonds, etc., paid and accrued.....	140,305 94
	<u>18,204 85</u>
Balance.....	<u>\$117,357 40</u>

A table showing the earnings, expenses, etc., of the Montmorency division from Aug. 10, 1889, to June 30, 1903, has been prepared. It shows that in the first year 98,863 passengers were carried, and that there was a loss on the year's operation of \$2,569.59. Until 1898 the division was operated by steam, and during the year ended June 30, 1898, 221,940 passengers were carried, the net earnings being \$16,347.89. The introduction of the electric cars, in addition to the steam service, brought about a large increase, the figures for each year since being:

	Earnings.	Expenses.	Net Earnings.	Passengers carried.
1898-99.....	\$58,882 34	\$32,950 74	\$25,931 58	239,593
1899-00.....	65,615 23	37,275 58	28,339 65	261,178
1900-01.....	92,049 43	56,089 64	35,959 79	537,933
1901-02.....	102,934 74	65,183 10	37,751 64	649,087
1902-03.....	121,951 72	79,269 67	42,682 05	797,941

The following directors and officers have been elected for the current year: President, A. Thomson; Vice-President, F. Ross; other directors: Hon. S. N. Parent, G. H. Thomson, E. W. Methot, F. W. Ross, W. Shaw, W. Hanson, Hon. J. Sharples. The latter was elected in place of W. Price, resigned.

In our Nov. issue in the report of the address of President McNamara, at the convention of the Canadian Ticket Agents' Association at Sydney, N.S., he was made to say: "The companies we represent carried in 1887 2,000,000 passengers," etc. It should have read "10,698,638 passengers."

**Montreal Street Railway Co.'s Report.**

The report for the year ended Sept. 30, presented at the annual meeting Nov. 4, shows net earnings of \$905,939.01, compared with \$911,032.27 last year. After providing for the percentage on earnings accrued to the city, and interest on bonds and loans, the Directors declared four quarterly dividends, amounting to \$600,000, and in view of the Co. having assumed its own fire insurance risk, placed an additional \$25,000 to the credit of the fire insurance fund, which now amounts to \$239,377.31, and \$50,000 to the credit of the contingent account, leaving a surplus of \$9,907.54, which has been transferred to the general surplus account. \$54,130.18 expended during the year on special renewals, has been charged against the contingent account. The roadbed, rolling stock, buildings and other property have been efficiently maintained. The Directors call attention to the fact that the Co.'s earnings continue to increase in satisfactory ratio. The operating expenses per cent. of gross earnings show an increase, due to the heavy increased rate of wages paid in all departments, the increased amount spent on the maintenance of the Co.'s property and the increase paid to the city per cent. on gross earnings. While the gross earnings from the Montreal Park and Island Ry. Co.'s system have shown a satisfactory increase during the year, the working expenses have also increased from causes that have already been mentioned, and in consequence the Montreal Street Ry. Co. has not received any interest on the stock and bonds of the M.P. & I. Ry. Co. owned by it. The Directors issued during the year \$1,000,000 of new stock, to provide for extensions to lines and additions to rolling stock and equipment. This stock was offered to and subscribed for at par by the shareholders. Several new extensions to the system have been completed and put in operation during the year, and the rolling stock equipments and feeder system have been increased to keep up to the requirements of the traffic. Strikes among the motormen and conductors occurred in Feb. and May respectively, causing an interruption in business for a short period. The Directors, in order to improve the relations between the company and its employes, have assisted in the establishment of a mutual benefit association, to provide life insurance, relief in cases of sickness and accident, and pension for long and faithful service, to the funds of which the company will contribute liberally. Jas. Ross, Vice-President, resigned during the year, and the board elected F. L. Wanklyn in his place. During the year the Co. has paid the city of Montreal: tax on earnings and other taxes, \$121,298.80; on account of snow clearing, \$47,168.17, a total of \$168,466.97.

Following are comparisons: Gross receipts, \$2,222,787.65, against \$2,046,208.59; increase, 8.63%. Operating expenses, \$1,316,848.64, against \$1,135,176.32; increase 16%. Operating expenses per cent. of car earnings, 60.20%, against 56.39%. Net earnings, \$905,939.01, against \$911,032.27. Net income per cent. of capital 11.41%, against 11.68%. Passengers carried, 54,592,014, against 49,947,467; increase, 9.30%. Transfers, 16,774,595; against 15,077,511.

**ASSETS—1903.**

Cost of road and equipment:	
Construction, &c.....	\$ 3,650,222.12
Equipment, &c.....	3,287,160.53
Real estate and buildings.....	1,627,009.37
M.P. & I. Ry. Co.'s stock and bonds.....	1,160,105.40
	<u>\$ 9,724,497.42</u>
Stores.....	159,530.75
Accounts receivable.....	113,595.55
M.P. & I. Ry. Co.....	160,166.07
Cash in bank and in hand.....	32,931.23
	<u>\$ 475,223.60</u>
Fire insurance fund investments.....	208,000.00
	<u>\$10,405,721.02</u>

LIABILITIES—1903.	
Capital stock	\$ 6,000,000.00
Bonds:	
5% payable March, 1908	292,000.00
4 1/2% " August, 1922	681,333.33
4 1/2% " Nov., 1922	1,500,000.00
Mortgages	6,034.51
	\$ 8,479,367.84
Bank of Montreal loan	407,456.16
Accounts and wages payable	109,019.63
Accrued interest on bonds	33,350.00
Accrued tax on earnings	114,034.85
Employes securities	10,301.60
Unclaimed dividends	1,956.57
Unredeemed tickets	22,966.01
Suspense account	139,511.56
Dividend payable Nov. 1st, 1903	150,000.00
	\$ 988,596.38
Fire insurance fund	239,377.31
Contingent account	179,656.04
Surplus	518,743.45
	\$ 937,756.80
	\$10,405,721.02

PROFIT AND LOSS ACCOUNT—1903.	
City percentage on earnings	\$ 107,182.87
Interest on bonds and loans	113,848.60
Dividends—(payable quarterly)	600,000.00
Transferred to fire insurance fund	25,000.00
" contingent account	50,000.00
" surplus account	9,907.54
	\$ 995,939.01

**G.T.R Subsidiary Companies.**

The annual meeting of the G.T.R. subsidiary companies was held at Detroit, Mich., recently. The officers and directors for the current year are as follows:

**GRAND TRUNK WESTERN RY.**—President and General Manager, C. M. Hays, Montreal; other directors: F. H. McGuigan, F. W. Morse (advisory), Montreal; Hon. E. W. Wright, Alma, Mich.; E. W. Meddaugh, W. J. Spicer, A. Dixon, Detroit, Mich.; L. R. Skinner, Valparaiso, Ind.; Secretary-Treasurer, J. H. Muir, Detroit, Mich.

**DETROIT, GRAND HAVEN AND MILWAUKEE RY.**—President and General Manager, C. M. Hays; other directors: F. W. Morse, F. H. McGuigan, J. Hobson, J. W. Loud, Montreal; E. W. Meddaugh, W. J. Spicer, J. Pridgeon, jr., A. P. Sherritt, Detroit, Mich.; Secretary-Treasurer, J. H. Muir.

**TOLEDO, SAGINAW AND MUSKOGON RY.**—President and General Manager, C. M. Hays; other directors: F. W. Morse, F. H. McGuigan, C. Percy, Montreal; E. W. Meddaugh, C. J. Church, C. W. Middleton, Greenville, Mich.; Secretary-Treasurer, J. H. Muir.

**GRAND TRUNK JUNCTION RY.**—President, C. M. Hays; other directors: F. W. Morse, E. W. Meddaugh, W. J. Spicer, F. A. Howe; Secretary, J. H. Muir.

**CHICAGO, DETROIT AND CANADA GRAND TRUNK RY.**—President and General Manager, C. M. Hays; Vice-President, J. Bell, K.C., Belleville, Ont.; other directors: F. W. Morse, E. W. Meddaugh, W. J. Spicer; Secretary, J. H. Muir; Treasurer, F. Scott.

**MICHIGAN AIR LINE.**—President and General Manager, C. M. Hays; other directors: J. Bell, K.C.; E. W. Meddaugh, W. J. Spicer; Secretary, J. H. Muir; Treasurer, F. Scott.

**ST. CLAIR TUNNEL CO.**—President, C. M. Hays; Vice-President, J. Bell, K.C.; other directors: F. W. Morse, F. H. McGuigan, J. Hobson, E. W. Meddaugh, W. J. Spicer; Secretary, J. H. Muir; Treasurer, F. Scott.

**INTERNATIONAL BRIDGE CO.**—President, C. M. Hays; Vice-President, J. Bell, K.C.; other directors: F. W. Morse, F. H. McGuigan, J. Hobson, H. W. Sprague, E. W. Meddaugh; Secretary, J. H. Muir; Treasurer, F. Scott.

The employes of the Michigan Central Ry. Co. at St. Thomas, Ont., have been formed into a company of the 25th regiment of the Canadian Militia.

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

Gross earnings, working expenses, net profits, increases or decreases over 1902-03, from July 1, 1903:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
July	\$3,997,343.75	\$2,678,816.63	\$1,318,527.12	\$142,815.86+
Aug.	4,076,153.74	2,642,051.24	1,434,102.50	71,204.05+
Sept.	3,937,001.72	2,734,735.91	1,202,265.81	208,488.69-
	\$12,010,499.21	\$8,055,603.78	\$3,954,895.43	\$5,528.22+

Approximate earnings for Oct., \$4,475,000, against \$4,116,000 for Oct., 1902.

The mileage was increased to 8,044 miles, Oct. 1, and the earnings of the Calgary and Edmonton Ry. have been included in the C.P.R. earnings since that date.

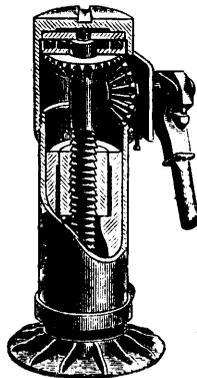
**DULUTH, SOUTH SHORE AND ATLANTIC RY.**—Gross earnings for Sept., \$239,411.99; net earnings, \$78,442.10, against \$241,617.43 gross and \$97,868.97 net for Sept., 1902. Net earnings for three months ended Sept. 30, \$291,040.10 against \$327,815.76 for same period, 1902. Approximate earnings for Oct., \$247,730, against \$259,206 for Oct., 1902.

**MINERAL RANGE RY.**—Approximate earnings for Oct., \$55,761, against \$48,878 for Oct., 1902.

**MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.**—Gross earnings for Sept., \$736,602.79; net earnings, \$430,835.87, against \$723,294.17 gross and \$401,559.66 net for Sept., 1902. Net earnings for three months ended Sept. 30, \$1,000,401.13, against \$941,345.61, for same period, 1902. Approximate earnings for Oct., \$792,934, against \$774,166 for Oct., 1902.

The Fort William, Ont., town council has decided to run cars on the electric line in the town morning and evening on Sunday, subject to the approval of the voters.

**When a Man**



Wastes his time and money using slow, clumsy and dangerous Jacks some one should tell him he needs

**Norton Ball-Bearing Jacks.**

They are Ratchet Screw Jacks having all the advantages of Hydraulics, are lighter, lower in price, absolutely safe and guaranteed in every respect. Fifty styles, 8 to 70 tons capacity.

Illustrated Catalogue upon request

MANUFACTURED BY

**A. O. NORTON, Coaticook, Que.**

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

**Canadian Pacific Railway Land Sales.**

	Acres.		Amount.	
	1903	1902	1903	1902
July..	267,647.32	155,344.98	\$1,020,404.70	\$672,876.50
Aug... 263,339.45	130,723.83	1,271,529.81	473,064.85	
Sept... 60,441.12	145,535.83	268,757.99	542,811.11	
Oct.... 15,950.07	270,616.23	236,611.59	952,645.35	
	546,936.84	702,220.87	\$2,528,546.17	\$2,641,397.81

**Grand Trunk Ry. Earnings, Expenses, &c**

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

	1903.	1902.	Increase.	Decrease.
July.....	\$3,192,608	\$2,589,422	\$603,186	....
Aug.....	3,201,511	2,719,303	482,208	....
Sept.....	3,274,245	2,885,405	388,840	....
Oct.....	3,222,750	2,956,358	266,392	....
	\$12,891,114	\$11,150,488	\$1,740,626	....

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

**GRAND TRUNK RY. CO.**

Revenue statement for Sept.:

	1903.	1902.	Increase.	Decrease.
Gross receipts...	£541,300	£486,600	£54,700	....
Working expenses	348,200	301,000	47,200	....
Net profit...	£193,100	£185,600	£7,500	....

Aggregate from July 1 to Sept. 30:

	1903.	1902.	Increase.	Decrease.
Gross receipts...	£1,631,800	£1,384,200	£247,600	....
Working expenses	1,099,100	892,800	206,300	....
Net profit...	£532,700	£491,400	£41,300	....

**GRAND TRUNK WESTERN RY. CO.**

Revenue statement for Sept.:

	1903.	1902.	Increase.	Decrease.
Gross receipts...	£103,000	£81,500	£21,500	....
Working expenses	89,300	72,000	17,300	....
Net profit...	£13,700	£9,500	£4,200	....

Aggregate from July 1 to Sept. 30:

	1903.	1902.	Increase.	Decrease.
Gross receipts...	£280,900	£233,200	£47,700	....
Working expenses	255,200	211,900	43,300	....
Net profit...	£25,700	£21,300	£4,400	....

**DETROIT, GRAND HAVEN & MILWAUKEE RY. CO.**

Revenue statement for Sept.:

	1903.	1902.	Increase.	Decrease.
Gross receipts...	£28,400	£24,600	£3,800	....
Working expenses	19,500	15,900	3,600	....
Net profit.....	£8,900	£8,700	£200	....

Aggregate from July 1 to Sept. 30:

	1903.	1902.	Increase.	Decrease.
Gross receipts...	£73,500	£65,200	£8,300	....
Working expenses	50,600	43,800	6,800	....
Net profit....	£22,900	£21,400	£1,500	....

**TRAFFIC RECEIPTS OF THE SYSTEM.**

Aggregate from July 1 to Oct. 31:

	1903.	1902.	Increase.	Decrease.
Grand Trunk..	£2,148,658	£1,876,770	£271,888	....
G. T. Western	400,587	325,335	75,252	....
D. G. H. & M.	99,614	89,090	10,524	....
Total.....	£2,648,859	£2,291,195	£357,664	....

The mileage of the G.T.R. was decreased from 3,561 to 3,558.

**C.P.R. Shareholders.**

At the closing of the books of the C.P.R. Co. Sept. 1, there were 10,294 holders of preferred stock and 7,734 holders of common stock, making the total number of shareholders 18,028. When the books closed Feb. 28 there were 9,999 holders of preferred and 6,921 holders of common, a total of 16,920. In the six months the number of shareholders increased 1,108, or nearly 200 a month. Of the increase 295 were preferred shareholders and 813 common stockholders.

The C.P.R. has actually outstanding \$31,171,000 4% cumulative preferred and \$84,500,000 common stock. This was jointly held by



**A STATION AGENT'S GOOD CATCH.**

Members of the Canadian Ticket Agents Association's party, which recently visited New Brunswick, will remember with pleasure O. A. Barbarie, Station Agent at Campbellton, who travelled on the special train from there to Newcastle, and who is one of the most successful salmon fishermen in that Province. The illustration above shows a catch of six salmon taken at Flatlands on June 14, 1900, being carried into camp. The largest fish weighed 27 lbs., and the next 25 lbs., the average weight being about 22½ lbs. Two of the largest were caught by Mr. Barbarie's son, aged 14, in water belonging to W. Delaney, and the other four were taken by Mr. Barbarie in water belonging to W. Thomson—an excellent pool in the month of June. In four or five days they secured 16 salmon averaging 24 lbs. A few years ago, at the same place, Mr. Barbarie caught four salmon which aggregated 119 lbs., one weighing 35 lbs. On July 16 of this year he caught 16 salmon, averaging about 10 lbs., in the Upsalquitch river. Trout weighing from 3 to 6 lbs. are often caught near Campbellton.

the preferred and common shareholders at an average of 64 shares each, showing the wide distribution of the stock issues. The 10,294 preferred shareholders have 30 shares each, and the holders of the common stock 109 shares each.

The C.P.R. compares with U.S. roads in the total number of stockholders thus:

Canadian Pacific .....	18,028
Pennsylvania .....	34,500
Union Pacific .....	14,100
Illinois Central .....	8,647
Baltimore & Ohio .....	6,577
Erie Railroad .....	5,239
St. Paul .....	5,300
Missouri Pacific .....	1,600
Rock Island preferred .....	1,700

—Montreal Herald.

**I.C.R. Maintenance of Way Notes.**

The Intercolonial Ry., which is owned by the Dominion, comprises 1,333 miles of single track line, the principal termini being Montreal, St. John, N.B., Halifax and Sydney, N.S. It is ballasted with gravel of good quality. The standard rail is of 85-lb. section, which is being laid at the rate of 25,000 tons each year as lighter rail is being renewed. Thirty-seven miles are laid with the heaviest rails of which we have knowledge for steam railway practice. These rails weigh 110 lbs. a yard, and were rolled in 1889, for the Chignecto Ship Ry. They were recently taken up and were laid by the I.C.R. during last summer. The rails are of Cammel's make, of "toughened steel." The section is 6½ ins. high, 6¼ ins. wide on the base and the head is 2¾ ins. wide. Four-bolt splices are used. The horizontal leg of the outer angle bar is punched for two spikes—one for each joint tie—and the inner bar is punched twice for spiking to each tie.

The track sections are 6 miles long, and are worked by five men in summer and three in winter, or an average of about four the year around. The track surface and alignment are in excellent condition. The limit of curvature on main line is 4 degs., with but one or two exceptions. The right of way is kept in clean condition. On rocky ground and wherever the ground is heaved badly by the frost the fence posts are set on sills. The sill for each post extends at right angles to the track, with a brace on the track side.

Notwithstanding that this road is located through a rolling country there are some notably long tangents. There is one 40 miles long, another 35 miles long, and several others 15 to 20 miles long. Along the tangents there are no bogs, marsh land or prairies.

Owing to the deep snows it is necessary to maintain and operate a modern equipment of snow plows and snow flanges during the winter, and the cuts are well protected by snow fences, while some of the worst cuts are covered with sheds. The standard snow fence is 8 ft. high, built of cedar. There are posts with two girts, the boards being put on vertically 2 or 3 inches apart. On its northern division the management is pursuing the plan of growing hedge snow fence wherever the trees will grow, and many examples of thriving trees on the line of the snow fences may be seen by the passenger. Fir and spruce are set out on the track side of the fence, and by the time the fence decays the growth of trees will take the place of the lumber fence. Trees planted 10 to 12 years ago are now 8 to 12 ft. high, bushy near the ground and growing close enough together to serve the purpose of a snow fence excellently. In order to maintain a bushy growth the trees are trimmed to a height of 12 ft., and are not permitted to permanently exceed this height.

The old bridges of the road are being renewed with stronger structures, to carry the increased train loads. Riveted truss construction is being followed for the longer spans. The bridges at the crossing of the Northwest Miramichi and Southwest Miramichi rivers, six spans of 200 ft. each, at each point, have recently been renewed with spans of this character. They were built by the Dominion Bridge Co., and the details throughout are designed on the same substantial plan as the main members. A peculiarity of the design of the floor system of these bridges is the use of four heavy plate-girder stringers under each track, close to the rails. Each rail is supported by two plate-girder stringers spaced 2 ft. apart, one on either side of the rail. The stringers are 4 ft. deep and head into the floor beams, the latter being carried by being riveted at each end into the vertical posts of the trusses. The panel length is 30 ft.

The deck ties are 8x10 ins., laid 4 ins. apart in the clear, and they are long enough to reach within 2 ins. of the bottom chords of the trusses. Outside each rail 4x8x12 ins. chock blocks are placed between the ties, nailed on with steel spikes as each tie is laid. The bridge trusses stand 16 ft. 9 ins. apart in the clear, and the clear headroom over the track is 23 ft.

On either side of each station, at a distance of 1,000 to 1,800 ft., there is a high semaphore signal operated in connection with the order board at the station. While a train is waiting at the station these distant signals are set to danger, and other trains approaching the station are held at the distant signal. No train is allowed to pass into a station or out from it until the distant signal ahead of it is set to clear. In other words, a train is not allowed to pass a station until it first gets a clear signal to approach it, and it may not pass the distant signal beyond the station un-

less the semaphore is cleared. The operation of these signals is by a single line of wire cable five-sixteenths inch in diameter, counterweighted for the back pull. It is carried on posts about 7 ft. high, painted white, with a pulley on one side, near the top of each post.

An interesting feature of the station building construction of this road is a so-called "frost proof" floor. The sills (outer and cross sills) of the building are old plate-girder bridge beams 15 ins. deep. On the flanges of these there is a floor, and on this there is a bed of concrete 6 ins. deep. This bed of concrete supports the wooden joists of the service floor, which consists of 3-in. plank overlaid with straw paper and matched hardwood flooring.—Railway and Engineering Review.

#### December Birthdays.

Many happy returns of the day to—

A. H. Anderson, Cashier, Paymaster, and Purchasing Agent, Quebec Central Ry., at Sherbrooke, Que., born at Cookshire, Que., Dec. 19, 1859.

J. H. Barber, Division Engineer, C.P.R., St. John, N.B., born at Cobourg, Ont., Dec. 20, 1856.

N. E. Brooks, C.P.R., Division Engineer, Calgary, Alta., born at Sherbrooke, Que., Dec. 25, 1866.

D. Brown, Manager Milwaukee and Michigan Line and Grand Trunk Despatch, Detroit, Mich., born at Glasgow, Scotland, Dec. 21, 1843.

J. C. M. Buntzen, General Manager British Columbia Electric Ry. Co., at Vancouver, born at Copenhagen, Denmark, Dec. 16, 1859.

P. E. Demers, Trainmaster Central Vermont Ry., at Farnham, Que., born there Dec. 10, 1859.

A. Price, Superintendent C.P.R. at Fort William, Ont., born Dec. 6, 1861.

H. P. Dwight, President Great Northwestern Telegraph Co., Toronto, born at Belville, Jefferson Co., N.Y., Dec. 23, 1828.

P. Gitkins, General Manager Dominion Atlantic Ry. at Kentville, N.S., born at Harpenden, Herts, England, Dec. 25, 1850.

A. J. Gorrie, General Superintendent Great Northern Ry. of Canada at Quebec, born at Raith, Kirkcaldy, Scotland, Dec. 10, 1868.

D. B. Hanna, Third Vice-President Canadian Northern Ry. at Toronto, born at Thornliebank, Scotland, Dec. 20, 1858.

S. P. Howard, General Freight Agent Eastern and Lake Superior Division C.P.R. at Montreal, born there Dec. 30, 1865.

R. R. Jamison, General Superintendent Western Division C.P.R. at Calgary, Alta., born at Westover, Ont., Dec. 12, 1856.

W. Kennedy, Master Mechanic Middle Division G.T.R. at Toronto, born at Belleville, Ont., Dec. 23, 1869.

J. Niblock, Superintendent C.P.R. at Calgary, Alta., born in York County, Ont., Dec. 21, 1849.

J. V. Paul, Locomotive Fuel Inspector C.P.R. at Montreal, born at Mokelumne Hill, Cal., Dec. 29, 1863.

C. Schrieber, C.E., Deputy Minister of Railways and Canals, Ottawa, Ont., born at Bradwell, Essex, Eng., Dec. 14, 1831.

A. J. Shulman, City Passenger and Freight Agent C.P.R. at Buffalo, N.Y., born at Syracuse, N.Y., Dec. 11, 1873.

A. J. H. Stewart, Secretary Gulf Shore Ry. at Bathurst, N.B., born at Dalhousie, N.B., Dec. 3, 1860.

C. E. E. Ussher, General Passenger Agent C.P.R. lines east of Lake Superior, at Montreal, born at Niagara Falls, Ont., Dec. 20, 1857.

B. D. Webber, General Manager Canadian Pacific Despatch at Boston, Mass., born at Beverley, Mass., Dec. 3, 1851.

# American Locomotive Company

**BUILDERS OF LOCOMOTIVES FOR ALL CLASSES OF SERVICE.**

President, S. R. CALLAWAY.

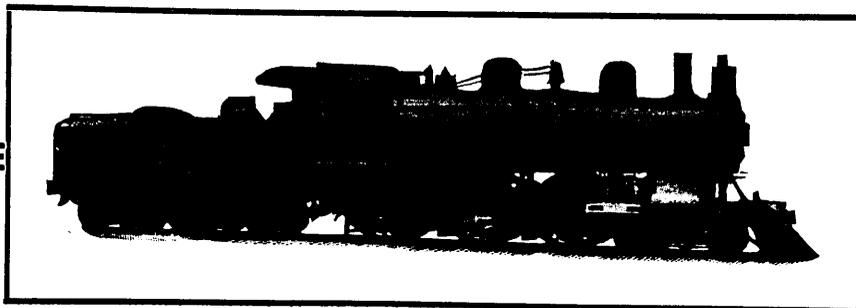
Secretary, LEIGH BEST.

Treasurer, C. B. DENNY.

Vice-President, A. J. PITKIN.

Second Vice-President, R. J. GROSS.

Mech. Engr., J. E. SAGUE.



**SCHENECTADY WORKS, Schenectady, N. Y.**

**BROOKS WORKS, Dunkirk, N. Y.**

**PITTSBURG WORKS, Allegheny, Pa.**

**RICHMOND WORKS, Richmond, Va.**

**COOKE WORKS, Paterson, N. J.**

**RHODE ISLAND WORKS, Providence, R. I.**

**DICKSON WORKS, Scranton, Pa.**

**MANCHESTER WORKS, Manchester, N. H.**

**GENERAL OFFICE** ————— **25 Broad Street, NEW YORK CITY.**

**Railway Equipment Notes.**

The G.T.R. has completed a new switching locomotive at Fort Gratiot, Mich.

The Intercolonial Ry. has completed a new passenger locomotive at its Moncton, N.B., shops.

The G.T.R. has bought material for 25 compound Richmond locomotives, 900 class, to be built at its Point St. Charles shops.

H. Weston, an employe of the C.P.R. car shops at Perth, Ont., has secured a patent for a pneumatic electric axle light system for lighting and ventilating all kinds of passenger cars.

The Point Ann Ry. Co., Belleville, Ont., has purchased a locomotive from the Estate of the late Jas. Cooper, Montreal, also 11 dump cars, and will probably add a passenger car to its equipment.

The American Locomotive Co. has completed, at its Paterson, N.J., works, two simplex consolidation locomotives for the Sydney and Louisburg Ry. They are the first of their kind to be imported into Canada.

The Quebec Ry. Light and Power Co. is in the market for six box and 10 flat cars, the purchase of which was recommended at the annual meeting recently held. The Company will require the cars early in 1904.

The White Pass and Yukon Ry. is building two passenger cars at its Skagway shops. They are 40 ft. long over end sills, 47 ft. 10 in. over couplers, and 8 ft. 6 in. wide over sills. They will have a seating capacity of 50.

The Michigan Central Rd. has recently added the following shop equipment at its St. Thomas, Ont., shops: six inch radial drill, 200 lb. upright helve hammer, air compressor, variable self-feed rip saw, bulldozer, and an automatic saw plug machine.

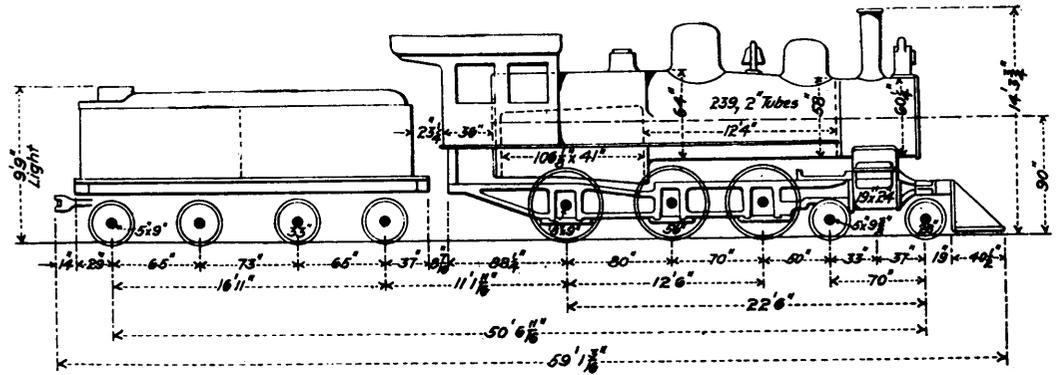
The P.E. Island Ry.'s rolling stock is to be equipped with the Westinghouse air brake, funds for that purpose having been voted at last session of the Dominion Parliament. It is intended to put the equipment on 13 locomotives, 33 passenger cars and 117 freight cars.

The Canadian Northern Ry. added to its equipment between Oct. 13 and Nov. 16, 5 freight locomotives built by the Canadian Locomotive Co., Kingston, Ont.; 61 box cars, 60,000 lbs. capacity, built by Rhodes, Curry & Co., Amherst, N.S.; and 90 box cars, 60,000 lbs. capacity.

The Michigan Central Rd. has under construction for its Canadian lines at its St. Thomas, Ont., shops four consolidation locomotives. It has recently completed at the same shops 24 box cars, 35 ft., 80,000 lbs. capacity; one coal car, 40 ft., 40,000 lbs. capacity; one flat car, 40 ft., 40,000 lbs. capacity.

The C.P.R. received the following equipment between Oct. 14 and Nov. 14: four passenger and five freight locomotives from Scotland; three freight locomotives from the Saxon Engine Works, Chemnitz, Germany; one freight locomotive from the American Locomotive Co.'s Schenectady shops; two first-class cars from the C.P.R. Hochelaga shops; one first-class car and 43 stock cars from Rhodes, Curry & Co., Amherst, N.S.; 94 box cars and 83 flat cars from the C.P.R. Perth shops; and six vans from its Farnham shops.

The suggestion having been made that Canadian manufacturers of locomotives should be asked to tender for locomotives required by the Indian Government and the various British Colonial government railways, an objection was made that the governments had



TEN WHEEL LOCOMOTIVE FOR CANADIAN NORTHERN RY.

no representative in Canada who could inspect the locomotives. This objection has been overcome, the Department of Railways having consented to either allow a member of its staff to make the inspections, or to select some one to do so. The arrangement was made at the instance of the Locomotive and Machine Co. of Montreal.

The Wabash Rd. has added three Atlantic type locomotives to those already in use in Canada, for the operation of the Wabash trains on the G.T.R. southern division between Windsor and Fort Erie, Ont. The locomotives have hitherto been in use on the Co.'s line in the U.S. They were built by the Baldwin Locomotive Works and have the following general dimensions: weight on drivers, 84,000 lbs.; total weight of engine and tender, loaded, 255,000 lbs.; diameter of driving wheels, 73 in.; diameter of cylinders, 19 in. by 26 in. stroke. Three more locomotives of the same class will also be brought into Canada, early in Dec.

The Canadian Northern Ry.'s locomotive, elevation of which is given on this page, is one of 25 built by the Canadian Locomotive Co. They weigh 133,000 lbs., with 107,000 lbs. on drivers. The boilers are Belpaire narrow fire-box, carrying 180 lbs. pressure, and having 1,691 sq. ft. of heating surface, of which 155 sq. ft. or 9% is in the fire-box. There are 239 2-in. tubes 12 ft. 4 in. long, the area of the cross-section of the 58-in. boiler taken up by the tubes being 27.5%. The cylinders are 19 in. x 24 in. and the drivers 56 in., enabling a tractive effort of 23,670 lbs. to be exerted. The special equipment includes Westinghouse-American brakes. Other dimensions are:

Wheel base, rigid.....	12 ft. 6 in.
Wheel base, total.....	22 ft. 6 in.
Length over all engine and tender.....	59 ft. 1 3/16 in.
Height to centre of boiler.....	7 ft. 6 in.
Heating surface, fire-box.....	155 sq. ft.
Heating surface, tubes.....	1,536 sq. ft.
Heating surface, total.....	1,691 sq. ft.
Grate area.....	30 sq. ft.
Driving wheels, diameter.....	56 in.
Driving wheels, material of centres.....	Cast iron
Diameter and length of journals.....	8 in. x 9 in.
Truck wheels, diameter.....	28 in.
Weight of tender, loaded.....	101,000 lbs.
Capacity of tank, imperial gals.....	4,500
Coal capacity.....	9 tons

**Canadian Society of Civil Engineers.**—The first meeting of the general section was held in the Society's rooms, Montreal, Oct. 5. In the absence of the Chairman of the section, G. A. Mountain, W. McL. Walbank occupied the chair. A paper on sewage disposal at the Provincial jail at New Westminster, B.C., written by E. Mohun, was read by J. W. Hickman; and a paper on the Canadian Northern Ry. Co.'s fireproof grain storage elevator at Port Arthur, Ont., written by R. M. Pratt, was read by W. J. Sproule. These papers were partially discussed, a fuller discussion being postponed until the next meeting.

**RAILWAY FINANCE, MEETINGS, ETC.**

**Algoma Central and Hudson Bay Ry.**—An action has been entered in the U.S. circuit court at St. Paul, Minn., by Cook Bros., contractors, Sault Ste. Marie, Ont., against Foley Bros., Porter & Whalen, to recover \$26,695 stated to be due on account of the construction of the A.C. and H.B. Ry.

**Atlantic and Lake Superior Ry.**—The Dominion Government has appointed H. A. F. McLeod, C.E., a commissioner to ascertain the amount of subsidy due in respect of work done between Caplin and Paspébiac, Que., on the Baie des Chaleur section; and G. A. Mothersill has been appointed a commissioner to investigate claims for labor, boarding house claims, and claims for material and supplies, furnished in connection with the same piece of line.

**Brockville, Westport and Northwestern Ry.**—At the organization meeting held Nov. 23, the following were elected officers: President, J. Gerken, New York; Vice-President, C. R. King, Philadelphia; Treasurer, H. W. Gennerich, New York; Secretary, C. Heilshorn, New York; other directors: V. Schmitt, M. Zimmerman, W. H. Comstock, R. Bowie, Brockville, Ont.; J. Cumming, Lyn, Ont.; W. C. Fredenburg, Westport, Ont.; Counsel, Hohn and Smith, New York; W. S. Buell, Brockville, Ont. The old Brockville, Westport and Sault Ste. Marie Ry. Co. has now ceased to exist, and its lines and franchises are vested in the B. W. and N. W. Ry.

**British Columbia Electric Ry. Co.**—Earnings and expenses for Sept.:

	1902.	1903.	Increase or Decrease.
<b>GROSS EARNINGS.</b>			
Railway—Vancouver division	\$12,816	\$16,167	\$3,351+
Victoria	9,725	9,359	366-
Westminster	10,780	12,372	1,592+
Lighting—Vancouver division	12,768	18,198	5,430+
Victoria	6,554	8,539	1,985+
	52,643	64,635	11,992+
Less working expenses.....	31,898	38,229	6,331+
	20,745	26,406	5,661+
Renewal funds.....	4,222	4,988	766+
Net income.....	16,523	21,418	4,895+
<b>Aggregate gross earnings, July 1, to Sept. 30.....</b>	155,157	188,373	33,216+
<b>Aggregate net earnings, July 1, to Sept. 30.....</b>	\$49,422	\$67,113	\$17,691+

**Calgary and Edmonton Ry.**—Notice has been given that application will be made to the Minister of Railways, Dec. 16, to sanction the lease of the C. and E. Ry. to the Canadian Pacific Ry. The earnings of the railway have been included in those of the C.P.R. since Oct. 1,

**Canadian Northern Ry.—Earnings:—**

	1903.	1902.	Increase or Decrease.
July.....	\$254,800	\$132,000	\$122,800+
Aug.....	250,800	131,200	119,600+
Sept.....	270,800	184,300	88,500+
Oct.....	334,100	236,500	97,600+
	\$1,110,500	\$682,000	\$428,500+

Working expenses for Sept. \$179,700, net earnings \$91,100, against \$112,900 and \$69,400 respectively for Sept., 1902. Net earnings for three months to Sept. 30 \$262,000, against \$171,000 for same period 1902.

The following are the results for the year ended June 30: Gross earnings \$2,449,600, operating expenses \$1,589,300, net earnings \$860,300, charges \$637,400, surplus \$222,900.

**Consolidated Lake Superior Co.**—At the recent annual meeting held at New Haven, Conn., the directors did not present a report

or statement of accounts. The following directors were elected: G. Abbott, E. J. Berwind, F. H. Clergue, C. Shields, L. Harrison, H. G. Lloyd, H. K. McHarg, C. MacDonald, C. E. Orvis, G. Philler, S. M. Prevost, S. Rea, T. C. Search, J. S. Swartz, C. H. Tweed. An adjourned meeting was announced to be held Nov. 24.

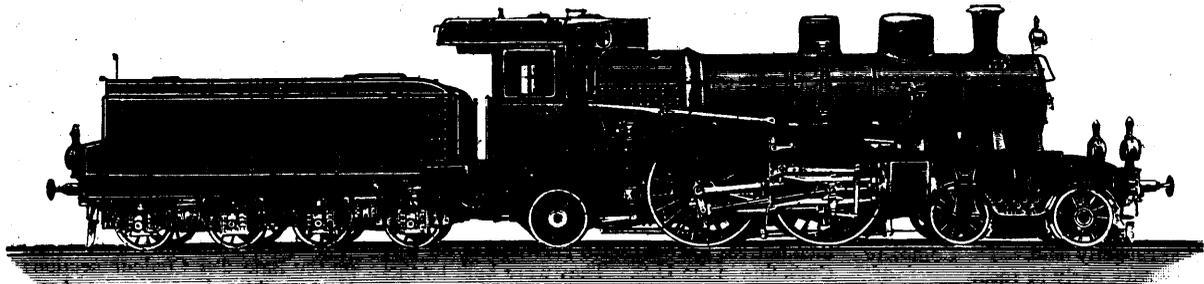
**Domintion Atlantic Ry.**—Gross earnings for Sept. \$143,000, against \$123,257 for Sept., 1902, making for nine months ended Sept. 30 \$766,976, against \$756,262 for same period 1902.

**Duluth, South Shore and Atlantic Ry.**—The following were elected directors at the recent annual meeting: Sir W. C. VanHorne, Sir T. G. Shaughnessy, W. F. Fitch, G. H. Church, R. B. Angus, C. Drinkwater, J. W. Sterling, R. Y. Hebden, T. W. Pearsall, J. O. Bloss, E. V. Skinner.

**Esquimalt and Nanaimo Ry.**—At the annual meeting recently held at Victoria, B.C., the following were elected officers: President, J. Dunsmuir; Vice-President, J. Hunter; Treasurer, J. A. Lindsay; Secretary, C. E. Pooley; other director, F. D. Little.

**Great Northern Ry. of Canada.**—The annual meeting fixed for Nov. 18, was adjourned until Dec. 2, no business being transacted.

**Great Northwest Central Ry.**—In the Ontario courts recently judgment was delivered in the action of Delap v. Codd. This was an action between two sets of directors of the G.N.C.Ry., which is now leased to the C.P.R. for 99 years. In 1893 it was decided that J. A. Codd had no financial interest in the railway, and the present decision declares that C. N. Armstrong holds no shares and is in no way interested in the railway. J. A. Codd and C. N. Armstrong represent one of

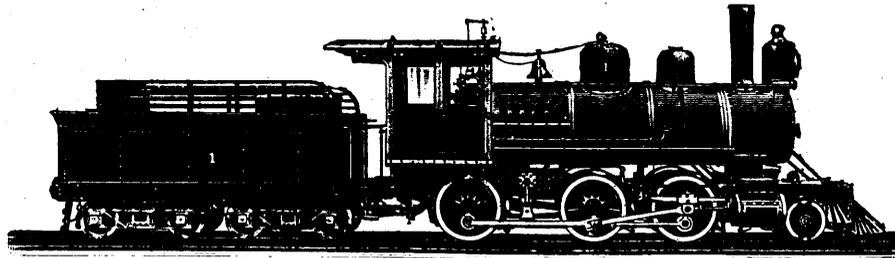


## The Saxon Engine Works, late Rich. Hartmann, Limited

CHEMNITZ (Germany),

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

Number  
of  
Workmen,  
5,200.



Capital,  
\$3,000,000.

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— BUILDERS OF —

## SINGLE EXPANSION AND COMPOUND LOCOMOTIVES

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also **STRUCTURAL STEEL**

for Bridges, Buildings, Roof Trusses, Etc.

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

Offices: Street Railway Chambers, **MONTREAL, QUE.**

the boards of directors. Chief Justice Falconbridge, in giving judgment, said the sheriff's sale of the shares in dispute, pursuant to the interpleader order of the writs of execution, was valid, and passed to the purchasers all of the shares so seized and sold by the sheriff for all purposes, free from any property or claim of the defendant Armstrong.

**Halifax and Yarmouth Co.**—A writ has been issued by W. C. Nunn, Toronto, against this Company, and a number of Philadelphia people interested, to recover \$9,040. This amount is claimed to be due as commission on the payment of a Government subsidy of \$90,400.

**Halifax Electric Tramway Co.**—Gross receipts from railway:

	1903.	1902.	Increase or Decrease.
Jan.	\$10,867.33	\$10,764.58	\$102.75+
Feb.	9,321.75	8,498.39	823.36+
Mar.	10,195.12	9,761.27	433.85+
April.	10,532.55	10,024.66	507.89+
May.	10,768.11	11,126.66	358.55-
June.	11,843.82	11,528.19	315.63+
July.	15,042.37	14,834.69	1,107.68+
Aug.	16,786.03	17,177.12	391.09-
Sept.	18,494.50	17,494.21	1,000.29+
Oct.	12,054.78	11,382.25	672.53+
	\$126,806.46	\$122,593.32	\$4,213.14+

**Hamilton, Grimsby and Beamsville Electric Ry.**—The bonds, amounting to \$85,000, issued when the line was built to Grimsby, Ont., are being taken up, and an issue of \$150,000 covering the entire line is being made. In connection with this issue a chattel mortgage for \$85,000 given by the Company to the Colonial Trust Co. has been registered.

**Hamilton Street Ry.**—The percentage for the three months ended Sept. 30 to be paid the city amounts to \$4,565.23, and the amount for mileage to \$1,879.96, a total of \$6,445.19.

**The International Traction Co.**, which owns the Niagara Falls Park and River Ry., in Canada, the Clifton Suspension Bridge Co., the Queenston Heights Bridge Co., and the Niagara Falls Suspension Bridge Co., in its report for the year ended June 30, 1903, shows: gross earnings, \$1,285,170; net earnings, \$132,019; charges, \$191,772; deficit, \$59,353; against \$1,096,358 gross; \$210,000 net; \$133,645 charges, and \$76,254 surplus for the year ended June 30, 1902.

**Lake Erie and Detroit River Ry.**—A meeting of the shareholders was called to be held Nov. 30 for the purpose of ratifying an agreement with the Pere Marquette Rd., for trackage and other rights over the L.E. and D.R.Ry. Upon such approval application will be made Jan. 4, 1904, to the Minister of Railways for his final sanction.

An agreement has been made between the Chatham, Ont., city council and the L.E. and D.R.Ry. in respect of its claims for the removal of the shops of the old Erie and Huron Ry. to Walkerville. The agreement was reached after a conference with the directors of the Pere Marquette Rd., which controls the L.E. and D.R.Ry., and provides for the payment of \$16,000 in two instalments, or the establishment at Chatham of the shops of the Canadian division. These shops are now at Walkerville, but a decision has been reached to remove them to a more central point on the line.

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

	1902-3.	1901-2.	Increase or Decrease.
Dec.	\$15,041.80	\$12,947.48	\$2,094.32+
Jan.	12,132.54	10,117.60	2,014.94+
Feb.	10,716.42	8,894.78	1,821.64+
Mar.	11,533.68	10,233.21	1,300.47+
Apr.	11,818.06	9,941.94	1,876.12+
May.	13,144.75	12,233.68	911.07+
June.	16,224.80	13,642.77	2,581.03+
July.	18,317.23	16,337.43	1,979.80+
Aug.	19,058.16	16,102.08	2,956.08+
Sept.	19,528.11	18,157.57	1,370.54+
Oct.	13,772.11	11,645.46	2,126.65+
	\$161,322.67	\$140,254.00	\$21,068.67+

**Manitoulin and North Shore Ry.**—B. F. Fackenthal has been appointed receiver for Speyer & Co., who hold bonds to the extent of \$405,000, upon which default has been made.

**Montreal Street Ry. Co.**—Earnings and expenses for Oct., 1903:

	1902-3.	1901-2.	Increase or Decrease.
Passenger earnings	\$204,452.45	\$179,432.86	\$25,019.59+
Miscellaneous earnings	2,148.23	1,972.77	175.46+
Total earnings	206,600.68	181,405.63	25,195.05+
Operating expenses	110,708.92	96,418.92	12,290.00+
Net earnings	95,891.76	84,986.71	10,905.05+
Fixed charges	18,921.62	15,991.62	2,930.00+
Surplus	76,970.14	68,995.09	7,975.05+
Expenses % of car earnings	54.14	53.74	

Interest on M. P. & I. Ry. Co.'s bonds owned by this Co. not included.

**Ottawa and New York Ry.**—Following are the traffic returns for the year ended June 30, 1903, as presented at the recent annual meeting:—Passenger earnings, \$53,483; freight earnings, \$44,386; mail earnings, \$1,419; express earnings, \$1,481; miscellaneous earnings \$470; Total, \$101,239. Number of passengers carried, 101,191; tons of freight carried, 64,799.

**Port Arthur Electric Ry.**—At a recent meeting of the Port Arthur, Ont., town council it was reported that the earnings of the street railway and electric light plant left a balance of over \$400 after meeting all expenses of maintenance, operating and interest on debentures. The railway, light and power debentures issued amount to \$200,000.

**Pullman Co.**—At the annual meeting held in Chicago, the reports showed: total revenue for the year, \$23,120,713; total expenses, \$19,622,933; net surplus, \$3,497,719; surplus brought forward, \$10,778,029, making the total surplus \$14,275,749. The general statistics showed that the mileage of railway under contract to the Company had been increased to 175,761 miles; passengers carried numbered 12,321,269, against 10,753,643; miles run by cars, 389,254,000, against 360,602,000; value of cars manufactured, \$22,546,878, against \$19,416,021; rentals received \$338,811, against \$316,089. The directors were re-elected, and the usual quarterly dividend of \$2 a share was declared.

J. E. Clement, private secretary to the Dominion Minister of Marine, recently brought an action in Montreal against the Company to recover damages. He was a passenger in one of the Company's sleeping cars between Jersey City, N.J., and Washington, D.C., in Dec., 1902, and claimed that \$65 had been taken from his pockets during the night. The loss was not discovered until some hours after he had left the car, and he admitted that he had not verified the fact that the money was in his pocket-book before he went to bed. The Company stated that every precaution was taken to prevent theft by its employees, or on the cars, and further contended that it was not liable, as there was a condition printed on the tickets to the effect that "baggage, wearing apparel, money and valuables taken into the car are entirely at owner's risk." The action was dismissed with costs.

**Qu'Appelle, Long Lake and Saskatchewan Ry.**—Net loss for Sept., \$5,308.12, against a net loss of \$273.78 for Sept., 1902; making for 10 months ended Sept. 30, net earnings \$5,511.16, against \$64,528.14 for same period 1901-2.

**Quebec and Lake St. John Ry.**—Gross receipts for Sept., \$53,919, against \$39,300; making for nine months ended Sept. 30, \$302,812, against \$270,714 for same period 1902.

**Quebec Central Ry.**—Gross earnings for Sept., \$68,332.17; working expenses, \$44,292.53; net earnings, \$24,039.64; against

\$71,219.26 gross and \$29,656.73 net for Sept., 1902. Gross earnings for nine months ended Sept. 30, \$530,003.88; net earnings, \$158,121.73, against \$510,616.45 gross and \$167,548.46 net for same period 1902.

**Rutland Rd.**—At the recent annual meeting the following directors were elected: Dr. W. S. Webb, Shelburne, Vt.; E. W. Rossiter, S. R. Callaway, C. M. Depew, J. A. Burden, jr., New York; H. H. Powers, Morristown, Vt.; F. D. Proctor, Proctor, Vt.; J. W. Stewart, Middlebury, Vt.; J. Lawrence, Groton, Mass.; P. W. Clement, G. T. Jarvis, Rutland, Vt.; G. Ball, Boston, Mass.; O. Merrill, Enosburg Falls, Vt.

**Temiskaming and Northern Ontario Ry.**—The Commissioners have arranged with banks temporary loans aggregating \$2,300,000 at 5%, to run for a year. The price offered for the 30-year 3½% gold bonds was not sufficiently high to satisfy the Commissioners, and it was decided to effect temporary loans pending a general improvement in the money market. The loans effected will discharge current indebtedness and provide all requirements for some time ahead.

**Toronto, Hamilton and Buffalo Ry.**—Gross earnings for Oct., \$55,482.14, against \$43,801.42 for Oct., 1902. Gross earnings for five months ended Oct. 30, \$242,180.46, against \$183,581.25.

Two actions by Hamilton lawyers against W. G. E. Boyd, assignee of the insolvent estate of Maxey, Larson & Gough, contractors for the T.H. and B. tunnel, were recently dismissed without costs, by consent, at Hamilton. The plaintiffs, it was stated, had accepted 30 cents on the \$1 in full settlement of all claims.

**Toronto Railway Co.**—Car earnings:

	1903.	1902.	Increase or Decrease
Jan.	\$161,938.22	\$137,135.21	\$24,803.01+
Feb.	146,539.17	127,981.01	18,558.16+
Mar.	159,913.85	141,681.22	18,232.63+
April.	162,276.36	132,546.56	29,729.80+
May.	174,519.58	145,195.54	29,324.04+
June.	177,593.21	131,865.85	45,727.36+
July.	192,629.06	162,072.02	30,556.94+
Aug.	185,822.45	164,764.57	21,057.88+
Sept.	237,009.91	195,610.37	41,399.54+
Oct.	183,810.09	154,750.17	29,059.92+
	\$1,782,051.90	\$1,493,602.62	\$288,449.28+

**White Pass and Yukon Ry.**—Gross earnings for Sept., \$465,000; Oct. 1 to Oct. 14, \$141,264; Jan. 1 to Oct. 14, \$1,091,003.

**Intercolonial Ry. Employees' Association.**—The 14th annual meeting was held at Moncton, N.B., recently, at which it was reported that the funds, etc., were in a satisfactory condition. The question of establishing a pension fund was under discussion, and a resolution favorable thereto was passed. The following officers were elected for the ensuing year: President, D. Pottinger; Vice-President, J. J. Wallace; Auditor, W. Brown.

**The Canadian Railway Club** held its regular monthly meeting in Montreal Nov. 3, Vice-President T. McHattie in the chair. Prof. Stansfield, of McGill University, gave an address on hardening and tempering of steel which was briefly discussed. The discussion on W. H. Hunter's paper on maintenance and system of keeping check of repairs to and general condition of the air brakes under freight cars was continued.

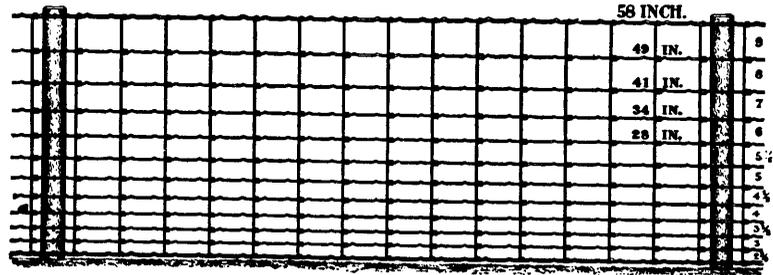
The U. S. customs authorities have notified Canadian railways that on dining cars crossing the boundary from Canada all supplies must be put under seal while passing through the U. S. The Canadian customs authorities have issued a notice providing that after Jan. 1, 1904, trains from the U. S. must stop at the boundary for customs inspection. Hitherto this inspection was made while the trains were running.

### White Pass and Yukon Route.

At the annual meeting in London, Eng., Oct. 30, C. C. Macrae, who was elected a director in place of the late Sir A. Sarle, and who was subsequently elected Chairman of the board, presided. In referring to the annual report he stated that the gross profits were £126,515. Interest on debentures had been £52,668, and the sinking fund for 1902 was £16,462. Expenses amounted to £13,438. Deducting those three amounts £43,947 remained as the net profit balance, which was increased by the amount brought forward to £126,537. Out of this the whole of the sinking fund instalment for 1903 had already been provided—£13,459. Deducting that amount and the interim dividend, £34,375, there remained at the credit of profit and loss account £78,703, from which the directors proposed to declare a final dividend of 5s. per share, making 5% for the year, and leaving £44,326 to be carried forward. He could not help thinking that this dividend was exceedingly satisfactory, particularly in view of the circumstances of the past year's working. Comparing the accounts for 1902 with those of the two previous years, it might be thought that a considerable falling-off had taken place in the traffic in the last-mentioned year; but an analysis of the figures showed that that was not the case. The reduction both in gross and in net earnings, comparing the figures of 1902 with those of 1901, had been brought about by what every one who was connected with United States railways was familiar with—a rate war. During the contest the company was exposed to the active and strenuous opposition of their competitors, who, with the object, of course, of driving the company out altogether, were actually importing and selling goods in Dawson below cost price. Mr. Graves, however (the president of the local companies), had overcome all the opposition, and, although the company had suffered temporarily in the fight, yet it had maintained, and even strengthened, its position. It had worn down the competition, which was disastrous to both parties, and trade had been suffered to settle down to its normal conditions. He believed that there would be no repetition of the war. There had, however, necessarily been a falling off in revenue, and one could not all at once recover from such a state of things.

The recent award of the arbitrators deciding the disputed Alaskan boundary had a special interest for this company, as it settled the question as to the jurisdiction over the first 20 miles of the railway between Skagway and the summit of White pass, which would continue U.S. as heretofore. As British subjects, they regretted that the British contention was not sustained by the award, and that the whole of the company's railway would not be under the British flag, as they would have wished; but it must be borne in mind that this was more a matter of sentiment than of business. They had the natural gateway giving access to that enormous region, both British and U.S., through which the Yukon river and its tributaries extended for thousands of miles. The subjects of both nations must continue, as hitherto, to use this gateway in common. Under the reciprocal bonding arrangements between Canada and the U.S. Canadian traffic had passed over the U.S. portion of the line and U.S. traffic over the Canadian portion as freely as traffic between eastern and western Canada passed through U.S. territory en route or as traffic between the eastern and western states passed through Canadian territory. Both countries would suffer equally and enormously by disturbance of their reciprocal bonding arrangements, and it was more in harmony with the enlightened spirit of modern civilization to extend than to curtail such privileges. A good deal had been said in the past about "all-Canadian" or

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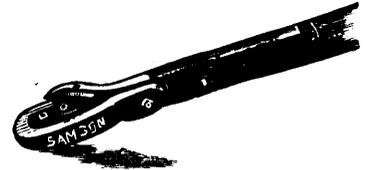


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"all-U.S." routes to British and U.S. Yukon gold fields respectively, and since the recent award there had been some revival of the all-Canadian route idea. At present an all-Canadian route, running as it must through barren mountains, would cost so much to build that it would involve the expenditure of many millions; and if it were constructed and in operation to-day it could not possibly earn enough to pay working expenses, to say nothing about interest on its cost, because the working expenses would be so enormous that the whole of the existing Yukon traffic would be insufficient to provide them at the rates which would be necessary in order to secure traffic. The report was adopted.

**Canada Atlantic Ry. Co.'s Report.**

The report presented at the annual meeting Sept. 30 consists entirely of financial and other statements. Following is the comparative statement for the years ended June 30, 1902 and 1903:

RECEIPTS.		
	1902.	1903.
Passenger.....	\$ 302,368 08	\$ 310,096 83
Mails and express.....	30,525 41	29,466 80
Parlor cars.....	5,486 76	5,934 06
Freight.....	1,514,379 96	1,404,842 68
Elevators (net).....	7,725 25	26,366 91
Telegraph.....	4,024 06	3,712 00
Rental of terminals.....	22,980 00	22,680 00
Other rentals.....	19,279 88	13,317 52
Miscellaneous receipts.....	1,056 13	229 67
<b>Total.....</b>	<b>\$1,908,025 53</b>	<b>\$1,816,946 47</b>
EXPENDITURES.		
Maintenance way and structures.....	\$ 239,919 96	\$ 210,955 42
Maintenance equipment.....	208,026 35	213,108 29
Conducting transportation.....	675,348 53	739,881 71
General expenses.....	65,440 46	55,979 98
<b>Total operating expenses.....</b>	<b>\$1,188,735 30</b>	<b>\$1,219,925 40</b>
Balance.....	719,290 23	597,021 07
Taxes and rent leased lines.....	28,200 00	28,000 00
<b>Net earnings barges and lake steamers season 1902.....</b>	<b>\$ 691,090 23</b>	<b>\$ 569,021 07</b>
Net revenue.....	9,450 02	31,401 24
<b>Net revenue.....</b>	<b>\$ 700,540 25</b>	<b>\$600,422,31</b>

The mileage operated is 468.4, of which 6.7 miles is from Albury Jct. to Swanton, Vt., C. V. Ry. under trackage rights. The freight traffic was 1,494,809 tons in 1902-3 against 1,545,240 in 1901-2, but the earnings increased from \$1,404,842.68 to \$1,514,579.96. The number of passengers carried was 377,779 in 1902-3, against 368,571 in 1901-2, but the earnings decreased from \$345,497.69 to \$338,380.25. The engine mileage in 1902-3 was: train miles earning revenue 1,436,790, piloting, switching and light running 207,017, work trains 138,428, total 1,782,235, against 1,714,572 in 1901-2. The car mileage in 1902-3 was: passenger 1,711,256, freight 21,643,459, total 23,354,715, against 24,395,451 in 1901-2. The classification of freight in 1902-3 in net tons was: grain 412,387, flour 60,351, coal 92,824, hay 56,616, live stock 13,765, lumber 427,609, manufactured goods 108,855, merchandise 101,752, pork 1,834, stone and brick 53,086, wood 64,728, wood pulp 62,398, all others 38,604, total 1,494,809, against 1,545,240 in 1901-2. The rolling stock consists of 64 locomotives, 43 passenger, baggage, mail and express cars, and 2,634 freight, conductor, tool and oil cars and snow plows.

The following were elected: President, C. J. Booth; other directors: J. F. Booth, W. Anderson, N. MacIntosh, G. W. Mitchell, J. A. Seybold, C. MacLachlan; Secretary-Treasurer, A. W. Fleck.

The Algoma Central and Hudson Bay Ry. is now giving a service of three passenger trains each way on its main line. The branch line from Michipicoten Harbor to the Helen mine has been closed for the winter.

**An Ontario Per Diem Case.**

The Central Ontario Ry. recently appealed to the arbitration committee of the American Railway Association respecting a reclaim against the G.T.R. Co., on cars in switching service at Trenton Jct.

The C.O.R.'s case was submitted by G. Collins, Manager, as follows: The C.O.R. perform a switching service for the G.T.R. at Trenton Jct., handling freight for the latter company between Trenton Jct. and Trenton, a distance of two miles, in carloads and less lots, for which it is allowed 2½c. per 100 lbs. on freight classifying 1 to 5, and 1c. per 100 lbs. on classes 6 to 10. This allowance is not added to the through rates, but is absorbed by the G.T.R. The C.O.R. became a party to the per diem agreement on July 1, 1902, fully believing that it would be entitled to reclaim on the G.T.R. for cars in this service as per rule 5. The C.O.R. furnishes a locomotive and crew to handle this traffic, and if it was obliged to pay the full per diem on cars in such service, the business would be handled at a loss. In view of the above facts, the C.O.R. claims to be entitled to a reclaim of at least four days on the G.T.R. on cars in switching service between Trenton and Trenton Jct., and in support of such claim refers to the following correspondence between the parties on the subject in question: July 17, 1902—Wrote M. C. Sturtevant, Car Service Agent G.T.R., requesting a reclaim as per rule 5. July 30, 1902—Letter from M. C. Sturtevant, agreeing to allow a reclaim of three days. Aug. 9, 1902—Wrote M. C. Sturtevant, asking for four days' reclaim. Aug. 20, 1902—M. C. Sturtevant replied, agreeing to allow a reclaim of four days. Sept. 20, 1902—M. C. Sturtevant wrote that the G.T.R. could not allow any reclaim whatever, owing to the fact that the C.O.R. was paid by the 100 lbs. instead of by the car. Jan. 16, 1903—G. Collins met M. C. Sturtevant at his office in Montreal, the matter was fully discussed, and the latter gentleman (after conferring with his Freight Traffic Manager), confirmed a reclaim of four days on all cars handled from July 1, 1902, to Nov. 30, 1902, and positively agreed to allow three days' reclaim on all cars after Dec. 1, 1902. Jan. 21, 1903—J. W. Loud, Freight Traffic Manager of the G.T.R., wrote that he had been look into the matter, and, while admitting there was some merit in the C.O.R.'s argument, he had come to the conclusion that the C.O.R. was not entitled to a reclaim. Trenton is a competitive point reached by both the G.T.R. and C.P.R. That rates to this point are agreed upon, and in order to be placed upon an equal basis with the C.P.R. as regards delivery, etc., in the town, the G.T.R. arranged with the C.O.R. to handle its business between the junctions of the G.T.R. and the town proper, for which service it pays a rate per 100 lbs. instead of by the car.

M. C. Sturtevant, Car Service Agent G.T.R., submitted its case as follows: The G.T.R. for many years had a station called Trenton, which was two miles from the town of that name; delivery of Trenton goods being taken by the consignees at the G.T.R. station. A few years ago the C.O.R. was built, running from Trenton town and points south thereof, crossing the G.T.R. at the G.T. Trenton station and running north, connecting with the C.P.R. at Central Ontario Jct. The rates from Trenton station G.T.R., prior to the opening of the C.O.R., were practically the same as those which governed at contiguous stations on the G.T.R. east and west of it. When the C.O.R. commenced operations, by its connection with the C.P.R., it made the rates which the G.T.R. had in effect at its Trenton Station (then changed to Trenton Jct.) to and from Trenton town. Therefore, on competitive points traffic, the G.T.R. had to make, by interchange with the C.O.R. at

Trenton Jct., the same rates to and from Trenton town as made via the C.P.R. and the C.O.R. Under this arrangement the C.O.R. is allowed, as stated by Mr. Collins, on classes 1 to 5 2½c. per 100 lbs., and 6 to 10 1c. per 100 lbs. The G.T.R. looks upon this simply as a division of the rate, just the same as the basis which governs on traffic to points north and south of Trenton Jct., which, in the case of south, is to Picton, 32 miles, and north to Bancroft, 84 miles, the C.O.R. being allowed an arbitrary rate per 100 lbs. in each case. Under these circumstances, the G.T.R. claims that the Trenton traffic is not a switch service, but simply a division of the through rate on an arbitrary basis of an allowance of cents per 100 lbs., instead of a mileage pro-rate to the C.O.R. This method of dividing rates between railways is not unusual, in fact it is very common in Canada on short lateral lines running in connection with the G.T.R. and C.P.R. Under these conditions, if the service which the C.O.R. performs for the G.T.R. on Trenton traffic is a switch service, what is the service which it performs at Picton or Bancroft? Surely that cannot be considered a switch service.

The Arbitration Committee decided that, while there is nothing in rule 5 to compel the allowance of a reclaim under the circumstances stated, there is nothing in the per diem rules to prevent such agreements as were made by the C.O.R. and the G.T.R. on the various dates named, and that the G.T.R. shall pay the C.O.R. reclaim of 80c. on all cars handled from July 1, 1902, to Nov. 30, 1902, inclusive, and a reclaim of 60c. on all cars handled from Dec. 1, 1902, inclusive, to Jan. 21, 1903, inclusive.—Railway Equipment Register.

**Cattle Guard Commission Report.**

The report of F. W. Holt, C.E., and Geo. Robertson, who were appointed by the Dominion Government to investigate the question of providing a suitable cattle guard, which was laid on the table at the close of the recent session of the Dominion Parliament, is a voluminous document. The instructions given the commissioners were to make examination of the guards in use on the principal lines both in Canada and the U.S., and also of such inventions as might be presented. In accordance with these instructions the commissioners travelled as far west as Winnipeg, visited a number of points in the U.S., inspecting all the guards in use, and gathering all the information possible in regard to the use of the guards on the different lines, and the views of officials. At Chicago they were present at the convention of the Roadmasters' and Maintenance of Way Association, when a discussion on cattle guards came up, and a good deal of information was gathered there. In Ontario and other points much information was gathered from railway officials and others. The commissioners finally arranged to have tests made of new devices that had been submitted by inventors, which were made at Ottawa, and were continued over a lengthened period. The guards presented for trial were divided into five classes: (1) gate guards lying usually in the plane of the rails, but working about a horizontal axis and working in the quadrant next the highway, that is, rising from the party approaching from the highway; (2) gate guards working in the opposite quadrant, that is, rising toward the approach; (3) those that swing about a vertical axis in a horizontal quadrant; (4) those that swing in a vertical plane about a horizontal axis, that is to say edgewise; (5) guards that are practically surface guards. After explaining the working of the appliances tested, or of which models were submitted, the commissioners came to the conclusion that no guard could be found which has been in use sufficiently long to prove that it can be maintained in a state

of efficiency, and at the same time be a safe appliance for railway use. There are, doubtless, a number of appliances that will act as bluff guards, provided the cattle are not permitted to loiter around them. Some of those that have been proved to be positive turners of stock may, upon extended use, prove to be efficient and safe appliances on proper use, but the ideas are too untried to recommend that they shall be made the legal protection between the railway companies and the stock owners.

The C.P.R. and its subsidiary, the Minneapolis, St. Paul and Sault Ste. Marie Ry., have become members of the Transcontinental Passenger Association. The C.P.R. was a member of the old transcontinental associations at various times when they were in existence.

Wm. Jessop & Sons, Ltd., steel manufacturers, Sheffield, Eng., have through their Canadian representative, C. L. Bailey, asked what inducement the Toronto city council will offer them to locate a plant in Toronto which would employ 2,000 men. Mr. Bailey is now in England.

#### TRANSPORTATION APPOINTMENTS.

**Bay of Quinte Ry., Thousand Islands Ry., and Deseronto Navigation Co. (Ltd.).**—E. Walter Rathbun, heretofore General Agent, Bay of Quinte Ry., has been elected Vice-President of the B. of Q. Ry., T.I. Ry., and of the D.N.Co. He is also President of the Oshawa Ry. Co.

**Canadian Manufacturers' Association.**—W. H. T. Miller, heretofore chief clerk to the Assistant Traffic Manager, C.P.R. at Toronto, has been appointed as Railway Classification and Freight Rate expert to the Canadian Manufacturers' Association. Office at Toronto.

**Canadian Northern Ry.**—G. G. Ruel, heretofore law clerk in the Department of Railways and Canals, Ottawa, has been appointed Assistant Solicitor. Office, Toronto.

**Canadian Pacific Ry.**—M. Hinchey, heretofore Trainmaster district 1, Eastern division, has been appointed Chief Train Dispatcher same district, succeeding J. A. Armstrong, transferred to Ottawa.

Jas. H. Boyle, for the past 15 years a conductor, with headquarters at Farnham, Que.,

has been appointed Trainmaster, district 1, Eastern division, succeeding M. Hinchey, transferred. Office, Farnham, Que.

Jules Hone, jr., heretofore joint ticket agent, Windsor Hotel, Montreal, has been appointed City Passenger Agent at Quebec, succeeding E. H. Crean, deceased.

R. W. McCormick, heretofore Chief Train Dispatcher at Ottawa, has been appointed Trainmaster district 4, Eastern division, succeeding F. M. Spaidal, appointed Superintendent district 2, Eastern division. Office, Ottawa, Ont.

J. A. Armstrong, heretofore Chief Train Dispatcher, district 1, Eastern division, at Farnham, Que., has been appointed Chief Train Dispatcher district 2, at Ottawa, Ont., succeeding R. W. McCormick, transferred.

The Ottawa, Northern and Western Ry. having been leased to the C.P.R. Co., it has since midnight of Oct. 31 been operated as part of district 4 of the Eastern division of the C.P.R. All employees then in the O.N. and W.R. service then became employees of the C.P.R. Co. The line between Hull and Gracefield has been named the Gracefield branch, and the line between Hull and Waltham the Waltham branch. The positions

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CANADIAN REPRESENTATIVES

## FRIED. KRUPP, ESSEN, GERMANY.

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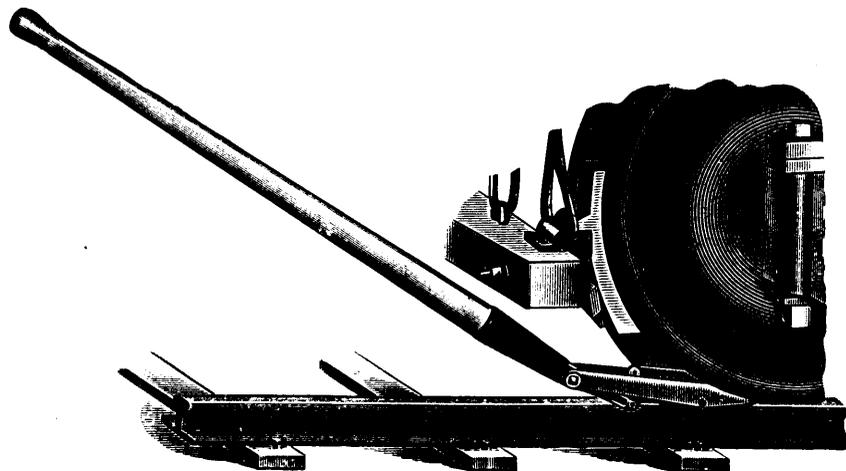
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WILL MOVE ANY CAR

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MONTREAL.

heretofore held by H. S. Maltby, Secretary-Treasurer; B. Sims, Assistant Engineer, and G. A. Lizotte, Auditor, have been abolished.

F. P. McKee has been appointed freight and passenger agent at Washington, D.C., succeeding W. W. Merkle.

**Cumberland Ry. and Coal. Co.**—D. Stewart, heretofore General Sales and Purchasing Agent, has been appointed Assistant to the General Manager, succeeding E. Laflamme, resigned. Office, Springfield, N.S. He will continue to act temporarily as General Sales and Purchasing Agent.

**Grand Trunk Ry.**—T. Crossen has been appointed locomotive foreman at Allandale, Ont., succeeding D. E. Smith, resigned.

A. E. Till, of Toronto, has been appointed locomotive foreman at London, Ont., succeeding A. S. Wright, appointed chief fitter at the Stratford shops.

H. S. McQueen, jr., has been appointed contracting freight agent at Detroit, Mich., succeeding P. C. Crean resigned to join the staff of the Detroit and Toledo Shore Rd., Detroit.

**Great Northern Ry. of Canada.**—E. E. Ling, Treasurer, has resigned, and the position has been abolished.

A. E. Doucet, Chief Engineer, has resigned. A successor has not yet been named. Mr. Doucet continues as Chief Engineer of the Quebec and Lake St. John Ry.

**Great Northern Ry., U.S.A.**—Louis Hill has been appointed Vice-President, succeeding his brother, J. N. Hill, who has resigned on account of ill-health.

H. E. Watkins, for the past 3½ years clerk in the Company's Toronto office, has been appointed Travelling Agent for Michigan. Headquarters, Detroit. J. J. Johnston, heretofore of the C.P.R. city ticket office, Toronto, has succeeded Mr. Watkins as assistant to C. W. Graves, District Freight and Passenger Agent, Toronto.

**Grand Trunk Pacific Ry.**—A Montreal dispatch states that J. W. Kneeshaw, Assistant Stationery Agent of the G.T.R. at Detroit, Mich., has been appointed Purchasing Agent G.T. Pacific Ry., with office at Winnipeg.

**Hull Electric Tramway Co.**—Jas. Crosby, heretofore General Superintendent, has been appointed Manager, succeeding F. A. Hunbiss, who has been appointed Manager of the Worcester Consolidated Street Ry. Co., Worcester, Mass.

**Intercolonial Ry.**—L. Desjardins, heretofore Chief Train Dispatcher at Levis, Que., is reported to have been appointed to a similar position at Riviere du Loup, succeeding J. H. Brassard, resigned. A. Fortin is reported to have been appointed Chief Train Dispatcher at Levis, succeeding L. Desjardins. We were advised Nov. 18 that no permanent appointments had been made at Riviere du Loup or Levis.

**Inverness Ry. and Coal Co.**—The officers of this company are; President, W. Mackenzie, Toronto; Vice-President, D. D. Mann, Toronto; Secretary-Treasurer, A. W. Mackenzie, Toronto; General Manager, J. L. Brass, Inverness, N.S.; Mine Manager, J. C. Mitchell, Inverness; Chief Accountant, H. F. Deas, Inverness; Master Mechanic, J. R. Morrison, Inverness; Roadmaster, R. McNeil, Inverness.

**Lehigh Valley Rd.**—G. R. Chesbrough, heretofore Western Passenger Agent at Buffalo, N.Y., has been appointed General Eastern Agent at New York, vice A. A. Heard, appointed Assistant General Passenger Agent of the Delaware and Hudson Rd. at Albany, N.Y. G. L. Doughty, heretofore Soliciting Passenger Agent in New York, has been appointed City Passenger Agent there. W. B. Wheeler, heretofore Northwestern Passenger Agent at Chicago, has been appointed West-

ern Passenger Agent at Buffalo, succeeding G. R. Chesbrough. G. Eade, Jr., heretofore City Ticket and Passenger Agent at New York, has been appointed Northwestern Passenger Agent at Chicago, succeeding W. B. Wheeler.

**Montreal Street Ry.**—R. M. Hannaford, heretofore acting Engineer in charge of Permanent Way Buildings and Bridges, has been appointed Engineer in charge of Permanent Way Buildings and Bridges, succeeding J. S. Vindin, deceased.

**Quebec Southern Ry.**—C. B. Hibbard, heretofore General Passenger Agent Rutland Rd., has been appointed General Manager. He will have charge of transportation and traffic, and perform such other duties as may be assigned to him by the President. Office, Board of Trade Building, Montreal.

**Rutland Rd.**—C. A. Nimmo, heretofore General Western Passenger Agent Boston and Maine Rd., has been appointed General Passenger Agent Rutland Rd., succeeding C. B. Hibbard, resigned.

**A C.P.R. Metallurgical Department.**—A press report recently stated that the C.P.R. had instituted a mining and metallurgical department for the purpose of developing coal properties to provide coal for its own consumption. We are informed that the company has been doing a certain amount of mining and metallurgical work for several years. As it owns large acreages of coal lands, it will probably be its policy to place a certain number of its properties in a position to make shipments with a view of supplementing the supply of fuel along its lines. A certain amount of exploration work has been carried on at Banff, Alta., with a view of developing a property which will furnish a supply of domestic fuel.

**The American Association of Travelling Passenger Agents'** annual excursion, which took place to New Orleans early in Nov., was attended by several Canadian representatives, including T. Henry, Traffic Manager Richelieu & Ontario Navigation Co., Montreal, and wife; J. Quinlan, District Passenger Agent G.T.R., Montreal, and wife; H. B. Mussen, Contracting Agent Canada Atlantic Ry., Montreal; S. J. Murphy, T. P. A., and J. V. Foy, Niagara Navigation Co., Toronto; W. F. Clancy, T.P.A. Richelieu & Ontario Navigation Co., Niagara Falls, N.Y., and wife; J. McKenna, Travelling Passenger Agent C.P.R., St. John, N.B.; H. B. Howard, C.P.R., St. John, N.B., and wife. A number of the party went from New Orleans via Mobile to Havana and return. The next excursion of the Association will be to Mexico in Dec., 1904.

**Sydney and the Ticket Agents.**—The Sydney Post re-publishes from our Nov. issue the last paragraph of our report of the Canadian Ticket Agents' Association meeting there, respecting which it says:—"At Washington, the previous year, the convention was plainly told that the hotel accommodations at Sydney would prove inadequate for such a large gathering, and if in the face of this the convention decided to come it should not 'kick' at this late season. Other delegations have been here, and they said Sydney made an ideal place for such meetings. Unfortunately the ticket men were here at a time of the year that was not the most attractive—it rained practically during their entire stay in town. This, by the way, calls attention to the need of a summer hotel at Sydney. Such has been taken of for some time past, but nothing definite has been done. From the above comment, which comes from a journal accredited to be one of the most reputable in Canada, it will be seen that we cannot too well safeguard the reputation of our town as a convention city."

## MAINLY ABOUT PEOPLE.

F. W. Morse, 3rd Vice-President G.T.R., has been spending some time at Hot Springs, Va.

C. H. Coste, the eight year old son of E. Coste, M.E., died at Grace hospital, Toronto, Nov. 8.

W. R. Baker, Assistant to the 2nd Vice-President C.P.R., has returned to Montreal from England.

Jos. Hobson, Chief Engineer G.T.R., slipped while getting into a bath, late in Oct., breaking one of his ribs.

Dr. W. S. Webb, President Rutland Rd., has returned to New York from England much improved in health.

Miss A. Clark, daughter of Geo. Clark, formerly a G.T.R. train dispatcher at London, Ont., died suddenly there recently.

D. W. Campbell, Superintendent C.P.R. Atlantic steamships, Montreal, is recovering from his recent attack of typhoid fever.

J. W. Smith, of St. John, N.B., has been appointed forwarding agent of the Canadian Manufacturers' Association at St. John, N.B.

G. M. Bosworth, 4th Vice-President C.P.R., is in Great Britain on a business trip, and is expected to return to Montreal by Christmas.

J. U. Gregory, agent of the Department of Marine at Quebec, has been named a Companion of the Imperial Service Order by the King.

T. V. Cook, formerly storekeeper Intercolonial Ry., Moncton, N.B., and who has been in the railway service for 33 years, died there Nov. 7.

Mrs. MacLeod, mother of M. H. MacLeod, Chief Engineer, Canadian Northern Ry., Winnipeg, died at East Toronto, Nov. 3, aged 81.

J. T. Meany, formerly agent of the Reid Newfoundland Co. at Sydney, N.S., was acquitted upon being tried on a charge of embezzling \$400.

W. F. Egg, City Ticket Agent, C.P.R., at Montreal, returned to his office early in Nov., after an absence of some months on account of ill-health.

A. P. Allingham, chief rate clerk C.P.R., Montreal, was presented with a gold watch and locket by the clerks of the staff on resigning from the service.

Sir Wm. VanHorne has returned to Montreal from his seaside residence at St. Andrews. Miss VanHorne, who has been seriously ill, is recovering.

T. H. Creedon was entertained at dinner by a number of friends at Sydney, N.S., Nov. 6, on resigning his position as Superintendent Cape Breton Electric Co.

R. Holwell, accountant in the C.P.R. freight office, Brandon, Man., recently absconded with over \$4,000. Cheques valued at \$3,950, have been recovered.

W. H. Moore, Assistant to the President, Toronto Ry., has returned from West Baden, Ind., where he went for a few weeks to recuperate after his recent operation.

G. H. Webster, C.P.R. Right of Way Agent, went to Pasadena, California, late in Oct., and it is hoped that he will be well enough to be back in his office at Montreal in Dec.

D. B. Hanna, 3rd Vice-President, Canadian Northern Ry., with Mrs. Hanna and family, who have arrived in Toronto from Winnipeg, have taken up their residence in Elmsley Place.

T. G. Peat, who was associated with the contracting firm of Moore & Pearson, who built several sections of the old Great Western Ry., died in Hamilton, Ont., recently, aged 84.

A. M. Paton, formerly telegraph operator on the G.T.R. at Lindsay, Ont., has been appointed Chief Dispatcher, Missouri division, Chicago, Rock Island and Pacific Ry., at Trenton, Mo.

W. B. Howard, Jr., of the C.P.R. divisional passenger staff, St. John, N.B., was presented with a case of silverware by the office staff, Nov. 4, on the occasion of his marriage to Miss M. A. Fowler.

Thos. Shaughnessy, father of Sir Thos. G. Shaughnessy, President, C.P.R., died at Milwaukee, Wis., Nov. 14, aged 85. He was a native of Ireland, and had been a resident of Milwaukee for 62 years.

The Governor-General recently held an investiture of the Imperial Service Order at Ottawa, when Dr. Martin Murphy, Provincial Engineer of Nova Scotia, and K. Tully, C.E., Toronto, were made Companions.

B. J. Coghlin, manufacturer of springs and axles, Montreal, recently returned there after a three months' trip to Great Britain and Ireland. His son, B. W. Coghlin, was recently married in Montreal to Miss Jean Dawes.

Hon. L. J. Forget, President, Richelieu and Ontario Navigation Co., has been appointed Chairman, and Sir T. G. Shaughnessy, President C.P.R., has been elected a member of the board of governors of Laval University.

J. Hone, Jr., was recently presented with a gold watch by the management and staff of the Windsor hotel, Montreal, on giving up joint charge of the union ticket agency in the hotel to become C.P.R. city ticket agent at Quebec.

J. A. Heyn, of Heyn Bros., Belfast, Ireland, managers of the Ulster Steamships Co. (Ltd.), owners of the Head Line of steamers trading between Montreal and other Canadian ports and Ireland, is visiting eastern Canada in the interests of the line.

T. C. Frenyear, who has recently been appointed General Sales Agent of the Canadian Westinghouse Co., with headquarters at Toronto, was taken ill with typhoid fever while on a western trip, and is in the general hospital at Fort William, Ont.

Mrs. James Bryce, wife of the Vice-President and General Manager Dominion Ex. Co., who has been ill for some months with typhoid fever, has been spending some time at Atlantic City, N.J., recuperating. She was accompanied by her husband.

W. Nichols, G.T.R. agent at St. Hyacinthe, Que., was run over and killed by a ballast train there Nov. 7. He appears to have been crossing the track in front of the train, when he slipped, and his foot got caught between the rails at a switch.

S. G. Tate, formerly Travelling Freight Agent Michigan Central Rd. at Buffalo, who resigned to take a position in the office of the American Ex. Co.'s foreign department in New York, has been appointed Assistant Freight Agent for that company in Liverpool, Eng.

J. B. Lambkin, Assistant General Passenger Agent, Intercolonial Ry., who had charge of the party of Superintendents of Bridges and Buildings of America during the trip over the I.C.R. at the end of Oct., was presented with a copper and silver smoking set at the conclusion of the trip.

F. L. Wanklyn, Vice-President Montreal Street Ry., was elected President, and C. E. E. Ussher, General Passenger Agent C.P.R. Eastern lines, a member of the committee of the Province of Quebec Association for the protection of fish and game, at the 47th annual meeting recently held in Montreal.

R. W. Leonard, ex-General Manager and Chief Engineer, Cape Breton Ry., is now Resident Engineer in charge of construction of Water and Electrical Power Development for the Hamilton Cataract Power, Light and

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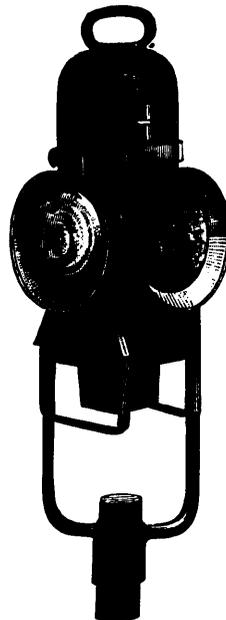
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Traction Co., Ltd., near St. Catharines, Ont. The Company is developing 35,000 h.p., with a head of 267 ft.

E. Reynolds, who was recently appointed Assistant Superintendent C.P.R., at Quebec, was born there in 1848, and entered railway service in 1878 on the old North Shore Ry., remaining with the C.P.R. when that Company took over the line. For some years he has been conductor on express trains between Quebec and Montreal.

H. Shackell, general agent, Detroit, Grand Haven and Milwaukee Rd., at Milwaukee, Wis., died there recently, aged 69. He was born in London, Eng., in 1834, and entered the service of the old Great Western Ry. of Canada as Auditor in 1859, remaining with the G.T.R. as Auditor and General Passenger Agent for a number of years.

F. S. Stocking, city ticket agent Quebec Central Ry. at Quebec, was presented with a cabinet of silverware by a number of citizens, a silver chafing dish by the Quebec Amateur Athletic Association, a silver kettle by the Quebec Rugby Football and Hockey Clubs, and a silver tea service by the Quebec Snowshoe Club, on the occasion of his recent marriage to Miss R. White, at Montreal.

E. de la Hooke, G.T.R. city agent, London, Ont., recently received \$10, in an unsigned letter, from some one who stated that he formerly travelled over the G.T.R. and arranged with the conductors about his fare; his conscience now troubles him and he sends the money to cover the amounts he saved. W. Fulton, C.P.R. city ticket agent at London, received a similar communication, \$8 being enclosed.

With a view of adding to the attractiveness of Quebec city as a winter resort a movement has been set on foot to arrange for a regular old-time programme of winter sports. Those in charge of the matter include E. A. Evans, Quebec Ry. Light and Power Co., who was Chairman of the public meeting; J. G. Scott, A. Hardy, Quebec and Lake St. John Ry.; G. U. G. Holman, Levis County Ry.; H. Graves, C.P.R.; F. O'Connell, Quebec Central Ry.

Gerard G. Ruel, who has been appointed Assistant Solicitor Canadian Northern Ry., was born at St. John, N.B., July 5, 1866, and studied law in St. John, subsequently graduating in law at Harvard university, Cambridge, Mass., in 1889. He practised in St. John for a number of years, latterly as a member of the firm of Blair, Ruel and Blair. From July, 1899, to Oct. 1, 1903, he was law clerk of the Department of Railways and Canals at Ottawa.

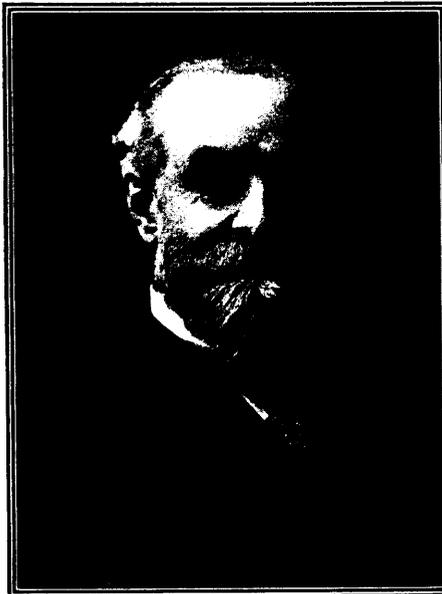
Jules Hone, Jr., who has been appointed C.P.R. passenger and ticket agent at Quebec, was born at Montreal, Sept. 8, 1873, and entered transportation service 1889, since which his record has been: Mar., 1889, to June, 1890, clerk in Car Accountant's office; Mar., 1890, to June, 1890, secretary to Manager of Transportation, C.P.R.; June, 1890, to Aug., 1891, clerk in Car Accountant's office; Aug., 1891, to Sept., 1892, clerk, city ticket office, Montreal; Sept., 1892, to July, 1893, clerk, city ticket office, Ottawa; July, 1893, to Nov., 1903, joint agent of the union ticket and telegraph office, Windsor hotel, Montreal.

F. M. Spaidal, who was recently appointed Superintendent C.P.R. district 2, Eastern division, and Montreal terminals, was born at Gananoque, Ont., Nov. 13, 1858, and entered transportation service 1876, since which his record has been: Mar., 1876, to June, 1883, operator, agent and dispatcher G.T.R. at various points between Kingston and Montreal; June, 1883, to June, 1885, agent and dispatcher Union Pacific Rd. at Butte, Mont., and other points; Aug., 1885, to Dec., 1885, operator C.P.R. Ottawa; Dec., 1885, to June, 1893, dispatcher C.P.R. Ottawa; June, 1893,

to Sept., 1897, Chief Dispatcher C.P.R. Ottawa; Sept., 1897, to Oct., 1903, Trainmaster C.P.R. Ottawa.

E. W. Rathbun, President of the Bay of Quinte Ry. Co., Thousand Islands Ry., Deseronto Navigation Co., and of the Rathbun Co., died suddenly at Deseronto, Ont., Nov. 24. He was born at Ashburn, N.Y., Oct. 5, 1842, and joined his father in the firm of H. B. Rathbun & Co. at Deseronto, 1861. The firm carry on an extensive lumbering business, the manufacturing of cars, etc., at Deseronto, and in connection therewith built the Bay of Quinte Ry., the Thousand Islands Ry., and operate the Deseronto Navigation Co. In addition the firm owns barges, etc., operating on the minor inland waters of Ontario. He was interested in the formation of the Dominion Marine Association in May, and was elected one of its vice-presidents.

C. B. Hibbard, who has been appointed General Manager, Quebec Southern Ry. at Montreal, was born at St. John's, Que., Mar. 31, 1858, and entered railway service 1872, since which he has been consecutively to May, 1875, telegraph messenger and telegraph operator, G.T.R., May, 1875, to April, 1880,



THE LATE E. W. RATHBUN, OF DESERONTO.

telegraph operator, Montreal Telegraph Co., and clerk U.S. and Canadian Express Co., St. John's, Que.; April, 1880, to July, 1889, stenographer and chief clerk, passenger department, Central Vermont Rd., St. Albans, Vt.; July, 1889, to June, 1895, General Passenger Agent, Duluth, South Shore and Atlantic Ry., and Minneapolis, St. Paul and Sault Ste. Marie Ry.; June, 1895, to Nov., 1897, President, Northern New York Rd.; Nov., 1897, to Nov., 1899, President and General Manager, New York and Ottawa Rd.; May, 1900, to Nov., 1903, General Passenger Agent, Rutland Rd.

J. F. Richardson, who has been appointed Superintendent Eastern Division, C.P.R. telegraphs, at Montreal, was born at Granby, Que., Aug. 23, 1861. His official record is: 1876 to 1880 with Central Vermont Ry.; 1880 to 1881, with Montreal Telegraph Co.; 1881 to 1883, with Great Northwestern Telegraph Co.; 1883 entered the employ of the C.P.R. Telegraphs, and has been successively to 1903, chief operator, assistant electrician, Superintendent of Construction and Inspector. In 1897 he was engaged by the Dominion Government to report on the routes to the Yukon and estimate the cost of constructing a telegraph line there; in 1899 he was engaged

by the Dominion Government to superintend the construction of the telegraph line from Bennett, B.C., to Dawson City, Yukon; and in 1901 was in charge of the telegraph service on the Royal train during the trip of the Prince and Princess of Wales through Canada.

G. J. Bury, whose portrait appears on the first page of this issue, was born at Montreal Mar. 6, 1866, and was educated at Montreal College. He entered railway service on the C.P.R. 1883, since which his record has been: 1883 to 1887, clerk in purchasing department and clerk in General Manager's office; 1887 to 1889, secretary to Vice-President, afterwards President; 1889 to Mar., 1890, acting Superintendent Dining, Sleeping and Parlor Car Service; Mar., 1890, to Sept., 1899, successively Assistant Superintendent at Chalk River, Ont., and Superintendent North Bay, Ont.; Sept., 1899, to Feb., 1901, Superintendent Fort William, Ont.; Feb., 1901, to Feb., 1902, Superintendent Crow's Nest Pass line, Cranbrook, B.C.; Feb., 1902, to May, 1902, Assistant General Superintendent Lake Superior division at North Bay; May, 1902, to date, General Superintendent same division; entire service with C.P.R.

W. J. Camp, who has been appointed Electrical Engineer C.P.R. Telegraphs, was born at Oakville, Ont., April 22, 1855, and commenced his telegraph career in the freight office of the G.T.R. at Prescott, Ont. He entered the service of the Dominion Telegraph Co. in 1874, his subsequent record being: 1874 to 1875, operator Dominion Telegraph Co., Prescott, Ont.; 1875 to 1876, bookkeeper same company at Montreal; 1876, manager same company at Watertown, N.Y.; 1877 to 1878, on railway work in U.S. and latterly night chief Dominion Telegraph Co., Montreal; 1878, train dispatcher on the Quebec, Montreal, Ottawa and Occidental Ry., now a section of the C.P.R.; subsequently to 1881 Dominion Telegraph Co. at Montreal; 1881 to 1883, Great Northwestern Telegraph Co. at Montreal; 1883 to 1889, in private employ; 1889 to 1899, electrician C.P.R. telegraphs; 1899 to 1903, Superintendent Eastern Division C.P.R. telegraphs.

F. W. Snider, who has been appointed Superintendent Atlantic Division C.P.R. Co.'s telegraph, was born in Halton County, Ont., July 14, 1854. He was educated at the grammar schools in Paris and Brantford, Ont., and learned telegraphy in the office of the Dominion Telegraph Co. at St. Catharines, Ont., in 1870. He was subsequently employed by the Dominion Telegraph Co. in Brantford, London, Toronto and Ottawa until 1877, when its lines were extended to the Maritime Provinces. Opened its office at St. John, N.B., in Oct., 1877, and was section manager for the Maritime provinces until the consolidation of that company with the Western Union Telegraph Co. in 1881. From Aug., 1881, to 1889 he was cashier of the St. John office of the Western Union, being appointed Manager of the St. John office of the C.P.R. telegraphs, then opened, and in 1890 was appointed circuit manager for the Maritime province district, and in charge of the maintenance of lines.

N. E. Brooks, who has been appointed Division Engineer Western division C.P.R. at Calgary, Alta., was born at Sherbrooke, Que., Dec. 25, 1866, and entered railway service in 1886, since which his record has been: May, 1886, to Mar., 1887, rodman Ontario and Quebec branch C.P.R.; May, 1887, to April, 1888, rodman Atlantic and Northwest branch C.P.R.; April, 1888, to Aug., 1889, resident engineer on construction Atlantic and Northwest branch C.P.R.; Aug., 1889, to Sept., 1890, resident engineer on construction Qu'Appelle, Long Lake and Saskatchewan Ry.; Sept., 1890, to Oct., 1891, resident engineer Calgary and Edmonton Ry.; Oct., 1891, to

to Sept., 1892, leveller Crow's Nest Pass line C.P.R.; Sept., 1892, to Dec., 1892, resident engineer on construction Crow's Nest Pass line C.P.R.; Dec., 1892, to Dec., 1895, assistant engineer of construction Montreal Street Ry.; Jan. 1, 1896, to Aug., 1903, Inspector Calgary and Edmonton Ry. and Qu'Appelle, Long Lake and Saskatchewan Ry.; Aug., 1903, to Nov., 1903, Superintendent Maintenance of Way and Structures Calgary and Edmonton Ry. He is a member of the Canadian Society of Civil Engineers.

C. E. Cartwright, who has been appointed Division Engineer Pacific division C.P.R. at Vancouver, was born at Toronto Oct. 14, 1864, but spent his earlier years at Kingston, Ont., and graduated at the Royal Military College there June, 1884. He entered railway service in 1883, his subsequent record being: 1883, chainman on location Great American and European Short Line, Nova Scotia; Oct., 1885, to July, 1888, location and construction Pontiac and Pacific Junction Ry. and Gatineau Valley Ry.; July, 1888, to Mar., 1890, draughtsman Norfolk and Carolina Ry. and in charge of survey for Belt Line Ry.,

Norfolk, Va.; Mar., 1890, to Nov., 1892, in private practice; Nov., 1892, to July, 1896, in charge of preparation of right of way maps and changes of grade and alignment for Division Engineer, Peoria division, Terre Haute and Indianapolis Rd.; Oct., 1896, to April, 1897, topographer and draughtsman through Adirondacks for New York and Ottawa Ry.; April, 1897, to Jan., 1899, assistant Chief Engineer New York and Ottawa Ry., Cornwall, Ont.; April, 1899, to Sept., 1899, resident engineer C.P.R. Kamloops and Lagan branches; Oct., 1899, to April, 1902, engineer of construction Vancouver and Lulu Island Ry.; April, 1902, to Oct., 1903, assistant to Division Engineer C.P.R. at Vancouver, B.C.

The Association of Railway Superintendents of Bridges and Buildings of America, held its annual convention recently in Quebec. About 120 members attended, and after completing the business of the meeting made a trip over the Intercolonial Ry.

The children's home on Berthelet st., Montreal, owned by the Ladies' Benevolent Society,

was recently burned, and C. M. Hays, 2nd Vice-President and General Manager G.T.R., has placed at the Society's disposal the old G.T.R. offices at Point St. Charles, pending rebuilding.

The accident bulletin published by the U.S. Interstate Commerce Commission shows that 64 passengers and 780 trainmen, etc., were killed in accidents during the three months ended June 30, bringing the total for the year up to 321 passengers and 3,233 employes, against 303 passengers and 2,819 employes killed in the year ended June 30, 1902.

The Westinghouse Air Brake Co.'s report for the year ended July 31, contains the following particulars: gross earnings, \$9,179,588; net earnings, \$3,719,080; dividends at the rate of 24%, \$2,636,748; surplus, \$1,082,337; against \$8,559,503 gross; \$2,928,696 net; \$2,634,468 dividends at 24%, and \$294,228 surplus for year ended July 31, 1902. In 1902-03 \$25,506 was charged for depreciation, and created a special depreciation reserve fund of \$300,000. The total surplus, July 31, 1903, was \$3,993,870.

## Pintsch System Car and Buoy Lighting.

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

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Give every satisfaction to shippers

### Chateauguay and Northern Railway.

There is being added this season to the railways entering Montreal a short but important piece of line, connecting with the Great Northern Ry. at Joliette and having a magnificent entrance into Montreal from the north through Maisonneuve and Hochelaga, with a fine terminal, now under construction, at the corner of Moreau and St. Catherine sts. The Chateauguay and Northern Ry., leaving Montreal, parallels the existing line of the Montreal Terminal (Electric) Ry. on a 40-ft. right of way secured from that company for a distance of about 12 miles to Bout de L'Isle, where the Terminal Ry. ends. Here the line curves to the right, leaving the Terminal line and then crossing it by means of an overhead crossing—a through girder span and concrete abutments over Park avenue—then crossing the Ottawa river, or as it is here called Rivière des Prairies, passes the village of Charlemagne and, turning north-east, runs in a straight line beside the L'Assomption river some seven miles to the town of L'Assomption. Here the line curves to the left and runs in a northwesterly direction for about 2½ miles to where it crosses, nearly at right angles, the C.P.R. main line between Montreal and Quebec and, somewhat less than a quarter mile further on, the L'Achigan river; then, curving to the right, it passes the town of L'Epiphanie, and after crossing the St. Esprit river, runs in a direct line for about 6½ miles to a crossing of the Lac Ouareau river, thence on another tangent of about 4½ miles it connects with the Great Northern Ry. in the town of Joliette.

The country through which the line passes is a level agricultural district, well settled and prosperous, intersected by numerous streams and by a number of deep gullies running to the rivers, and all open, with the exception of some three or four miles between L'Epiphanie and Joliette. The profile shows a gradual rise in the direction of Joliette but with very easy gradients, the heaviest being 0.6 ft. per 100, the sharpest curve on the line being 2°.

From an engineering point of view the feature of the line is the number and cost of the bridges compared with the length of the line, there being over 3,400 ft. of steel bridging and trestling in the 36 miles, exclusive of permanent culverts and overhead road crossings. Taking the bridges in order from Montreal, the first is Bout de L'Isle bridge, a combined railway and highway bridge across the Ottawa river, which is divided into two channels by Isle Bourdon. The bridge crosses the first or west channel by 8 spans of 140 ft. each and one of 200 ft. in the centre, together with a short girder span of 46 ft. at each end to the shore abutments, making in all a length of 1,412 ft. The piers and abutments are of masonry on concrete foundations resting on piles. The bed of the river was found to be of very firm blue clay into which piles were driven about 2 ft. 9 in. apart; upon this concrete was deposited through the water in bottomless caissons to a level of 1 ft. below low water and well riprapped, and the slopes of the embankments in front of the abutments also protected by hand-laid riprap. Upon the concrete foundations rests the masonry of grey limestone from the Terrebonne quarries. The piers in this channel are 30 ft. in height and are built with a batter of 1 in 24 on all sides, with a cutwater extending up about two-thirds of the height, and the down stream ends rounded, giving the whole a substantial and handsome appearance. The east channel is crossed by seven 140-ft. spans and two 76-ft. plate girder spans, making a total length of 1,132 feet. The piers in this channel are of the same design and material as those of the west channel, but are 2 ft. less in height, and as the water in this channel is much shallower than in the other, the contractors were enabled to cofferdam all the piers,

pump them out and deposit the concrete dry, the depth of concrete in the east channel being only 4 ft. against 16 to 21 ft. in the west channel. The superstructure for this bridge, as well as for the other bridges on the line, was supplied and erected by the Dominion Bridge Co. The 140-ft spans are through trusses, with parallel top and bottom chords and inclined end posts, 5 panels each, the 200-ft. span at the centre of the west channel being higher at the centre of the truss. The railway, single track, is carried in the centre between the trusses, which are spaced 17 ft. 9 in. centre to centre of trusses, while the highway portion of the bridge consists of two roadways 10 ft. clear from truss to railing on each side of the bridge, carried on brackets outside of the trusses and with heavy latticed railings 4 ft. 10 in. in height, making altogether a very handsome and well-proportioned structure.

The next bridge is that over the L'Achigan river at L'Epiphanie, which consists of one 140 ft. deck truss span in the centre and two 50 ft. plate girder deck spans. The piers and abutments of this bridge are of concrete on bedrock, the piers in the river having a height of about 20 ft., the height of the truss bringing the track about 50 ft. above the bed of the river. The dimensions of the piers are 18 ft. in length with a width of 6 ft. at the top, and a batter of 1 in 24 ins. on all sides, and having rounded ends. The abutments are 20 ft. in width by 8 ft. at the bridge seat, and the slope of the embankment runs in front of them towards the piers. About a mile further on is the St. Esprit river bridge, which consists of one 75 ft. and two 30 ft. plate girder deck spans, the piers and abutments being of the same general design as those at L'Achigan and with rounded ends. The Lac Ouareau river bridge consists of one 140 ft. deck span crossing the main channel of the river, and a 50 ft. plate girder span at the easterly end with ten 30 ft. bents of steel trestle on concrete pedestals, ending with an abutment to hold the bank at the western end. The piers and abutments of this bridge are also of concrete and of the same general design as the others.

In addition to the above mentioned structures, there are a number of concrete arch culverts, 1 of 10 ft. span just outside of Montreal, and between Charlemagne and Joliette; 2 of 6 ft., 1 of 8 ft., 2 of 10 ft., 1 of 14 ft. skew arch, and at the Ruisseau Vacher a 25 ft. concrete arch culvert. The concrete is composed of one part cement, two of sand, and six of broken stone. Other small culverts are of open beam cedar.

The fencing is Page wire, with posts 16½ ft. centres, 8 ft. long, standing 4½ ft. above the ground.

The piling for the Bout de L'Isle bridge was done on the ice during last winter, and work on the concrete and masonry was commenced in April last. On Nov. 16 we were advised that the substructure for both channels was completed. A temporary trestle was erected across the east channel to facilitate construction, and trains have been run over it. The other bridges are completed, also all the concrete culverts with the exception of Ruisseau St. Pierre, which was expected to be completed by Oct. 31. The superstructure of the Bout de L'Isle bridge was begun in July, and is now completed across the west channel with the exception of flooring and railings. On Nov. 16 three spans of the superstructure over the east channel had been erected.

The grading, which has all been done this year, is practically completed, and tracklaying is now being vigorously pushed at three points, L'Epiphanie, Joliette and from Montreal. Out of 36 miles, all but 2½ miles had been laid up to Nov. 25. The company has secured a convenient ballast pit near L'Assomption, where a steam shovel is at

work, and the track is being rapidly ballasted. The rails used are 70 lbs. per yard, and 33 ft. long, 4 bolt angle plates and ties laid 22 in. centres. Owing to the flatness of the country, material to make the heavy fills at the gullies before mentioned and at the approaches to the bridges was difficult to obtain, and in some places large areas of extra land had to be acquired from which to make the fills, notably across Isle Bourdon in the Ottawa river, where the dump is required not only for the railway but for a 14 ft. roadway on each side. These roadways, however, are carried down from the west channel on a 5% grade to the centre of the island and up again on the same grade to the east channel, and also at the east and west approaches on the main land. At the Bout de L'Isle, or west end of the bridge, a 3-posts temporary trestle has been erected over 1,000 ft. long, and another at the Charlemagne end, 1,460 ft. long, is under construction. These trestles will be filled in from the ballast pit by train. Fencing and telegraph line are well under way, and were expected to be completed by the end of Nov.

Stations are located at the following points with distances between as stated:—Charlemagne, 13.5 miles from Montreal; L'Assomption, 20.6 miles; L'Epiphanie, 23.7 miles; Ste. Marie Salomie, 29.3 miles; Joliette, 36.2 miles. At each station a passing siding is constructed 2,200 ft. long, the station and freight house being on the main track, with a 12 ft. platform about 200 ft. long, and a spur freight track running in behind the freight house. The design adopted for the passenger stations which are now under contract, shows a building 1½ stories high, having a curved roof extending 7½ ft. over the platform all around, and with flat-topped dormer windows, the whole appearance being attractive and picturesque. There are two sizes: the smaller, 24 ft. by 40 ft., and having on the ground floor general waiting room, agent's office, baggage and express room, with 4 living rooms upstairs; and the larger, 24 by 50 ft., having in addition a ladies' waiting room on the ground floor. With the exception of the one at Charlemagne, which is to be of brick, the buildings are of wood with shingle roof, and walls covered with American clapboards 3 in. to the weather. A water tank of 60,000 gallons capacity will be located at L'Epiphanie, and another at Montreal. The Montreal terminus is at the corner of St. Catherine and Moreau Sts., where a handsome station will be built, together with the requisite terminal facilities.

The engineering staff is as follows: F. A. Hibbard, late of the Michigan Central, Chief Engineer (to whom we are indebted for these particulars); C. E. Macnaughton, R. M. Charlton and J. O. Montreuil, Assistant Engineers in charge of three sections of the work; A. W. H. Stimpson, C.E. in charge of the draughting department at the office at Bout de L'Isle, with A. Langlois as assistant. D. J. Mullarkey is Chief Inspector.

The contractors for the greater part of the work, viz., substructure of bridges, grading, fencing, telegraph line and concrete culverts, Charlemagne to Joliette, are the F. C. Dunn & Co. J. B. Laflamme is their superintendent of works. In addition Isaac Kert has the contract for the fill on Isle Bourdon, and Schell, Bonneville and Purcell for the grading between Bout de L'Isle and Lasalle St. Maisonneuve. The balance of the work, wooden culverts, tracklaying and ballasting, is being done by the company under the superintendency of J. Rowley.

The company has every reason to be pleased with the excellent showing made in completing 36 miles of railway, with so many important and costly structures, in one season, and it is largely owing to the efforts of H. H. Melville, the Vice-President of the Company, that the work has been pushed in such a

short time to what is now practically successful completion. The immediate management of the work has been in the hands of J. P. Mullarkey, Managing Director. Dennis Murphy is President of the company.

It is expected that trains will be running from Joliette to Montreal early in December; the equipment to be supplied by the Great Northern Ry. of Canada, which has leased the line.

At the recent session of the Dominion Parliament the following subsidies were voted: From L'Epiphanie by way of St. Jacques l'achigan to Rawdon village, 16 miles, \$51,200; an additional subsidy of \$50,000 towards the construction of the Bout de L'Isle bridge.

#### General Passenger and Ticket Agents' Association.

At the recent convention of the American Association of General Passenger and Ticket Agents, the auxiliary associations comprising general baggage agents, travelling passenger agents, and ticket agents were for the first time represented by delegates, as the result of a resolution proposed by G. T. Bell, General Passenger Agent of the G.T.R., and T. Henry, General Traffic Manager of the Richelieu & Ontario Navigation Co., at the Portland, Me., convention in 1902. The Canadian Ticket Agents' Association was represented by F. W. Churchill, C.P.R. ticket agent at Collingwood, Ont., who, in addressing the convention, said:

The Canadian Ticket Agents' Association is organized largely upon the same lines as the American Association of Travelling Passenger Agents, being educational and to an extent social. By the kindness of railways of our own country we have visited a number of prominent points in Canada. Last year through courtesies extended by the Lehigh Valley, Baltimore & Ohio, Philadelphia & Reading and other lines, we made our first trip to the U.S., thus becoming better acquainted with the junction points and with their various attractions. In no other way can a ticket agent, tied to his office, be enabled to so intelligently direct passengers as by travelling. I did not know until I came that a report was expected. We trust that you may do us the honor in future years of asking our Association to send a delegate to your meetings, and I can promise on their behalf that any delegate who may be appointed, will do his utmost to bring to the meeting something which may be of interest and instruction, and which may in some way increase the interest of your members. I thank you for the opportunity given by your Association to attend this meeting.

The Detroit and Toledo Shore Line Rd., (which is owned jointly, one half each, by the Grand Trunk Western Ry. Co. and the Toledo, St. Louis and Western Rd. Co.), owns, leases and controls a single track railway from a connection with the Detroit, Grand Haven and Milwaukee line of the G.T.R. at West Detroit, to Trenton, Mich., from which point to its connection with the Toledo Terminal Rd. at Toledo, it has a double track. Under a lease arrangement with the Toledo Terminal Rd. it reaches a connection with the Toledo, St. Louis and Western Rd. at Toledo. It has access, under running arrangements, to the Toledo, St. Louis and Western Rd. terminals at Toledo, and in like manner has access to the G.T.R. terminals at Detroit. The total mileage from West Detroit to Toledo is 67.70 miles. The road is laid with 70 lb. rails, well tied and well ballasted, with steel bridges and modern construction in every respect. It is now being operated for freight service only, but it is expected that passenger service will be put on early in 1904. The operation of the road is in charge of S. W. Knapp, Superintendent, with headquarters at Detroit, Mich.

# Canadian Northern Railway

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**FORT FRANCES**                      **MORRIS**                      **GLADSTONE**  
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**PORTAGE LA PRAIRIE**              **OARMAN**                      **DAUPHIN**  
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**GEO. H. SHAW**, Traffic Manager,  
WINNIPEG, MAN.

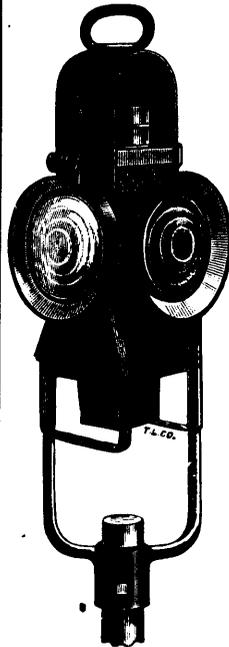
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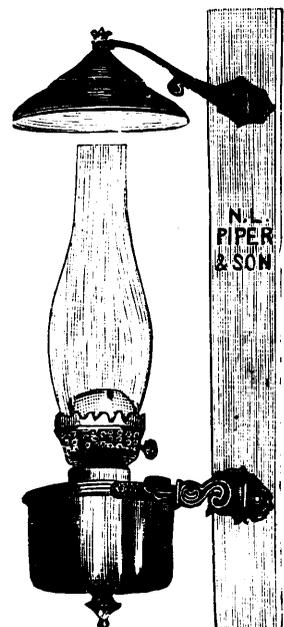
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clear,  
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**G.T.R. Betterments, Construction, Etc.**

**Montreal Terminals.**—On a portion of the land recently acquired in the vicinity of St. Henri and Turcot, Montreal, tracks to accommodate 2,000 cars being laid. This, however, is only preliminary to the work of laying out the new yards on the site. (Nov., pg. 387.)

**Elevator at Montreal.**—The foundations for the elevator to be erected at Windmill Point by the Montreal Warehousing Co., a subsidiary of the G.T.R., have been completed, and nothing more will be done until the spring. No contract has been let for the erection of the elevator.

**Lacadie-St. John's Double-track.** The second track between Lacadie and St. John's Que., 7 miles, has been completed, and a regular train service was placed in operation over it Nov. 16. (Sept., pg. 309.)

**Toronto-Montreal Second Track.**—The double-tracking and gradient reduction operations between Port Hope and Port Union were begun in the spring of 1901, and will be entirely completed this year. The line between the points mentioned runs practically parallel to the shore of Lake Ontario, crossing the valleys at almost right angles, and making a series of heavy ascending and descending gradients; the maximum being 1%. The new gradient over this section has been reduced, for eastbound traffic, to practically  $\frac{1}{3}$  of 1%. To accomplish this the old track was lowered from 10 to 20 ft. at the summits and the fills raised a corresponding amount. Between Port Hope and Newtonville, a distance of eight miles, a new line to the north was chosen, eliminating several reverse curves, a 1% grade, and reducing the gradients (westbound) from 1% to 0.5%. A diversion was also made around the Darlington summit, which, although slightly increasing the curvature, decreased the maximum 1% gradient two-thirds. The grading consisting principally of hard clay with underlying layers of hard pan; and was handled very economically by steam shovels of  $2\frac{1}{2}$  yard dipper capacity. Several smaller shovels were used in the light cuttings and in getting out ballast. The shovels working the cuts loaded the material on to flat cars, which were then moved to the fills and unloaded by ploughs operated by rapid unloaders. The cuts were sloped and excavated to the proper grade by the shovels, leaving very little trimming to be done by hand. The work, which presented no great difficulty, was accomplished with a very light hindrance to traffic, it being found desirable to maintain one track for main line trains, the work trains in all cases using separate tracks. As stated previously, the work will be completed this season, there being at present uncompleted a small amount of grading with about 10 miles of track to ballast. (Sept., pg. 309.)

**Allandale Yards, Etc.**—The new roundhouse, under construction at Allandale, Ont., will be of similar size to that recently completed at Fort Erie. It will be in the form of three-quarters of a circle, having a diameter of 330 ft., and a height of 25 ft.; with a depth of 80 ft. There are 27 stalls, which surround a turntable with a steel platform, 70 ft. in length. Adjoining is a machine shop, 50 ft. by 125 ft., having a smoke-stack, 75 ft. in height. There is also being built a store and office building, 115 ft. by 20 ft. The basement will be used for oil and other stores, and for records, while the master mechanic and his staff will have offices upstairs. These buildings are being constructed of concrete, the roof of the roundhouse and machine shop being of felt and gravel, and the office building of slate. (Nov., pg. 387.)

**Toronto Yards.**—Tracks are being laid in the new freight yards at Toronto, and the whole work is expected to be completed early in Dec. Work on the inward freight shed

will be gone on with in the spring. (Nov., pg. 387.)

**Sarnia-Kingscourt Second Track.**—The grading for the second track between Kingscourt Jct. and Sarnia, Ont., is completed, and it is expected to have the track laid and a train service in operation over the whole of this section by Dec. 31. The second track is already in operation between Kingscourt and Wyoming. (Nov., pg. 387.)

**G.T. Pacific Ry.**—We are advised that the surveys being made for the G.T.P.Ry. are under the charge of the following: Assistant Chief Engineer, J. R. Stephens, Montreal; Division engineers, G. A. Knowlton, North Bay, Ont.; G. A. Kyle, Winnipeg, Man., and C. C. VanArold, Victoria, B.C. The Railroad Gazette, New York, recently announced that E. R. McNeill, resident engineer of the Great Northern Ry., U.S., at Havre, Mont., had been appointed district engineer at Edmonton, Alta., but we are officially informed that he has been attached to the surveying staff in the vicinity of Edmonton. The Railway Age, Chicago, announced that E. P. Reynolds, Jr., of Wymore, Neb., had been appointed consulting engineer in charge of the location and construction of the G.T.P.R.; we have been officially advised that the G.T.R. management knows nothing of this appointment. We have been unable to obtain a complete list of the engineers employed on the 16 parties in the field, the personnel being so frequently changed, owing to illness, unfamiliarity with the country and other causes, that we are informed a satisfactory list would be very difficult to compile. The names of engineers are so frequently appearing in the press as being engaged on surveys for the G.T.P.Ry. that it would be interesting to have a complete and correct list. Among the names of engineers recently mentioned, in addition to those already referred to, are the following:—Pym, working in the vicinity of Lac du Bonnet; C. N. Bouchier, in charge of survey near Heron Bay, Ont.; L. J. Houston, formerly with the C.P.R. at Fort William, Ont., on survey north of Fort William;—Meyer, on survey between Lake Nepigon and Frenchmen's Head; L. R. Ord, on survey from Frenchmen's Head, westerly; B. A. H. Lansberry, of New York, with party of 11, north of Yorkton, Assa.;—Armstrong, town engineer of Edmonton, Alta., on survey north, having obtained leave of absence from town council; A. F. Cotton, New Westminster, B.C., was on survey near Hazelton, B.C.

The Huntsville and Lake of Bays Ry. has purchased two saddle-tank engines, 14 box cars and 10 flat cars, formerly used by the E. B. Eddy Co. at Hull, Que.

The Intercolonial Ry. has received from the Toronto Industrial Exhibition Association a diploma awarded for a collection of photographs illustrating the route of the Maritime express, shown at this year's exhibition.

The G.T.R. between Oct. 23 and Nov. 23 added to its equipment seven switching engines, built at its Montreal shops; one switching engine, built at its Fort Gratiot, Mich., shops; and 12 cinder cars, built at its Port Huron, Mich., shops.

The B.C. Electric Ry. Co. has built at its New Westminster shops two double truck cars, 48 ft. bodies, for use on the interurban line between Vancouver and New Westminster, B.C.; and six single truck cars for use on its lines in Vancouver and Victoria.

The Canadian Northern Ry. has issued a new folder giving a short story of the commercial development of Northwest Canada. It is well written and profusely illustrated with cuts showing the early methods of transportation in the country, the public buildings of Winnipeg and other centres of population.

**C.P.R. Betterments, Construction, Etc.**

**Megantic Line Improvements.**—During the summer considerable work has been done on the line in the vicinity of Megantic, Que. A number of curves have been straightened, the roadbed raised, and widened in places, and a rock cut near Johnville blasted out. New steel has been laid from near Bulwer to a mile west of Cookshire, Que.

**Megantic Yard.**—The increasing freight passing over the line between Montreal and St. John, N.B., has led to a congestion at the freight yards at Megantic, Que., and it is reported that they will be enlarged to meet the increasing demands. Another press report states that consideration has been given to the question of removing the divisional point from Megantic to Hobe.

**Montreal Terminals.**—In connection with the appropriation of \$4,500,000 for general improvements of terminals etc., a press report quotes Sir Thos. Shaughnessy as stating that a very considerable amount will be spent upon the terminals at Windsor st. station; that the purchase of land between the city and Montreal West had been going on steadily, and before long all the way out west there will be important extensions. First of all, there will be an increase of trackage; then there will be shunting grounds provided, sheds for reserve cars, and possibly another turntable. These improvements would take \$1,000,000 or more. (Oct., pg. 355.)

**Montreal Shops.**—The power house at the new shops, for which a permit was recently obtained, will be 164 ft. long by 60 ft. wide, and will cost \$40,000. (June, pg. 245.)

**Northern Colonization Ry.**—The distance from Labelle to Nominique, Que., is 25 miles, and track was laid to three miles beyond Labelle when work on the extension to Nominique was commenced, so that there remained 22 miles to be graded and completed. The grading was expected to be completed by Nov. 15, and tracklaying finished by Dec. 1. The grading has been a difficult work, there being a good deal of hard pan. There is not much bridge work on the extension. (Nov., pg. 385.)

**St. Philippe d'Argenteuil to Brownsburg.**—The Dominion Parliament at its last session voted a subsidy of \$3,200 a mile towards the construction of a line from the C.P.R., on the Montreal-Ottawa line, 49 miles from Montreal, northerly through the village of Brownsburg, Que., not exceeding three miles.

**Ottawa, Northern and Western Ry.**—The lines of the Ottawa, Northern and Western Ry., which include the old Ottawa and Gatineau Valley Ry., and the Pontiac Pacific Junction Ry., have been absorbed by the C.P.R., and are being operated as a portion of the Eastern division. In addition to securing the lines built and the charter rights of the two companies forming the O.N. and W. R. the C.P.R. also secured the Interprovincial bridge and the Hull Electric Ry.

At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile was voted for one mile of railway completing the Company's connecting lines in the city of Hull, Que.; and for a line into and through Hull from the old Ottawa and Gatineau Ry., not exceeding 4 miles, in lieu of previous subsidies. A subsidy was also voted for a line from Waltham, Que., the present terminus of the old Pontiac Pacific Junction Ry., to Ferguson Point, about 20 miles. The first two mentioned of these lines have been constructed and are in operation, and provision is made in the charter of the old P.P.J. Ry. Co., for the extension from Waltham.

The extension of the old Ottawa and Gatineau Ry. from Gracefield to Maniwaki is practically completed, construction trains having been running into Maniwaki since early in Nov. (Oct., pg. 145.)

**Ontario Lines.**—At a meeting recently held at Bowmanville, Ont., at which representatives from Whitby, Oshawa, Port Hope, Cobourg and Campbellford were present, a resolution was passed favoring the construction of a line connecting the lake front towns with the C.P.R. main line. A committee was appointed to interview the C.P.R. officials with a view to diverting the main line or constructing a loop line by which these various towns could be brought into connection with the C.P.R. In this connection a press report states that the C.P.R. has in contemplation the construction of a line from Blairton to Toronto, via Warkworth, Cobourg, Port Hope, Bowmanville, Oshawa and Whitby. This line would serve the district represented by those present at the meeting, and could open up a portion of the country not now served by a railway. A press report states that the C.P.R. has on paper plans for the extension of its lines in Ontario, with the idea of getting into all districts likely to develop, and from which remunerative traffic may be expected. These lines are in addition to the Lindsay, Bobcaygeon and Pontypool Ry., of which the C.P.R. has a lease; and the proposed extension of the Guelph Junction Ry. to Goderich, for which surveys are in progress.

**North Bay Yards, Etc.**—The old station has been moved into line with the new station building, and a new track laid alongside. The new platform was ready for use early in Nov. (Nov., pg. 385.)

**Grain Loading Platforms, Etc.**—During the season 33 grain-loading platforms have been completed at various points in Manitoba and the Northwest Territories.

**Pipestone Branch.**—We were advised, Nov. 12, that 42 miles of track had been laid

easterly from Regina on the extension of this branch from Arcola to Regina, Assa. (Nov., pg. 385.)

**Carberry to Neepawa.**—C.P.R. engineers are reported to be at work locating a line between Carberry and Neepawa, about 25 miles.

**Pheasant Hills Branch.**—We were advised Nov. 12 that track had been laid to mileage 107.5 from Kirkella, and it is expected to lay track to mileage 130, near Balcarres. (Nov., pg. 385.)

**Trail Loop.**—A contract is reported let to W. P. Tierney & Co., Nelson, B.C., for the construction of a loop line, about 1¼ miles, to connect the Rosslund Power Co.'s mill near Trail, B.C., with the main line.

**Vancouver Hotel.**—Construction of the new wing for the Hotel Vancouver will, it is said, be gone on with in the spring. This wing will replace the old building. (Feb., pg. 53.)

**Victoria Hotel.**—F. M. Rattenbury has prepared plans for the proposed new hotel at Victoria, B.C., which he recently submitted to the executive. He will go to Europe to look over some of the big new hotels there before returning to Vancouver. (Oct., pg. 355.)

**Minneapolis, St. Paul and Sault Ste. Marie Ry.**—Upon the extension from Greenwood, Minn., northerly, about 25 miles are reported to be in operation, and the construction gangs have reached a point 75 miles further north. (Oct., pg. 355.)

C. M. Hays, 2nd Vice-President and General Manager G.T.R., left Montreal Nov. 25 for London, Eng., in connection with G.T. Pacific Ry. business.

## RAILWAY DEVELOPMENT.

### Projected Lines, Surveys, Construction, Betterments, Etc.

**Atlantic, Quebec and Western Ry.**—At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile, with the usual provisions for increasing it to \$6,400 a mile, was voted towards the construction of a line from Gaspé to Causapsal, Que., on the Intercolonial Ry.; from Causapsal to Edmundston, N.B., 260 miles, and from Gaspé along the shore to Paspebiac, the present terminal of the Atlantic and Lake Superior Ry., 102 miles. In the winter of 1902-3 preliminary surveys were made between Amqui station on the I.C.R. and Gaspé, 180 miles, a good route being found with easy gradients. During the recent summer the preliminary survey was made on the proposed branch from Gaspé to Paspebiac. After the voting of the subsidy a survey party was sent out to make the final survey of the first section of the route from Paspebiac, and arrangements have been completed to send out two additional parties to survey additional sections. It is desired to have the surveys completed so as to let contracts for 30 miles before spring. The company hopes to be able to complete the line from Amqui to Gaspé, and from Gaspé to Paspebiac, Que., within three years. The cost of construction is estimated to exceed \$15,000 a mile. J. X. Lavoie, Perce, Gaspé, Que., is Secretary. (Oct., pg. 339.)

**Bay of Quinte Ry.**—At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile was voted towards the construction of an extension from the present terminus at Tweed to Actinolite (Bridgewater), Ont., and to Marmora township, about 20

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miles. Tracklaying has been completed on the extension from Tweed to Bannockburn, where a connection has been made with the Central Ontario Ry. The extension starts from a point near the engine shed at Tweed, crosses the C.P.R. track and River st., and parallels that line for some distance, then turning northerly to Actinolite (Bridgewater), then northwesterly to Bannockburn. Temporary wooden bridges have been erected, four of which are to be replaced by steel spans. There will be three stations on the extension, Bridgewater, Queensboro and Allen Settlement. Ballasting is in progress. (Oct., pg. 339.)

**Beersville Coal and Ry. Co.**—The Dominion Parliament at its recent session voted a subsidy of \$3,200 a mile towards the construction of this line from Adamsville on the I.C.R., to the coal mines at Beersville, N.B., seven miles. Track is reported to have been laid for three miles from Adamsville, and grading to have been completed for six miles. Grading on the remaining mile to the mines is in progress and tracklaying is being continued. It is expected to complete tracklaying by the end of the year. Arrangements are being made to put in terminal facilities at the mines, but it is not expected that anything will be done in that direction until the spring. The New Brunswick Government is negotiating with the company with a view of providing for the construction of a further 2½ miles of line to the mines of the Canadian Manganese Co. G. G. Polleys, Manager of the Imperial Coal Co., is also manager of the railway. (Oct., pg. 339.)

**Berlin, Waterloo, Wellesley and Lake Huron Ry. (Electric).**—The promoters, in company with an engineer from Boston, Mass., have recently been looking over the route of this projected line from Berlin to Goderich, Ont., via Wellesley. It is said that it is intended to construct a line from Berlin to Wellesley, about 15 miles, immediately, and to operate it in conjunction with the Preston and Berlin Ry. and the Galt, Preston and Hespeler Ry. C. R. Hanning, Preston, Ont., is Secretary. (Sept., pg. 305.)

**Brockville, Westport and Northwestern Ry.**—The opposition to the passing of the act incorporating the Reorganization Syndicate of New York, which purchased the Brockville, Westport and Sault Ste. Marie Ry., was withdrawn, the syndicate agreeing to pay 25% of the amount due to the judgment creditors. The act was then passed, the name of the company being changed to the Brockville, Westport and Northwestern Ry. Co., and power given to extend the line from Westport northwesterly. The B. W. and S. S. M. Ry. is now vested in the B. W. and N. Ry. Co., and at the meeting for the organization of the new company held Nov. 23, it was decided to bring the line in all respects up to the Government standard, and the officers were given instructions to this effect. A committee was appointed to select a terminal for the projected extension and to make arrangements for the preliminary surveys. (Oct., pg. 340.)

**Bruce Mines and Algoma Ry.**—A subsidy was voted at the recent session of the Dominion Parliament for an extension of the line from its present terminal at the Rock Lake copper mines, Ont., northerly 19 miles, and for a line from Bruce Mines to Bruce Mines Junction, 2 miles. The latter piece of line has already been constructed. It is not expected that anything will be done on the line northerly next year. (Sept., pg. 305.)

**Chateaugay and Northern Ry.**—See pg. 419.

**Central Ontario Ry.**—The subsidy previously authorized by the Dominion Parliament for the extension of this line from Bancroft to a junction with the Canada Atlantic

Ry. near Whitby, Ont., about 40 miles, was revoked at the recent session.

**Colchester Coal and Ry. Co.**—At the last session of the Dominion Parliament a subsidy of \$3,200 a mile was voted towards the construction of a line from Debert station on the I.C.R. to the Debert Coal Mines, N.S., 4½ miles, for the construction of which the C.C. and Ry. Co. has a charter. This subsidy was granted in lieu of one voted in 1900. (Oct., pg. 341.)

**Cumberland Ry. and Coal Co.**—At the last session of the Dominion Parliament a subsidy of \$3,200 was voted for the construction of one mile of railway from Parrsboro, N.S., station to riverside wharf. (Feb., pg. 39.)

**Detroit River Bridge.**—In connection with the proposal to construct a bridge over the Detroit river between Windsor, Ont., and Detroit, Mich., which was under discussion a good deal in the early part of the year, and to which special attention was directed by the securing of a charter by the Pere Marquette Rd., C. M. Hays, 2nd Vice-President and General Manager G.T.R., recently stated that he was collecting information on the subject, but was as yet unable to state what attitude his company would assume toward the subject. Sir Thos. Shaughnessy, President C.P.R., interviewed by the Montreal Star on the subject, said that it was a matter mainly interesting to Canadian connections with the U.S. (Aug., pg. 267.)

**Edmonton Street Ry.**—W. G. Tretheway, of Montreal, has been visiting Edmonton, Alta., recently, and interviewing the town council in connection with the construction of a street railway there. A charter for the construction of an electric railway is held by the town council. (Jan., pg. 213.)

**Esquimalt and Nanaimo Ry.**—At the last session of the Dominion Parliament a subsidy of \$3,200 a mile, with the usual conditions as to an increase to \$6,400 a mile, was voted towards the construction of a line from Wellington to Union bay, about 50 miles. A charter for the construction of this line is held by the E. and N. Ry. Co., and surveys have been made for a line along the coast terminating at Comox. The B.C. Legislature voted a subsidy of \$4,000 towards the construction of such a line, but provided that it should run through Alberni and Nanaimo. Nothing was done to earn the subsidy, which has now lapsed. (Jan., pg. 21.)

**Grand Valley Ry. (Electric).**—Grading has been completed to within four miles of St. George, Ont., and tracklaying is in progress from Paris to St. George. Negotiations are in progress for the extension of the line to Galt. (Oct., pg. 341.)

**Great Northern Ry. of Canada.**—Nothing definite has been announced in regard to construction of the connection between the Montford and Gatineau Ry., at either St. Sauveur or St. Morin flats, and the G.N.R. at St. Jerome, Que., about 20 miles. (See Montford and Gatineau Ry.)

The Dominion Parliament at its last session voted the usual subsidy of \$3,200 a mile towards the construction of a line from Hawkesbury to South Indian, Ont., not exceeding 35 miles, in lieu of a subsidy granted in 1899, and for a line from Garneau Jct. to Quebec bridge, not exceeding 70 miles. Surveys were made in 1901 for the proposed extension from Hawkesbury to South Indian, and for a cut off from Garneau Junction to St. Catharines, Que., 55 miles. No work was done on either of these pieces of line. The new subsidy for the line from Garneau is for an extension into Quebec, thus providing a direct entrance into that city for the G.N. Ry. independent of the Quebec and Lake St. John Ry., which is now utilized from Rivière à Pierre to Quebec. (Sept., 1901, pg. 335.)

**Guelph Junction Ry.**—This railway is at present in operation from Guelph to Guelph Junction, Ont., where connection is made with the C.P.R. main line, 15 miles. The line is operated by the C.P.R. and it was always intended that it would be extended to Goderich, and negotiations to that end have been initiated by the Guelph city council, which has a large interest in the line. Surveys for the extension are now in progress; P. A. Peterson, formerly Chief Engineer C.P.R., being in charge of the work; the engineers in charge of the survey parties being:—Roberts, at Goderich, and J. Davis, at Guelph. Three lines have been run between the two points, but the final route has not been settled. The lines surveyed are: (1) from Guelph via Elmira, Linwood, Milverton, Monkton, Walton, Blyth, to Goderich; (2) Guelph via Conestogo, Linwood, Atwood, Brussels and Listowel, to Goderich; (3) the third route would run into Goderich via Seaford and Clinton. The construction is comparatively easy between Guelph township and Blyth. The distance of the proposed line will be about 82 miles, as against 88 via the G.T.R. It is probable that legislation will be asked to change the name of the Company to the Guelph and Goderich Ry. It is expected that work will be gone on with in the spring, as C.P.R. assistance has practically been secured by the promoters. Colonel A. H. Macdonald, Guelph, is solicitor for the Company. (Oct., pg. 341.)

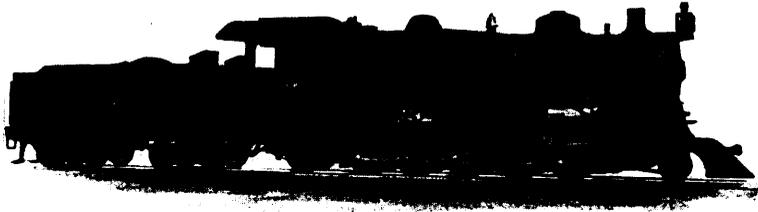
**Halifax and Southwestern Ry.**—We are advised that the location of the line at several points is still undecided, and no further contracts have been let for grading. The line between Halifax and Mahone, N.S., has been graded and the bridges and culverts, with the exception of the steel spans, delivery of which depends on the makers, are well under way and will be ready for tracklaying for about 50 miles by the end of Nov. From this point into Halifax the grading and culverts have been about one-third finished and are being pushed forward. On Nov. 16 we were advised that tracklaying was expected to be commenced at Mahone in a few days. All the track material and telegraph posts are provided, so that the work will be pushed forward to Halifax as fast as possible. Work on the line in the vicinity of Liverpool is also making good progress. In connection with the entrance into Halifax, the arbitrators have been appointed to assess the value of the land to be purchased by the city and county for the right-of-way.

On the old Nova Scotia Southern Ry. the Caledonia branch has been completed, and we were advised Nov. 16 that it was expected to be opened for traffic by Nov. 20. The branch extends from New Germany to Caledonia, about 22 miles. On this branch considerable work was done some years ago, but the whole has been entirely reconstructed. Stations have been built at Hemford, North Brookfield, South Brookfield and New Caledonia; a water tank at Hemford, and an engine and coal shed at Caledonia. (Nov., pg. 389.)

**Hampton and St. Martin's Ry.**—A train service has been placed in operation on this line by the new company, and freight is being exchanged with the I.C.R. (Oct., pg. 341.)

**Huntsville and Lake of Bays Ry.**—The grading on the mile of railway being constructed under this charter by the Huntsville, Lake of Bays and Lake Simcoe Navigation Co., between Lake of Bays and Peninsula lake, Ont., is nearly completed, and tracklaying will be commenced at once if the weather continues favorable. It is expected that a train will be running within three weeks after tracklaying has commenced. Steel rails 56 lbs. to the yard will be laid. Professor Kerry, of McGill College, laid out

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- 160 acres at \$5.00 per acre, 1st instalment \$119.85, and 9 equal instalments of \$100.
- 160 acres at \$5.50 per acre, 1st instalment \$131.80, and 9 equal instalments of \$110.
- 160 acres at \$6.00 per acre, 1st instalment \$143.80, and 9 equal instalments of \$120.00.

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

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Grand Trunk Elevators, No. 2 and No. 3, Portland, Me.	2,500,000	"
Export Elevator, Buffalo, N.Y.	1,000,000	"
J. R. Booth Elevator, Depot Harbor, Ontario	1,000,000	"
Southern Pacific Terminal Co.'s Elevator, Galveston, Texas	1,000,000	"
Erie R. R. Transfer & Clipping House, Chicago, Ill.	100 cars in 10 hrs.	"
Manchester Ship Canal Co.'s Elevator, Manchester, Eng.	1,500,000	"
Burlington Elevator Co., Peoria, Ill.	500,000	"
Canada Atlantic Railway Elevator, Coteau Landing, Que.	500,000	"
Northern Grain Co., Manitowoc, Wis.	1,350,000	"
Union Elevator, East St. Louis, Ill.	1,100,000	"
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the route, assisted by —. Bazette, of Burk's Falls, Ont. (Aug., pg. 268.)

**Indian River Ry.**—At the last session of the Dominion Parliament a subsidy at the rate of \$3,200 a mile was voted for a line from the north end of Lake Megantic southward to the International Boundary, about 19 miles. A company with this title was incorporated by the Dominion Parliament in 1902, to construct a railway from the north end of Lake Megantic along the lake to the International Boundary at Riviere Morte. Power was given the Company to enter into arrangements with the C.P.R. and the Quebec Central Ry. in Canada, and with the Rumford Falls and Rangeley Lakes Ry. and the Portland and Rumford Falls Ry. in the U.S. M. P. Davis, contractor, Ottawa, and H. G. Harrison, Montreal, were among the incorporators. (June, 1902, pg. 191.)

**Intercolonial Ry.**—The grading for the second track between Richmond and Rockingham, N.S., 2.45 miles, has been completed, and tracklaying is nearly finished. It is expected that the second track will be placed in operation early in Dec.

Tenders are under consideration for some improvements at the deep-water terminus, Halifax, including submarine blasting and dredging at the dock between piers 3 and 4.

A sum of \$10,000 was provided in the supplemental estimates, at the recent session of the Dominion Parliament, for a new station at Windsor, N.S.

The new roundhouse at St. John, N.B., has been completed, and the tracks leading to it are being laid. The new building is semi-circular in form, with an inside diameter of 344 ft. and a height of 23 ft. It will accommodate 18 locomotives, and is built of brick on concrete foundations, resting on piles. The roof is supported on 45 iron columns. Adjoining is the machine shop, 50 ft. by 100 ft.; and a steel water tank having a capacity of 100,000 gals. The contractors were Flood and Bates, St. John. (Oct., pg. 342.)

**International Ry. of New Brunswick.**—The I.Ry. of N.B. is a new name for the Restigouche and Western Ry. At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile was voted from the western end of the 10 miles completed from Campbellton towards the St. John river, between Grand Falls and Edmundston, N.B., about 67 miles, and a new subsidy for a further distance of 33 miles, making in all 100 miles. T. Malcolm, of Edmundston, N.B., is the principal promoter. (See Restigouche and Western Ry., July, pg. 241.)

**Interprovincial and James Bay Ry.**—A subsidy of \$3,200 a mile, with the usual provision for an increase to \$6,400 a mile, was voted at the recent session of the Dominion Parliament for a line from the C.P.R. Temiscamingue branch from Mattawa, at or near its present terminal at Temiscamingue wharf, northerly not to exceed 50 miles. The I. and J.B. Ry. Co. was incorporated by the Dominion Parliament in 1901, amongst the promoters being Hon. R. Prefontaine, L. J. Tarte and J. W. Poupore, of Montreal. (July, pg. 236.)

**Inverness Ry. and Coal Co.**—At the recent session of the Dominion Parliament a subsidy at the rate of \$3,200 a mile was voted for 8 miles of line between Point Tupper and Broad Cove, N.S. This piece of line has been completed and is in operation, but was not covered by the previous subsidies. A subsidy at the same rate for an extension of the line from near Broad Cove to Cheticamp, about 37 miles, was also voted. (May, pg. 149.)

**Iroquois, Bancroft and Ottawa Ry.**—The Dominion Parliament at the recent session granted a subsidy of \$3,200 a mile towards the extension of this line from its present terminus near Bancroft to Renfrew, Ont., about 75 miles. (June, pg. 215.)

**Joliette and Lake Manuan Colonization Ry.**—A subsidy of \$3,200 a mile was voted at the recent session of the Dominion Parliament for the construction of about 60 miles of railway from Joliette to Lake Manuan, Que., in place of a subsidy voted in 1900. At the recent session the Dominion Parliament passed an act incorporating a company with this title to construct a railway from Joliette to Lake Manuan, Que., with local incorporators. It has power to lease or sell its line to the C.P.R., the Great Northern Ry., or the Montreal Terminal Ry. (July, pg. 336.)

**Kettle Valley Lines.**—Subsidies were voted at the last session of the Dominion Parliament for a line from Grand Forks, up the north fork, and west fork of the north fork of Kettle river, B.C., 50 miles. The Kettle Valley Lines are in operation from Grand Forks, B.C., to Republic, Wash., and the proposed extension will open up a considerable mining country to the north of Grand Forks. The objective point of the extension is Franklin camp. It is expected that construction will be commenced early in the spring. Hon. J. R. Stratton, Provincial Secretary of Ontario, is President of the K.V. Lines, and H. Warrington, Grand Forks, B.C., is Superintendent. (Sept., pg. 307.)

**Kootenay Central Ry.**—At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile, with the usual conditions for an increase to \$6,400 a mile, was voted towards the construction of a line from Golden, B.C., to the International Boundary via Windermere and Fort Steele, and crossing the C.P.R. Crow's Nest Pass line at or near Elkos, not exceeding 106 miles. C. H. Pollen, of Fort Steele, B.C., is the principal promoter of the company, which has both B.C. and Dominion charters. Surveys for the line have been completed. (July, pg. 237.)

**Lime Ridge to Quebec Bridge.**—At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile was voted towards the construction of a railway from Lime Ridge, the present terminal of the Hereford Ry., northerly for 50 miles into the county of Megantic, Que., being a revote of a subsidy granted in 1894. A subsidy at the same rate was also voted for a line in extension of the 50 miles from Lime Ridge for 30 miles to the Quebec Bridge. The Lotbiniere and Megantic Ry. was at the last session of the Quebec Legislature given power to construct a line from Kinnear's Mills to Windsor Mills and Brompton Falls, via Lime Ridge. This line would cover the mileage subsidized, and an additional distance from Lime Ridge to Brompton Falls, on the G.T.R., 94 miles from Montreal. (See Lotbiniere and Megantic Ry., May, pg. 149.)

**Lake Superior, Long Lake and Albany River Ry.**—The Dominion Government at its last session voted a subsidy of \$3,200 a mile towards the construction of this railway from Peninsula Harbor, on Lake Superior, northerly for 10 miles. (June, pg. 215.)

**Montford and Gatineau Colonization Ry.**—At the last session of the Dominion Parliament a subsidy of \$3,200 a mile was voted for an extension of the line from Arundel to the united townships of Preston and Hartwell, Que., about 30 miles. A subsidy at the same rate was also voted for an extension from Morin Flats to St. Jerome, about 26 miles, to connect with the Great Northern Ry. of Canada. (See also Great Northern Ry. of Canada.)

**Nepigon Ry.**—The Dominion Parliament at its recent session voted a subsidy of \$3,200 a mile towards the construction of 80 miles of railway from Nepigon on Lake Superior to Nepigon lake and northerly. A contract was recently reported let to J. Connee, M.L.A., for the construction of this line. The

Ontario Government has also voted subsidies for a portion of the line. (Oct., pg. 343.)

**The Strathroy and Western Counties Ry. Co.** was incorporated by an act of the Ontario Legislature in 1893, and an act amending the same was passed in 1897. It was empowered to construct a railway from St. Thomas through the counties of Elgin and Middlesex to Forest or Park Hill on the G.T.R., and subsidies were voted by the Dominion Parliament in 1894 and 1897, but no work has been done. At the recent session of the Dominion Parliament a subsidy was voted for 31 miles of railway from Lambeth to Strathroy, via Mount Brydges and Caradoc.

**Sydney and Glace Bay Ry.**—This company has 22 miles of electric railway in operation. It has eight interurban cars equipped with four no. 67 motors, and two single truck cars equipped with two no. 67 motors. (Oct., pg. 345.)

**Yonge St. Bridge, Toronto.**—Plans for the construction of a bridge across the tracks at Yonge st. have been forwarded by the city council to the Railway Committee of the Privy Council for approval. It is understood that the G.T.R. and the C.P.R. will appeal to the Government against the decision to make them pay the whole cost of the bridge. (Nov., pg. 387.)

### Quebec Bridge and Railway Co.

The report of the directors presented at the annual meeting, held in Quebec Oct. 30, stated that a contract had been signed the previous day in Ottawa between the Dominion Government and the company, respecting future subsidies towards the completion of the bridge and railways. A summary of the principal features of the contract is published on another page. The report of E. A. Hoare, Chief Engineer, which follows, was appended: At the date of my last report the construction works for piers on the south side, and the steel approach span on the north side of the river were in progress. The former were completed last autumn, the pier in the river being the last on account of the extra sinking required to obtain a sufficient depth of foundation, which was accomplished at 85 ft. below high water and 57 ft. below the river bed at the pier site. Riveting and painting the steel approach span on north side was continued last June; the erection of metal on the south approach, however, was only commenced this year, and not as at first intended at the end of last season. The latter has been completed in Sept. last. Designs for the main structure are progressing, and preparations are being made at Phoenixville, Pa., for the instalment of special machinery for the manufacture of the metal for the main and anchor spans, which will be followed by preparations for the instalment of the erection plant at the bridge site. Progress has also been made with surveys and plans for connecting the bridge with railways on both sides of the St. Lawrence river and the city of Quebec.

The report was adopted, as also were resolutions thanking the President for his conduct of the negotiations leading up to the signing of the new contract.

The following were elected officers and directors: President, Hon. S. N. Parent; Vice-Presidents, R. Audette, J. Breakey; other directors: V. Boswell, Hon. N. Garneau, J. B. Laliberte, G. Lemoine, H. M. Price, and N. Rioux. Secretary, U. Barthe.

A boiler on the Dominion Government hydraulic suction dredge J. Israel Tarte exploded Nov. 3, killing one man and injuring several others. The dredge was at work on the deepening of the channel of the St. Lawrence at Lake St. Peter at the time of the accident, and was towed to Sorel for repairs.

**Grain Elevator Notes.**

The Crown Elevator Co. proposes to construct a large storage and cleaning elevator at St. Boniface, Man., at a cost of \$150,000.

The new steel tank elevator "E" at Fort William, Ont., has been taken over by the C.P.R. It will be operated as an annex to elevator "B."

The Winnipeg Grain Exchange has been informed that the C.P.R. insurance on grain at Fort William, Ont., covers grain both on the track and in the elevators.

The Montreal Harbor Commissioners are considering the question of erecting a second marine leg to the elevator, nearly completed at the harbor, at a cost of \$30,000.

We are officially informed that there is no truth whatever in the report that the Canada

Atlantic Ry. contemplates building another elevator at Depot Harbor, Ont., this season.

The Monteith Junction Elevator Co. (Ltd.) has been incorporated under the Manitoba Companies' Act, with a capital of \$15,000 to carry on an elevator business at Souris and

Monteith Junction, Man. T. Lockhart, W. C. McLaren, A. Wood, J. H. Cook, R. Smith, H. McLean and J. S. Grant, Souris, are the incorporators.

The movement of grain to the head of the lakes this season is slower than last year, the

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### The Victoria Rolling Stock Company of Ontario, Limited.

NOTICE is hereby given that a dividend of six per cent. on the paid up capital stock of the company for the half year ending 30th November, 1903, has been declared payable 1st December next to shareholders on record as on the 30th of November, 1903.

By order of the Board,

R. A. SMITH,

Secretary.

## THE ST. THOMAS BRASS COMPANY, Ltd.

MANUFACTURERS OF

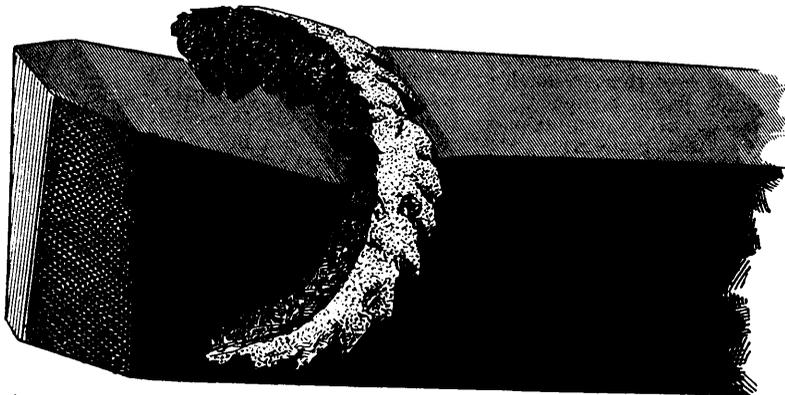
**Brass Castings** For the Wearing Parts of Locomotives.

**Journal Bearings** For Passenger and Freight Car Service.

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## The JESSOP High-Speed ... TOOL STEEL



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

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

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## DOMINION BRIDGE CO., Limited

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ELECTRIC CRANES

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STEEL BUILDINGS

Structural METAL WORK of All Kinds

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

receipts to the end of Oct. at the elevators being 8,700,000 bush. against 13,000,000 bush. in 1902.

The Intercolonial Ry. elevator at Halifax, N.S., was placed in operation in Nov., after lying idle for six years, and will be utilized all winter, vessels belonging to four lines of steamers having arranged to take cargoes of grain there.

The Point Edward Elevator Co.'s new elevator is situated on the St. Clair river and adjoining the G.T.R. at Point Edward, Ont. The foundations consist of 62 stone piers resting on heavy oak piles cut off at the water level and capped with oak timbers. The working house is 48 ft. square and 142 ft. in height. There is storage room here for 80,000 bush. in small bins. The basement is 6 ft. 6 in. high, and has a concrete floor on which the elevator boots and legs rest, the legs themselves being 140 ft. long. The bins in this part of the elevator are 52 ft. high and are made of 2 x 8 and 2 x 6 pine and hemlock planks, in what is known as a laminated structure, being spiked one to the other, and the planks of each sectional wall of the bins crossing alternately that of the other. The marine leg is entirely of steel. It is 65 ft. long and has a capacity of 12,000 to 15,000 bush. of wheat per hour. The elevator legs discharge into the scale hoppers, the grain being weighed on scales with capacity of 72,000 lbs. each. After the grain is weighed it is dropped upon belts and conveyed to the storage bins in the main building, the belts running at a speed of about 900 ft. per minute. The main storage section of the elevator is 66 x 126 ft. and 75 ft. deep, containing 36 bins with capacities of 10,000 and 15,000 bush. each. These discharge upon conveyor belts, which run through tunnels into the working house to the receiving legs, and grain goes through the same operation of weighing before being loaded. After being weighed in carload lots it is spouted direct from the scales to the cars; and it is possible to load 1,000 bush. of wheat in about 3¼ minutes. Two special tracks have been put in by the G.T.R. for the use of the elevator. Two sets of power unloading shovels are used for unloading the grain from the boats. The elevator is also equipped with its own electric light service, comprising 15 incandescent and 6 arc lights, also a fire pump with a capacity of 750 gallons of water per minute and at suitable distances there are stands of rubber fire hose ready for use. In the power building is a 350-h.p. engine, together with condenser, feed pump and all usual connections. Steam is furnished by two return tubular boilers 16 ft. long and 6 ft. in diameter, rigged to be run independently or together. The transmission of power through the elevator is by rope transmission.—American Elevator and Grain Trade.

At the last session of the Dominion Parliament an act was passed giving the Exchequer Court jurisdiction over railways not wholly within one province, concurrently with that of any provincial court, for the purpose of ordering the sale of any railway, or the ordering of foreclosure at the instance of the mortgagees. The court may appoint a receiver for the line, whose duty it shall be to take possession of the line and operate it, and complete the railway if incomplete on order of the court. Sec. 6 states that a railway company is insolvent within the meaning of the act in all cases which constitute insolvency under the Winding Up Act, except that par. 8, sec. 5, shall not apply to railways which have been taken possession of by the bondholders. This act does not apply to, nor authorize proceedings against the Central Ontario Ry., nor effect any proceedings pending in connection with that company.

## SHIPPING MATTERS.

### Navigation in Temiskaming District.

The increasing number of settlers who have gone into the Temiskaming country, particularly on the Ontario side of the lake, and the increasing number of tourists who visit the Kippawa lakes, on the Quebec side, and the Montreal river route to Temagami lake, on the Ontario side, has directed some extra attention to the navigation of this section of the Ottawa river. For many years, when lumbering was the sole traffic along the river, Mattawa, Ont., was the point of departure for the Upper Ottawa, and a tramway was constructed for some miles along the Quebec bank of the river to aid steamers getting up the rapids. The ruins of this tramway are to be seen in places, between the railway and the river. The point at which all steamers now receive and discharge freight and passengers is at Temiscamingue, Que., 59 miles by rail from Mattawa, and at a point where lake Temiskaming has reached its narrowest point, and discharges its waters into the Ottawa river. The river expands into a lake when near the point where the Opemican river, which drains the Kippawa lakes, joins the Ottawa; and a few miles south of Haileybury, Ont., the Montreal river, draining the Temagami country, falls into the Ottawa through a narrow gorge. Between Temiscamingue and Haileybury there are several wharves on both sides of the river; the most important being at Baie des Pères, Villa Marie, Que., and Old Fort, Ont. At Haileybury a wharf is being constructed well out into the lake, which is about 10 miles wide near here. A considerable settlement has sprung up at Haileybury, which will be one of the stations on the Temiskaming and Northern Ontario Ry. At present it is the starting point for the Temagami country, but as the new railway from North Bay will touch the lake itself, a good deal of that trade will be diverted. About eight miles north is New Liskeard, which is a flourishing town and the centre of a very large settlement, the area covered extending nearly 40 miles north and 20 miles west. At New Liskeard a channel was dredged in the spring 11 ft. deep, a dredge being constructed on the river for that purpose. The channel is at present rather narrow, but this will be remedied another year; it is temporarily lighted pending completion. From New Liskeard there is also navigation to the White river, which forms the boundary between the two provinces, and up the river to Tomstown, about 40 miles. There are thus about 120 miles of navigation on the main waters of the Ottawa, on lake Temiskaming and White river. The pioneer of navigation was A. Lumsden, of Ottawa, who is an extensive lumberman both in Quebec and Ontario. Up to a couple of years ago the Lumsden boats did all the trade. They included four passenger and freight steamers, one freight steamer, six tugs and "alligators," besides a number of tow barges. One of the passenger steamers—the Comet—was burned in the fall of 1902, but will be rebuilt at Temiscamingue, where Mr. Lumsden has a repairing shed, etc. A list of the vessels owned by Mr. Lumsden on Lake Temiskaming follows:

Argo, sidewheel steamer, built on Temiskaming lake, 1882; length, 125 ft.; breadth, 39.4 ft.; depth, 8.4 ft.; tonnage—gross, 154.06 tons; net, 96 tons; licensed to carry 40 passengers.

Clyde, screw steamer, built at Baie des Pères, Que., 1888; length, 61.5 ft.; breadth, 13.5 ft.; depth, 3.4 ft.; tonnage—gross, 29 tons; net, 26 tons; licensed to carry 25 passengers.

Comet, screw steamer, 144.42 tons gross, on Lake Temiskaming, and licensed to carry 50 passengers; is mentioned in the report of

the Department of Marine, but does not appear on the register of shipping for the year ended 1902.

Meteor, screw steamer, registered at Ottawa; built at Opemican, Que., 1897; length, 130.5 ft.; breadth, 27 ft.; depth, 7.4 ft.; tonnage—gross, 299 tons; register, 204 tons; licensed to carry 350 passengers.

Temiscamingue, sidewheel steamer, registered at Ottawa; built at Temiscamingue, Que., 1898; length, 133 ft.; breadth, 22.5 ft.; depth, 6.5 ft.; tonnage—gross, 413 tons; register, 236 tons.

Beaver, sidewheel warp tug, built at Simcoe, Ont., 1893; owned by A. Lumsden, Ottawa; length, 36 ft.; breadth, 16 ft.; depth, 3.2 ft.; tonnage—gross, 13 tons; net, 6 tons.

Beaver, sternwheel tug, owned by A. Lumsden, Ottawa; built at Temiscamingue, Que., 1899; length, 47.4 ft.; breadth, 16.7 ft.; depth, 4.2 ft.; tonnage—gross, 16 tons; net, 8 tons.

Dora, screw steamer, built at Opemican, Que., 1889; length, 61.6 ft.; breadth, 13 ft.; depth, 5.5 ft.; tonnage—gross, 48 tons; net, 44 tons.

Little Roxey, screw tug, built at Baie des Pères, 1896; length, 41.7 ft.; breadth, 8.3 ft.; depth, 3 ft.; tonnage—gross, 12 tons; net, 7 tons.

Mink, screw steamer, built at Gordon Creek, Que., 1896; length, 37 ft.; breadth, 16 ft.; depth, 3.5 ft.; tonnage—gross, 14 tons; net, 9 tons.

In addition to these vessels there were added a large passenger steamer—Jubilee—carrying passengers from Temiscamingue to New Liskeard; two passenger steamers—Swan and Geisha—running between New Liskeard and Tomstown, and three tugs, owned by the Upper Ottawa Navigation Co. The three first mentioned steamers were brought in from other points of Ontario, and have been altered for their new routes, and the three latter are new steamers built in the spring at Toronto; the dimensions, etc., of neither of these appear in the last register of Canadian shipping.

On the adjoining waters of Lake Kippawa, Que., several steamers are being operated, connection being had with the railway at Kippawa, a spur line running from Temiscamingue. Following are details.

Alice, screw steamer, owned by P. Kelley, Kippawa, Que.; built at Kippawa, Que., 1901; length, 62 ft.; breadth, 12.6 ft.; depth, 4.8 ft.; tonnage—gross, 26 tons; net, 18 tons; licensed to carry 40 passengers; operating between Turtle Portage and Kippawa.

Charlotte, screw steamer, owned by P. Kelley, Kippawa, Que.; built at Quebec, 1880; dimensions: length, 37 ft.; breadth, 10.3 ft.; depth, 3.6 ft.; tonnage—gross, 14 tons; net, 9 tons.

D. A. Martin, screw steamer, owned by A. Lumsden, Ottawa; built at Kippawa, Que., 1889; dimensions: length, 84 ft.; breadth, 16 ft.; depth, 6 ft.; tonnage—gross, 78 tons; net, 57 tons; licensed to carry 40 passengers; operates between Turtle Portage and North River, Que.

R. Hurdman, screw steamer, owned by A. Lumsden, Ottawa; built at Kippawa, Que., 1892; length, 103 ft.; breadth, 19.7 ft.; depth, 6.6 ft.; tonnage—gross, 93½ tons; net, 68 tons; licensed to carry 40 passengers; operates between Turtle Portage and Kippawa, Que.

C. E. Read, warp tug, built at Simcoe, Ont., 1894, owned by W. H. Hurdman, Ottawa; operating on Kippawa lake.

North River, warp tug, built at Kippawa, Que., 1899, owned by H. F. and C. McLachlin, Arnprior, Ont.; operating on Kippawa lake.

Otter, warp tug, owned by A. Lumsden, Ottawa; built at Kippawa, Que., 1895; length, 48.2 ft.; breadth, 16 ft.; depth, 3.6 ft.; tonnage—gross, 21 tons; net, 12 tons.

### The Dominion Marine Association.

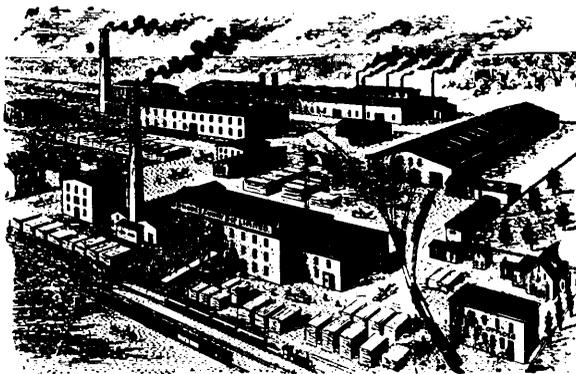
The following circular has been issued by the President and Secretary: Six months have passed since the convention held in Ottawa at which it was resolved to form a permanent organization to be known as the Dominion Marine Association. In this time the Association has been established upon an apparently firm footing and is already able to point to decidedly successful results in the matters it has undertaken. Amongst these may be mentioned:

**CANALS AND CANAL TOLLS.**—The Ottawa Convention asked that the canals should be made free. Proof of the statements made by the deputation being required before the ex-Minister of Railways and Canals would consent to consider the removal of the tolls, a committee of this Association forthwith met in Ottawa and prepared comparative statements of the charges for carriage of grain by way of the Erie and the Welland and St. Lawrence canals. Copies of these were sent to all the ministers, and later the committee met Mr. Blair and discussed the statements with him. Further statements were subsequently prepared in Kingston and Montreal, and likewise submitted, and the information furnished, with that in possession of the Government, was sufficient to support the petition for removal of the tolls. The Canadian canals have been declared free for two years, and the St. Lawrence route has thus been placed in a position to compete fairly with that by way of Buffalo. Under this heading reference may be made to two or three accidents which vessels have suffered in the Lachine and Cornwall canals. The assistance of this Association has been enlisted and representations have been made to the Department by the Secretary, which have in each case received attention and have been followed by instructions in the proper quarter made with a view to remedying any defects complained of and assisting vessels using the canals.

**TONNAGE DUES AND INSPECTION FEES.**—Immediately after the Ottawa convention the petition on this subject was followed up by correspondence. Authoritative information was compiled in support of the arguments adduced, and this was placed in the hands of all the ministers, while at the same time many members of the Association responded to a request for individual action and personally submitted their views to the Minister of Marine. On April 28 instructions were telegraphed by the Department to all inspectors instructing them to issue inspection certificates without requiring payment of the usual fees and dues. At a later date the Minister introduced a bill to amend the law, which has been passed. The sections of the Steamboat Inspection Act of 1898 under which tonnage dues and inspection fees were collected are repealed. The fees and dues are placed under the control of the Governor-in-Council, so that at any time they may be in whole or in part re-imposed. It is submitted that this result demands further consideration by this Association. The argument for the removal of these obnoxious charges justified their total abolition, and no reason is apparent for leaving it in the power of the Government to revive them. In the meantime, however, the desired exemption from their burden has been, at least, temporarily gained. Certain members of this Association obtained inspection and paid fees and dues before the instructions of April 28 were issued to inspectors, and found some difficulty in obtaining refunds. This Association was appealed to and action has been taken to have injustice prevented if possible. The matter has been promised consideration by the Department, and there should be no doubt that all steamboat owners will be placed in the same position for the year 1903 by refund being made of any fees collected.

**RECIPROCAL INSPECTION.**—Another important provision in the Act above referred to enables the Governor-in-Council to enter into reciprocal inspection arrangements with countries outside of Canada. This provision results from the action of this Association in calling attention to the statute and orders in

force in the U.S., and the reciprocal arrangements already entered into between that country and certain foreign powers. It will be in order now for the Government to carry this provision into effect and bring about the desired reciprocal inspection regulations with the U.S.



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Special Cars for Coal, Ore,  
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\* Bearing Wheels. \* \*

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SUCCESSORS TO

THE CANADA SWITCH AND SPRING CO., Limited,

CANAL BANK, PT. ST. CHARLES, MONTREAL.

### Manufacturers of Steel Castings

(Open Hearth System)

Springs, Frogs  
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Interlocking Plants Installed  
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FOR STEAM AND ELECTRIC RAILWAYS.

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Standard and Lang's  
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### RAILWAY FEEDER AND TROLLEY WIRE

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

**CUSTOMS FEES.**—In this, the remaining one of the three main questions taken up at Ottawa, the results are set out in the memo. on the subject, dated July 28, issued by the Customs Department and published in THE RAILWAY AND SHIPPING WORLD in Nov. Temporary regulations were made earlier in July, but an Order-in-Council was passed on the date above named and subsequently embodied in this departmental memorandum, which supersedes the previous regulations. It will be seen that the Association has been successful in the main issue, that overtime should be paid by the public revenue, but at the same time important restrictions are made by the Government in granting this concession, notably, that parties accommodated must still pay for services rendered on Sundays or on board moving trains or vessels. The new tariff of charges for special services is, however, less burdensome, and in the matter of services on board of moving trains and vessels the Department is apparently prepared to allow some latitude when it can be proved that the services so performed accommodate the public and the officers as well as the transportation company. Considerable correspondence has taken place on the subject of services of officers on Sundays, and it has been pointed out that the question is not one of Sabbath observance at all, but simply whether it is proper for the Government to exclude one day of the week from those for which it is willing to pay, if at the same time it concedes the two points that certain traffic is necessary on that day as well as on others and that the public revenues should pay for their own necessary protection.

**MARINE ENGINEERS.**—Bill 136 of the last session of Parliament, to amend the Steamboat Inspection Act so as to satisfy the demands of the National Association of Marine Engineers, was protested against by this Association, and the promise of the Deputy Minister was obtained that the Association would be given an opportunity to express its views before a sub-committee to which the bill would be referred. In expectation of this meeting a circular was sent to all the members of this Association and a number of letters were received in reply containing careful arguments against the main provisions of the bill, while several members expressed their willingness to go to Ottawa to oppose it before the Committee. In the meantime overtures have been made to the engineers with a view to bring about a mutually advantageous understanding, and as the Bill referred to has not yet become law, it is probable that a conference will be arranged before next session.

**RULES OF THE ROAD.**—Owing to the absence of H. D. Goulder, Chief Counsel of the U.S. Lake Carriers' Association, it was impossible until recently to make any progress in the proposed work of assimilating the Canadian and U.S. rules. Since Mr. Goulder's return, the matter has been referred to J. Bertram, Chairman of the Transportation Commission appointed by the Government to consider all such questions. Until this Commission can sit and hear evidence the matter stands. In the meantime the U.S. rules are being pretty generally applied in the rivers in order to guard against confusion, in spite of the risk that is run in using them in Canadian waters. When navigation finally closes, and the members of this Association, who are experienced in the rules on both sides of the line are free to attend the Commission, the question is to be finally discussed so that a proper report may be made to the Government.

The tonnage represented in the Association is shown by the list of members who have paid the 1903-1904 assessment, which is printed further on. Present appearances indicate that the expenses will not require so large an assessment for next year as for this.

A great deal of correspondence has taken place in connection with the organization of

this Association, and in answering enquiries and attending to special matters brought forward by individual members. The desire is that each member should have full opportunity to enlist the Association's services on every occasion that these services can be of general advantage. The Executive Committee met in Ottawa on April 8, and in Kingston on May 18. It is proposed to hold a third meeting in Toronto, probably about the middle of Dec., for general business and to consider and prepare for the matters which should be brought before the annual meeting of members to be held in Ottawa during the early part of next session of Parliament.

**BUSINESS FOR ANNUAL MEETING.**

Among matters to be brought before the annual meeting the following have been suggested:

**ENLARGEMENT OF THE WELLAND CANAL.**—The subject of greatest importance to the Dominion at large, and therefore to this Association, in connection with marine matters, is the improvement of the St. Lawrence route, so that it may become the unrivalled highway, not only for the commerce of the Dominion, but also for that of the northern portion of the U.S. Hitherto ocean freights to Europe have generally been, and from geographical and other conditions will probably continue to be, somewhat lower from U.S. ports than from Montreal; so that we must look to the superiority of our inland facilities to counteract this disadvantage; and it is by many believed that the time has arrived for pressing upon the Government the enlargement of the Welland canal as the most important step to that end. The advantage of the inland portion of the U.S. route lies in the wonderful cheapness with which grain can be carried to Buffalo in the large upper lake vessels of 6,000 tons and over; but it is claimed that when these vessels can extend their voyage to the full length of lake navigation, the longer haul and the larger freight which will then be open to them, will cause them to become feeders to the Canadian route in preference to the other. The comparative facilities would then be—By the U.S. route: A steamer of 6,000 tons for 900 miles to Buffalo, and barge of 1,000 tons for 450 miles to New York; and by the Canadian route: A steamer of 6,000 tons for 1,100 miles to the east end of Lake Ontario and barge of 2,000 tons for 170 miles to Montreal. And this difference places the advantage decidedly with the Canadian inland route. The question forces itself upon our attention, and it seems eminently proper that it should have the early and careful consideration of the Association.

**CLOSING OF CANALS ON SUNDAY.**—The canals are at present closed on Sunday, except after Oct. 1 in each year, when they are opened to permit as large a portion as possible of the harvest to get to market before the close of inland navigation. As nature's waterway is not closed, as railways are not closed, as the Erie canal is not closed, as the season of navigation is all too short, as the main purpose for which the canals were constructed is to facilitate the transportation of freight in its carriage for long distances, making one great water highway, the other portions of which are not closed; it is contended that the canals should not be closed on Sunday.

Complete abolition of canal tolls, tonnage dues, and inspection fees, as hereinbefore set forth.

Harbor dues and charges at government wharves.

Qualification of masters, mates and engineers, and better facilities for their education. Shipbuilding in Canada.

The Association having been formed for the general benefit and united action of marine interests, in order to secure results which are difficult to secure, and which in the past have not been secured by individual effort; we

would suggest that if there are any matters either in respect of the subjects indicated, or others, which you think it would be beneficial to marine interests to have carried out, you should furnish your views thereon to the Secretary before Dec. 15, so that they may be considered by the executive at its next meeting, preparatory to the annual meeting.

**LIST OF MEMBERS.**

	NET REGISTERED TONNAGE.	
	Steam Vessels.	Sailing Vessels and Barges.
The British Yukon Nav. Co., Ltd., Whitehorse, Yukon.....	3,533.61	
The Calvin Co., Ltd., Garden Island, Ont.....	2,410.	1,793.
R. Cunningham & Son, Port Essington, B.C.....	273.94	
The Canadian Pacific Car & Passenger Transfer Co., Ltd., Prescott, Ont.....	565.01	
J. & T. Conlon, Thorold, Ont.....	400.	600.
The Donnelly Salvage & Wrecking Co., Ltd., Kingston, Ont.....	90.	325.
The Dominion Iron & Steel Co., Ltd., The Dominion Coal Co., Ltd., Sydney, C.B.....	4,892.	3,304.
The Dominion Fish Co., Ltd., Selkirk, Man.....	784.92	
The Ewing & Fryer Fish Co., Ltd., Selkirk, Man.....	29.79	
J. H. Hall, Ottawa, Ont.....	453.	
R. T. Holcomb, Ottawa, Ont.....	150.	
A. Hicks, Trenton, Ont.....	85.	
A. W. Hepburn, Picton, Ont.....	1,245.	1,218.
F. E. Hall, L'Orignal, Ont.....	157.	
The Hamilton Steamboat Co., Ltd., Hamilton, Ont.....	625.	
The Hamilton & Montreal Nav. Company, Ltd.....	360.	
The Hamilton & Port William Nav. Company, Ltd.....	2,687.	
Huntsville, Lake of Bays and Lake Simcoe Nav. Co., Ltd., Huntsville, Ont.....	180.97	
International Ferry Co., Buffalo, N. Y.....	170.	
Lake Ontario & Bay of Quinte Steamboat Co. Ltd., Kingston, Ont.....	1,043.	
J. B. Miller, Toronto, Ont.....	566.	
The Montreal Transportation Co., Montreal.....	3,821.	15,686.
The Muskoka Lakes Nav. & Hotel Co., Ltd., Gravenhurst, Ont.....	1,035.96	
The Niagara Nav. Co., Ltd., Toronto, Ont.....	2,016.48	
The Northern Fish Co., Selkirk, Man.....	155.10	
The New Ontario Steamship Co., Ltd., Hamilton, Ont.....	996.	
The Northwest Nav. Co., Ltd., Selkirk, Man.....	263.98	1,083.15
The Ottawa River Nav. Co., Mon't James Playfair, Midland, Ont.....	1,505.	
A. E. Pontbriand, Sorel, P. Q.....	1,348.97	
The Rideau Lakes Nav. Co., Kingston, Ont.....	183.32	418.32
The Rathbun Co., Deseronto, Ont.....	391.	
The Rainy River Nav. Co., Ltd., Rat Portage, Ont.....	695.	296.
The Richelieu & Ontario Nav. Co., Montreal.....	721.97	
The St. Lawrence & Chicago Steam Nav. Co., Ltd., Toronto, Ont.....	14,475.	
The Trent Valley Nav. Co., Ltd.....	3,600.	
The Toronto & Montreal Steamboat Co., Ltd., Toronto, Ont.....	234.21	
The Upper Ottawa Improvement Co., Ltd., Ottawa, Ont.....	500.	
The Wentworth Nav. Co., Ltd.....	1,431.	
A. A. Wright, Toronto, Ont.....	455.	
	1,604.	
	56,134.23	24,723.47
In addition the following applications for membership have been received:		
The Canadian Lake & Ocean Nav. Co. Toronto, Ont.....	3,536.	
Jas. Carruthers, Toronto, Ont.....	358.	
	3,894.	
	60,028.23	24,723.47

The following tonnage has been declared by members of the Association since the last list we published:

A. A. WRIGHT, TORONTO—Tadousac, 1,451 tons register; Charlton, 140 tons register; Reginald, 13 tons register. Total three steamers, 1,604 tons register.

LAKE ONTARIO AND BAY OF QUINTE STEAMBOAT CO.—North King, 499 tons register; Caspian, 544 tons register. Total two steamers, 1,043 tons register.

BRITISH YUKON NAVIGATION CO. (LTD.)—Stern wheel steamers operating on Yukon river: White Horse, 630.69 tons register; Dawson, 490.62 tons register; Selkirk,

484.67 tons register; Columbian, 455.15 tons register; Canadian, 455.15 tons register; Victorian, 455.15 tons register; Gleaner, 149.05 tons register; Scotia, 124.87 tons register; Barley, 132.08 tons register; Zealandian, 141.18 tons register. Total, 10 steamers, 3,533.61 tons register.

**RICHELIEU AND ONTARIO NAVIGATION Co.**—Algerian, 575 tons; Beaupre, 1,070 tons; Bohemian, 647 tons; Boucheville, 256 tons; Berthier, 439 tons; Columbian, 596 tons; Cultivator, 228 tons; Chambly, 247 tons; Corsican, 501 tons; Carolina, 610 tons; Canada, 961 tons; Fire Fly, 120 tons; Hamilton, 476 tons; Hosanna, 59 tons; Kingston, 1,008 tons; Laprarie, 372 tons; Longueuil, 331 tons; Quebec, 1,272 tons; Saguenay, 592 tons; Spartan, 543 tons; Toronto, 1,651 tons; Three Rivers, 793 tons; Terrebonne, 319 tons. Total, 23 steamers, 14,475 tons register.

**St. Lawrence Route Improvements.**

In Oct., 1902, we published a statement of the work in progress on the St. Lawrence in the way of deepening the channel between Quebec and Montreal, and of the additional aids to navigation which the Department of Marine was preparing to place in position at different points in the river and gulf, with a view of rendering the route more accessible and safe than formerly. The work as outlined in that article has been carried out and further works are proposed to be done by the present Minister of Marine, Hon. R. Prefontaine, out of a vote of \$512,000 passed at the recent session of Parliament. The work already completed on the St. Lawrence route in improving aids to navigations since the opening of the season of 1902 are as follows:

**Cape Rosier.**—The fog whistle has been strengthened and the light made occulting and greatly increased in brilliancy.

**Fame Point.**—A siren on the Hamilton-Foster principle has been established and the lighthouse has, at the request of the Messrs. Allan, been painted a bright red as an experiment, to ascertain if that color will be more conspicuous as a land mark than the white and black previously used.

**Manicouagan shoal.**—A whistling buoy was established on the south extremity in 1902.

**Matane.**—A bell buoy was established in 1902, on the extremity of the shoal.

**Father Point.**—A first-class siren has been put in operation and the light has been made a very strong acetylene light.

**Rimouski.**—A gas buoy was established in June, 1903, to mark the point where mail steamers should meet the steam tender in receiving and delivering mails.

**Prince shoal.**—This danger at the mouth of the Saguenay has been marked by a combined gas and bell buoy.

**Lower Traverse.**—A lighthouse pier was successfully sunk in 1902, and it is hoped that the pier will be completed and a permanent lighthouse and siren erected on it this year. Temporary lights are already maintained at this important point. A gas buoy was also established in 1903 on the north side of the channel, opposite this pier.

**St. Jean Port Joli.**—A gas buoy was anchored off this point in 1902.

**Bellechasse.**—The light has been changed from fixed to occulting and greatly increased in strength.

**Beaumont shoal.**—A gas buoy was established on the north edge of this shoal in 1902.

**St. Nicholas.**—The semaphore, previously maintained at Cap Santé, was moved to this point in 1902, to indicate the depth over St. Augustin bar, now the shoalest point in the ship channel.

**St. Antoine.**—The lights at this point were re-arranged in 1902, one old light being discontinued and three new range lights being established.

**Point Platon.**—A gas buoy was established here in 1902.

**Barre à Boulard.**—The system of lights leading through this cut was re-arranged on July 1, 1903, two new lights being changed in color and strengthened, and three old lights being abandoned.

**Batture Simon.**—A gas buoy was anchored on this shoal in June, 1903.

**Batiscan.**—The arc of visibility of the front light was enlarged in 1902.

**Yamachiche.**—A gas buoy was placed on a bend in the channel opposite this point in June, 1903.

**Contrecoeur to Varennes.**—In this stretch of the channel six new range lights were established in 1902, and two additional range lights in June, 1903. A pair of day beacons on con-

crete piers has also been erected and one gas buoy established at Varennes curve.

**Ile à l'Aigle.**—Two range lights were established here in 1902.

**Pointe aux Trembles.**—The range lights heretofore maintained at Pointe aux Trembles were discontinued on the opening of navigation in 1903 and a new tower established at Varennes, which, ranging with one of the Ile à l'Aigle lighthouses, marks more correctly the channel heretofore marked by the Pointe aux Trembles range lights.

**Dominion Line Steamships**

FAST TWIN-SCREW SERVICE. WEEKLY SAILINGS.

HALIFAX TO LIVERPOOL PORTLAND TO LIVERPOOL

HALIFAX TO LIVERPOOL

Dominion - Wednesday, Dec. 9th, noon

PORTLAND TO LIVERPOOL

Cambroman - Saturday, Dec. 5th, 2 p.m.  
Canada - " Jan. 2nd, "  
Dominion - " Jan. 23rd, "

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Longueuil.—A gas buoy was established here in June, 1903.

Further improvements contemplated or now in course of construction on the same route, are as follows:

Cape Race.—The light will be improved next year, and a stronger fog alarm is being built to replace the present whistle.

Cape Pine.—Representations are being made to the Imperial and Colonial Governments asking them to co-operate with the Canadian Government in establishing a first-rate fog-signal at this point.

Cape Ray.—The light and fog signal will be strengthened this year.

Bird Rocks.—The light will be made occulting this year.

Bryan Island.—A lighthouse will be built on the west end of this island.

Entry Island.—The lighthouse is now in course of being moved to a more prominent site, whence it will be visible very much farther and over a much larger arc.

Fame Point.—The present alternating red and white light will be replaced by a stronger one this year.

Belle Isle.—A new iron lighthouse has been constructed for erection on the northeast end of this island, and the materials have been shipped to the island, so that the station ought to be in operation this autumn.

Cape Norman.—The characteristic of the fog alarm at this point is being changed.

Point Amour.—The light will be made occulting and greatly strengthened during the present summer.

East end of Anticosti.—A first-class lighthouse with electric lights, steam fog alarm and steam power, is under construction for this important station, and ought to be ready for mooring in the autumn of 1903.

Matane.—A first-class steam fog siren is being constructed for this station, and the light will ultimately be improved.

Saguenay mouth.—The range light buildings formerly operated on Point Noir will again immediately be put in operation to form an additional safeguard in entering and leaving the Saguenay.

Grondines.—Two range lights will be established on the point in 1903 to replace unlighted beacons now maintained, and the present range lights at Grondines will be moved westward into the axis of the ship channel.

Ile Aux Raisins.—A new back range tower is being erected here higher than the old one, and will be put in operation immediately.

Contrecoeur.—To guide through the dredged channel off Contrecoeur three pairs of range lights are under construction, and will be in operation before the dark nights of autumn in 1903.

Sorel to Montreal.—To light the dredged ship channel between Sorel and Montreal 15 additional gas buoys have been ordered and will be placed in position as soon as they have been delivered from the Pintsch company. When these buoys are in position the deepest draught vessels can navigate the portion between Sorel and Montreal at night.

The improvements enumerated above only embrace the deep draught ship channel from Montreal to the ocean.

While this portion of the Canadian navigable waters has been receiving prompt attention, other portions of the coast have not been neglected. The approaches to Sydney, Louisburg, Halifax and St. John have all been improved by extending and increasing the number of aids to navigation. In Halifax harbor, especially, three new gas buoys and two additional lighthouses, to be used as range lights in connection with previously existing lights, have been established. It has been the aim of the Government to remove every preventable cause of complaint against the St. Lawrence route. Shippers have stated that charges for freight and insurance by this route are so great that it is difficult for ship

owners to make a profit on their enterprise, and it is stated that the insurance for St. Lawrence ports is from two to five times as great as from American ports. This is evidently a heavy tax on the Canadian producer, as compared with the U.S. exporter, and the reason for this high rate is to a great extent the many casualties which have happened on the St. Lawrence route.

The Chief Engineer of the Department visited British Columbia in the autumn of 1902 and located a new lighthouse at Clayoquot, and five or six new lighthouses in the inside channels and on the northern route, which are in operation or in course of construction. Additional aids to navigation are being supplied on the great lakes to render navigation from Fort William to Montreal safer. Especial attention has been paid to the 14-foot channel between Kingston and Montreal, and an elaborate system of buoys and lights, in charge of a special assistant, has been inaugurated. The buoys in this section are filled with compressed acetylene, and acetylene is being introduced into the lighthouses.

The tidal and current survey work is being continued and extended. With a portion of the vote granted last year the steel steamer *Gulnare*, previously used by the Imperial Government for hydrographic work, was purchased, and Dr. W. B. Dawson is now employing her in investigating the set of the currents off Cape Race, where many casualties to vessels bound to and from the St. Lawrence have occurred. Tide tables are prepared annually from tidal records procured from this survey for all the more important harbors both in Eastern Canada and in British Columbia, and as additional records are secured the accuracy of these tables is increased. Work is going on to extend the number of places which can be referred to as points for which tide tables are published, so that tidal differences can be given. It is proposed to utilize the *Gulnare* next year in investigating the currents at the entrance to the Bay of Fundy and their relations to the tides.

#### Notices to Mariners.

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

No. 99. Oct. 20.—Ontario—248. Lake Erie, Port Colborne, lighthouse established on breakwater.

No. 100. Oct. 22.—Ontario—253. Lake Superior, northeast shore, Otter island, lighthouse established. 254. Lake Superior, north coast, State islands, Sunday harbor, lighthouse established.

No. 101. Oct. 22.—Quebec—255. River St. Lawrence, ship channel between Quebec and Montreal, Platon range and Richelieu inlet, lights relit.

No. 102. Oct. 29.—256. Lake Superior, Silver islet, range lights.

No. 103. Oct. 30.—Quebec—257. Chaleur bay, New Carlisle, light on wharf. Newfoundland—258. East coast, St. John's harbor, Merlin rock, increased depth.

No. 104. Oct. 30.—New Brunswick—263. Gulf of St. Lawrence coast, Miramichi river, Grant beach, range lights improved.

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

No. 44. Oct. 31.—St. Lawrence river—2203. Below Clayton, N.Y., shoal spots reported.

No. 45. Nov. 7.—St. Mary's river—2251. Dark Hole and Coyle Point gas buoys, change in position.

Since the article giving details of the work of the Dominion Marine Association was put in type, the following additional tonnage has been declared by new members: Ottawa Transportation Co. (Ltd.), 178 tons, steamers, and 9,464 tons, sailing vessels, barges, etc.; J.B. Fairgrieve, Hamilton, 770 tons, steamers.

#### Maritime Provinces and Newfoundland.

The Bras d'Or Steamboat Co. has sold its str. *Elaine* to the Star Steamship Co., St. John, N.B.

The Eastern Steamship Co.'s str. *Calvin Austin* will be placed on the St. John (N.B.)-Boston run for the winter.

Tenders are asked for the operation of a steam ferry for five years between Indiantown and Lancaster, on the St. John river, N.B.

The tug *Henry Hoover*, built in Philadelphia, Pa., 1863, and owned by G. S. Campbell & Co., Halifax, was sunk by collision with a schooner in Halifax harbor, Nov. 4.

A 900-ton barque, *Edna M. Smith*, has been launched at Harvey Bank, N.B., for J. N. Smith, of Coverdale, N.B.; and a 100-ton schooner, *Valonia*, for the West Indian trade, has been completed at Lunenburg, N.S.

The Canada-Atlantic-Plant Line has not yet decided to put a steamer on the Sydney-Hawkesbury, N.S., route, via the Bras d'Or lakes, from which the Bras d'Or Steamboat Co. has withdrawn, as has been reported in the daily press.

A new tug, named *Lord Dundonald*, is being completed at St. John, N.B., for J. Moore. The hull was built at Spencer's Island and towed to St. John for the engines. Dimensions: length, 88 ft. 6 in.; breadth, 19 ft. 6 in.; depth of hold, 9 ft. 6 in.

A company is being formed in New Brunswick to operate a steamer on a route between Bridgetown and points on the Annapolis river to St. John, N.B. It is proposed to build a new steamer. The company's office will be at Bridgetown, N.S.

G. Robertson, M.L.A., states that the Dominion Government has approved of the plans of the proposed dry dock at St. John, N.B., that the approval of the N.B. Government is expected at an early date, and that tenders will be asked for immediately thereafter.

The river str. *May Queen*, of St. John, N.B., has been sold by Capt. Brennan to a syndicate, which proposes to continue her on the Grand Lake service. Capt. Brennan is retiring from active work. He has had over 50 years' service, for 34 of which he was in command of the *May Queen*.

D. McNichol, 2nd Vice-President and General Manager; G. M. Bosworth, 4th Vice-President, and other officials of the C.P.R. have been in St. John, N.B., conferring with the local authorities in reference to the harbor accommodation at that port, and the improvement of the same. Suggestions have been made for the expenditure of about \$2,000,000 on new piers, etc.

The vessels scheduled to sail from Canadian ports to South Africa for the winter months are the *Wyandotte*, *Melville*, *Oriana* and *Monarch*. There will be one sailing each way a month. The companies interested in the service are the *Elder-Dempster Co.* and the *Furness-Withy Co.*

A despatch recently published in the daily papers states that the German Government has established stations on the frontier of Saxony in order to prevent intending immigrants from passing to Dutch or Belgian ports, thereby compelling them to travel on German steamers, and preventing them reaching C.P.R. steamers. The despatch says this will mean a loss to the C.P.R. steamers of 50,000 passengers annually. An officer of the C.P.R. advises us that there was no necessity for such a scare despatch. The German Government has maintained control stations along its frontiers for years; it has merely added one more, on the frontier of Saxony. The British trans-Atlantic steamship lines are in no worse position in this respect to-day than they have been for years.

### Province of Quebec Shipping.

R. J. Goodwell, of Quebec, who at one time owned 23 sailing vessels, with home port at Quebec, died in Montreal recently aged 84.

The Montreal Harbor Commissioners have decided to erect two-storey sheds at the new wharves, subject to the approval of the Department of Public Works.

The International Steamship Co., which built two ocean steamers on the Great Lakes, and took them through the Canadian canals in sections, has sold them and gone out of business.

The completion of the gas buoy system in the channel of the St. Lawrence between Montreal and Sorel, at the end of Oct., enabled navigation to be carried on at night for the rest of the season.

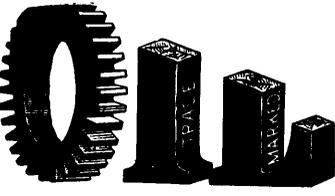
The shipping interests of Quebec complain of the lack of steamers, and it is reported that an attempt will be made to start an independent line of ocean-going steamers with head offices at Quebec.

The act transferring the pilotage service on the St. Lawrence, Montreal district, from the Harbor Commissioners to the Minister of Marine; and declaring the Saguenay river to

be separated from the port and pilotage district of Quebec, comes in force Jan. 1, 1904.

The steamers Quebec and Canada, of the Quebec-Montreal line, and the Virginia, of the Saguenay line of the Richelieu and Ontario Navigation Co., have been equipped with electric searchlights of 4,000 candle power.

The Montreal Transportation Co.'s shareholders at a recent meeting endorsed the action of the directors in applying to the Dominion Government for a new charter. The object of the new charter is to bring the Company under the provisions of the Companies' Act of 1902.



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TORONTO and QUEBEC.

## MANITOBA

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

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

**STOCK.**

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

Horses..... 146,591	Sheep..... 20,518
Cattle..... 282,343	Pigs..... 95,598
Value of Dairy Products..... \$26,314	

**15,000 FARM LABORERS**

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

**MANITOBA FARMERS ARE PROSPEROUS.**

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

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

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

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Or **J. J. GOLDEN**, Manitoba Emigration Agt., 617 Main St., Winnipeg, Man.



## LOW COLONIST RATES

TO NORTH-WEST AND CALIFORNIA

Special Low Rates Homeseekers' Excursions, Sept. 15th, Oct. 20th

To all points in Louisiana and Mississippi, \$16.00 from Chicago.

To all Texas points on the Southern Pac. Ry. at proportionate rates.

The Local Agent is asked to note Cheap Rates to all the North-West, also to California from Sept. 15 to Nov. 30, nearly \$20 less than regular second-class fare and ordinary Pullman service from Chicago or Cincinnati. Special folders for St. Paul, Minneapolis, California and West, and regular folders with it all in. July folder is a good one. Get it!

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**Day Train** leaves Toronto 9.45 a.m., Hamilton 10.45 a.m., connects with the **"EMPIRE STATE EXPRESS"** Arrives New York 10 p.m.

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The Empire has long been the favorite Hotel for tourists visiting the Metropolitan.

Within ten minutes of amusement and shopping centres.

The Empire is the headquarters of the Canadian Society of New York.

Send for booklet. **W. Johnson Quinn, Prop.**

During the season of navigation to Oct. 31, 713 ocean-going vessels, having a tonnage of 1,725,693 tons, arrived in Montreal; against 657 vessels, of 1,385,365 tons during the same period 1902. To the same date 9,675 inland vessels, of 2,157,570 tons, arrived in the port, against 8,281 vessels, of 1,664,096 tons in 1902.

The Canadian Transit Co. (Ltd.), which was recently incorporated under the Ontario Companies' Act, will have as its Canadian board, John Torrance, R. Bickerdike, A. Racine, of Montreal, and C. B. K. Carpenter, Gaspé, Que. There will also be a board in England. The secretary is J. Gowan, and the Managers are Blakeley & Lemieux. The Company has opened an office in the Coristine Building, Montreal. It is proposed to put on 12 steamers to operate between Montreal and the upper lakes, and which will carry 60,000 or 70,000 bush. on a 13 ft. 6 in. draught. It is stated that some of the steamers will probably be on the lake next spring. It is understood that the Company will be financed by the New Canadian Co. (Ltd.), which owns the charter of the Atlantic, Quebec and Western Ry.

### Ontario and the Great Lakes.

The machinery of the dismantled Empire State is reported as being stored with a view to its being utilized on a new steamer.

The Amherstburg town council has decided to purchase the McClary dock, and open it for the benefit of all vessels coming to the port.

The new tug under construction at Collingwood for the Montreal Transportation Co., was launched Nov. 18, and was named the Emerson.

The new lighthouse at Port Colborne has been completed, and a temporary light placed. A powerful fog horn will be added to the equipment.

Capt. McMaugh, of St. Catharines, has brought an action against the Hamilton and Fort William Navigation Co. for damages for wrongful dismissal.

An engineer from the Department of Public Works recently went over the route of a proposed extension of the Rideau canal from near Burford Mills to Desert Lake, about 10 miles.

The Wolfe Island township council has placed an order with the Bertram Engine Works, Toronto, for a ferry steamer, to cost \$25,000, to run between Wolfe Island and Kingston.

C. Schrieber, Deputy Minister of Railways and Canals, inspected the terminal facilities at Port Colborne recently. It is proposed to deepen the harbor from the lake to the lock on the Welland canal to 22 ft.

The str. Ocean, on a recent trip from Montreal to Toronto, went ashore on Rock Point, off Wolfe island, and was got off after being fast 22 hours, without material damage. She was repaired at Port Dalhousie.

The various steamers operated among the Thousand Islands of the St. Lawrence by Capt. W. L. Visgers of Alexandria Bay, N.Y., have been acquired by a joint stock company, of which Capt. Visgers is one of the promoters.

An order has been placed with a firm at Newcastle-on-Tyne, Eng., by the Lake Ontario Steamship Co., for a turbine steamer for the Hamilton-Toronto run. The steamer will be of full canal size, and will have accommodation for 1,500 passengers.

The str. Advance, owned by Jas. Carruthers, Toronto, was burned to the water's edge and sunk at the New Ontario dock, Sault Ste. Marie, Ont., recently. The steamer was valued at about \$50,000, and she had on board

a cargo consisting principally of fish plates and cement.

The Dominion Government hydrographic survey steamer Bayfield has been laid up for the winter at Owen Sound. During the season she has been engaged on Lake Superior, from Pigeon river, 35 miles from Port Arthur, to the eastern limits of Thunder bay. It will require several years to complete the work on the lake.

The Lurcher, the first of the two lightships under construction at the Polson Iron Works, Toronto, for the Dominion Government, was recently launched. The lightship is the first to be built in the country, and will be placed in service on the Lurcher shoal off Yarmouth, N.S., this season. A second lightship to be placed off Anticosti island was launched at the same works Nov. 23.

There was recently launched at Cleveland, Ohio, a car ferry no. 19 for the Pere Marquette Rd., for the Ludington, Manitowoc and Milwaukee route on Lake Michigan. The company is also having built at Cleveland car ferry 20 for the route between Port Huron, Mich., and Sarnia, Ont. A car ferry for the route between Conneaut, Ohio, and Port Stanley, Ont., has been launched at Buffalo, N.Y.

The total freight passing through the Canadian and the U.S. canals at Sault Ste. Marie, in Oct., was 4,475,965 tons, against 4,618,391 tons in Oct., 1902. The figures for the Canadian canal are:

	1903.	1902.	Increase or Decrease.
April.....	159,763 tons	197,926 tons	38,163 tons -
May.....	636,747 "	334,262 "	302,485 " +
June.....	917,105 "	1,118,564 "	201,459 " -
July.....	890,338 "	523,936 "	366,402 " +
Aug.....	879,420 "	639,858 "	239,562 " +
Sept.....	639,320 "	560,031 "	79,289 " +
Oct.....	683,405 "	604,713 "	78,692 " +
	4,806,098 tons	3,979,290 tons	826,808 tons +

+ increase. - decrease.

The str. Atlantic, owned by the Northern Navigation Co., was burned to the water's edge in the Parry Sound channel Nov. 10, and stranded near Spruce island. She was making a special trip from Collingwood to Byng Inlet, and had a full cargo of freight and lumbermen's supplies, including 5 carloads of baled hay and 125 barrels of oil. A leak was discovered about 3 o'clock on Tuesday morning, and some time afterwards fire was discovered among the hay amidships. The flames spread rapidly and the passengers and crew took to the boats, nothing being saved. The Atlantic was built at Owen Sound in 1883 to replace the Manitoulin, burned in 1882 in Manitowaning bay with considerable loss of life, the unburned portion of the hull being used in the new steamer. She was owned by the Great Northern Transit Co., and traded from Collingwood to Sault Ste. Marie; subsequently this company became amalgamated with the North Shore Steamship Co., and this was afterwards merged into Northern Navigation Co. of Ontario. The Atlantic was a screw steamer, her dimensions being: length, 147 ft.; breadth, 30 ft.; depth, 11 ft.; tonnage—gross, 683 tons; net, 442 tons. She was valued at \$25,000, and was partly insured.

### Manitoba and Northwest Territories.

The Hudson's Bay Co. is arranging for the construction of a sternwheel steamer, equipped for freight and passenger service, for the Peace river trade. The steamer will be constructed under the charge of Capt. Johnson, who has had the superintendence of the building of the Company's river steamers for some years.

The Western Trading Co. (Ltd.) has been incorporated under the Manitoba Companies' Act, with a capital of \$90,000, to carry on a general business, including the purchase and

operation of boats, tugs, barges and vessels of all kinds. The McMillan Bros., contractors, Westbourne, are among the promoters, and the head office is at Shoal Lake.

The Polson Iron Works, Toronto, is building the steel frame and engines for an 80 ft. steamer for Great Slave lake, Athabasca, to the order of Rev. A. Husson, Montreal, Superintendent of Roman Catholic Missions in western and northwestern Canada. The hull and engines are expected to be shipped to Edmonton, Alta., by the end of the year, from which point they will be hauled to Athabasca Landing, where the steamer will be put together.

The Hudson's Bay Co.'s barque Lady Head was wrecked on Gasket shoal, Hudson's bay, Sept. 25, while on her annual voyage to Great Britain with a valuable cargo of furs. The vessel was breaking up when she was abandoned. The crew will be kept at the Co.'s post at Moose Factory for the winter. Fears are entertained for the safety of the Co.'s schooner Mink, which has not been heard of since leaving the bay, early in Sept., for St. John's, Nfld.

The str. El Dorado, owned by Revallion Freres (Ltd.) was wrecked in Hudson's bay, and was abandoned by the crew Sept. 2. The crew and passengers landed on an island near Fort George, from which they were rescued by Hudson's Bay Co.'s schooners and taken to Fort Charles. Here they went on board the H.B. Co.'s str. Inenew, and were taken to Moose Factory, from which point they made their way by the H.B. Co.'s trading route to the C.P.R. The steamer and her cargo of supplies for the owners' trading posts are a total loss.

The Hudson's Bay Co.'s str. Inenew, built by the Polson Iron Works, Toronto, in 1902, which met with several mishaps after leaving Toronto, finally left St. John's, Nfld., Aug. 12, and reached Moose Factory, on the Ontario shores of Hudson's bay, Sept. 20. During the trip the Inenew was caught in Hudson's strait's tides and nearly swamped; on reaching Fort Charles, the shipwrecked crew and passengers of the wrecked str. El Dorado were picked up and conveyed to Moose Factory. The Newfoundland crew, who took the steamer round from St. John's, returned via the Abitibi river and across the portages to the C.P.R.

In connection with the proposal to establish a steamship service between Canada and France, for which a subsidy of \$100,000 a year for 10 years was voted at the last session of the Dominion Parliament, a Liverpool paper states that four steamers are to be purchased, two of which will sail under the British and two under the French flag.

Press reports state that the Dominion Government has completed arrangements for the early transfer of the construction and operation of canals from the Department of Railways to that of the Marine. It is understood that this arrangement was made when Hon. R. Prefontaine was appointed Minister of Marine, but could not be carried out until the necessary Parliamentary authority had been obtained.

The Dominion Parliament at its recent session passed an act amending the act respecting certificates to masters and mates of ships, the important point of which describes the expression "coasting voyage" of sea-going ships. A "coasting voyage" includes a voyage between any eastern Canadian port to any port in Newfoundland, Labrador, St. Pierre, Miquelon, or on the U.S. coast as far south as Cape Hatteras, or from any western Canadian port to any U.S. port not further south than Portland, Ore., or further north than Cape Spencer, Alaska.

**B.C. and Pacific Coast Shipping.**

R. G. MacPherson, M.P., is interested in a proposal to construct a dry dock at Vancouver, B.C., large enough to take in the biggest merchant vessel afloat on the Pacific ocean.

Application will be made at the next session of the B.C. Legislature for an act incorporating the Canada Fire and Marine Insurance Co. The solicitors for the applicants are Livingstone, Garrett & King, Victoria.

The M. S. Dollar Co. (Ltd.) has been incorporated under the B.C. Companies' Act, with a capital of \$180,000, for the purpose of acquiring the str. M. S. Dollar, of Victoria, and of carrying on a general navigation business.

The Western Steamship Co. (Ltd.) has been incorporated under the B.C. Companies' Act, with a capital of \$150,000, for the purpose of purchasing the str. Wyefield, of Victoria, and of carrying on a general navigation business.

The Vancouver Engineering Works propose constructing a 500 ft. extension of its wharf, and has submitted plans to the city and the Department of Marine. The additions will carry the wharf out to a point where there is 40 ft. of water alongside.

Capt. Noel, hitherto in command of the str. Nell, is forming a company in Victoria, B.C., for the purpose of building or purchasing a steamer to trade between Victoria and northern B.C. ports. The steamer will have accommodation for a number of passengers, and will carry 600 tons of cargo.

The shipping returns for the port of Vancouver for the year ended June 30, show that there were entered inwards 3,583 British vessels of 850,154 tons, and 787 foreign vessels of 556,060 tons, against 3,238 British vessels of 761,268 tons, and 764 foreign vessels of 546,615 tons for the year ended June 30, 1902.

Press reports state that the North American Transportation and Trading Co., and the Northern Commercial Co., operating in the

Yukon Territory and in Alaska, will be amalgamated. Each company has a dozen posts along the Yukon basin, and their combined fleets number about 30 steamers and 10 barges.

The New Westminster Towing and Fishing Co. (Ltd.) has placed an order for the building of the hull of a new tug locally, and an order for the engines and boilers with a firm in Glasgow, Scotland. The new tug's dimensions will be: length, 110 ft.; breadth, 20 ft.; depth, 12 ft., and the engine is expected to develop 350 h.p.

Navigation on the Yukon river closed rather unexpectedly, and a good deal of freight is lying both at Whitehorse and at St. Michael, which will have to be kept over until the spring. A despatch from Dawson, via Seattle, Wash., states that all the steamers up the Yukon for Whitehorse reached their destination, but that other steamers and cargoes, valued at \$2,000,000, remained exposed to the ice with little prospect of getting to places of safety for the winter.

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**Mica Fire-Proof Coverings**

— FOR —

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

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the World.

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GRAND PRIZE AT PARIS**

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

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The Grand Trunk Railway in connection  
with the

**LEHIGH VALLEY RAILROAD**

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

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**"Black Diamond Express"**

(Handsomest train in the world.)

The Great double-track scenic highway,  
stone ballasted, protected by automatic  
electric block signals. Through Pullman  
Parlor and Sleeping Car Service. Dining  
Car Service à la carte. Everything first  
class. Call on Grand Trunk Ticket Agents  
for tickets and further information, or  
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A. A. HEARD, CHAS. S. LEE,  
Asst. Gen. Pass. Ag't, New York. Gen. Pass. Ag't, New York.  
G. R. CHESBROUGH,  
West'n Pass. Ag't, Buffalo, N.Y.

**When You Stop to Think**

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

**METALLIC CIRCUIT SERVICE**  
EFFICIENT, RAPID, CONSTANT.

**THE BELL TELEPHONE COMPANY**  
OF CANADA.

**STEEL, PEECH & TOZER,**

LIMITED,

SHEFFIELD, ENGLAND.

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SPRING STEEL.**

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Railway and Tramway Equipment.

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Hoisting Machinery, etc.**

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MONTREAL.**

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

**RATES: \$3 UPWARDS.**

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

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Capital paid up - - - 2,983,896  
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HEAD OFFICE, TORONTO.

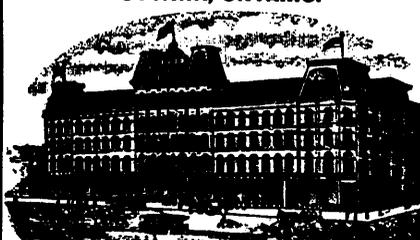
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PRINTING**

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Richard Southam  
Manager

The **White Star Line** has established in addition to its regular New York-Liverpool services regular services between Boston and Liverpool (calling at Queenstown), and Boston, Azores and Mediterranean ports. The services will be operated by the large, modern, twin-screw steamers Republic, 15,400 tons; Cretic, 13,500 tons; Cymric, 13,100 tons; Canopic, 13,000 tons; Romanic, 11,400 tons, sailing regularly throughout the year to and from Boston and Liverpool (calling at Queenstown), and to and from Boston, the Azores and Mediterranean ports, and will be inaugurated at once and operated continuously. Return tickets by the White Star Line are available for their full value towards passage by any of the White Star services. Facilities will be offered for booking across the European Continent between the various ports of call in the Mediterranean and Liverpool, which will thus enable passengers to book the round trip from Boston, via the Mediterranean, returning from Liverpool to New York or Boston or vice versa.

**Among the Express Companies.**

The Western Ex. Co. has closed its offices at Stuben and Sturgeon River, Mich.

The Dominion Ex. Co. has reopened its wagon route between Beamsville and St. Catharines, Ont., for the winter.

The Dominion Ex. Co. has closed its stage route between St. Basil, Que., and St. David, Me., the office at the latter point being closed.

The Dominion Ex. Co. announces the following changes in names: Annville, formerly Ste. Anne de la Perade; Bruchesi, formerly Ste. Anne de Plains; Masson, formerly Buckingham, Que.; Biscot, formerly Biscotasing; Eureka, formerly Eureka Lake; Nemegos, formerly Nemegosenda, Ont.

The Alaska Pacific Express Co. is operating a stage line between Whitehorse and Dawson, Yukon, from two to six times a week, according to the condition of the trail and the volume of the business. It is also operating a weekly dog train service between Dawson and Eagle, Alaska and Forty Mile, Yukon; a semi-weekly service from Log Cabin to Atlin, Discovery and Pine City, B.C., and a semi-monthly service from Valdez to Fairbanks, Chenoa, Fort Gibbon, Tanana and Weare, Alaska.

**Telegraph and Cable Matters.**

The Canadian Northern Telegraph Co. has laid a cable to connect its commercial office at the corner of Main st. and Portage avenue, with its railway telegraph office, Water st., Winnipeg.

A conference of the partners in the all-British trans-Pacific cable will shortly be held in London, Eng., at which a proposal will be made to lay a cable between Canada and Great Britain.

The Dominion Government proposes to establish a Marconi wireless station at Sable Island, N.S., and has under consideration a proposition to establish a similar station at Cape Race, Newfoundland.

R. G. Reid, of the Reid Newfoundland Co., has filed a claim for \$3,000,000 against the Newfoundland Government for losses sustained through the Government taking back from him in 1901 the control of the telegraph system of the colony.

W. M. Gibson, formerly connected with the G.N.W. Telegraph Co. and with the C.P. Telegraph department in Montreal, won the Carnegie medal for being the best all-round telegrapher, at the recent tournament of the American Telegraphers' Association.

The C. P. Telegraph department has created a new position, that of electrical engineer, to which W. J. Camp, heretofore Super-

intendent of the Eastern division, has been appointed. He will have charge of all electrical equipment on the system; office Montreal.

I. McMichael was presented with a diamond stud at a farewell dinner given him by the staff of the Western Union Telegraph Co., on leaving Minneapolis, Minn., to assume the duties of his new position as General Manager of the Great Northwestern Telegraph Co., Toronto.

The Canadian Northern Telegraph Co. has completed stringing a line for commercial purposes on its Duluth extension from Stanley Junction to Gunflint Narrows, Ont., and proposes to string a copper wire for commercial business between Port Arthur, Ont., and Winnipeg, Man.

The Australian Senate has declined to ratify the agreement made between the ex-Premier, Sir E. Barton, and the Eastern Extension Cable Co., which gave an unfair advantage to that company in competition with the state-owned all-British trans-Pacific cable, in which Canada has a very large interest.

The Chief Signal Officer of the United States, in his annual report, states that 1,470 miles of military telegraph and cable lines have been laid during the year in Alaska, and adds that preparations are being made for the installation of wireless telegraph stations at St. Michael and Nome, 108 miles apart.

N. C. Marshall, of Vancouver, B.C., has been appointed Western manager of the Marconi Wireless Telegraph Co. It is proposed to instal stations at various points in the west to connect Vancouver, Victoria, Nanaimo, Comox, and other places, thence to Skagway, Alaska, and Dawson, in the Yukon Territory.

The company controlling the Marconi system of wireless telegraph in Great Britain has begun suit against the DeForest Wireless Telegraph Co. for alleged infringement of patents. The DeForest Co., which has its Canadian headquarters in Toronto, has recently had in operation stations at Holyhead, Wales, and Howth Head, Ireland, 65 miles apart.

The Dominion Government telegraph repair steamer Tyrian recently completed a three months' trip laying cables and repairing land lines in Nova Scotia, and along the northern shores of the Gulf of St. Lawrence to Chateau bay, opposite Belle Isle. At Chateau bay new masts for the Marconi wireless telegraph system of communication between the mainland and Belle Isle were erected.

The C.P. Telegraph eastern division, hitherto extending from the Atlantic coast to Fort William, Ont., was on Nov. 1 divided, one of the new divisions, the Atlantic, extending from the coast to Megantic, Que.; and the other, the Eastern, from Megantic to Fort William. J. F. Richardson, heretofore Superintendent of Construction and Inspector, has been appointed Superintendent Eastern division; office at Montreal. P. W. Snider, heretofore local manager at St. John, N.B., has been appointed Superintendent Atlantic division, office St. John. W. P. Robinson, hitherto chief operator at St. John, has been appointed local manager at St. John, succeeding P. W. Snider.

The "magnetic storm" which was observed in Canada Oct. 30-31, appears to have been not only general from east to west in Canada, but in England, and generally all over the northern hemisphere. The lines at Winnipeg were considerably disorganized, that district being apparently right in the storm centre. So much was the system disorganized there that the C.P.R. telegraph department had to send messages by train to Fort William, Ont., where they could be dispatched. At Fort William the C.P.R. telegraphers were able to establish a circuit to Montreal, 998 miles, and send messages without batteries. The Montreal offices of the

company escaped the disturbances. At Kingston, Ont., the G.N.W. telegraph operators worked a commercial line to Toronto. J. F. Richardson, Superintendent Eastern division C.P.R. telegraph department, referring to the recent disturbances says that messages were sent over the wires from Montreal to Fort William without artificial current, the electricity coming from the earth. The telegraph wires are connected to the earth at each end, forming what is termed a "shunt." A sufficient portion of the current passing through the earth east and west, travelled over the wires and furnished the power by which signals were transmitted. This current, sometimes positive and sometimes negative, measured over 50 milliamperes, but is too intermittent to be of practical use, and its maximum is reached only every 10½ years. "I have," says Mr. Richardson, "experienced three of these cycles, and the disturbance we felt Oct. 31 was the heaviest and most widely felt. At the same time that the northern part of Canada was effected, the cables and European lines reported similar electrical phenomenon. I have reason to believe that the aurora borealis is the outward sign of this internal disturbance, and discharges from the earth around the magnetic north. There are dark spots on the sun, said to be eruptions, that appear at the same time, but I am unable to say what the connection is between these three phenomena—sun spots, aurora borealis, and earth currents."

**Western Union Telegraph Co.**

Comparative statement for years ended June 30, 1902, and 1903:

	1903.	1902.
Revenue .....	\$29,167,686 80	\$28,073,095
Expenses and taxes .....	20,953,215 07	20,780,766
Net revenue .....	\$ 8,214,471 73	\$ 7,292,329
Interest .....	1,077,700 00	992,580
Balance .....	\$ 7,136,771 73	\$ 6,299,749
Dividends .....	4,868,050 00	4,868,031
Surplus .....	\$ 2,268,721 73	\$ 1,431,718
Previous surplus .....	10,751,022 82	9,319,285
Total surplus .....	\$13,019,744 55	\$10,751,003

The capital stock is \$97,370,000. The funded debt is \$24,504,000. The Co. now has 1,089,212 miles of wire and 23,567 offices. During the past year 69,790,866 messages were sent. The average tolls for the messages transmitted were 31.4 cents and the average cost 25.6 cents. \$3,351,644.94 were expended for construction during the year, 402 miles of poles and 59,228 miles of wire being added.

**General Telephone Matters.**

The number of telephones in use in London, Ont., is now over 1,700.

The franchise of the Bell Telephone Co. in London, Ont., expires Dec. 4.

The Bell Telephone Co. has bought out the local telephone company heretofore doing business at Carman, Man.

The Dominion Government has laid a land cable between the two ends of Belle Isle, and fitted the same for telephonic use.

We are advised that the Bell Telephone Co. has not decided, as press reports state, to erect a new exchange building in Winnipeg in 1904.

The Canadian Machine Telephone Co., which hitherto has had its headquarters at Ottawa, has moved its offices and plant to Toronto.

The Canadian Machine Telephone Co. has made overtures to the Kingston, Ont., city council with a view of installing its telephone service there.

The Bell Telephone Co. is improving its lines between Chesley, Walkerton and Owen

Sound, Ont., and is making a number of extensions in Owen Sound.

The Bell Telephone Co. has completed a copper metallic line from Simcoe to Port Rowan, Ont., and has opened offices in connection with the line at Port Rowan, St. Williams, and Vittoria.

B. J. Thomson, of Portage la Prairie, Man., has been canvassing Dauphin, Man., with a view to establishing a telephone service, and proposes bidding for the franchise which the town is offering for sale.

At the annual meeting of the B. C. Telephones (Ltd.) at Huddersfield, Eng., Oct. 21, Dr. J. M. Lefevre, of Vancouver, B.C., and W. E. Wimpenny, of Huddersfield, were re-elected directors. Dr. Lefevre has been re-elected Chairman.

A local telephone system has been installed at Hillsboro, N.B., with nine instruments; and another line connecting the village with the Cape station, 11 miles, on which there are five instruments. These lines may be used separately or together, and a connection is also made with the system of the New Brunswick Telephone Co.

The Humber Power and Lighting Co. has entered into a contract with the Toronto Junction, Ont., town council, to place in operation a telephone service in the town. The contracts are to be yearly, the price to be \$6 a year and one cent a call until \$20 a year for private house instruments and \$40 a year for business houses, has been reached. The company promises to have the system in operation within a year.

The Canadian Telephone and Telegraph Co., which was incorporated under an act passed at the last session of the Dominion Parliament, has been organized with the following officers: President, C. Robinson, Scranton, Pa.; Vice-President, R. Bickerdike, M.P., Montreal; other directors: F. J. Stegmaier, Wilkesbarre, Pa.; W. F. McCreary, M.P., Winnipeg; G. Fowler, M.P., Sussex, N.B.; Treasurer, J. R. Mears, Scranton, Pa.; Secretary, J. T. C. Thompson, Ottawa; Manager, F. J. Leonard, New York. The offices of the Company will be at Ottawa. Application has been made for franchises for telephone services in Ottawa and London.

The Bell Telephone Co. expects to have the following long distance lines in Alberta completed this fall: Calgary to Edmonton, and Lethbridge to Cardston. The completion of these lines will enable a long distance service to be maintained between Calgary, Didsbury, Olds, Lacombe, Ponoka, Red Deer, Wetaskiwin, Strathcona and Edmonton, and between Lethbridge, Raymond, Stirling, Margrath, Spring Coulee and Cardston. Between Calgary and Edmonton the line follows the Calgary and Edmonton Ry., and between Lethbridge and Cardston it follows the route of the Canadian Northwest Irrigation Co.'s line and the St. Mary's River Ry.

The Bell Telephone Co. has this year added to its long distance lines in its Northwest department the following lines: Winnipeg to Morris, Morris to Morden, Rosebank to Carman, Rosebank to Miami, Morden to Killarney, Portage la Prairie to Carberry and Brandon to Souris. In connection with these lines offices have been opened at Austin, Bagot, Alexander, Souris, Roland, Rosebank, Miami, Carman, Darlingford, Manitou, La Rivière, Pilot Mound, Killarney, Crystal City and Cartwright, Man. It is proposed to add to these lines next year lines from Macgregor to Wawanese and from Portage la Prairie to Gladstone, and probably other extensions will be decided upon later. The single copper line heretofore in operation between Portage la Prairie and Brandon, Man., has been converted into a metallic circuit.

<b>Structural Metal Work</b>	
Dominion Bridge Co.	Montreal.
Locomotive and Machine Co. of Montreal.	
Jas. W. Pyke & Co.	Montreal.
<b>Studs, Engine and Binder</b>	
John Morrow Machine Screw Co. (Ltd.)	Ingersoll
<b>Switches</b>	
Montreal Steel Co.	Montreal.
<b>Switch Lamps</b>	
The Hiram L. Piper Co.	Montreal.
The N. L. Piper Railway Supply Co.	Toronto.
<b>Switch Locks</b>	
The Hiram L. Piper Co.	Montreal.
<b>Switch Ropes</b>	
The B. Greening Co.	Hamilton, Ont.
<b>Switch Targets</b>	
Acton Burrows Co.	Toronto.
<b>Tanks and Tank Fixtures</b>	
Ontario Wind Engine and Pump Co.	Toronto.
<b>Tarpaulins and Waterproof Covers</b>	
Sonne Awning, Tent and Tarpaulin Co.	Montreal
<b>Telegraph and Telephone Office Signs</b>	
Acton Burrows Co.	Toronto.
<b>Tents</b>	
Sonne Awning, Tent & Tarpaulin Co.	Montreal.
<b>Tie Plates</b>	
B. J. Coghlin & Co.	Montreal.
<b>Tobacco and Cigars</b>	
The Hudson's Bay Company.	
<b>Toilet Paper</b>	
The Hudson's Bay Company.	
<b>Tools</b>	
Rice Lewis & Son.	Toronto.
<b>Track Jacks</b>	
James Cooper.	Montreal.
W. H. C. Mussen & Co.	Montreal.
A. O. Norton	Coaticook, Que.
<b>Track Tools</b>	
Canada Switch and Spring Co.	Montreal.
James Cooper.	Montreal.
Rice Lewis & Son.	Toronto.
W. H. C. Mussen & Co.	Montreal.
The Hiram L. Piper Co.	Montreal.
<b>Tramway Equipment</b>	
James Cooper.	Montreal.
W. H. C. Mussen & Co.	Montreal.
J. J. Gartshore.	Toronto.
<b>Trucks (Electric Car)</b>	
Baldwin Locomotive Works.	Philadelphia, Pa.
Montreal Steel Co.	Montreal.
<b>Trucks (Warehouse and Express)</b>	
Rice Lewis & Son.	Toronto.
<b>Turntables</b>	
Dominion Bridge Co.	Montreal.
<b>Varnishes</b>	
McCaskill, Dougall & Co.	Montreal.
<b>Vessels</b>	
Poison Iron Works	Toronto.
<b>Waste</b>	
B. J. Coghlin & Co.	Montreal.
Rice Lewis & Son.	Toronto.
N. L. Piper Ry. Supply Co.	Toronto.
The Queen City Oil Co.	Toronto.
<b>Wheelbarrows</b>	
James Cooper.	Montreal.
Rice Lewis & Son.	Toronto.
<b>Windmills</b>	
Ontario Wind Engine and Pump Co.	Toronto.
<b>Window Blinds</b>	
The Hudson's Bay Company.	
<b>Wines and Liquors</b>	
The Hudson's Bay Company.	
<b>Wire and Wire Rope</b>	
Dominion Wire Rope Co.	Montreal.
The B. Greening Co.	Hamilton, Ont.
Rice Lewis & Son.	Toronto.
W. H. C. Mussen & Co.	Montreal.
The Wire and Cable Co.	Montreal.
<b>Wire, Brass and Steel</b>	
Dominion Wire Manufacturing Co.	Montreal.
<b>Wire Cloth</b>	
The B. Greening Co.	Hamilton, Ont.
<b>Wire, Copper</b>	
Dominion Wire Manufacturing Co.	Montreal.
E. F. Phillips Electrical Works, Ltd.	Montreal.
The Wire and Cable Co.	Montreal.
<b>Wire, Electric</b>	
Dominion Wire Manufacturing Co.	Montreal.
E. F. Phillips Electrical Works, Ltd.	Montreal.
The Wire and Cable Co.	Montreal.
<b>Wire Goods</b>	
Dominion Wire Manufacturing Co.	Montreal.
<b>Wire, Insulated Copper</b>	
E. F. Phillips Electrical Works, Ltd.	Montreal.
The Wire and Cable Co.	Montreal.
<b>Wire, Telegraph and Telephone</b>	
Dominion Wire Manufacturing Co.	Montreal.
E. F. Phillips Electrical Works, Ltd.	Montreal.
The Wire and Cable Co.	Montreal.
<b>Wire, Transmission and Trolley</b>	
Dominion Wire Manufacturing Co.	Montreal.
The Wire and Cable Co.	Montreal.
<b>Wood Screws</b>	
Dominion Wire Manufacturing Co.	Montreal.
<b>Yachts</b>	
Poison Iron Works.	Toronto.

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CHAS. F. CLARK, Pres. JARED CHITTENDEN, Treas.

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

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Gen. Man. Western Canada, Toronto.

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### PURCHASING AGENTS' GUIDE.

(Continued from third page of Cover.)

<b>Station Name Signs</b>	
Acton Burrows Co.	Toronto.
<b>Steamboats</b>	
Poison Iron Works.	Toronto.
<b>Steamboat Signs</b>	
Acton Burrows Co.	Toronto.
<b>Steam Couplers</b>	
Safety Car Heating and Lighting Co.	New York.
<b>Steam Shovels</b>	
James Cooper.	Montreal.
W. H. C. Mussen & Co.	Montreal.
<b>Steel</b>	
James Cooper.	Montreal.
B. J. Coghlin & Co.	Montreal.
Wm. Jesop & Sons.	Sheffield, Eng.
Rice Lewis & Son.	Toronto.
<b>Steel Buildings</b>	
Dominion Bridge Co.	Montreal.
<b>Steel for Springs</b>	
James Hutton & Co.	Montreal.
<b>Steel Plate</b>	
Jas. W. Pyke & Co.	Montreal.
<b>Steel Tyres</b>	
B. J. Coghlin & Co.	Montreal.
James Hutton & Co.	Montreal.
Latrobe Steel Co.	Philadelphia, Pa.
Jas. W. Pyke & Co.	Montreal.

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Canadian Ry. Accident Ins. Co. . . . Ottawa, Ont.  
Travelers' Insurance Co. . . . Montreal.

## Aerated Waters

E. L. Drewry . . . . . Winnipeg.

## Air Brakes & Fittings

Westinghouse Mfg. Co. . . . . Hamilton, Ont.

## Ales

E. L. Drewry . . . . . Winnipeg.

## Anchors

Rice Lewis & Son . . . . . Toronto.

## Awnings

Sonne Awning, Tent & Tarpaulin Co. Montreal.

## Axles

James Hutton & Co. . . . . Montreal.  
Jas. W. Pyke & Co. . . . . Montreal.  
Rhodes, Curry & Co. . . . . Amherst, N.S.

## Babbitt

Rice Lewis & Son . . . . . Toronto.

## Blankets & Bedding

The Hudson's Bay Company . . . . .

## Block & Tackle

Dominion Wire Rope Co. . . . . Montreal.  
Rice Lewis & Son . . . . . Toronto.

## Boat Fittings & Hardware

Rice Lewis & Son . . . . . Toronto.  
Sonne Awning, Tent & Tarpaulin Co. Montreal.

## Boiler Covering

Mica Boiler Covering Co. . . . . Montreal.

## Boilers

Poison Iron Works . . . . . Toronto.

## Boiler Tubes

B. J. Coghlin & Co. . . . . Montreal.  
Jas. W. Pyke & Co. . . . . Montreal.

## Bolsters

Simplex Railway Appliance Co. . . . . Montreal.

## Bolts

Rice Lewis & Son . . . . . Toronto.

## Bolts, Boiler Patch

John Morrow Machine Screw Co. (Ltd.), Ingersoll

## Brake Beams

Simplex Railway Appliance Co. . . . . Montreal.

## Brass and Copper Cloth

The B. Greening Co. . . . . Hamilton, Ont.

## Brass Castings

St. Thomas Brass Co. . . . . St. Thomas, Ont.

## Bridge Numbers

Acton Burrows Co. . . . . Toronto.

## Bridges

Dominion Bridge Co. . . . . Montreal.

## Buoy Lighting

Safety Car Heating and Lighting Co., New York

## Cables, Electric and Feeder

E. F. Phillips Electrical Works, Ltd., Montreal.  
The Wire and Cable Co. . . . . Montreal.

## Car Couplers

Latrobe Steel and Coupler Co., Philadelphia, Pa.

## Car Heating

Safety Car Heating and Lighting Co., New York

## Car Jacks

James Cooper . . . . . Montreal.  
W. H. C. Mussen & Co. . . . . Montreal.

## Car Lighting

Safety Car Heating and Lighting Co., New York

## Carpets

The Hudson's Bay Company . . . . .

## Cars

Rhodes, Curry & Co. . . . . Amherst, N.S.

## Car Wheels

Jas. W. Pyke & Co. . . . . Montreal.  
Rhodes, Curry & Co. . . . . Amherst, N.S.

## Castings

Montreal Steel Co. . . . . Montreal.  
Rhodes, Curry & Co. . . . . Amherst, N.S.

## Cement Machinery

Jas. W. Pyke & Co. . . . . Montreal.

## Chains

Rice Lewis & Son . . . . . Toronto.

## Coal Haulage Ropes

The B. Greening Co. . . . . Hamilton, Ont.

## Concrete Mixers and Rock Crushers

W. H. C. Mussen & Co. . . . . Montreal.

## Contractors' Plant

James Cooper . . . . . Montreal.  
T. A. Morrison & Co. . . . . Montreal.  
W. H. C. Mussen & Co. . . . . Montreal.

## Cotter Pins

Dominion Wire Manufacturing Co. . . . . Montreal.

## Cross Arms, Top Pins & Side Blocks

The Firstbrook Box Co. . . . . Toronto.

## Crossing Gates

The N. L. Piper Railway Supply Co. . . . . Toronto.

## Curtains

The Hudson's Bay Company . . . . .

## Cuts

Acton Burrows Co. . . . . Toronto.

## Derrick Ropes

The B. Greening Co. . . . . Hamilton, Ont.

## Derricks

James Cooper . . . . . Montreal.

## Door Signs

Acton Burrows Co. . . . . Toronto.

## Dry Goods

The Hudson's Bay Company . . . . .

## Electric Car Route Signs

Acton Burrows Co. . . . . Toronto.

## Electric Cranes

Dominion Bridge Co. . . . . Montreal.  
W. H. C. Mussen & Co. . . . . Montreal.

## Enameled Iron Signs

Acton Burrows Co. . . . . Toronto.

## Engines, Stationary & Marine

Poison Iron Works . . . . . Toronto.

## Engraving

Acton Burrows Co. . . . . Toronto.  
Toronto Engraving Co. . . . . Toronto.

## Expanded Metal

Expanded Metal and Fire-Proofing Co. Toronto.

## Express Office Signs

Acton Burrows Co. . . . . Toronto.

## Fencing

Canadian Steel and Wire Co. . . . . Hamilton, Ont.  
Dominion Wire Manufacturing Co. . . . . Montreal.  
Page Wire Fence Co. . . . . Walkerville, Ont.

## Fire-Proofing

Expanded Metal and Fire-Proofing Co. Toronto.

## Flags

Rice Lewis & Son . . . . . Toronto.  
The Hudson's Bay Company . . . . .

## Flour

The Hudson's Bay Company . . . . .  
The Ogilvie Flour Mills Co. . . . . Montreal.

## Foghorns

Rice Lewis & Son . . . . . Toronto.

## Gates

Page Wire Fence Co. . . . . Walkerville, Ont.

## General Supplies

The Hudson's Bay Company . . . . .

## Grain Elevators

John S. Metcalfe Co. . . . . Chicago, Ill.

## Groceries

The Hudson's Bay Company . . . . .

## Hardware

Rice Lewis & Son . . . . . Toronto.  
The Hudson's Bay Company . . . . .

## Headlights

The Hiram L. Piper Co. . . . . Montreal.  
N. L. Piper Railway Supply Co. . . . . Toronto.

## Hose

Rice Lewis & Son . . . . . Toronto.

## Illustrations

Acton Burrows Co. . . . . Toronto.

## Interlocking Plants

Montreal Steel Co. . . . . Montreal.

## Iron

Rice Lewis & Son . . . . . Toronto.

## Iron Signs

Acton Burrows Co. . . . . Toronto.

## Japans

McCaskill, Dougall & Co. . . . . Montreal.

## Journal Bearings

Jas. W. Pyke & Co. . . . . Montreal.  
St. Thomas Brass Co. . . . . St. Thomas, Ont.

## Lager Beer, &c.

E. L. Drewry . . . . . Winnipeg.

## Lamps & Lanterns

The Hudson's Bay Company . . . . .  
Rice Lewis & Son . . . . . Toronto.  
The Hiram L. Piper Co. . . . . Montreal.  
N. L. Piper Railway Supply Co. . . . . Toronto.

## Launches

Poison Iron Works . . . . . Toronto.

## Life Insurance

Travelers' Insurance Co. . . . . Montreal.

## Lights, Contractors and Wrecking

James Cooper . . . . . Montreal.  
W. H. C. Mussen & Co. . . . . Montreal.

## Linoleum and Floor Coverings

The Hudson's Bay Company . . . . .

## Locomotives (Compressed Air)

American Locomotive Co. . . . . New York, N.Y.  
Baldwin Locomotive Works, Philadelphia, Pa.  
Locomotive and Machine Co. of Montreal

## Locomotives (Electric)

American Locomotive Co. . . . . New York, N.Y.  
Baldwin Locomotive Works, Philadelphia, Pa.  
Locomotive and Machine Co. of Montreal

## Locomotives (Raak)

American Locomotive Co. . . . . New York, N.Y.  
Baldwin Locomotive Works, Philadelphia, Pa.  
Locomotive and Machine Co. of Montreal

## Locomotives (Steam)

American Locomotive Co. . . . . New York, N.Y.  
Baldwin Locomotive Works, Philadelphia, Pa.  
Canadian Locomotive Co. . . . . Kingston, Ont.  
James Cooper . . . . . Montreal.  
Locomotive and Machine Co. of Montreal  
The Saxon Engine Works, Chemnitz, Germany.

## Machine Tools

The Saxon Engine Works, Chemnitz, Germany

## Matches

The Hudson's Bay Company . . . . .

## Milepost Numbers

Acton Burrows Co. . . . . Toronto.

## Mohair

The Hudson's Bay Company . . . . .

## Nails, Wire

Dominion Wire Manufacturing Co. . . . . Montreal.

## Numbers

Acton Burrows Co. . . . . Toronto.

## Nuts, Cold Pressed

John Morrow Machine Screw Co. (Ltd.), Ingersoll

## Oakum

Rice Lewis & Son . . . . . Toronto.  
The Hudson's Bay Company . . . . .

## Oils

Galena-Signal Oil Co., Franklin, Pa., & Toronto.  
The Queen City Oil Company . . . . . Toronto.

## Office Signs

Acton Burrows Co. . . . . Toronto.

## Packing

The N. L. Piper Railway Supply Co. . . . . Toronto.

## Pinch Bars

The Hiram L. Piper Co. . . . . Montreal.  
The N. L. Piper Railway Supply Co. . . . . Toronto.

## Pipe Covering

Mica Boiler Covering Co. . . . . Montreal.

## Plushes

The Hudson's Bay Company . . . . .

## Porter

E. L. Drewry . . . . . Winnipeg.

## Portland Cement

Rice Lewis & Son . . . . . Toronto.

## Printing

The Hunter, Rose Co. . . . . Toronto.  
The Mail Job Printing Company . . . . . Toronto.

## Pumps

Rice Lewis & Son . . . . . Toronto.

## Railway Supplies

The Hiram L. Piper Co. . . . . Montreal.  
The N. L. Piper Railway Supply Co. . . . . Toronto.

## Rails (New)

James Cooper . . . . . Montreal.  
Drummond, McCall & Co. . . . . Toronto.  
J. J. Gartshore . . . . . Toronto.  
W. H. C. Mussen & Co. . . . . Montreal.

## Rails (for relaying)

James Cooper . . . . . Montreal.  
J. J. Gartshore . . . . . Toronto.  
T. A. Morrison & Co. . . . . Montreal.  
W. H. C. Mussen & Co. . . . . Montreal.  
Rice Lewis & Son . . . . . Toronto.  
Jas. W. Pyke & Co. . . . . Montreal.

## Roof Trusses

Dominion Bridge Co. . . . . Montreal.

## Rope

Rice Lewis & Son . . . . . Toronto.  
The Hudson's Bay Company . . . . .

## Screws, Milled Machine

John Morrow Machine Screw Co. (Ltd.), Ingersoll

## Semaphore Arms

Acton Burrows Co. . . . . Toronto.

## Semaphores

The Hiram L. Piper Co. . . . . Montreal.  
The N. L. Piper Railway Supply Co. . . . . Toronto.

## Shafting

Rice Lewis & Son . . . . . Toronto.

## Shipbuilders' Tools & Supplies

Rice Lewis & Son . . . . . Toronto.

## Ship Lamps

The Hiram L. Piper Co. . . . . Montreal.  
The N. L. Piper Railway Supply Co. . . . . Toronto.

## Ships

Poison Iron Works . . . . . Toronto.

## Shovels

James Cooper . . . . . Montreal.  
The Hudson's Bay Company . . . . .  
Rice Lewis & Son . . . . . Toronto.

## Side Bearings

Simplex Railway Appliance Co. . . . . Montreal.

## Signal House Numbers

Acton Burrows Co. . . . . Toronto.

## Signals

The Hiram L. Piper Co. . . . . Montreal.  
N. L. Piper Railway Supply Co. . . . . Toronto.

## Signs

Acton Burrows Co. . . . . Toronto.

## Snow Ploughs

Rhodes, Curry & Co. . . . . Amherst, N.S.

## Spikes

Rice Lewis & Son . . . . . Toronto.

## Springs

B. J. Coghlin & Co. . . . . Montreal.  
Montreal Steel Co. . . . . Montreal.

(Continued on preceding page.)

# Hudson's Bay Company

INCORPORATED 1670



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—THE COMPANY OFFERS FOR SALE—

## FARMING AND GRAZING LANDS

—IN—

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ON EASY TERMS OF PAYMENT AND WITHOUT ANY  
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### TOWN LOTS FOR SALE

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**Winnipeg, Vancouver, Victoria, and Other Places**

WHERE INTENDING PURCHASERS WILL FIND THE BEST GOODS OF  
EVERY DESCRIPTION AT MODERATE PRICES.

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