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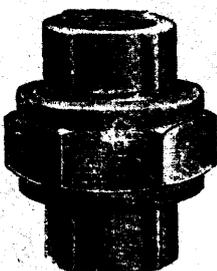
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G.T.R. Semi-Annual Meeting.

The report, for the ½ year ended June 30, as presented at the annual meeting in London, England, Oct. 9, was published in our last issue. The report having been taken as read, the President, Sir C. Rivers Wilson, said:—In considering the reports & accounts of our Co. for the ½-year ended June 30 last, I would ask you to bear in mind that we have been working during that period in comparison with heavy receipts & prosperous times in the corresponding ½-year of 1899. I will ask you also to remember that the conditions under which railways, not only on the other side of the Atlantic, but here also, have been working during the last 6 months have been of a peculiarly difficult & onerous character, imposing an enormous strain upon the resources of the management. That we have been able, notwithstanding, to add largely to our gross income, & even to improve upon our net receipts, I think, is a subject of congratulation to our shareholders. Well, beginning with the question of addition to capital, which the directors have always shown themselves most anxious to restrict within the narrowest limits, we have added £143,800 net to the capital expenditure of the ½-year. Of that a certain portion is represented by the necessity for renewing the bridges over the 10 miles of double track which have been recently completed. The doubling of the line between Hamilton & Niagara Falls, referred to at the last meeting, is being proceeded with, & several miles of the grading have been completed. We hope that considerable progress will be made in this important work, & that 26 miles of the entire distance of 43 miles will be completed & opened for traffic before the close of this year. It will be very satisfactory if we are able to complete the double tracking on that section in the spring of next year, as it is proposed to hold an important exhibition at Buffalo—the Pan-American Exhibition—which it is expected will result in a large & remunerative traffic to our Co. The outlay for the past ½-year, on account of additional double track, amounted to £49,029. The other charges to capital account were in respect of the purchase of additional land at Montreal, required for the improvement of the terminal accommodation there, & for land adjoining the terminals at Island Pond & Toronto for the necessary enlargement of the yards at those points. The board has authorized the construction of a new freight station at Montreal, the cost of which is estimated as \$50,000. The expenditure of £55,031 charged last year to capital on account of improvements to rolling stock is chiefly for the equipment of engines & cars with air-brakes & automatic couplers to meet the requirements of

the U.S. Safety Appliance Act, & Mr. Hays reports that before the end of this year it is expected that all the necessary equipment will be accomplished. The total expenditure on this account has already reached about £220,000, & a further outlay will be required during the current ½-year to complete the equipment of the remainder of the cars with the regulation coupler. This expenditure has been a heavy drain upon us, but it is an expenditure which is imposed by the Legislature of the United States, & it is impossible for us to do anything otherwise than accept it. I may say that all the new

stock realized during the ½-year, to £143,800. I would call your attention to this—that during the recent few months we have been able to exchange for 4% debenture stock a large number of our terminable bonds carrying rates of interest at 6 & 5%, with the result that a saving of £4,500 a year has been effected in our interest charges. Another million of terminable 5% bonds will fall due within the next two years, & their redemption will no doubt result in a further considerable saving, & then after that there is a still further larger quantity of bonds which will be dealt with in the same way.

Turning now to the revenue portion of the accounts, the gross receipts have satisfactorily increased over those of the corresponding ½-year, showing that the favorable business conditions which have existed for some time past have continued during the past ½-year. The passenger traffic has increased by £33,704, & the average fare per passenger is slightly increased. The receipts from freight & live stock traffic increased by £107,448. There has not been much variation in the volume of American or through freight traffic carried in comparison with the June ½-year of 1899. It only increased by 9,876 tons, or ¼ of 1%, but the local traffic was larger by 329,000 tons, or 9½%. The average gross rate per ton per mile was 1-5 of a mill, or 3.4% better than in the corresponding ½-year, caused by the more remunerative rates received from the local traffic, which, as I have just said, increased in a larger ratio than the through traffic. The receipts on account of express business show the gratifying increase of £7,638, & the miscellaneous receipts an increase of £7,683. The west-bound merchandise in the U.S. has fallen off considerably of late, owing, it is said, to the over-stocking of commodities in the West during the last fall & winter, & to high prices. On our own line, while the east-bound through traffic increased by 39,867 tons, the west-bound traffic decreased by 29,991, necessitating the return haulage of a larger number of empty west-bound cars, from which no revenue is derived, & thereby increasing the percentage of working expenses.

The increase in the gross receipts has to a large extent been neutralized by enhanced working expenses, caused partly by the larger train mileage run, but principally by the increased cost of fuel & rails, & in fact, all material required for the working of the traffic & the maintenance of the line. Rails, for instance, in the last ½-year, as contrasted with the corresponding ½-year of 1899, ranged at about an average of 69% higher, & the price of all other railway materials increased, as well as timber, in a very large degree; besides which, I may mention that we purchased a larger amount of material in 1900 than we



GEORGE BELL REEVE,

The newly-appointed General Manager of the Grand Trunk Railway System.

cars built in our own shops, or purchased on renewal account, include, as part of their fittings, the air brake & automatic coupler. The supply of suitable cars for the proper conduct of our coal supply is quite inadequate for the Co.'s requirements, & the board, at the request of the General Manager, has authorized the purchase on capital account of 300 double-hopper coal cars of modern design, from which considerable economy in the transport & handling of fuel is anticipated. The total charge to capital on the accounts now presented to you amounts, after crediting £14,000 for premium received on debenture

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did in 1899, when we experienced considerable difficulty in getting our orders promptly complied with. With reference to working expenses, the maintenance of way expenditure shows an increase of £8,220, due to the charge on account of the new general offices in Montreal, which I hope we shall see completed in the spring of next year. There was a greater outlay for clearing snow in the early part of the ½-year, but economies in other items of which the abstract is composed compensated for the increase. £15,402 is included in the maintenance of way charges on account of renewal of bridges & the reconstruction of the Victoria Jubilee Bridge on the basis authorized some time ago. In the motive power department the expenses exhibit a large increase, caused to a considerable extent by the rebuilding of a larger number of locomotives & cars than in the corresponding ½-year. Of course, the enhanced rate of wages & the higher prices of materials have influenced the expenditure in this as well as in other departments.

With reference to the renewal of our rolling stock there are in process of construction in the Montreal shops 1,000 standard 30-ton box cars, the cost of which will be borne by revenue or charged to the car renewal account. The greater portion of the material has been for some time in readiness for the building of these cars, but there has been difficulty in obtaining delivery of some special parts of the iron work required, which is, however, now coming forward, & the cars will be completed as rapidly as possible. Twenty-four of the new standard engines are expected to be turned out of the locomotive shops before the end of the year. The work on these renewals has been somewhat retarded by the boilermakers' strike, which is still unsettled, & the work is being carried on with a largely-reduced force. I should like to say one word in eulogy of the two extremely capable officers who preside over these departments—I allude to Mr. McWood, Superintendent of the Car Department, & Mr. Morse, Superintendent of the Motive Power Department. They have worked with an ability & zeal beyond all praise, & I think the thanks of the shareholders are due to them.

The work on the bridges between Island Pond & Portland has been hindered by the delay in the delivery of the material contracted for, but Mr. Hays reports that the renewal of all the bridges between Montreal & Portland will be completed before the end of the year. Owing to the high prices of material but little work has been done on the renewal of the bridges on the Southern division—that is the division over which the Wabash has running powers—for which \$230,000 was esti-

mated to be required. These bridges are safe for the size of engines now used on this section of the line, but they will have to be renewed in heavier material to enable us to run over them the heavier modern locomotives. Meantime the bridge renewal account stands as follows: The total expenditure originally estimated to be required for these renewals, & for the revenue proportion of the cost of reconstructing the Victoria Jubilee Bridge amounted to £241,309, of which £172,795 has been expended to June 30 last, leaving a balance of £68,514 of the original estimate unexpended on June 30 last. There has been charged to revenue to June 30 last, including £20,000 specially allocated from the revenue for the ½-year ended Dec. 31, 1899, £138,090, leaving £103,219 still to be charged to clear off the whole amount in 5 years from June, 1898, as originally contemplated, unless, as the directors hope, the revenue of the Co. will permit of its being discharged at an earlier period.

In the charges for conducting transportation the wages of the enginemen & firemen have increased by nearly £13,000. The fuel has cost more by £36,997, partly attributable to increased consumption caused by the larger engine mileage run, & the heavier loads hauled at higher speed, & partly to the higher cost at which the coal used for traffic purposes has been charged out, notwithstanding that a considerable portion of the fuel used had been contracted for prior to the rise in prices. It may be mentioned that part of the contracts at the lower prices do not expire until early next year, when it is hoped that normal conditions will again prevail, but judging by the circumstances now existing in the U.S. in connection with the coal mining industry we must not be too sanguine in this respect. With the exception of the car mileage balance, which has been against us to an increased amount of £8,116, the other items in this description of expenditure call for no particular comment, but it will be observed that in the charge for compensation for injuries there is a saving of £6,547 & of £6,381 in the cost of the outside agencies, which are favorable features in the ½-year's accounts. The general charges show an increase of about £5,000, attributable to the contribution of \$15,000, announced in the last ½-year's report as having been subscribed by the Co. towards the Patriotic Fund raised in Canada for the relief of Canadians disabled in the war in South Africa, & an amount of \$10,000 on account of a total subscription of \$20,000 to the capital stock of the Pan-American Exhibition, to be held in Buffalo in 1901, in connection with which a large amount of traffic is expected to be carried over our system. I took credit last time I addressed you for a very satisfactory reduction in the ratio of working expenses as compared with the gross receipts, but you will not be surprised to hear that during the last ½-year the ratio has somewhat increased again to 67.42, but I may take this credit to our management, that the percentage is considerably lower than for any June ½-year prior to June, 1895, when the present board came into office, & that even now the amount is slightly below the average percentage since that date. Upon this question of increased ratio of expenses, from which railways are suffering all over the world, the U.S. lines have suffered in common with the Canadian lines. A return for July of 112 American railways exhibits a gross increase of no less than \$5,430,000, with a net gain of only \$138,000, & the same condition of affairs is obtaining in this country also, as you are all aware.

The result of the ½-year's operations was as follows: There was an increase in the gross receipts from all sources of £156,474, & in the working expenses of £144,305, leaving the net traffic receipts larger by £12,169 than in the corresponding ½-year of 1899. The net revenue charges, after deducting the cre-

dividends to that account, amounted to £1,585 more, & the payments on account of the controlled lines were £5,078 less than in the ½-year ending June 30, 1899, & the increased amount available for dividend amounted, therefore, to £15,662, a result which, I venture to think, taking into consideration all the circumstances in connection with the ½-year's operations, must be regarded as satisfactory.

I should like to say one word in answer to some friendly critics who have upon more than one occasion charged me with being a pessimist, for this reason, that in stating to you the successful working of our Co. in recent times I have insisted so much upon the desirability of expending largely, while we can do so, in the improvement of our line. And from that point of view only I admit the charge, & I earnestly reiterate my advice to the shareholders, to be patient with us in this matter. Considering that we have been able to distribute among the proprietors not far from £1,000,000 sterling in dividends during the last three years, I think they will not grudge to the board the spending, so far as they can safely do so, of further amounts upon the improvement of the line with the view to securing in a larger degree the prosperity of the Co. & thus enhancing the value of your securities. The great object of our practical managers is to economise as far as possible by increasing the train loads, thereby obtaining a reduction in the cost of working, which means increased profit. To do that money must be spent. I will give you an illustration of the economy which may be effected by improving the grades on some portion of our line. Between Brockville & Montreal at the present the average number of freight cars that an engine can draw is 34, but not very far from this point on the same section of the line—between York & Belleville—only 27 cars can be hauled. You will see at once how indispensable it is that this state of things should be improved, so that the Belleville section should be worked on the same basis as the Brockville section, & with the same economy. Therefore, you must not grudge us the reasonable outlays we propose in furtherance of these important works. I have received, every now & then, letters from proprietors who are somewhat impatient because they have not received dividends for a considerable period. I had one or two letters from 3rd preference shareholders wanting to know when we shall resume payment upon the 3rd preference stock, and rather complaining that we are spending money on the line which might go into their pockets. My answer to them is a repetition of what I said just now. I must ask them to be patient, & in the meantime what they do not get in interest they get in improved value of their security. The value of the 3rd preference stock when we took office, if I remember rightly, was about 12, & is now 21; therefore, even those less fortunate stockholders have some reason to be satisfied with what has been done during the last five years. I am not a pessimist. On the contrary, there is no one who has a greater faith in the future of this great company. I am convinced that the prosperity of the G.T.R. will continue to grow with the prosperity of the country through which it runs, & to which it adds so much prosperity itself. There is a great future before Canada; there is a great future for the American States through which our line passes, & with which it is connected, & I have the utmost faith in the permanent & stable prosperity of this company.

The report I have to make as to the Central Vermont Ry. affords a pleasant contrast with the statements made to you a few years ago. I am glad to tell you that the line, as reorganized last year, has been working most satisfactorily. The result of the first 14 months' working since it was taken over from the receivers on May 1, 1899, to June 30, 1900, shows that, after paying all its fixed charges, it has

earned a surplus of \$142,000, a matter of great interest to us because over & above our large holding of bonds, on which, by the way, we are receiving a regular income of \$60,000 a year, we are holders of \$2,215,000, or more than two-thirds of the whole of the capital stock of the Co. But Mr. Hays has, I think, very properly & prudently, urged upon the board the necessity of not distributing this surplus, but to devote it, & even for a limited period to go on devoting surplus earnings, to the improvement of the line. We took it over in a poor condition, with a shortage of cars & a very light motive power. These matters will have to be improved if the line is to be worked as profitably as it should be. What we propose then is, with your agreement, that the surplus earnings, for the present at all events, should be applied to the improvement of the line. That, of course, will only last for a limited period, & then we shall have a thoroughly well equipped line, working at, I hope, continued profit for the benefit of our proprietors. I can only hope that the success attending the reorganization of the C.V.R. is a good omen of what we may expect from the reorganization of the C. & G.T.R.

I should like, in dealing with the Chicago & Grand Trunk, to shortly recapitulate what we have done up to the present time, & what the actual position of the case is. I have explained to you on former occasions that a large amount of C. & G.T.R. 6% 1st mortgage bonds would mature on Jan. 1, 1900, that the traffic agreement between the G.T. & the Chicago & G.T. companies under which the interest on those bonds was secured terminated on their maturity, & I also informed you that it was indispensable that a considerable amount of additional capital must be raised & expended for doubling the track & improving the grades of the C. & G.T. line, & that the C. & G.T. Co. had no means either of providing for the bonds when due, or for the improvement of the line. The directors were not prepared, as had been suggested in certain quarters, to recommend the proprietors of the G.T.R. to provide out of its resources the money required for these purposes, for which they were neither morally nor legally responsible, & therefore to place the affairs of the C. & G.T.R. on a permanently satisfactory footing, the only alternative was reorganization, & I announced to you that a scheme with that object was in course of preparation. You were subsequently informed that a plan of reorganization had been promulgated by the C. & G.T. Co. to which the board had in the interest of the G.T.R. Co. assented, & then in furtherance thereof your directors had expressed their willingness to enter into a new agreement for the interchange of traffic with the C. & G.T. Co. when reorganized, whereby the interest at 4% on a 1st mortgage bond capital of \$15,000,000 proposed to be created by the new company would be fully secured. That was how the case stood when I last had the honor of speaking to you upon this subject. However, the terms proposed in the original scheme did not altogether commend themselves to the views of the bondholders, & they made overtures to the reorganization trustees with a view of seeing if some modification could not be made in a direction advantageous to their interest. The result was that conferences were held, & points of modification were agreed to. The most important of them was that, in addition to the guarantee under the traffic agreement between the two companies, the G.T.R. would give an absolute guarantee on the \$15,000,000 of bonds referred to as & when issued by the reorganized company. So far as we were concerned, we thought that as between one guarantee & the other it was a distinction without a difference, inasmuch as the security of the 30% of the G.T. gross earnings on the traffic interchang-

ed between the two companies, which is, if necessary, to be appropriated under the agreement, would be ample to meet the entire interest on the \$15,000,000 1st mortgage bonds to be created by the new company. However, it was stated to us—&, no doubt, with reason—that the bondholders themselves & other investors attached importance to this additional security, & considered that it would enhance the value of their bonds, & therefore your directors had no hesitation in acceding to that not unreasonable request, & this we shall ask you to be good enough to confirm. A further modification of the scheme was that the C. & G.T. 5% 2nd mortgage bondholders are to receive 75% of the nominal amount of their bonds in the new 4% 1st mortgage bonds, & the remaining 25% in new 4% income bonds of the company to be created when reorganized, the interest on which will be payable when the net earnings of the company will permit, after providing for the interest on the 1st mortgage bonds, with this proviso, that the new company would be entitled at any time within 10 years to purchase those income bonds at 85. The scheme thus modified has been agreed to by an overwhelming majority of the 1st mortgage bondholders & almost entirely by the 2nd mortgage bondholders. Let me repeat to you that this 1st mortgage bond will be a 50 year gold bond, with the interest guaranteed by a valuable traffic agreement, & also by the unconditional guarantee of the G.T.R., & further, the bond will be secured by mortgage on the improved double-tracked road. Of course the G.T.R. Co. will receive its proportion of the new bonds in respect of the C. & G.T. 1st & 2nd mortgage bonds now held, & it is also in consideration of the guarantee, which I have mentioned, to receive the entire share capital of the reorganized company. This capital stock, it is fully anticipated, will prove a valuable asset when the contemplated improvements of the line are effected, for which ample provision is made by the reserve of \$4,500,000 of the 4% 1st mortgage bonds to be appropriated for that purpose.

Well, that is all I need have said about the C. & G.T. Co. I should have concluded my remarks, having made it, I think, clear to you that the arrangement is distinctly to the advantage of the G.T. shareholders, but I think it right to inform you that I yesterday received a letter from your former President, Sir Henry Tyler, enclosing a memorandum which he desired should be communicated to you at your meeting to-day. I doubt whether I should have proposed to submit it to you. The memorandum is couched in terms which I think would have fully justified me & my board in refusing to lay it before you. Sir Henry has been greatly wanting in self-respect in the manner in which he has attacked our board, & the language it has pleased him to use in the communication to which I alluded, I think, would have fairly entitled me to put the document in the fire & refused to lay it before you, but I am informed that Sir Henry is present himself to-day. That being so, there is no necessity for reading the memorandum, but I will ask Sir Henry to rise & repeat face to face—to the board whom he has attacked—the charges which he wishes to bring against us. The President concluded by moving the adoption of the report & accounts, seconded by Vice-President Jos. Price.

Sir Henry Tyler said the C. & G.T. Co. was owned and controlled by the G.T. Co., & when they were told in the Directors' previous ½-yearly report that the C. & G.T. Co. had promulgated a scheme, & that that scheme had been assented to by the G.T. Co., he could only say that it was a false pretence, because the whole thing was done by the G.T. Co. itself. The President of the C. & G.T. was the General Manager of the G.T., & had to obey this board; therefore this board

was responsible for that scheme, & not the C. & G.T. Co. When the G.T. Co. had undertaken by a solemn engagement to pay for 22 years longer 5% interest upon the 2nd mortgage bonds of the C. & G.T. Co., and when they promulgated a scheme & compelled them to accept that scheme, which gave a smaller interest, he could only characterize it as repudiation. All he asked was that the directors should be honest & fair. He concluded by moving the following proposition: "That this meeting respectfully requests the President & Directors of the G.T.R. Co. to reconsider the position of holders of C. & G.T. mortgage bonds, & not to allow those holders to be placed in a worse position than that which had been guaranteed to them by the G. T. R. Co." Mr. Philpots seconded the proposition.

The President said he admired the courage—he might almost say the audacity—which had brought Sir Henry Tyler there, not as a G.T. shareholder, but as a C. & G.T. bondholder, to attack the interests of this Co., over which he had presided so many years. Sir Henry asserted they had repudiated a solemn & unconditional guarantee of interest upon the bonds issued in 1882. He (the speaker) absolutely denied that statement. This mortgage was a 2nd mortgage, & the day the 1st mortgage was unsatisfied & the line foreclosed & sold, that arrangement of 1882 fell ipso facto to the ground. For six years they had been paying out of their traffic balance \$95,000 a year to make up the dividend of those C. & G.T. bondholders, & forsooth, Sir Henry Tyler came there & asked them, when there was no legal or moral obligation upon them to do so, to continue in perpetuity this terrible load! Sir Henry had not alluded to the fact of the enormous amount of money which was required to put the C. & G. T. in good order. Owing to the most extraordinary systems of finance which were in force in the G.T. Co.

some years ago, their capital had been piled up to cyclopean proportions, and, so far as the board was concerned, they would not do anything to add to their capital charge unless for matters of absolute necessity relating to their own line. Sir Henry, speaking with all the authority which ought to attach to a former President of the Co., accused the Directors of dishonourable acts. In the letter to which he had referred he called them highwaymen & compared them to the persecutors of Captain Dreyfus. He protested against such language being used to men of honour who had nothing to reproach themselves with. So long as they had the favourable verdict of their shareholders they could afford to disregard Sir Henry's ill-temper, his discourteous words and unfounded charges.

Sir Henry Tyler's proposal was put to the meeting & lost, amid loud applause. The original resolution was then put and carried unanimously.

The following resolution was unanimously carried: "That this meeting approves of the working arrangements proposed to be made in connection with the reorganization of the C. & G. T. R. Co., including the giving by this Co. of an unconditional guarantee of interest on an issue of \$15,000,000 4% 1st mortgage 50-year gold bonds, proposed to be created by the new Company to be formed under the reorganization, & that the Directors be & are hereby authorized to take such steps as they in their discretion may think advisable to give effect thereto."

A vote of thanks to the President & other directors was carried amid applause, one shareholder, in speaking to it, saying: "We must all admire, not the audacity, but the boldness & courage of our Chairman, who stood up in this room publicly & supported our cause, & would not allow us to be ruined—well, I will not say by whom."

RAILWAY FINANCE, MEETINGS, &c.

Boston & Albany.—The shareholders of the New York Central have ratified the action of the directors in taking a lease of the B. & A.R.R. for 99 years. The negotiations have been in progress for about a year, having been protracted by the delay of the Massachusetts Legislature in passing the necessary legislation. The lease has been dated back to July 1 last. The B. & A. mileage is as follows: main line, Boston to Albany, 201.65 miles; branches, 103.90 miles; leased lines, 88.40 miles; total 393.95 miles. The gross earnings for the year ended June 30, 1898, were \$9,241,568.39; expenses, \$6,088,069.12. An 8% dividend was paid for that year.

Calgary & Edmonton net earnings for Sept., \$10,142,23, against \$10,254.31 in Sept. 1899.

Canadian Northern—The remaining 20% on subscriptions to the £700,000 4½% 1st mortgage bonds on the Ontario division fell due on Nov. 2.

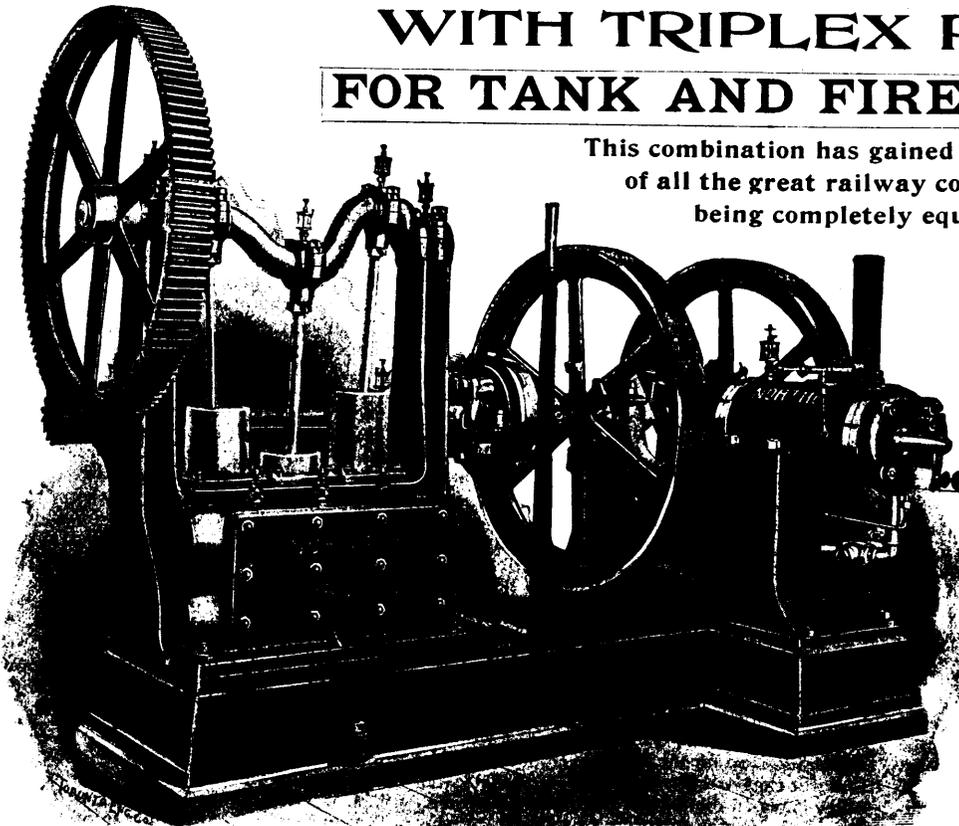
The Chicago & Grand Trunk Ry. was sold Oct. 31 under 1st mortgage foreclosure proceedings brought by the Mercantile Trust Co. of New York, in accordance with a decree of the U.S. District Court. General Manager C. M. Hays & E. W. Meddaugh, of Detroit, representing the stockholders of the road, were the only bidders, the road being sold to them for \$5,708,701.04. Of this \$5,437,000 represented the mortgages, & \$271,701.04 interest.

Dominion Atlantic gross earnings Jan. 1 to Sep. 30, \$640,489, against \$567,310 for corresponding period of 1899.

Great Eastern.—C. N. Armstrong, of Montreal, has taken action in the Superior Court against Mayor Prefontaine, calling on the latter to account for \$65,000, the purchase

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price of a property belonging to the plaintiff, & which was sold through Prefontaine to the South Shore Ry. Co., Prefontaine being entrusted with the money to pay certain claims. The property referred to is a portion of the Great Eastern Ry., between Yamaska & St. Gregoire, Que. Armstrong claims that Prefontaine did not fulfil the condition of the trust undertaken by him, & that especially he has not paid certain engineers who had prepared plans of the railway, & workmen who had assisted in the construction of the line. He also complains that other liabilities of the G.-E.R. & of the plaintiff have not been paid or discharged by Prefontaine, although he has received the moneys out of which these obligations were to be paid by him. Plaintiff asks that defendants be ordered to render an account of all the moneys received from the South Shore Ry. Co. & H. Beauchemin, also how they were disbursed.

Great Northern, U.S.A.—Gross earnings, July 1 to Sep. 30, \$7,554,253, a decrease of \$122,863 from corresponding period of 1899.

New Brunswick's Railway Claims.—Particulars of the claims of New Brunswick against the Dominion in connection with the Eastern Extension Ry. were given in our last issue, pg. 317. The arbitrators have decided that the contention made on the part of the Dominion that the \$150,000 voted in 1884 was in full of all claims by the Province in connection with this road is not sustained by the evidence, but that the facts & circumstances are altogether the other way. They also decided that the Dominion Government pay to New Brunswick the various semi-annual payments of \$3,750 to which it would have been entitled if this \$150,000 had been carried to the credit of the Province in 1869 instead of 1884, as they think it equitably should have been; together with interest at 5% on the several semi-annual payments from the time they would have been payable up to July 1, 1884, when the \$150,000 was credited. This sum amounts to \$145,218.75, & they have decided that the Province is entitled to be paid this also by the Dominion, with interest at 5% per annum.

Ontario & Quebec.—The 1/2-yearly interest due Dec. 1 on this Co.'s 5% debenture stock will be paid on that date by the C.P.R. Co. in London, Eng. Interest for the same period on the common stock of the Co. at the rate of 6% per annum will be paid on the same date at the Bank of Montreal, or at the London office of the C.P.R.

Ottawa & Gatineau.—It is said that arrangements are being made for the amalgamation of this Co. & the Pontiac Pacific Junction Ry. Co.

Pontiac Pacific Jet. Ry.—It is said that arrangements are being made for the amalgamation of this Co. & the Ottawa & Gatineau Ry. Co.

Qu'Appelle, Long Lake & Saskatchewan net earnings for Sept., \$3,934.47, against net loss of \$4,607.45 in Sept. 1899.

Quebec Central gross earnings for Sept., \$55,358.04, against \$52,927 in Sept., 1899; working expenses, \$34,479.09, against \$31,400.90; net earnings, \$20,878.95, against \$21,526.10.

Gross earnings, Jan 1 to Sept. 30, \$407,458.69, against \$386,787.70 for corresponding period of 1899. Working expenses, \$270,334.15, against \$246,193.53; net earnings, \$137,124.54, against \$140,594.17.

Quebec & Lake St. John.—The shareholders have authorized the directors to issue prior lien bonds, not exceeding £170,000, bearing not exceeding 4% interest, as a first mortgage on the property. This is under power given by the Quebec Legislature last session. (Apl., pg. 103.)

U. S. Railway net earnings for Aug. on 135 roads, according to the Chronicle, were \$34,005,748, which is a gain of \$2,008,647, or

6.28% over the net of the same roads last year. This increase follows a gain of \$5,004,870, or nearly 20%, in the preceding year. There was an increase of \$6,915,392, or 7.53% in the gross earnings. Twenty-eight roads reported increases in net earnings of more than \$30,000, & 16 roads reported similar decreases. The Pennsylvania Lines east & west led in the increases with \$646,300; then follow the Atchison, Topeka & Santa Fe with \$327,875; the Reading, \$175,615; the Chesapeake & Ohio, \$172,477, & the Chicago, Milwaukee, & St. Paul, \$166,508. The largest decrease was of the Mexican Central, \$169,607. The Illinois Central showed a loss of \$137,390, & the Southern Pacific, \$121,430.

White Pass & Yukon.—Notice is given that the following documents have been deposited at the Land Registry Office, Victoria, B.C.:—Copy of mortgage made Oct. 16, 1900, between The B.C.-Yukon Ry. Co., The Pacific Contract Co., Ltd., & F. Pavy & C. C. Macrae; also copy of 1st mortgage bond, dated Oct. 16, 1900, from the B.C.-Yukon Ry. Co. to F. Pavy & C. C. Macrae, for £72,000, the bond being secured by the mortgage.

Grand Trunk Earnings, Expenses, &c.

The following statement of earnings, supplied from the Montreal office, includes the G.T. of Canada, & the Detroit, Grand Haven & Milwaukee Rys., the earnings of the Chicago & G.T., which is in the hands of receivers, being omitted:

	1900.	1899.	Increase.	Decrease.
July	\$1,844,458	\$1,799,945	\$44,513	....
Aug.	2,088,602	2,064,269	24,333	....
Sept.	2,117,690	2,178,303	....	60,613
Oct.	2,176,028	2,158,337	17,691	....
	\$8,226,778	\$8,200,854	\$26,537	\$60,613
Increase July 1 to Sept. 30,			\$25,924.	

CHICAGO & GRAND TRUNK.—The report presented at the recent annual meeting showed gross earnings for the year ended June 30, of \$3,900,000, operating expenses \$3,289,984, net earnings, \$612,046, a decrease of \$270,994 from the previous year.

C.P.R. Earnings, Expenses, &c.

Gross earnings, working expenses, net profits and increases or decreases over 1899, from Jan. 1, 1900:

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
Jan..	1,52,071.32	\$1,460,501.71	\$61,569.61	\$74,035.75+
Feb..	1,954,087.59	1,331,355.34	622,732.25	23,039.77+
Mar..	2,294,786.97	1,495,685.73	799,101.24	29,794.33-
Apr..	2,491,194.47	1,464,126.85	1,027,067.62	106,764.13+
May..	2,662,897.81	1,583,227.32	1,079,670.49	46,911.88+
June..	2,612,759.73	1,554,954.11	1,057,805.62	34,745.42+
July..	2,471,169.64	1,586,795.74	884,373.90	88,587.73-
Aug..	2,637,983.61	1,583,508.01	1,054,475.60	35,643.88+
Sept..	2,663,491.82	1,604,791.81	1,058,700.01	88,185.54-

\$21,940,442.96 \$13,664,946.62 \$8,275,496.34 \$114,564.23 + Increase. -Decrease.

Approximate earnings for Oct., \$2,765,000, against \$3,083,000 in Oct., 1899, decrease \$318,000.

SUBSIDIARY LINES.

DULUTH, SOUTH SHORE & ATLANTIC.—Approximate earnings for Oct., \$237,203; decrease from Oct., 1899, \$6,970.

Net earnings for Aug., \$110,083, against \$60,228 in Aug. 1899; net earnings for 8 months to Aug. 31, \$681,071, against \$529,585 for corresponding period.

HANCOCK & CALUMET.—Approximate earnings for Oct., \$22,571, decrease from Oct. 1899, \$2,526.

MINERAL RANGE.—Approximate earnings for Oct., \$30,725; increase over Oct. 1899, \$3,568.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—Approximate earnings for Oct., \$412,867; decrease from Oct. 1899, \$145,118.

Net receipts for July, \$80,464, decrease from July 1899; gross receipts for Aug., \$51,621, decrease from Aug. 1899.

Canadian Pacific Railway Land Sales.

	Acres.		Amount.	
	1900	1899	1900	1899
Jan.	31,486	14,718	\$100,857.85	\$46,411.35
Feb.	23,613	13,747	75,771.19	43,371.69
Mar.	31,183	24,045	97,777.79	75,460.76
April.	58,457	36,626	181,775.78	116,835.84
May.	66,057	26,584	214,851.09	88,928.98
June.	57,831	54,225	188,770.64	169,192.74
July.	49,715	47,401	129,481.42	149,546.48
Aug.	32,178	35,214	103,480.78	110,795.50
Sept.	21,807	25,517	69,012.54	83,719.70
Oct.	18,858	30,473	62,769.54	99,429.09
	382,185	308,550	\$1,224,557.62	\$983,602.13

Great Northern Railway, U.S.A.

The operations of the entire system of the G.N.R. Co., including the St. Paul, Minneapolis & Manitoba, in the year ended June 30, resulted as follows:

	1898-9.	1899-1900.
Passengers	\$3,750,338	\$4,652,091
Freight	19,779,209	22,533,020
Mail, express, rents, etc	1,488,356	1,725,678

Gross earnings	\$25,017,993	\$28,910,789
Expenses & taxes	13,091,361	15,868,575
Net earnings	\$11,926,542	\$13,042,414

Following is a summary of the income account of the entire system:

Gross earnings of railway system proper	\$25,017,994	\$28,910,789
Gross earnings of other proprietary companies	2,580,668	2,188,268

Total earnings of system	\$27,598,572	\$31,099,057
Operating expenses & taxes	14,861,108	17,075,533

Net earnings of system	\$12,737,464	\$14,023,524
Miscellaneous income	952,801	2,290,494

Total net of system	\$13,690,265	\$16,314,018
Fixed charges & dividends on St. P., M. & M. stock	\$5,466,624	\$5,038,348

Dividend, 5% on G.N. preference stock	3,851,034	6,408,778
Funds for improvements & tun's	1,800,000	1,800,000

Total disbursements	\$11,117,658	\$13,247,126
Surplus	\$2,572,607	\$3,066,892

The income account of the G.N.R. Co. is as follows:

	1898-9.	1899-1900.
Net earnings St. P., M. & M.R. \$	8,902,225	\$9,530,776
Interest on bonds owned	105,017	350,422
Dividend on stocks owned	2,134,620	2,958,855

Profits on treasury securities sold	68,152	689,076
Rent of leased lines	166,318	166,765
Interest & exchange	56,494	223,086
Bills receivable	3,616	3,740
Other income	139,608	213,370

Total	\$11,576,050	\$14,136,090
Rent St. P., M. & M.R.	\$4,137,824	\$3,799,548
Divs. on G.N. stock	3,851,034	6,408,778

Fund for improvements & renewals St. P., M. & M.R.	1,200,000	1,200,000
Fund for Cascade tunnel	600,000	600,000

Total disbursements	\$9,888,858	\$11,918,326
Balance—surplus	\$1,787,192	\$2,217,764

The average mileage operated of the railway system proper was 5,076 miles (against 4,786); the number of passengers carried 2,483,670 (against 2,024,293); the average rate per passenger per mile 2.378c. (against 2.208c.); the quantity of freight moved 11,529,661 tons (against 10,002.810); the average rate per ton per mile 0.899c. (against 0.916c.); the ratio of expenses to receipts 54.89% (against 52.33%).

Alligator Boats.—A correspondent writes asking a definition of an alligator boat. It is so called from its amphibious character, & is often used in lumbering. It is built with a flat bottom shod with steel, & is equipped with paddle wheels & a powerful windlass driven by an engine. It is sent ahead of the raft, paying out the tow line, & after being fastened to the shore or anchored, the tow line is wound in on the windlass dragging the raft up to it, when the operation is completed. When a rapid or fall has to be passed by the boat a road is cut out along the shore, the tow line taken ahead & made fast, & the boat pulls itself across the portage by means of the windlass.

Calgary & Edmonton Railway Company.

Following is the report for the year ended June 30, 1900: The gross earnings, after deducting earnings from Government service, were \$319,500.58, against \$249,894.77 for the previous year, an increase of 27.85%. The expenses were \$197,861.63, against \$170,993.05 for the previous year, an increase of 15.71%. The percentage of expenses to earnings for the past year is 61.93% as compared with 68.42% for the previous year. The net earnings were \$121,638.95, against \$78,901.72. The earnings from passenger traffic (including Government service) were \$92,247.73, against \$71,731.33 for the previous year, an increase of 28.60%. Freight, express, mail & miscellaneous earnings (including Government service) were \$233,878.56, against \$185,389.59 for the previous year, an increase of 26.15%.

The gross earnings are satisfactory, as both freight & passenger earnings were entirely derived from regular traffic. The increase in operating expenses of \$26,868.58 is not excessive considering the increase in traffic & the fact that of this increase over \$20,000 is under the heading "Maintenance of Way & Structures," & includes the cost of a new bridge over Willow Creek. During the year all bridges were thoroughly repaired, a large number of ties were put in, & the road generally was put in fair condition to meet the requirements of increasing traffic, & as it is expected that traffic will continue to increase it will be necessary for the next few years to expend a considerable sum annually in renewal of ties, ballasting & otherwise improving the road-bed.

The following is a comparative statement of freight carried as compared with the previous year:

	1898-1899.		1899-1900.	
	Tons.		Tons.	
Flour	18,664 bbls.	1,867	21,510 bbls.	2,151
Grain	787,072 bu.	15,872	992,610 bus.	18,700
Live stock	26,802 head	11,015	32,249 head	13,546
Lumber	6,671,700 ft.	8,464	7,288,620 ft.	9,824
Firewood	912 cords	1,370	638 cords	956
Manf. goods		14,988		22,270
Other articles		7,112		10,277
		60,688		77,724

The increase in grain, cattle & manufactured goods is particularly gratifying & the steady stream of immigration to the districts tributary to the railway & the very large area of land being taken up by new settlers & brought under cultivation, indicates that a still further increase in traffic may be expect-

ed. The export of dairy & other farm produce continues to show very satisfactory increase.

The net earnings for the year were sufficient to pay 3 1/2% in cash on the bonds, leaving with the balance carried forward from last year \$56,453.50 carried forward to next year. The cost of building the connection with the Crow's Nest line .857 miles, including the bridge over the Old Man's River which forms part of the connection, was \$25,619.15, of which \$24,000 was disbursed by the Co. up to June 30, 1900, the balance having been paid since. The cost of this connection has been paid out of the above-mentioned balance of net earnings. The bonds authorized on this mileage—£3,200 (\$15,573.33)—have been created, but are still held by the Co.

ASSETS.	
Cost of road	\$6,456,440 00
Crow's Nest Pass connection	24 000 00
Sundry debtors	26,915 16
Cash in bank	9,040 96
Interest deferred	586,836 05
	<u>\$7,103,232 17</u>

LIABILITIES.	
Capital stock paid up	\$1,000,000 00
First mortgage bonds sld	5,458,940 00
Coupons due & not presented	1,002 62
Interest unpaid	586,836 05
Profit & loss account	56,453 50
	<u>\$7,103,232 17</u>

EARNINGS.	
Balance brought forward	\$ 33,148 70
Passenger	\$ 92,247 73
Freight	223,632 82
Expenses	3,276 51
Mail	5,944 65
Miscellaneous	1,024 88
	<u>\$326,126 29</u>
Less Government service included in above	6,625 71
	<u>\$319,500 58</u>

Balance brought down	\$154,787 65
Interest received	281 60
	<u>\$155,069 25</u>

OPERATING EXPENSES.	
General and legal	\$ 3,111 73
Conducting transportation	36,284 73
Management	3,599 64
Motive power	46,751 96
Maintenance of way and structures	98,854 87
Maintenance of cars	9,258 70
	<u>\$197,861 63</u>
Balance carried down	154,787 65
	<u>\$352,649 28</u>

INTEREST ACCOUNT.			
1 1/2% paid on account Jan. 1, 1900, coupon	£14,021	5	0
2% paid on account July 1, 1900, coupon	22,434	0	0
	<u>£36,455</u>	5	0
Less Government subsidy for year, \$80,000	16,438	7	2
	<u>£20,016</u>	17	10
Expenses re service of coupon (London)			889 96
Balance carried forward			56,453 50
			<u>\$155,069 25</u>

As security for the annual subsidy the Government retained & now hold 407,402 acres of the Co.'s land grant.

Following is the official list: President, H. C. Hammond, Toronto; Vice-President, N. Kingsmill, Toronto; Secretary, R. A. Smith, Toronto; other directors, E. B. Osler, D. W. Saunders, W. P. Torrance, Toronto; C. E. L. Porteous, Montreal.

The C. & E. Ry. was opened in Oct. 1892. The C.P.R. operated the line until July 1, 1896, & had the option at that date of acquiring the bonds at 110% & of having the capital stock transferred to it free of charge. This option was not exercised & a new agreement was entered into whereby the C.P.R. will operate the line until July 1, 1901, at actual cost, without charge for general management or for interest on the value of the rolling stock used, & with certain arrangements for allowances to this Co. for traffic interchanged. By this agreement the net earnings & the Government subsidy of \$80,000 a year for 20 years from July 1891 for hauling Government traffic are applicable to the payment of interest on bonds.

The Mica Boiler Covering Co.

This Co. has received the very gratifying intelligence from the Canadian Commission at the Paris Exposition, that it has been awarded the grand prize diploma for its exhibit there. The articles exhibited were a model of a steam engine covered with mica locomotive lagging, & also samples of mica pipe covering. The Co. is naturally very pleased at this, as it is an endorsement of the qualities that it has always claimed for its pipe & boiler coverings, & adds one more to the numerous testimonials as to the high efficiency it shows.

The Co. last spring opened a factory in Montreal, in addition to its Toronto works, in

It Leads Them All.

Where accurate Weighing is required use

GURNEY STANDARD SCALES.

WE MAKE SCALES FOR ALL PURPOSES. ALSO THE REED RECORDING ATTACHMENT FOR RAILROAD TRACK SCALES.

Write For Descriptive Circular.

The Gurney Scale Co.,

HAMILTON, ONT., CANADA.

order to meet increased demands for its coverings, since which time it has been run to its utmost capacity to fill orders; in fact, so much so that it has lately had to get additional room. Among some of the large orders that have been placed with the Co., that of the pipe & boiler covering required at the Royal Victoria Hospital, Montreal, is perhaps the most important. The steam plant is being installed there by a U.S. firm which has always hitherto used the best & purest magnesia that could be got; in this case the firm preferred mica, even to the extent of replacing a quantity of the old magnesia covering, that had been there before, with mica covering.

The Co. has lately placed on the market a sectional pipe cover which differs from the well-known flexible covering in that it is in a moulded form, & except that it still preserves the concentric circles of flakes of mica, is to all appearances like any other sectional cover on the market. It is meeting with great favor, & the Co. finds a market for every foot of it that it can turn out, & at good prices.

Grand Trunk Betterments, Etc.

Coal Plant at Portland.—The Co. is establishing a coal handling plant at Portland, Me. It will have 4 coal towers, similar to those of the Dominion Coal Co. at Windmill Point basin at Montreal, capable of storing 3,000 tons, which will be handled from the vessels to the bins or cars, as the case may be, by "clam shells." The expenditure will be between \$60,000 & \$65,000, & the plant is expected to be ready for service during Dec.

Abolition of Montreal Level Crossings.—Several conferences have been held lately between Montreal City Council & representatives of the Co., & an agreement has practically been reached. The proposed cost, comparatively speaking, is not great, involving, as it does, for a work of such magnitude, the expenditure of only \$1,500,000, half of which it is proposed shall be borne by the city & the other half by the Co. One of the alternative plans submitted would have cost twice that amount, & a third over thrice. The latter, however, called for the raising of all the tracks as far as Victoria bridge, which was felt to be entirely beyond the requirements of the city for many years to come. The objection to level crossings in St. Gabriel's Ward is to be met by the construction of three additional subways at important points in that section, so that the elevation of the tracks for the present will only be carried as far as Atwater Avenue, which marks the dividing line between the city & St. Henri. In future years, when the growth of population, the increase of traffic & the expansion of commerce demands it, the elevation of the tracks throughout Point St. Charles & across St. Henri may be continued without any difficulty. All the

tracks in the yard at Bonaventure station are to be raised to a height of 16 ft., all the passenger tracks being carried at that altitude as far as Atwater Avenue, when, by an easy grade, they will be carried to the low level in St. Henri. In the neighborhood of Lusignan Street a single inclined track will convey the freight trains to the level at Mountain St., where will be one level crossing protected by gates. As freight is only to be permitted to enter the city late at night, & to depart early in the morning, it is felt that this single level crossing will prove neither inconvenient or dangerous. All the G.T.R. freight sheds are to be located east of Mountain St., thus being gathered into an area untraversed by streets, with the exception of Albert, which, however, is retained mainly for the use of teamsters & not for the convenience of the general public. The space between the two stone walls flanking the elevated tracks on either side is to be filled in with earth. At the station there are to be elevators for passengers & lifts for baggage, as well as two easily graded inclines up which trucks may be run. See plans on this page & on page 336. (Aug., pg. 233.)

Fast Track-laying.—Eight miles of rails between Dorval & Ste. Anne de Bellevue, Que., were laid on a Sunday recently without the slightest interruption to traffic, by a force of 120 men working from 7 a.m. to a little before 6 p.m. On the Toronto-Hamilton line $7\frac{1}{2}$ miles were recently laid in 10 hours by 95 men.

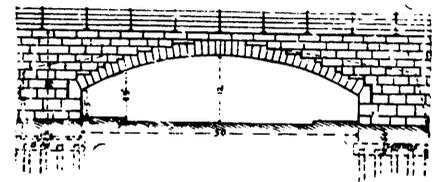
Ottawa to Brockville.—A report that the Co. is having a survey made for a line between these points is incorrect. See under heading "Ottawa, Brockville & St. Lawrence Rv."

Thousand Islands Jet. is to be moved about $1\frac{1}{2}$ miles east to the top of the hill, to avoid the difficulties & danger involved in stopping trains at the bottom of the hollow in which the station is now located. The work has commenced. (Aug., pg. 234.)

The Pottawatamie River Bridge, near Owen Sound, is being replaced by a steel thro' girder structure 98 ft. long.

Port Credit.—The bridge at Port Credit on the Toronto-Hamilton line is being raised $12\frac{1}{2}$ ft.; the track on each side of it is being levelled, & the station has been moved to the top of the hill. This will remove the worst gradient on this line, reducing it 17 ft., by raising the bridge $12\frac{1}{2}$ ft. & lowering a hill $4\frac{1}{2}$ ft., obviate winter delays & generally facilitate traffic. The work is being done without any interruption of train service.

Hamilton.—At a recent conference between the Mayor & General Superintendent McGuigan, the question of renewing the high level bridge & bridging Strachan St., was discussed. Mr. McGuigan would not give any assurance that the work will be done.



G.T.R. SINGLE-ARCH BRIDGE.

Single arches, with a 45 ft. roadway, & a sidewalks, each 6 ft. wide, are to cross Lusignan, Richmond, St. Martin, Seigneurs, Chatham, Canning, Fulford, Drummond, & Vinet, Montreal, in connection with the high level track scheme.

He intimated that the Co. is contemplating running all through trains across the Beach, instead of over the Toronto branch between Burlington & Hamilton. General Manager Hays, when at Hamilton recently, said there was nothing new about the establishment of an up-town station.

Hamilton-Niagara Falls Double Track.—Work is being proceeded with rapidly on the double-tracking of the line between Hamilton & Niagara Falls, a distance of about 43 miles. By the close of this season about $25\frac{1}{2}$ miles of the second track will have been completed from Hamilton to within a short distance of Jordan. Considerable grading has been done between Jordan & Niagara Falls. At the crossing of Jordan River the line will be straightened by re-diverting it to its old site of some 20 years ago, & a new bridge will be built. This is pretty heavy work, & is not expected to be completed before the fall of 1901. The masonry for the draw-bridge to be built over the Welland canal has been finished, but the bridge will not be erected till well on into next year. It is expected to have the whole of the work through to Niagara Falls completed by the end of 1901. The line is being laid with 80 lbs. rails, which have been specially rolled with a 6 in. base instead of a 5 in. one. (Aug., pg. 234.)

Brantford & Main Line Trains.—Several surveys have been made for the proposed cut off for main line trains to run through Brantford, but no decision as to construction appears to have been arrived at. (Aug., pg. 234.)

At Brantford the Buffalo & Goderich track is being raised, & the old Great Western track is being lowered so as to cross underneath it. This necessitates a lowering of the grade on the latter line to the street levels, & a raising of the Buffalo & Goderich track, entailing considerable work. It has not been decided, as stated by a local paper, to do away with the Y east of the G.T.R. station.

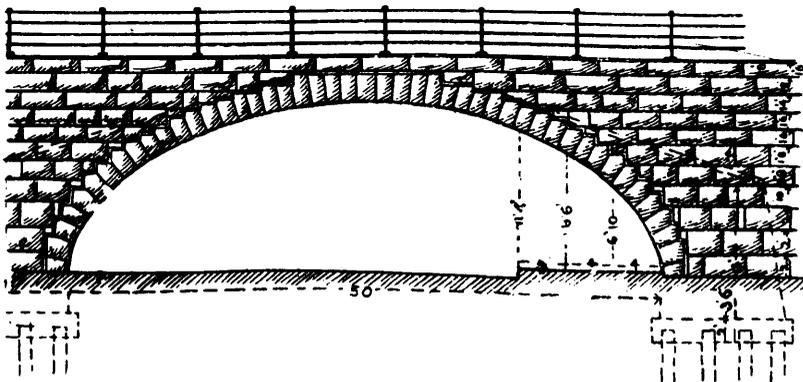
Meaford Extension.—Grading has been started on the extension of the line at Meaford to the harbor, to make close connection with boats & with the elevator which is being erected there. (Jan., pg. 6.)

Port Robinson to Welland Jet.—The second track between these points, about 7 miles in length, has been completed & put in use.

Fort Erie to Welland Jet.—This line, 18.60 miles, has been relaid with 80 lbs. rails. The whole of the line between Fort Erie & St. Thomas is now laid with that weight.

International Bridge.—Work is progressing satisfactorily on the renewal of this bridge between Fort Erie, Ont., & Buffalo. Nothing has been done upon the masonry except some repairs & renewals of a very trifling character; the superstructure, however, is being wholly renewed. The weight of the old superstructure was 3,589,994 lbs., while the one now under construction will weigh about 9,000,000 lbs. (Aug., pg. 234.)

Chicago & Grand Trunk.—In double-tracking this line it is intended to reduce some of the heavy grades materially, so as to obtain, if possible, a $\frac{1}{2}\%$ maximum grade throughout the line. (Aug., pg. 234.)



HALF-SECTION OF ATWATER AVENUE ARCH, G.T.R.

The above shows a half-section of the double arch to cross Atwater Avenue, Montreal. Each archway is to be 50 ft. in width. The highest point of passage, from the ground level to coping-stone, will be 14 ft. The sidewalks on the outer edge of each archway will be 4 ft. wide. Double arches, on a smaller scale, similar in construction, will also be placed at Fulford, Guy & Mountain Streets.

Central Vermont.—Work was started Oct. 12 on the extension of the Montreal & Province Line Ry. from Farnham to Freleighsburg, a distance of 18 miles, the intention being to complete the work this year. A line was in operation over this route about 25 years ago, but was abandoned. The country is generally level & the work will be light. Stations will be established at Stanbridge North, Stanbridge East, Riceburg & Freleighsburg. The work is being done directly by the Co. Operations will be commenced as soon as the extension is completed. (Aug., pg. 238.)

The Co. is reported to have let contracts for steel bridges at Winooski, West Berlin, Northfield, East Granville, Royalton, West Hartford & Richmond, & for 12 or 15 plate girdler structures on the Southern division.

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

Atlantic Division.—During the last week of Sept. & the first week of Oct. exceedingly heavy & continued rains fell in New Brunswick, doing great damage to the Co.'s lines. Between 25 & 30 washouts occurred, mainly between Fairville & Vanceboro, on the St. John-Montreal line, & along the branch lines. These ranged from slight washouts from 2 ft. deep, to huge excavations up to 15 ft. deep & over 100 ft. long; several trestles were extensively damaged & some culverts washed out. Through traffic was entirely suspended on the St. John end of the line from Oct. 11 to 19, & passengers had to be conveyed from St. John up the St. John River to Fredericton, thence by team to Fredericton Jct., & vice versa, this route having to be used both for the St. John-Montreal & for the St. John-New England traffic. Superintendent Timmerman & Division Engineer Barber were incessantly on the line superintending repairs, & had about 1,000 men at work. Manager Tait went down from Montreal to look over the situation. It is said the cost of repairing the main lines & branches will be nearly \$100,000.

Windsor St. Station, Montreal.—Good progress is being made on the westward extension of this building for station & general office purposes. The masonry is completed & interior work is now being done, it being the intention to have the extension completed for occupancy early next spring. (Dec. '99. pg. 348.)

The trestle approach to the station from the west is being replaced with permanent work,

& the Co. is allowing some property it has bought to be filled in with material from foundation excavations, etc., with a view to utilizing it for additional side track room later on.

Montreal to Toronto.—Under the direction of the Chief Engineer of Construction, A. C. Dennis is surveying a new line from Claremont, on the Montreal-Toronto line 310 miles from Montreal, to about 1½ miles west of Agincourt, also on the Montreal-Toronto line, a distance of about 17 miles. The survey runs north of the present line, the object in building the proposed diversion being to reduce the gradients, which are now 1%. The new line is expected to run pretty close to Markham.

Smith's Falls Divisional Offices.—The staff have moved into the new quarters recently completed. The building is a 2-story frame one on stone foundations, 36 ft. x 55 ft., with bay windows. There is a passage-way through the centre of the building, with rooms on each side. On the ground floor are conductors room, B. & B. Master's office, Roadmaster's clerk's office, Roadmaster's office, Trainmaster's office, telegraph office, & booking room. On the first floor are Superintendent's office, Chief Despatcher, despatchers, stores, Superintendent's clerks, Resident Engineer, draughting room. There is a lavatory on the ground floor. The building is heated by steam. (Jan., pg. 6.)

Chateau Frontenac.—Several of the directors recently visited Quebec, & as a result it has been decided to make a large extension to this hotel. President Shaughnessy & Bruce Price, architect, of New York, subsequently went to the Chateau to look the ground over, & it is understood Mr. Price is now working on plans for the extension. Some difficulty is being experienced in obtaining the necessary land.

Ottawa Connecting Line.—Nothing is likely to be done this year about the construction of the proposed line to connect the Co.'s union station near the Chaudiere Falls with the central station near the canal basin, but it is said to be probable that construction will be gone on with next year. It is said the options on property that are necessary have been secured. (Aug., pg. 232.)

The Ottawa Union Station is rapidly nearing completion, & it is expected that it will be ready by Dec. 1. The design may be described as being of the modern American style of architecture, savoring considerably

of the Romanesque. The building has a frontage of 156 ft., & is 40 ft. deep. A wing on the east side will have a frontage of 35 ft., & will be 80 ft. deep. The station will be almost twice as large as the old one, which had a frontage of about 50 ft. The centre pavilion runs up 4 stories. The building will have a high pitch roof of Rockland slate. Its foundations are on solid rock, 12 ft. from the surface. For 3½ ft. above the foundation the walls are of Scotch granite & above the masonry is white Scotch fire brick. The windows are all large & fitted with English sashes. The central room will be a general waiting room 32 by 40 ft. It will also contain a ticket & telegraph office. To the right of this room will be the 1st class waiting & smoking room for men & a 1st class waiting room for women. Between the two a corridor will extend to the north end of the building, at which will be situated the restaurant, kitchen & pantry. To the left of the main waiting room will be the 2nd class waiting room. At the extreme left there will be the 80-ft. wing, which is to be utilized as a general baggage room & as the office & store room of the Dominion Express Co. Upstairs will be situated the offices of the Superintendent & staff; train despatchers, Trainmaster, Roadmaster, Building & Bridge Master, & three spare offices. The building was commenced on July 20, & is expected to cost about \$25,000. The station is situated 50 ft. back from the road, between the aqueduct & the Richmond Road. Ample space will be allowed for vehicles in front of the station. Six tracks for passenger trains have been constructed to connect with the new station. Two platforms, with umbrella roofs, 700 ft. long, have been built between these tracks. The platform at the rear of the station is also covered by an umbrella roof. The old station site & tracks will be used as an extensive freight yard. The new station is about 5 ft. above the former one & this difference in level has been filled in & graded. E. Maxwell, Montreal, is the architect. An illustration of the station is given on page 329. (Aug. pg. 232.)

Eastern Division Shops.—An Ottawa paper recently stated very positively that the Co. was preparing to erect extensive workshops on its property at Westboro, a suburb of that city, to employ 1,500 men, so that a considerable amount of the work which is at present done at Carleton Jct. might be done at Westboro, & that the electrical power of the Metropolitan Co., conveniently situated at Britannia, would be used. We are officially

The Haliburton Lumber Company, LIMITED.

All Kinds of Hard and Soft Timber and Lumber,
Shingles, Slabs and Tan Bark.

PINE, SPRUCE, HEMLOCK AND BIRCH BILL STUFF CUT TO ORDER.

MILLS AT INGOLDSBY, ONT.

Head Office, Henderson Block, Corner Queen and Yonge Sts., TORONTO.

informed that there is no truth whatever in the rumor.

Spur from Webbwood.—The Spanish River Pulp Co. is building a spur from $1\frac{1}{2}$ to $1\frac{3}{4}$ miles long, starting from the Sault Ste. Marie branch about 4 miles east of Webbwood. (Aug., pg. 232.)

Dyment to New Klondike.—The spur of 7 miles from Dyment, 182.1 miles west of Fort William, to the New Klondike mining district, has been completed. (Aug., pg. 233.)

Branch to Manitou Lakes.—A deputation waited on Manager Whyte in Winnipeg a short time since urging the construction of a branch from the main line of the C.P.R. to the Manitou lakes. Several routes were discussed, the one from Dyment to Mosher Bay being considered the most favorable, owing to a spur having been built from Dyment to the New Klondike. A charter for a line through this district, starting from the C.P.R. main line, between Dryden & Tache stations, & connecting with the Ontario & Rainy River Ry., between Sturgeon Falls & Fort Frances, was granted at the last session of the Ontario Legislature to the Wabigoon & Rainy Lake Ry. Co.

Lac du Bonnet Branch.—Track laying has been completed on this branch from Molson, on the main line, to Lac du Bonnet, 28.8 miles. There will be considerable brick

run through the centre; on each side of this there will be a 12 ft. 6 in. roadway for general traffic, & running by the side of each roadway will be a 6 ft. sidewalk for pedestrians. The decline commences at Fonseca Avenue on the south side, & continues a like distance to the north of the track, a point some distance on the south side of Sutherland Avenue. The decline is 1 ft. in 15, to a depth of 12 ft. 6 in., the C.P.R. tracks to be raised 1 ft. from their present level. When the C.P.R. track is clear of trains there will be 45 ft. on each side of the subway opening, on the level, which will be open for street traffic as at present. The City Engineer approved of the plans. The question has been considered at several meetings of the City Council recently. The Winnipeg Electric St. Ry. Co. objected to the depth of the subway, proposing that it should be 14 instead of 13 ft.; the City Council decided in favor of this contention, and also for an increase of width from 42 to 60 ft., in consequence of which further negotiations are going on between the city & the Co. (June, pg. 175.)

Plans have been prepared for extensive alterations, improvements & extensions in the yards, shops, etc., at Winnipeg, involving a large expenditure & providing for the requirements for traffic for some years to come. (Feb., pg. 39.)

about completed. Page Wire Fencing has been used on the whole of this branch. (Aug., pg. 233.)

Pipestone Branch Extension.—Grading & track laying have been completed to Arcola, 95 miles west from Menteith Jct. At present the line is only being operated to Manor, 76 miles from Menteith Jct., but it will probably be opened through to Arcola very shortly. (Aug., pg. 233.)

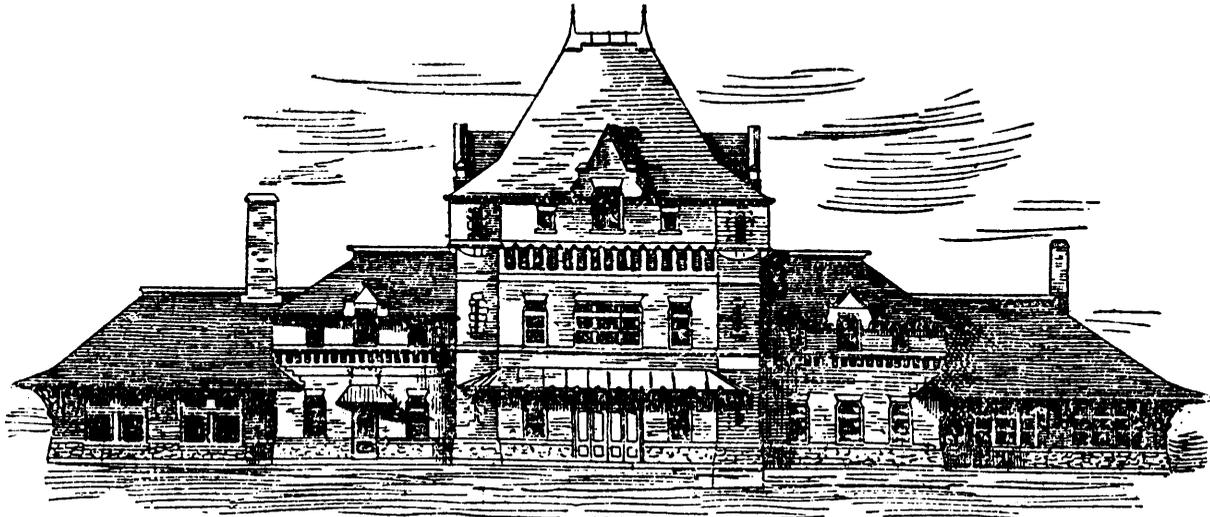
The Acton Burrows Co.'s enamelled iron plates are being used for station names on this branch, instead of painted wooden signs.

The Broadview Dining Hall, destroyed by fire last spring, will not be rebuilt, as there is sufficient accommodation for this service in one end of the station.

Banff Hotel.—It is reported that an addition containing about 75 rooms will be built ready for next season, at a cost of some \$60,000.

Crow's Nest Pass.—It is said the management has under consideration the building of a tunnel, about 1,000 ft. long, to do away with the long loop near Fernie, B.C.

Proctor to Nelson.—Track laying has been completed on this section of the Crow's Nest Pass Ry. between Proctor's Creek, on the south side of the west arm of Kootenay lake, & Five Mile Point, where connection is made with the portion of the Nelson & Fort Shep-



CANADIAN PACIFIC RAILWAY UNION STATION, OTTAWA.

traffic over this branch, a large brick-yard having been started near the lake early in the summer. A number of settlers have gone in lately, & occupy lands on both sides of the lake. (June, pg. 173.)

Winnipeg Terminals.—On pg. 304 of our last issue we gave particulars of an interview President Shaughnessy had with the Winnipeg City Council during his recent western trip. On Oct. 16 a largely attended public meeting was held in Winnipeg when it was explained on behalf of the Council that the C.P.R. would build the subway & be responsible for all damages to property in connection with the work. The Co. estimated the cost of the work at from \$120,000 to \$130,000, but all it would ask the city to contribute in any case would be \$60,000. In consideration of the city contributing this amount, the Co. would agree to pay school taxes, frontage taxes & business taxes on the hotel property. A resolution endorsing the Co.'s proposal, & recommending its acceptance, was adopted almost unanimously.

The Co.'s engineering department has prepared plans for the subway & submitted them to the City Council. The width of Main St. at the crossing point is 132 ft., & it is proposed to construct a subway 42 ft. in width. The street railway track, about 5 ft. in width, will

The West Selkirk Branch is being extended from West Selkirk about 24 miles, to the west shore of Lake Winnipeg, J. A. McArthur having the grading contract. The line will be an easy one to construct. It passes through a good agricultural district, especially north of Clandeboye. It is not expected that any track laying will be done until next spring. A summer resort, to be called Whyteswold, after the Manager of the Co.'s western lines, is to be established at the lake terminus of this branch. It will be about 42 miles from Winnipeg, & it is said to be the intention to give a passenger service covering the distance in an hour. To enable this to be done the old part of the branch between Winnipeg & West Selkirk is being improved & heavier rails are being laid on it. (June, pg. 172.)

Dauphin Branch.—A local paper states that a survey is being made for a branch from Westbourne, on the Manitoba & Northwestern branch, 16.9 miles north-west of Portage la Prairie, into the Dauphin district. It is said the survey touches Lake Dauphin at Bovette's, & that it is already made to Ste. Rose du Lac. This branch would be a competitor of the Canadian Northern.

McGregor-Vareoe Branch.—Track laying on the $26\frac{1}{2}$ miles graded from McGregor is

pard line between Five Mile Point & Nelson recently purchased by the C.P.R. It would have been extremely difficult to have located another line along the south shore of the west arm of Kootenay lake west of Five Mile Point, where the Nelson & Fort Sheppard Ry. had already been constructed. The C.P.R., therefore, bought from the N. & F.S.R. the portion of the latter line from Five Mile Point to Nelson, about 5 miles, the N. & F.S.R. retaining trackage rights into Nelson & terminal facilities, & maintaining connection with the C.P.R. at Five Mile Point for its line from there to the International Boundary, where connection is made with the Spokane & Northern. Considerable work in the way of improvement has been done on the section between Five Mile Point & Nelson since it came into the C.P.R. Co.'s possession. (Aug., pg. 233.)

The station to be built at Nelson will be 102x32 ft. In the basement there will be the furnace & fuel room. The ground floor will contain general waiting room, ladies' waiting room, ticket office, lavatories, baggage & express rooms. The first floor will be devoted to offices as follows: Superintendent, Superintendent's clerks, despatchers, Trainmaster, Engineer, Engineer's staff, Roadmaster & Bridge Inspector, Port Captain,

Port Steward, extra office for visiting officials, & lavatories. The contract has been let to J. Hepburn.

The freight sheds, which will be located on the south side of Baker St., & immediately south of the present station, will be 245x40 ft.

Slocan District Stations.—D. J. McGregor, of Kaslo, has been given contracts for building stations at Sandon & New Denver. The Sandon building will be for passengers & freight, & the New Denver one for passengers only.

Columbia River Bridge.—Work has been started on the construction of a bridge over the Columbia river at Sproat's Landing, about 1½ miles below Robson, to connect the latter place, which is the western terminus of the line from Proctor, on Kootenay lake, with West Robson, on the Columbia & Western Ry., from West Robson to Rosland, & from West Robson to Midway. At present passengers & freight cars are transferred by a scow ferry, necessitating the maintaining of two stations, at Robson & West Robson, & requiring a large staff to handle the slips & transfer vessels. At the eastern end of the bridge there is an approach of about 2,000 ft., which will at first be a trestle structure, crossing Pass Creek slough, 1,400 ft. long, & the remainder will be graded. This trestle will be filled in from the long cutting to be taken out at the western approach as soon as the bridge is completed. The bridge proper will have at the eastern end 2 deck girder spans, each 50 ft. clear, then a deck girder swing span giving openings of 54 ft. on each side of the pivot pier, then there will be 2 thro' truss spans of 200 ft. each clear opening, & a deck girder shore span of 50 ft. on the west bank. The western approach will be 2,000 ft. long, connecting by Y tracks with the Columbia & Western Ry. at Castlegar station. There is 25 ft. of water at low water, the river rising from 35 to 40 ft. about May or June. The current is about 4½ miles an hour. The rail level of the bridge will be 85 ft. above the river bed. John Gunn, of Winnipeg, who has the contract for foundations & piers, has commenced getting out piling & stone for the foundations. H. W. D. Armstrong is resident engineer in charge of construction.

Grand Forks, B.C. to Republic, Wash.—A Grand Forks paper credits the C.P.R. with the intention of building from there to Republic, over which route is projected the Republic-Grand Forks Ry., in which C. J. McCuaig, of Montreal, is interested. The paper referred to asserts that early in Oct.

the C.P.R. had a preliminary location survey made with lightning rapidity, so that filling could be done at the same time as its competitors, & that the C.P.R. has begun running its permanent survey.

Pacific Division Main Line.—The portion of the Mountain section between Palliser & Donald, 28.9 miles, is being relaid with heavier steel rails than those heretofore used.

A spur is being built east of Kamloops station, where facilities are being provided for storing 2,500 tons of coal. In future Kamloops will be the base of supply for coal for locomotives running from that point, the coal being procured from Vancouver Island.

Vancouver & Lulu Island Ry.—Grading has been finished from Vancouver to the north arm of the Fraser River, 5¾ miles, & track has been laid for 4 miles, the balance to be completed shortly. The line will be operated by steam, instead of by electricity, as originally intended. Connection will be made with the C.P.R. main line at the west end of Vancouver. (June, pg. 173.)

Duluth, South Shore & Atlantic.—The extension from Newton, on the Houghton branch, has been completed to a point near Trout Creek, & is being rapidly pushed through to Lake George, on the main line. The present mileage of the road will soon be increased by 75 miles of new line.

RAILWAY APPOINTMENTS, ETC.

Boston & Maine.—H. E. Fisher, heretofore Assistant Treasurer, has been appointed Treasurer, succeeding A. Blanchard, resigned.

Canadian Pacific.—A. C. Shaw, heretofore Excursion Clerk in the General Passenger Department at Montreal, has been appointed Acting General Agent of the Passenger Department at Chicago, succeeding J. F. Lee, who resigned to accept the Traffic Managership of the White Pass & Yukon.

Dominion Atlantic.—W. Fraser's title has been changed from Assistant Superintendent to Traffic Superintendent, with headquarters at Kentville, N.S.

Grand Trunk.—C. M. Hays having resigned the General Managership to accept the Presidency of the Southern Pacific, G. B. Reeve has been appointed Second Vice-President & General Manager, the change to take effect on Dec. 15.

J. Munday having resigned, the office of Superintendent of Terminals at Portland, Me., has been abolished. Mr. Munday also per-

formed the duties of Agent at Portland, & has been succeeded in the latter position by R. W. Scott, who has been in the Co.'s service for a number of years, & latterly has been Freight Agent at London.

Grand Trunk Western Ry.—At a meeting of directors Nov. 22, the following were elected: President, C. M. Hays; Treasurer, J. H. Muir; Secretary, C. Percy. All other persons in the service of the receivers of the Chicago & Grand Trunk are authorized to act in their respective positions & capacities for the G.T.W.R. until further notice.

Great Northern of Canada.—Revised list of officers:—President, Hon. P. Garneau; Vice-President, Hon. J. Sharples; 2nd Vice-President, Col. J. McNaught, New York; 3rd Vice-President, H. H. Melville, Boston; General Manager, J. G. Scott; General Freight & Passenger Agent, N. J. Fraser; Superintendent, J. Bain; Chief Engineer, E. A. Hoare; Treasurer, E. E. L. King; Secretary, L. G. Scott; Auditor, W. A. Kingland; Accountant, S. S. Oliver. Except where otherwise stated, the address of the officers is Quebec.

Great Northern (U.S.A.)—L. D. Kitchell has been appointed District Freight & Passenger Agent at Winnipeg, vice R. J. Smith, promoted.

Kootenay Ry. & Navigation Co.—J. F. Stevens, Chief Engineer of the Great Northern (U.S.A.) has also been appointed Chief Engineer of this subsidiary company.

New York & Ottawa.—M. Goodrich, heretofore Master General Foreman, has been appointed Master Mechanic, with headquarters at Ottawa.

Northern Pacific.—W. G. Pearce, Assistant to the President, with headquarters at Tacoma, Wash., has been appointed General Manager of the Seattle & International.

The position of Master of Construction has been abolished, & G. B. Gliff, who filled it, has been appointed Superintendent.

R. H. Relf has been appointed Assistant Secretary, vice B. W. Corbett, deceased.

Quebec & Lake St. John.—Revised list of officers:—President, F. Ross; Vice-Presidents, G. LeMoine & T. A. Piddington; Secretary & General Manager, J. G. Scott; General Freight & Passenger Agent, A. Hardy; Superintendent, J. Bain; Accountant, S. S. Oliver; Acting Purchasing Agent, J. A. Nicole; Chief Engineer, E. A. Hoare; Master Mechanic, J. Clark; Roadmaster, C. J. Carpenter, Hedleyville. Except where other-

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J. B. MILLER

wise stated, the address of the officers is Quebec.

Rutland & Ogdensburg & Lake Champlain.—J. B. Lucier has been appointed Canadian Passenger Agent, with office at Worcester, Mass.

Shediac & Coast.—A. B. Copp has been appointed Vice-President.

White Pass & Yukon.—J. Francis Lee, heretofore General Agent of the Passenger Department of the C.P.R., at Chicago, has been appointed Traffic Manager of the W.P. & Y., succeeding S. M. Irwin, resigned. Effective Jan. 1, 1901.

Mainly About People.

E. L. Doran, formerly Master Mechanic of the Northern Pacific, died recently.

H. Miller, inventor of the steam & air brake, died at Chappaqua, N.Y., Oct. 22, aged 80.

R. Southam, Manager of the Mail Job Printing Co., Toronto, was married, Oct. 31, to Miss E. Zimmerman.

Jas. & Mrs. Ross, who spent the summer at their shooting box in Scotland, arrived in Montreal late in Oct.

W. Kelly, Jr., General Passenger Agent of the Niagara Gorge R.R., has resigned, & the position has been abolished.

Harry Parry, General Agent of the New York Central R.R. at Buffalo, was married at Syracuse, N.Y., Oct. 25, to Mrs. H. R. Slot.

W. Phillips, formerly Manager of the Niagara Falls Park & River Ry., is acting as Superintendent of the Winnipeg Electric St. Ry.

Vice-President & General Manager Ramsey, of the Wabash Ry., returned to St. Louis late in Oct., after a two months' visit to Europe.

A. J. Kennedy, formerly of Hamilton, Ont., has been appointed Passenger Agent of the Atchison, Topeka & Santa Fe Ry., at Cleveland, Ohio.

H. B. Joy was elected a director of the Chicago & G. T. Ry. for the first time, at the recent annual meeting, taking the place of G. B. Reeve, resigned.

W. R. Baker, Executive Agent of the C.P.R. at Winnipeg, & Mrs. Baker recently celebrated their silver wedding by entertaining a number of friends at dinner.

Senator Forquet, President of the R. & O. Navigation Co., & his family have returned to 951 Sherbrooke St., Montreal, after summering at Ste. Anne de Bellevue.

Mrs. C. Percy, of Werendale Park, Montreal, wife of the Treasurer of the G.T.R., has been confined to her house for several weeks by illness, but is recovering.

F. L. Wanklyn, Manager of the Montreal Street Ry., & his family have closed their summer house at Ste. Anne de Bellevue & returned to Montreal for the winter.

Mrs. W. R. MacInnes, wife of the General Freight Agent of the C.P.R. at Winnipeg, has returned there after visiting her mother, Mrs. Cross, Pine Avenue, Montreal.

Among the guests recently entertained by Jas. & Mrs. Ross at their shooting lodge in Scotland, were Granville & Mrs. Cunningham, formerly of Toronto & Montreal.

H. E. Beattie, Agent for the G.T.R. at Ethel, Ont., has received a Fenian raid medal. He served in the 19th Battalion at Phillipsbury, Que., & was in the St. Albans raid affair.

Baroness Von Ketteler, wife of the late German Minister to China, & daughter of President Ledyard, of the Michigan Central, arrived at Detroit Oct. 22, & is staying there with her father.



WILLIAM JACKSON,
1st Vice-Pres., Can. Ticket Agents' Association.

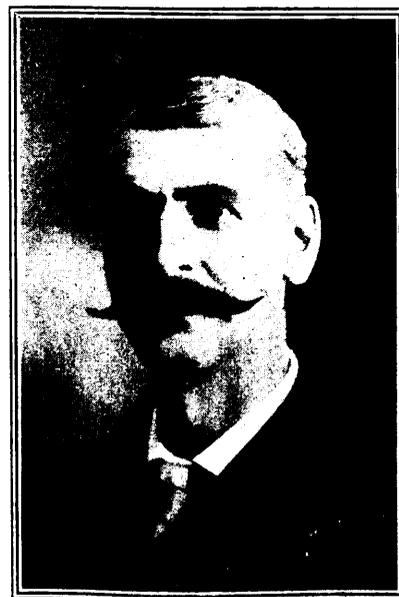
A. W. Mackenzie, son of W. Mackenzie, of Mackenzie, Mann & Co., was married in Toronto, Nov. 13, to Miss Kirkland, daughter of the Toronto Manager of the Bank of Montreal.

D. W. Campbell, Montreal Manager of the Elder-Dempster Steamship Line, was married in Toronto, Nov. 10, to Miss Maud Baird, daughter of H. N. Baird, grain merchant, Toronto.

The Emperor of Germany has conferred upon G. G. Ward, of New York, Vice-President of the Commercial Cable Co., the Order of the Crown of the second class to commemorate the opening of the cable connecting Germany with the U.S.

When Lady Minto visited the exhibition of arts & handicrafts held under the auspices of the Women's Art Association, of Montreal, on Oct. 25, she was received by the two little children of A. D. McTier, General Fuel Agent of the C.P.R., & escorted to the room where the officers of the Association awaited her arrival.

The photograph of Mr. Jackson, C.P.R. Ticket Agent at Clinton, Ont., & 1st Vice-President of the Canadian Ticket Agents' Association,



S. H. PALMER,
Auditor, Canadian Ticket Agents' Association.

not having been received in time it was impossible to publish it in our last issue with those of the other officers of the Association, so it is given on this page. In the absence of President Churchill through illness, Mr. Jackson presided at the recent annual meeting of the Association, & both there & during the Muskoka trip was assiduous in his attentions to the members & guests. A portrait of S. H. Palmer, Auditor of the Association, is also given on this page.

Joseph Simpson, railway folder display agent, who died in Toronto, Nov. 13, aged 68, was born in Ireland. After coming to Canada he was engaged in grocery business in Hamilton, after which he became Travelling Passenger Agent of the Great Western Ry. at Rochester, N.Y., & then entered the service of the Missouri, Kansas & Texas Ry. in a similar capacity. In 1879 he returned to Canada as Travelling Passenger Agent of the Chicago, Burlington & Quincy, & in 1892 took a similar position with the Toledo, St. Louis & Kansas City. In 1894 he started business as a railway folder display agent at Toronto.

J. Francis Lee, who has been appointed Traffic Manager of the White Pass & Yukon Ry., with headquarters at Seattle, Wash., was born Oct. 20, 1852, in London, Eng. He was educated at King's College, London, & Cambridge University, & entered railway service in 1871, since which he has been consecutively, 1871 to 1872, correspondence & financial clerk, general offices London & Northwestern Ry., Eng.; 1873 to 1880, freight car mileage & passenger departments G.T.R.; 1881 to March, 1886, General Agent Freight & Passenger Service, Chicago Rock Island & Pacific Ry.; Mar., 1886, to Aug., 1890, Commercial Agent Freight & Passenger Departments C.P.R., at Chicago; Aug., 1890, to Mar., 1896, District Freight & Passenger Agent C.P.R., at Chicago; Mar., 1896, to Nov., 1900, General Agent Passenger Department C.P.R., at Chicago.

H. J. McKenzie, who is engineer in charge of the Murray Harbor branch of the P.E.I. Ry. now under construction, was born in Pictou County, N.S., in 1860. He studied at the Pictou Academy, & entered the employ of the mechanical department of the I.C.R. in 1873, remaining there until 1878, during which time he took up the study of civil engineering. In 1879 & 1880 he was employed in the machine shops of Harris & Burnside's Locomotive Works, Providence, R.I. In 1881 he took up the active practice of civil engineering & entered the employ of the European & American Ry. Construction Co., doing business in Nova Scotia. He has since been identified either as locating or construction engineer on many of the railway works of importance in the Maritime provinces, & has also been employed as inspector of steel bridge construction for the I.C.R. & Newfoundland railways, also of creosoted material for the Departments of Railways & Public Works. He has also been employed by creosoting companies in the U.S., & is considered an expert in this line.

H. V. Harris, recently appointed General Manager of the Midland Ry. of Nova Scotia, was born in Devonport, Eng., Jan. 16, 1857. He went to Montreal with his parents in Oct., 1867, entered railway service with the G.T.R. on Feb. 7, 1870, & continued with that Co. in clerical capacities until Sep., 1878. For the following five years he was with the Louisville & Nashville as Chief Clerk to the General Manager, & then for three years Assistant to the General Manager of the Texas & St. Louis, now the St. Louis Southwestern. He served for one year as Purchasing Agent & Assistant Superintendent of the St. Louis, Kansas City & Colorado during its building. Then for three years as Purchasing Agent & Assistant to the General Manager of the Louisville Southern. For two years he was with the

Louisville Terminal, first as Superintendent & later as Receiver. Two years additional were spent as Fuel Agent & Chief Clerk to the General Superintendent of the Chesapeake, Ohio & Southwestern, & for the past five years he has been General Manager of the Breckenridge Cannel Coal Co., & of the Breckenridge Short Line, both mines & railway being now abandoned.

Swiftly as Lord Roberts advanced from Bloemfontein to Pretoria, & great as was the destruction wrought by the Boers, the repair of the railway kept pace with the forward march of the main army. The man who was responsible for this herculean feat, whose foresight & energy helped to make it possible, was the French-Canadian Major Girouard, best known, perhaps, as Director of Egyptian Railways. Of him Walter Kingsley writes in the Daily Express:—"He is a lesser Kitchener, but near to him in organizing power & relentless, unswerving execution of great designs. He is less taciturn than the former Sirdar, & in his amiability lies, it may be, his chief difference from Lord Kitchener." He has made a special study of the question of army transport, & it was a little pamphlet of his, showing how England could be defended from invasion by a military coast railway line, that is said to have first attracted Lord Kitchener's attention to him, and led to his appointment on the Egyptian war staff. "His name is a household word in Capetown," remarks Mr. Kingsley. "His wonderful energy, his contempt for red-tape, his political far-sightedness, his engineering skill, have made him into a kind of mechanical hero, from whom nothing, however wonderful, causes surprise. 'Oh, Girouard will see it through somehow!' closes many an argument on railway transport."—Canadian Gazette.

Richmond Locomotives.—A recent issue of the "Jernbanebladet," a railway journal published in Sweden, reports that the 20 in. & 31 in. x 24 in. two-cylinder compound 10-wheeled freight locomotives, which the Swedish State Railways purchased from the Richmond Locomotive Works during 1899, are so satisfactory that the Railway Administration has decided to adopt the Richmond system of compounding on its lines, & has ordered 29 compound engines of that type to be built in its own shops. This is a great achievement for American locomotives which are gradually working their way into all countries of the world.

RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Alaska.—The Arctic Construction Co. has been organized at Skagway, to build the Chilcoot Pass R.R. from Dyea & Skagway north under Chilcoot Pass. A. B. Miller, Seattle, Wash., & H. O. Peterson, Skagway, are trustees. H. Schafer, Skagway, has the subcontract for 10 miles.

Algonia Central.—As stated in previous issues, J. Conmee has a contract for the first 20 miles of the main line from Sault Ste. Marie towards the main line of the C.P.R., Foley Bros. & Co. having a subcontract for the bridging. The Co. is doing its own track-laying, & has completed it for the first 19 miles to a point where a big trestle, taking some 1,250,000 ft. of timber, is being constructed. This structure is expected to be completed by the end of Nov. Starting from the end of the first 20 miles, Fauquier Bros. have a contract for grading 50 miles, & have the first 10 miles of it ready for the steel. The whole of the 50 miles is expected to be completed by the fall of 1901. From the end of the first 70 miles J. Conmee has the contract for the grading & bridging of the whole of the line to the connection with the Michipocoton branch, about 70 miles, & has sublet it to Foley Bros. & Co., who expect to complete it by the fall of 1901. The main line of the C.P.R. will be crossed somewhere between Windermere & Missanabie. It is the intention to extend the line on to James Bay as rapidly as circumstances will warrant, & President Clergue is credited with saying that in 5 years the Co. will be running through fish trains from Hudson's Bay to Chicago. About 30 miles of the main line from the Sault have been completed. (Aug., pg. 236.)

Porter Bros. have the contract for completing the commercial dock at the Sault, which was formerly let to the late J. McGillivray. (May, pg. 143.)

The rumor that the Co. had secured running rights over the C.P.R. bridge across the St. Mary's River probably arose from the fact that the Co. is hauling a quantity of material, which is being excavated at the power canal on the U.S. side, across the bridge, having undertaken to fill the approach to the bridge for the C.P.R. with this material. (Aug., pg. 236.)

The Michipocoton branch is already in operation from Michipocoton harbor to the

Helen iron mine, 12 miles. Another branch is being built from a point on the Michipocoton branch, about 9 miles from Michipocoton Harbor, northerly about 8 miles, to the Josephine iron mine, the contract having been given to J. Conmee, who has sublet it to Foley Bros. & Co. It is the intention to complete this extension before next spring. The point of connection between Michipocoton harbor & the main line has not been decided on, & will depend largely upon other mines which are to be developed, & for which purpose the Michipocoton branch is being built. Probably it will be at or about the point at which the Josephine branch starts from the Michipocoton branch. (Aug., pg. 236.)

The ore docks built by this Co. at its Michipocoton terminus are 750 ft. long, 27 ft. wide at the bottom & 18 ft. at the top, & 64 ft. high, running full length out into the bay parallel to the commercial dock. They support 12 ore pockets, each holding 50 tons. About 1,500,000 ft. of pine & spruce timber have been used in their construction. The commercial dock is 300x40 ft., & on either side vessels with a 20 ft. draught can tie up & be unloaded into the cars, which run from a switch out upon the pier. The railway track runs right alongside the crusher, so that the crushed ore can be loaded in cars ready to be shipped to the docks. About half a mile from the harbor are the yards, which, when finished, will hold 1,000 cars, & will contain repair shops, roundhouse, coal sheds. (Aug., pg. 236.)

It is stated that the Co. is having a permanent waggon road built from Michipocoton harbor to Grasset, on the main line of the C.P.R.

See also under heads "Manitoulin & North Shore Ry.," & "Ontario, Hudson's Bay, & Western Rys."

Bemidji, Minn., to Rainy Lake.—Articles of incorporation have been filed for a company whose object is stated to be to construct a road from Bemidji on the line of the Great Northern Ry. in Beltrami county, Minn., northeast to the International Boundary at Rainy Lake. The incorporators are officials of the Northern Pacific R.R. The Company proposes to build a bridge across the Rainy River into Ontario, & to build & operate a steamship line on Rainy Lake & its tributary waters, including the Lake of the Woods. The proposed line would form a continuation of the Brainerd & Northern Minnesota Ry., which is under Northern Pacific control.

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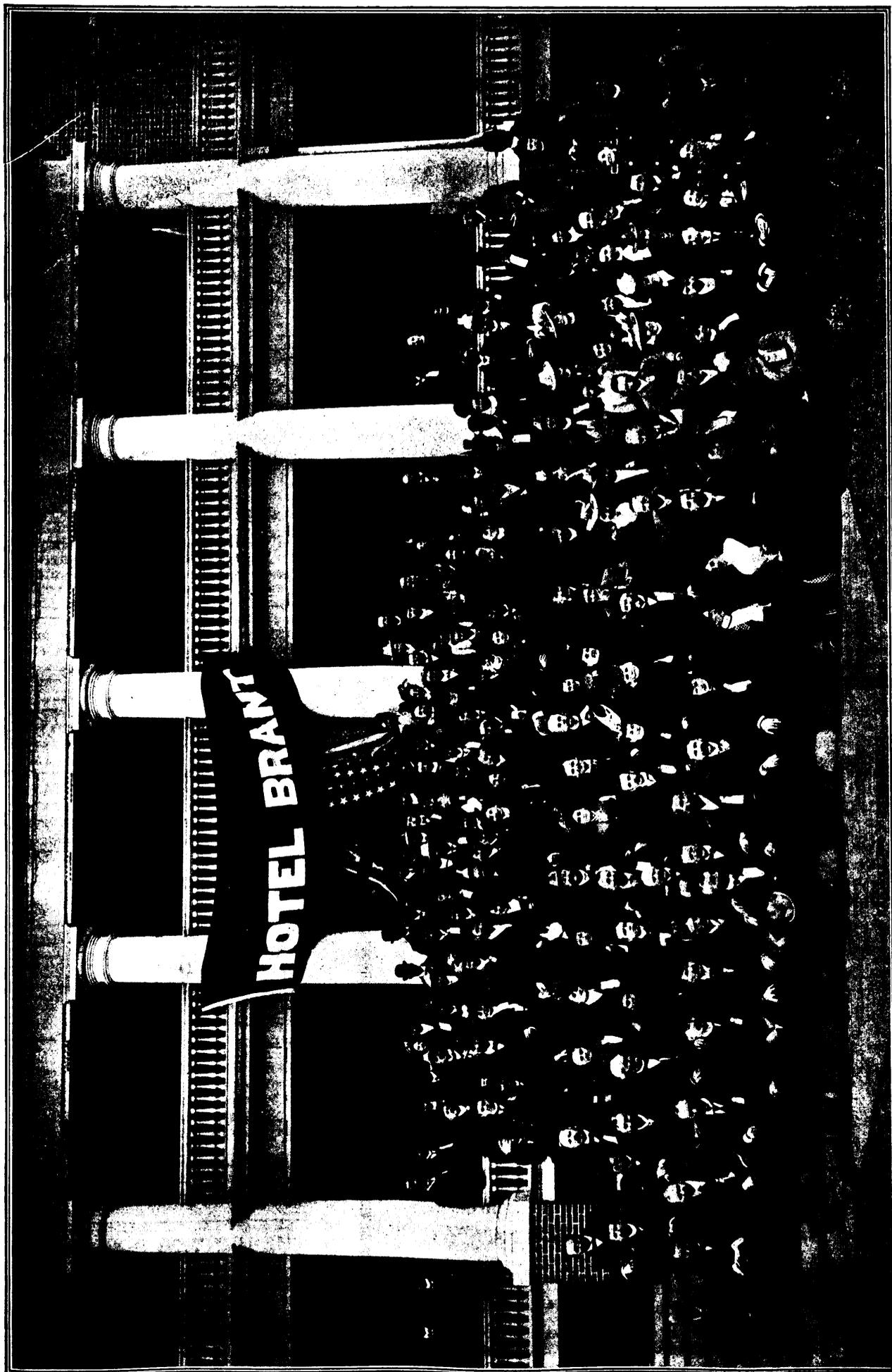
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The Canadian Ticket Agents' Association at Burlington Beach, Ont., Oct. 10, 1900.

Copies of this illustration, on heavy coated paper, 12 x 9 inches, suitable for framing, can be obtained from THE RAILWAY AND SHIPPING WORLD, Toronto, at 25c. each ; 2 for 35c. ; 3 for 40c. ; 4 for 45c., or 5 for 50c., postage prepaid.

Cross Creek to Stanley, N.B.—A Stanley despatch says that about one-third of the grading on this line of 6 miles is completed. (Nov. '99, pg. 333.)

Magnetawan River.—At a meeting held recently at Burk's Falls, Ont., it was decided to organize the Magnetawan River Ry. Co., with a capital of \$30,000, to construct a spur line connecting the G.T.R. near Burk's Falls with the head of navigation on the Magnetawan River. The proposed spur, which will start from the G.T.R. about $\frac{1}{2}$ of a mile north of Burk's Falls station, & run to the dock at the Magnetawan River, will be between $1\frac{1}{2}$ & 2 miles long. Construction will be expensive, as there will be considerable rock work & 2 steel bridges, one of 100 ft. over the Magnetawan River, & one of 40 ft. over a branch of that stream. Superintendent Tiffin & Division Freight Agent White, of the G.T.R., attended the meeting, the latter stating that the G.T.R. would operate the spur on the following terms: A charge of \$2.50 per loaded car to be made by the G.T.R. Co., empty cars free, \$1.50 to be allowed the Magnetawan River Ry. Co. to enable it to pay its interest on the stock, combined with the maintenance of the railway. The other \$1 to be paid to the G.T.R. for its switching service, the G.T.R. to have the free use of the spur for its entire service, including both passenger, freight & construction trains, such free freight trains not to include cars transported over the tramway containing freight for furtherance up or down the river. The following officers were elected: President, J. Sharpe, Burk's Falls; Vice-President, H. Knight, Burk's Falls; other directors, R. J. Watson, J. D. Reid, E. H. Smith, Burk's Falls; G. McKnight, Dr. Freeborn, E. A. Morris, E. W. Jenkins, W. McLaughlin, Magnetawan; C. G. Marlatt, Toronto; A. P. Cockburn, Gravenhurst; G.

Alexander, Royston; J. Turner, S. G. Ritter, Ahmic Harbor. In 1894 the Ontario Legislature voted a cash subsidy to the Northern & Pacific Jct. Ry. Co. for the construction of this spur. This subsidy, it is understood, will be available for the M.R.R. Co., but is not considered enough, & a deputation waited on the Ontario Government on Nov. 16, asking for an increase to \$10,000. A deputation of the directors, accompanied by General Assistant Wainwright of the C.P.R., also waited recently on the Acting Minister of Railways at Ottawa, applying for a Dominion subsidy of \$15,000. The portage between Burk's Falls & the head of navigation on the Magnetawan River has proved a serious obstacle to the progress of the country tributary to the river. By the construction of the proposed spur, through connection will be established with the steamers of the Muskoka Navigation Co., which run down the river for some 40 miles to Ahmic Harbor, & an impetus will be given to 10 tributary townships which are already being settled by colonists. The district is a fair farming one, but its principal resources are spruce, hemlock, and tan bark. Several woodenware factories were established, but have found the want of through communication very disadvantageous. As soon as the subsidy questions have been settled, a survey will be made, & it is hoped to have the line completed in time for next summer's traffic.

Manitoulin & North Shore.—The first 12 miles of this line, from Sudbury to the Gertrude mine, is well under way. Location parties are working from the Gertrude mine towards Little Current, Manitoulin Island, & from Little Current north, & further contracts are expected to be let soon. (Aug., pg. 240.)

Ontario, Hudson's Bay & Western Ry.—The Ontario charter for this line, which has been purchased in the interest of the Algoma

Central Ry., was originally granted in 1890, to J. Cozens, R. D. Perry, J. G. Stradley, T. W. Burdick, J. H. Steere, J. A. McDonald, W. McK. Bell, W. McK. Simpson, & John McKay, under the name of the Sault Ste. Marie & Hudson's Bay Ry. Co., with power to construct & operate a standard gauge railway from or near Sault Ste. Marie to the main line of the C.P.R. between Missanabie & Ridout stations, thence to Moose Factory or some other point on James Bay. The capital stock was fixed at \$3,000,000, & the Co. was empowered to issue bonds not exceeding \$25,000 a mile. In 1893 the Legislature extended the time for the commencement of construction for 3 years, from April 7, 1893, & for the completion of the line for 10 years from April 7, 1893. In 1896 a second extension of 3 years in each case was granted. The Company was given power to use electricity or water as motive power instead of steam, if desired, & was also authorized to locate the point of crossing the C.P.R. main line by its line between Grasset & Ridout stations. In 1899 the Legislature again extended the time for the commencement & completion of the railway for further periods of 3 years respectively. It also empowered the Co. to construct & operate a waggon road, with a stage & mail route, from the point of crossing of its line on the main line of the C.P.R. to the navigable waters of Moose river north of the long portage, thence to tide water at or near the mouth of Moose river, & to charge tolls therefor. The name of the company was changed to The Ontario, Hudson's Bay & Western Railways Co., & the company was given power to amalgamate or make traffic arrangements with the Hudson's Bay & Yukon Railways & Navigation Co. At the same session the Legislature voted the Co. a subsidy of \$2,000 a mile & 5,000 acres of land per mile for 240 miles from Missanabie sta-

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tion on the C.P.R. to tide water at the mouth of Moose river. The Co. also obtained a Dominion charter in 1890, particulars of which were given in our Aug. issue, pg. 241. The Algoma Central Ry. Co.'s charter, granted by the Dominion Parliament in 1899, & amended in 1900, empowers it to build from Sault Ste. Marie to a point between Magpie & the Michipicoton rivers, thence to the C.P.R. main line, & southerly to Michipicoton Harbor. The Ontario, Hudson's Bay & Western charter will be used for the extension of the line from the C.P.R. main line to James Bay. See also under head "Algoma Central."

Schomberg & Aurora.—The Dominion Parliament last session passed an act empowering this Co. to build & operate an extension of its railway, westward from Schomberg, Ont., through the townships of King, Tecumseth, Adjala, Mono, Amaranth & Melancthon, to Shelburne, thence through the townships of Melancthon, Proton, Artemesia or Egremont, & Glenelg to Durham, also from the present eastern terminus of the Co.'s railway through the townships of King, Whitchurch, Markham or Uxbridge, Pickering, Whitby & East Whitby to Oshawa. The Co. is also empowered to lease its line to the Metropolitan Ry. Co.

The Dominion Parliament last session voted \$12,800 towards building an extension of 4 miles from the easterly terminus to Bond's Lake.

Shediac, N.B., to Shemogue.—The Dominion Parliament last session voted \$121,600 towards building 38 miles of railway from Shediac to Shemogue.

South Shore.—The 10 miles extension of this line from Sorel to Yamaska, Que., has been opened for traffic. It was originally built as the Great Eastern Ry., & passed into the hands of the C.P.R., but has not been operated for years & is practically being rebuilt. The roadbed has been raised some 3 ft., & the culverts & bridges have all been renewed. At Yamaska, where 2 bridges in succession have been carried out by ice, a steel bridge is being erected. It is said the line will be continued this year to St. Francois du Lac, its ultimate destination being Point Levis. (June, pg. 176.)

Strathroy & Western Counties.—The Dominion Parliament last session revoted \$22,400 towards building 7 miles of this line from Caradoc on the C.P.R. to Strathroy.

Thousand Islands.—The G. T. R. having decided to remove its Thousand Islands Jct. station about 2 miles further east, the T.I.R. Co. is extending its line 2 miles to the new station. The line now runs from Gananoque to Thousand Islands Jct, 4.08 miles. The Dominion Parliament last session voted \$6,400 towards the building of this extension. Also for an extension to connect with the Brockville, Westport & Sault Ste. Marie Ry., the Bay of Quinte Ry., the Kingston, Smith's Falls & Ottawa Ry., or the waters of the Rideau Canal, the balance remaining of subsidy granted by 55-56 Vic., chap. 5, not exceeding 9½ miles (revote), \$30,400.

The Co. secured an act at the Dominion Parliament's last session largely increasing its powers in regard to electric power & energy, mining, timber lands, patent rights, &c. On its railway from Gananoque for 15 miles north it is authorized to issue bonds for \$30,000 a mile.

Taku-Atlin Tramway.—Work is reported to have been temporarily suspended owing to litigation between the two companies which are trying to secure the territory.

Western Alberta.—The Dominion Parliament last session passed an act providing that this Co.'s line shall be commenced & 15% of the capital stock expended thereon before Dec. 1, 1902, & shall be completed & in operation before Dec. 1, 1905.

Yukon Railway Charters.—In the House of Commons Railway Committee, towards

the close of last session, the Minister of Railways said that some years ago Parliament granted a charter for the White Pass & Yukon Ry. at a time when the importance of that country was not fully realized. Since then the Government had felt it to be unwise to encourage the construction of any lines which would have their terminals on U.S. soil, or which might ultimately be decided to be U.S. territory. With regard to the application before Parliament this year, the Government's policy was to withhold all new charters until it had been seen whether it was practicable to build an all-Canadian line into that country.

The G.T.R. General Managership.

Sir Rivers Wilson & Jos. Price, President & Vice-President of the G.T.R., arrived in New York Nov. 11 where they were met by the retiring General Manager, C. M. Hays. They stayed in New York for a few days, reaching Montreal Nov. 15. Two days later it was announced that G. B. Reeve, ex-General Traffic Manager of the line, had been selected to succeed Mr. Hays. Mr. Reeve was already on his way from his home at La Mirada, Cal., & reached Montreal Nov. 19, where he held lengthy conferences with Sir Rivers Wilson & Mr. Price, who left for England a few days later, after making a trip over the Central Vermont Ry.

In an interview in Montreal just after Mr. Reeve's appointment was announced, Vice-President Price said: "We regret exceedingly the departure of Mr. Hays, but we feel that an admirable choice has been made in the selection of Mr. Reeve, whose policy will be wise & progressive, in fact a continuation of the splendidly-successful work inaugurated & carried on by Mr. Hays. Apart from Mr. Reeve's undoubted ability & success as a railway man, there is the further advantage in his appointment that in his management he will be surrounded by men of first-class standing in their respective departments. Mr. McGuigan, the General Superintendent, was a most valuable man, & the other chief officials would bring to the support of the new General Manager a combination of a loyal & effective character."

Mr. Price added he was convinced that the G.T.R. was now in a remarkably good condition, seeing the splendid time made by the fast trains between Montreal & western points. Speaking of railways generally on this continent, he observed that, while working expenses during the year had been in excess of former returns, the receipts had not been correspondingly large. He, however, had the utmost faith in the future of the G.T.R., the condition of which had so much improved. Their credit was good & the re-organization of the Chicago & G.T. was especially to be commended amongst financial men. For this section, he said, a project had been approved of whereby the interest account had been very materially reduced, & \$4,500,000 provided for the double tracking & equipment of the line in question from Port Huron to Chicago. Mr. Hays had left for the West in connection with the completion of the re-organization of this part of the road, which would be well advanced, although not completed, during next year. With respect to the report as to the possibility of a financial board being established on this side of the Atlantic in connection with the G.T. management, Mr. Price expressed much surprise that such rumors should have been originated. "There is no foundation whatever for the report," he said; "I have never heard of such a creation being even proposed & I can assure you the matter has never been discussed. We find all the money that is required, & there is no possible necessity for such a board on this side."

When passing through Toronto on his way

to Montreal Mr. Reeve said: "I would be very much surprised & disappointed if any of the staff leave me. The staff which Mr. Hays gathered around him were like one family. When I left seven months ago it was simply one member of the family going away. My place was filled by other officials; & now that I have come back to take Mr. Hays's place I expect to find things as they were when I left. I have been going over a portion of the line looking at the improvements which have been inaugurated since I left, & am very much pleased at the condition of the road."

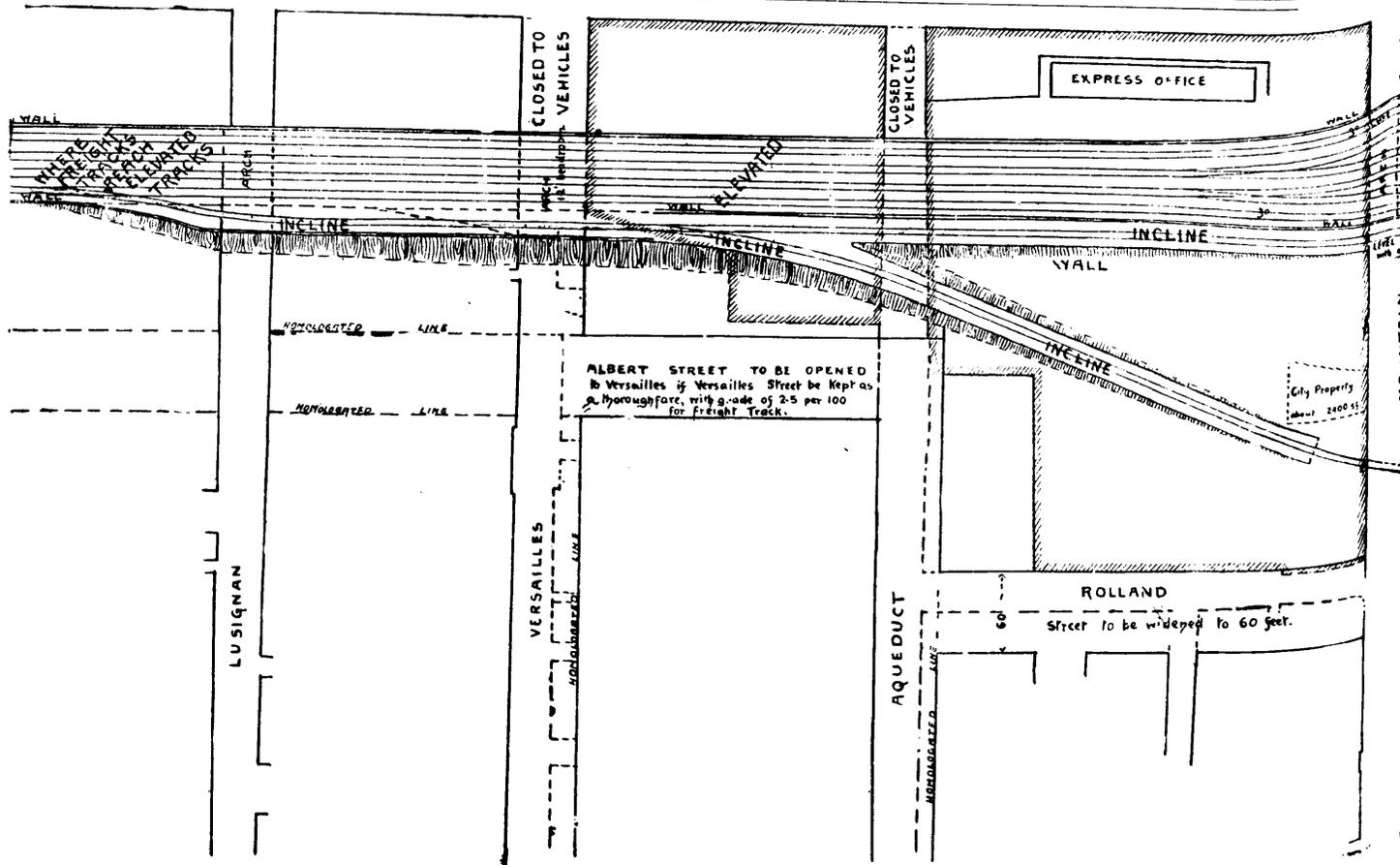
On the return of the President & Vice-President to England it was announced that Mr. Reeve's title would be 2nd Vice-President & General Manager, & that he would succeed Mr. Hays on Dec. 15, instead of at the end of the year as first announced.

George Bell Reeve, whose portrait appears on page 321 of this issue, was born in Surrey, Eng., Oct. 23, 1840. He came to Canada in 1860, from May of which year until April last he was continuously in the service of the G.T.R. He served in the capacity of Freight Clerk at Belleville until 1862, & as telegraph operator from 1862 to 1863, when he was appointed train despatcher, continuing in that position until 1865, when he became relieving agent. In 1866 he was appointed agent at Parkhill & remained there until 1873, when he was appointed Assistant General Freight Agent, with headquarters at Montreal. In 1874 he was removed to Toronto in charge of the Western district, & in 1876 to Sherbrooke in charge of the Eastern district. In 1878 he again made his headquarters at Montreal. In 1881, when the Chicago & G.T. Ry. was completed to Chicago, he was appointed Traffic Manager, & in 1890, when the Cincinnati, Saginaw & Mackinaw Ry. was acquired in the interest of the G.T., its traffic affairs were also placed under Mr. Reeve. In Feb., 1896, he was appointed General Traffic Manager of the G.T.R. system, with headquarters at Montreal, & in 1899, on the acquisition of the Central Vermont Ry. by the G.T., he was given the additional position of General Traffic Manager of that line. Mr. Reeve is a member of the Church of England. He was married in 1865 to Miss Alice Jones, of Warwick. On retiring from the G.T.R. Co.'s service in April last, Mr. Reeve was entertained at dinner by the Board of Trade, & also by the chief officials of the Co. He then went with his family to La Pomelo Ranch, La Mirada, Cal., some views of which appeared in our Sept. issue, with the intention of spending the balance of his life there.

Richelleu & Ontario Navigation Co.

The Co. has contracted for the construction in Toronto of a steel steamer to replace the str. Montreal, on the Co.'s Montreal-Quebec line. She is to be delivered complete in Sorel, Que., in May, 1902.

The preliminary plans & dimensions have been agreed upon, but are to be subject to such revision as fuller consideration may require. The length is to be not less than 340 ft.; width of hull 42 ft.; width over guard 73 ft.; depth of hull (moulded) 15 ft. The engine is to be inclined triple expansion with 3 cylinders & 3 cranks of 3,000 h.p., with feathering paddle wheels & curved steel buckets. The steam is to be from 175 to 200 lbs. pressure, & the consumption of coal not to exceed 1.68 lbs. of coal per indicated horse power per hour. There will be 6 single-ended Scotch boilers, each 11 ft. in diameter & 11½ ft. long, with hot draft. They will discharge into 2 smoke stacks, & will be placed down the centre of the hull with the front ends facing each other & the back ends next the sides of the hull. The regular service speed is to be 17 miles an hour, with ability to make 19 miles when required.



THE GRAND TRUNK RAILWAY'S HIGH LEVEL TRACK SYSTEM

In addition to the usual freight spaces, there will be cabins for 2nd class passengers on the main deck forward with sleeping berths below. The smoking room, barber shop, bar room, &c., will also be on the main deck immediately forward of the main passenger entrance. The pantries, & the dining room, with seating accommodation for 120 persons, will occupy the after portion of the main deck. The upper saloon will be extremely spacious & lofty, & the roof will be built on a new plan, giving a handsomer effect than anything heretofore attempted. The staterooms will be in two tiers, one above the other, but will be built in such a way, & the proportions of the steamer will be made adequate, so that a third tier of staterooms can be added at a future time, increasing the accommodation one-half more. The number of staterooms will at first be not less than 266, including 22 parlor rooms & 8 bath rooms, which is more than the present combined accommodation of the steamers Montreal & Quebec now on the Montreal-Quebec route. The management states that the new steamer will be of the highest class & thoroughly modern in all respects, & that the decorations will be unsurpassed by anything afloat.

Manitoba's Railway Policy.

Speaking in Woodlands recently on the occasion of his re-election, after taking office, Premier Roblin, of Manitoba, said: "The transportation question was of great importance to the farmers. It had been before the people for 20 years. Every time anything was taken off the freight rates on wheat it meant just that much additional to the farmer in the price of his wheat. The people claimed, & he agreed with them, that transportation rates on wheat going out of Manitoba were altogether too high. This deprived the farmers

of their just right. There are three railway corporations doing business in the province: the C.P.R., the powerful corporation of the Dominion; the Northern Pacific, also a strong corporation, though not Canadian; & the Canadian Northern, a strong young company that is extending its lines in such a way as to compete with the other two companies. These railways had not been reducing their freight rate on wheat as they should do. It was claimed that wheat should be carried to the great lakes at a rate not exceeding 10c per 100 lbs., or 6c a bush. To secure such a rate was the goal of his ambition, & he would not rest until he had secured it. How this would be secured he was not in a position to disclose at present. He asked for time to think the matter thoroughly over & to crystalize his thoughts into the proper shape for legislation on the lines mentioned. Its carrying out might involve a large outlay & the placing of a heavy liability on the province. It was therefore a matter which required serious consideration & there should be no rashness in reaching a conclusion on such a momentous subject. If conditions were right he thought the government should build railways where needed, some branch lines must be built in order to give transportation facilities to certain sections. These would have to be constructed by either of these corporations or by the government. If constructed by the government they might for the time being be leased to the companies. No bonus or material aid would be given to any railway that did not give reduced rate to the farmers. He had not as yet had sufficient time to reach any definite conclusion, however."

Mrs. Bibbs (as the train gives a lurch)—My goodness! Are we off the track?

Mr. Bibbs—No, we seem to be running all right. Guess we went round the curve. We must be at Chicago.

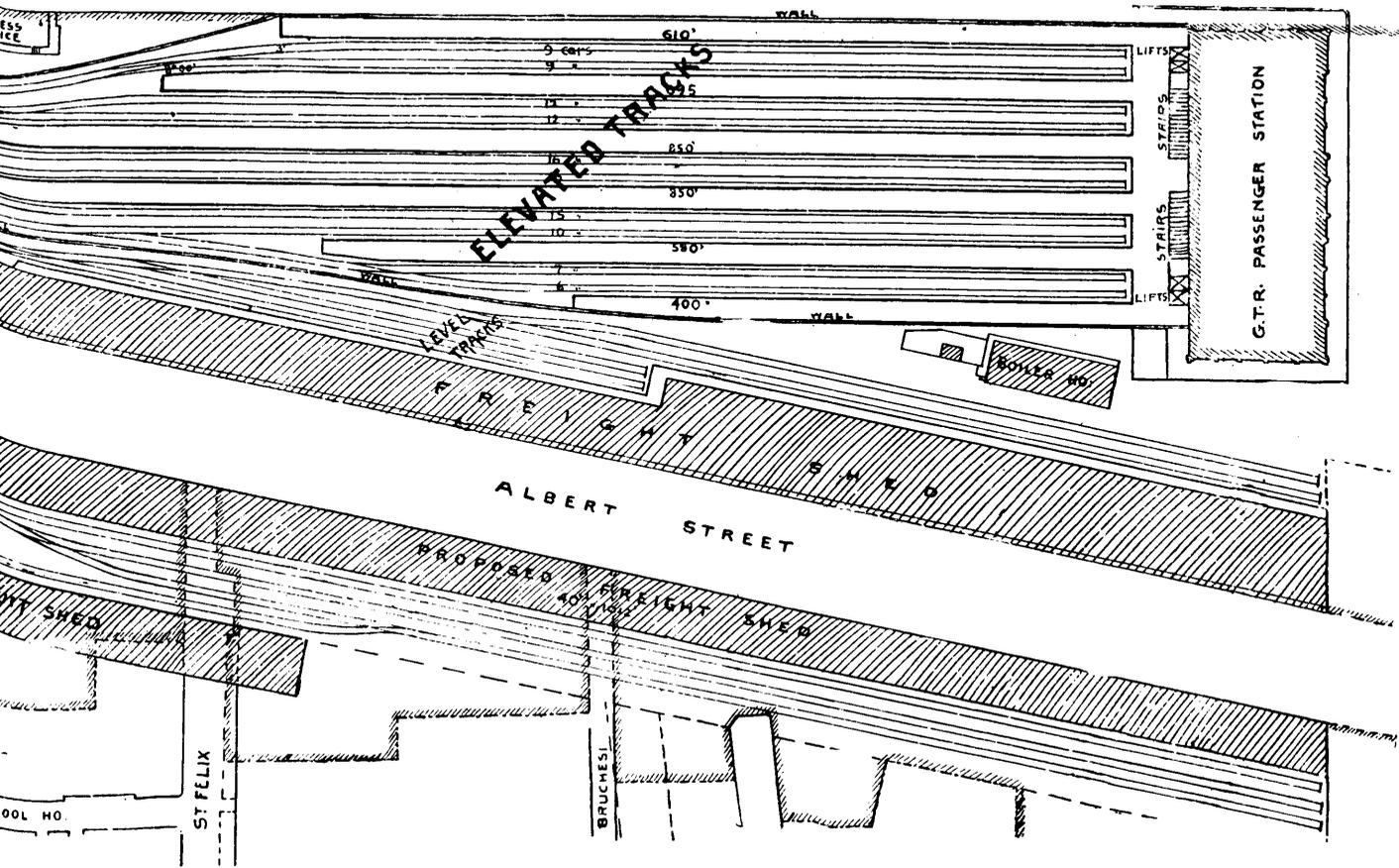
"But Chicago was a thousand miles off when we started, & we've only been riding an hour."

"Can't help it. I looked at the map of this railroad, & there ain't a curve in it till it gets to Chicago. Hunt up y'r things."

Government Control of Railways in Canada.

A correspondent of the London, Eng., Economist wrote from Winnipeg recently as follows: In the U.S. populism occupies itself chiefly with the money question. The greenback issues during the Civil War left the impression on the farmer's mind that money can be created by government fiat, & that impression still lingers. Ten years ago some farmers' organizations advocated the purchase by the Federal Government of the Union Pacific & Central Pacific Railways, which were indebted to it; it was supposed that if these lines were "run by the people for the people," & extended from ocean to ocean, the effect would be to lower the rates on other trunk lines. But the notion was soon abandoned & the United States farmer is now content with such control of railways as is afforded by his state commissions & by the Interstate Commerce Commission at Washington.

Here in Canada the money question cuts no sort of figure. When France owned the colony, issues of paper money, which the treasury were unable to redeem, inflicted such loss upon the settlers that long after, when banks came to be established under British rule, it was difficult to persuade them to accept bank notes—they would take nothing but l'argent sonant of gold or silver. Our banking system is a good one; circulation adjusts itself automatically to the fluctuating requirements of trade & the noteholder is thoroughly secured. Hence, while an agita-



BONAVENTURE STATION, MONTREAL. (SEE PAGE 327.)

tor now & then demands that all the paper money in the country should be issued by Government on the security of public resources, whatever that may be, the farmers as a body are satisfied with things as they are. In the recent Dominion general election campaign, however, Manitoba farmers advocated government ownership of railroads. It was not suggested that the existing lines should be purchased—Canada could not afford that—but that henceforth all new lines should be built & operated by government. The main ground on which this demand was based was that although the Dominion Government, the various Provincial governments, & the municipalities have voted, all told, about \$220,000,000 to railroads, without counting land grants, the public have no real control except in the case of the Intercolonial, which was built & is operated by the Dominion Government.

As a matter of fact, the Railway Committee of the Privy Council at Ottawa exercises a tolerably efficient control over all the private railways. It hears complaints regarding rates, & undue preferences, & has to do with running powers, expropriations, & crossings, traffic arrangements, & the like; no company may levy rates until they have been approved by it; any one with a grievance may submit it by letter, that is, is not obliged to appear at Ottawa in person or by counsel; & if he fails to make out his case, the costs are paid by the Government, provided he has acted in good faith. There is no doubt, I think, that the Committee serves the public as well as the Interstate Commission at Washington, whose usefulness has been impaired by recent decisions of the courts.

All things considered, too, the Manitoba farmer is well supplied with railways, the mileage per thousand of the population being greater than in any of the newer states south of the International Boundary; whilst rates

on the Canadian Pacific, local as well as through, are lower than rates in Dakota or Minnesota. He is asking for Government ownership principally because he thinks it would be the means of reducing rates at the expense of the taxpayer at large.

But the taxpayer in the older provinces is not disposed to rise to that height of altruism; his experience of Government ownership in the case of the Intercolonial having been singularly discouraging. To state the facts very briefly, the Government system, including the Prince Edward Island Ry., is 1,300 miles long. A roundabout route by the Baie de Chaleur was chosen ostensibly to withdraw the line as far as possible from the U.S. frontier, in reality to enable the Government of the day to obtain the support of northern New Brunswick for Confederation. There was a good deal of corruption in connection with the contracts, & ever since the road was opened it has been run, more or less openly, as a party machine. Politics have corrupted the management, & the management in turn has corrupted politics.

No matter whether Liberals or Conservatives are in power, the cost of operating is far higher than on other lines. Stations were planted thick to satisfy persons who had land to sell & create other patronage; buildings of various kinds, like the huge elevator at Halifax, have been erected to carry bye-elections or furnish contracts to political allies; & branch lines constructed with an eye to the effect on the constituencies traversed. Rebates are given to friends, or, what comes to the same, the friend gets the benefit of under-billing—he is allowed to place, say, 35,000 lbs. of freight in a car & be charged for only 24,000 lbs., whereas the political opponent is made to pay for the actual quantity shipped. When a new cabinet or a new Minister of Railways comes in, an effort is made to banish abuses of this sort, but the party friends are generally

strong enough to block reform. "Do you mean to tell us," they ask, "that we who have been in the wilderness so long are not to profit by the perquisites which the other side enjoyed?"

The number of employes is excessive, but as they are voters & usually active party workers, it is not easy for the most resolute of Ministers to get rid of them, even when they are known to be dishonest. Much of the time of the members who support the Government is occupied with matters of railway patronage or in pressing claims for damages, etc., not in every instance genuine. Rates are lower as a rule than on other lines, because the people along the route insist on low rates, knowing that the deficit will have to be shouldered not by themselves but by the general treasury. To reduce the deficit the Minister is tempted to charge to capital items which ought to be charged against revenue; the opposition for the time being protests, but does the same thing when its turn of office comes. The Chief Engineer has cited an instance where a farmer, whose claim was nursed by politicians, demanded \$60,000 for \$10 worth of sand taken from his land. The cost of building a branch, 14 miles long, from St. Charles to Levis, opposite Quebec, was estimated at \$750,000, which included the land expropriations; the actual cost to date amounts to nearly \$2,000,000.

The results of Government ownership in Europe or Australia have no bearing, therefore, upon the subject here. We must judge it by its results in Canada, which are so unsatisfactory that many of the best men in both parties would like to see the Intercolonial leased to a company, in order that politics might be purged of so fruitful a source of evil.

Moreover, mixed ownership is, as usual, beginning to work injustice, private lines having to compete with the Government railways that are not expected to earn dividends,

or even to make both ends meet. It is not at all likely, then, that the Dominion Government will undertake to build & operate lines in the Northwest. The Government of Manitoba is committed to provincial ownership, but cannot very well build a trunk line to Lake Superior, whether to Fort William or to Duluth; whilst province-owned branches, serving as mere feeders of the Canadian Pacific or the Northern Pacific, could not, of course, reduce rates to Lake Superior or the seaboard.

The Southern Pacific Presidency.

A U.S. contemporary says: The Southern Pacific Co. has made a great acquisition & the G.T.R. has suffered a corresponding loss in the decision which transforms the General Manager of the latter into the President of the S.P. system. C. M. Hays is a gratifying example of what a young man with ability & a tremendous capacity for work can accomplish in this country, without capital, political influences or favoritism. For 4 years he was an office clerk; for nearly 10 years more he was general manager's secretary—a splendid school for the all-round railway man; for the next 9 months he was assistant general manager, & then he reached the goal of most railway men's ambition by becoming general manager at the early age of 33. For 8½ years the Wabash was able to retain him in that position, until nearly 5 years ago, when he accepted the larger & more difficult work of operating the G.T.R. His success in rehabilitating that great property has been warmly acknowledged at the half-yearly meetings of the English stockholders—gentlemen who are generally less ready to praise than to blame—and the announcement that the Co. is to lose his services will cause general

regret as well as surprise. The presidency of a vast corporation such as the S.P., with its nearly 10,000 miles of railway lines, directly & indirectly controlled, operating thousands of miles of steamer lines, reaching to the South Sea & the Orient, & numbering its employes by tens of thousands, is a position of power & usefulness that may well satisfy the ambition of any man, & the man who has attained this was a clerk 16 years ago. In addition to the rapidity of his rise two facts are noticeable in examining the dates of Mr. Hays' railway career—that his official service thus far has been with two companies only & that from his entry into railway work as a boy of 17 he has never been for a day out of employment, stepping from one position to another that was higher by a continuous progress. Such a record is rare in a profession so full of vicissitudes as that of the railway official, & it is proof of extraordinary & varied abilities.

The accession of Mr. Hays to the presidency, with his office & residence in San Francisco, will, it is to be believed, begin a new era in respect to the attitude of the California public toward the S.P. Co. & its management. For 30 years & more this Co. & its predecessors have labored under the open hostility or the secret suspicion of a large part, if not all, of the people of the Pacific Coast, the chief beneficiaries of the pioneer transcontinental lines. The Central Pacific & its outgrowths were originated & controlled by four men, & it was easy to start the cry of monopoly, tyranny, despotism against those who ruled the sole & indispensable means of transportation in a vast territory. The forceful men who dared to stake their all on the venture of the first railway across the desert & the mountains seemed to many arrogant & overbearing in exercising their

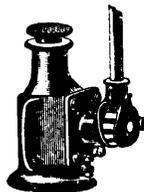
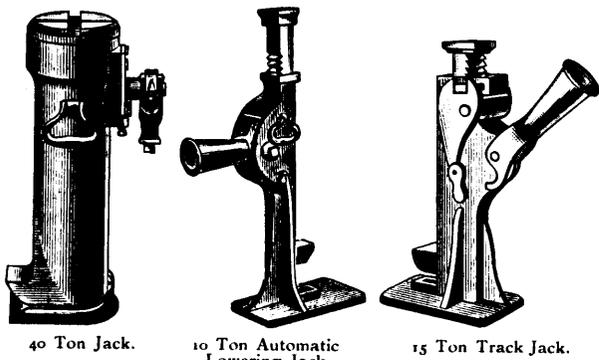
great powers. The great cost of construction in those experimental days, the sparseness of population & traffic & the expensiveness of operation on many parts of the new roads compelled the builders to fix high rates for transportation, & when offended applicants for lower charges began to agitate for legislation against the great monopoly, the railway company had to use its political influence also, & so the S.P. became in time the object of warfare of extraordinary bitterness & persistence. Conditions have changed of late years & the Co. & the majority of the people now have a better understanding of each other, but there is still a considerable faction, represented by several of the strong papers of San Francisco, whose voice is ever raised against the S.P. in regard to which they continue to believe that whatever is, is wrong.

It is time that this profitless war should cease. The four men whose achievements evoked it—Stanford, Crocker, Hopkins, Huntington—have passed from the scenes of their mighty labors, of which California is in the prosperous enjoyment, their millions have been dispersed through countless channels of industry & usefulness, the ownership of the vast railway system which they originated is distributed among tens of thousands of holders in many states & many lands. San Francisco has developed from a provincial town, jealous & fearful, into a strong & growing metropolis, another great railway has crossed the continent & built a new highway for commerce to & from the Golden Gate, & the days of monopoly in transportation on the Pacific Coast are forever ended. The S.P. is under a new régime; its President—born since the Central Pacific came into being—succeeds to the chair of Huntington & Stanford unhampered by the prejudices, misunderstandings & mistakes which have character-

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ized the attitude of presidents & people in the past, & comes bringing a clean sheet for a new record. He is a just, broad-minded, public-spirited man, duly appreciative of public sentiment, deeply impressed with the duty of the railway to the people, up to date & progressive in his methods of management, a twentieth-century executive. Now let the people of California forget their old grievances, stop their faultfinding with men & conditions that are gone, & begin to co-operate with & encourage the new head of the S.P. & the able men who are now conducting that great property with such signal success.

The Railway Employe as a Man.

By B. D. Caldwell, Traffic Manager, Delaware, Lackawanna & Western R.R.

In this paper I will present for consideration the extensive & promising field for the development of character which exists among that large class of our citizens known as "railway men." There is an impression in some directions that the standards of character among the rank and file of railway men, because of the nature of their work & their environment, are not as high as those in the general business world, & there may be some among the railway fraternity who feel that the nature of their work is not conducive to the development of character, as is the case with many other lines of general business.

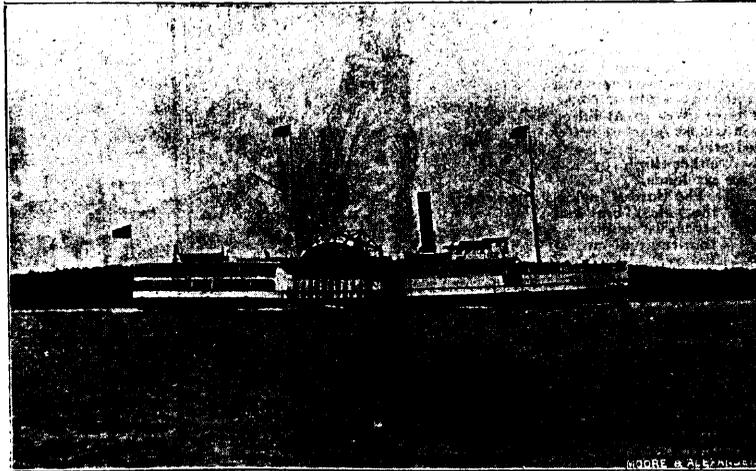
There was doubtless a time in the pioneer period of railway construction & operation when the railways did not enter so fully into the life & plans of our people, & make up so largely the commerce of our nation as they do today, when—because of limitations created by exposure & exclusion from the cultivating influences of society—there were lower standards of intelligence, of habit & of discipline than now prevail, such as to justify this conception; but to-day, in this country, when railway construction & operation have become almost if not altogether, the leading material factors in our civilization & progress; when the railways constitute nearly one-fifth of the total wealth of the country; when their employes, including their dependents, embrace nearly one-fifth of the population; when discipline like that of an army is required for the safety of life & property—in the enforcement of which the employe is equally benefited—who will but admit that no standard of character is too high; or who, among those who are conversant with the magnificent service rendered by our railways, unequalled anywhere on the globe, will but concede that railway employes, if they are to be equal to their responsibilities & opportunities, must measure up to the best & highest standards of intelligence, activity, fidelity, & all of those traits which constitute strong, self-reliant & forceful manhood.

Great interests & heavy responsibilities everywhere call for men of capacity & reliability, & surely in the railway world—justly so called—in finance, construction & maintenance, vast in scope & value, almost beyond comprehension; in traffic, intricate & perplexing, the structure upon which is builded the country's commerce; in operation, involving the safe, speedy & regular transportation of a nation's people & property—there exists a demand for the best qualities of mind, muscle & heart, that man is capable of; &

with all the possibilities of his profession—and it may properly be so termed—no railway employe can be said to lack for incentive to make the best of himself.

Perhaps there is no one before the public to-day who stands more firmly for this "strenuous life" than Theodore Roosevelt, & what he says is eagerly listened to, because the public believes that what he says is but an expression of what he does or tries to do. In a recent issue of the "Outlook," in an article "Promise & Performance," dealing largely with the relation of politics to good government, Governor Roosevelt, in his usual forceful way, said:—"A man is worthless unless he have in him a lofty devotion to an ideal, & he is worthless also unless he strives to realize this ideal by practical methods. He must promise, both to himself & to others, only what he can perform; but what really can be performed he must promise, & such promise he must at all hazards make good."

The history of mankind demonstrates the need of some aim or ideal as an incentive to progress. Indeed, the very nature of man is such that every intelligent being feels the impelling force of this principle, whether he realizes fully its meaning or not. I have dwelt somewhat upon these features of opportunity & possibility, because so large a por-



THE STEAMER MONTICELLO, SAILING BETWEEN ST. JOHN, N.B., AND HALIFAX, WRECKED NEAR YARMOUTH, NOV. 10, WITH A LOSS OF 33 LIVES.

portion of railway employes occupy what to many of them seem humble positions, so much so, in the minds of many, as to preclude their attainment to any special position or influence. To all such should come the inspiring words of Dr. John Hall:—"The best way for a man to get out of a lowly position is to be conspicuously effective in it." D'Israeli said:—"The secret of success in life is for a man to be ready for his opportunity when it comes." Browning believes that all actual heroes are essentially men, & all men possible heroes.

Let us as railway employes consider briefly some of the elements which enter into such a character; & as this paper is understood to come under the head of the educational work of the Y.M.C.A., it may be well to speak first of intelligence.

Intelligence is necessary to the successful performance of any important work. There are some who think that there is much railway work which requires muscle only; in this they are mistaken, as there is no business, taking it as a whole, wherein intelligence is more essential. Intelligence is not simply book learning, it consists of an ability to distinguish between right & wrong; to comprehend the duty of the hour, & to find a way for its performance. It means discipline of mind & body, without which all education is

vain. It may, we think, be correctly said that level-headedness is the essence of business intelligence; but this involves the acquirement of knowledge through all available channels & the right use of it.

An essential element of all true character is conscientiousness. Sincerity is the foundation of all right character. Used in its best sense it means integrity. That was a noble sentiment Charles Dickens uttered when he said:—"There is nothing so strong or safe in any emergency of life as the simple truth;" & so there is nothing so winning & so binding in our relations with our fellowmen as sincerity. Deceit & insincerity are the costliest implements employed in human society, because they destroy confidence, lacking which, there is no security of any structure, whether of life or property.

On the other hand, conscientiousness inspires trust. It creates courage. It impels loyalty. Mr. Depew, in his memorial of Mr. Vanderbilt, said:—"He was distinguished for an intense conscientiousness. Every matter which came to him was first subjected to the crucible of its being right or wrong. Once satisfied that the course he was to pursue was the right one, no difficulties, no dangers, no obstacles deterred him. Under such circumstances he was the most courageous of men. He simply took no heed of dangers or perils, but moved straight forward to the purpose that he believed he ought to accomplish."

Is it too much to ask that this principle shall govern any railway man, be he official or employe, in his relation to his fellows, whether it be his employer, his employe, or the public with whom he deals? We have seen that it may dominate the highest official, & we believe it may, with equal propriety, be the ideal of the humblest employe.

The old principle handed down by Benjamin Franklin, that "honesty is the best policy," finds fruitful field in railway work, as it is hard to conceive of a business where there is greater opportunity for opposite practices. Honesty, however, does not find its fulfillment merely in dollars and cents; it means con-

scientiousness as to time, service, method & duty, absent or present.

Another necessary element is energy, or industry. Prizes must be striven for. Obstacles must be overcome. Goethe said:—"Energy will do anything that can be done in this world, & no talents, no circumstances, no opportunities will make a man without it."

Earnest men are men of might; they win where others fail; they are practically resistless. Failure is a word they do not know. Power comes from persistent & repeated effort. There is no such word as discouragement in the vocabulary of an earnest man. His motto should be, "Difficulties are made to be overcome."

There are too many in the world looking for easy places. The easiest way is not the best! A man might as well, so far as the statement of character is concerned, look for a place of burial. Such men will never "carry a message to Garcia." They will, on the other hand, find themselves behind in the race, side-tracked while others go by. Such men make no contribution to progress; on the contrary, they clog its wheels, & instead of riding in chariots, well to the front, through life's way, they either drag along, hardly able to carry their own burden, or serve as a weight to some stronger character.

A very effective element in character is

"friendliness." It is well-nigh essential as an element of success in the railway service. It represents politeness, courtesy, cordiality, good-will, kindness & consideration. I heard an experienced traveller say but recently that if he was the manager of a railway he would make it his first duty to require politeness & courtesy in all dealings with the public, & would make a penalty of dismissal without recourse for any act of dishonesty or impoliteness to a patron. Railway agents & trainmen know what this means, & appreciate what a world of opportunity constantly exists for the manifestation of this principle, & how often it wins in the face of other adverse conditions, which without it would call for dissatisfaction & complaint.

What the rank & file of railway men want from their superiors is not to be dealt with leniently & to allow slipshod & dilatory work, but the enforcement of the strictest discipline, which is of itself a guarantee of safety to the life of the employe, together with fairness, justice, courtesy, consideration for & recognition of merit; & these must be shown by those in authority if the results are to be satisfactory.

I should feel unworthy of your hearing if I should close this paper without recording my conviction that the foundation & underlying principle of all true character is in conforming in disposition & conduct, to the divine standard of right. My observation & belief is that the only sure foundation for doing right in relation to our fellowmen is that of right-doing in the sight of the Almighty. If a man is seeking to walk rightly in His sight he is not likely to go very far wrong in his relations with his fellowmen, & it is in recognition of this principle that the Railway Y.M.C. Associations were formed, to minister to the needs of & exercise the influence upon railway employes; & when business men tell me, as they frequently have, "You have a fine class of trainmen on your line—many of them are earnest Christian men," I cannot but feel that the credit for that result is chiefly due to our railway associations & to the work of their noble secretaries & earnest bands of devoted Christian railway men, who have demonstrated that they have lofty ideals & are by practical methods endeavoring to live up to them.

The highest attainment any man can reach

is to be able to do that which is right, & to perform to the best of his ability, at all times & in all places, what he understands to be his duty. There are, however, so many adverse influences calculated to prevent men from measuring up their best selves, that it is absolutely necessary, if they are to be successful, that they seek for & place themselves under such influences & surroundings as will strengthen them in their good resolves. For this reason influences & surroundings, such as are to be found in membership of a Y.M.C.A., are not only valuable but essential to railway employes—especially to those whose occupation is such that a considerable portion of their time is spent away from home.

Be a man's religion, as to denomination or sect, what it may, if as inculcated by the principles of our Association, he recognizes the Almighty as his guide of faith & conduct, & with this sure foundation he seeks to make the most of his opportunities & abilities, he will, he must, attain a character which will stand the test of prosperity or adversity, health or illness, & from a worldly standpoint, of success or failure; & he will have influences working in his behalf, silently, but continually, which will carry him over all of life's places.

THE BARRETT TRACK JACK.

Recommended as a standard by the

Road Masters' Association of America.

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

The Barrett Jack is the safest, best and strongest known to the railroad world to-day.

Lifting capacity 10 to 15 tons.

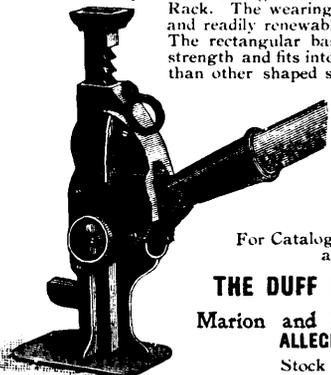
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THE DUFF MANUFAC. CO.

Marion and Martin Avenues, ALLEGHENY, PA.

Stock carried by

JAMES COOPER, Agent, 299 St. James St., Montreal.



No. 2 Automatic Lowering.



No. 1 Trip.



Page Fencing on Canadian Pacific Railway, Frederickton, N.B.
THE PAGE WIRE FENCE CO., LTD, WALKERVILLE, CANADA.

Edward L. Drewry

REDWOOD BREWERY,

Winnipeg, Manitoba

Fine

ALES, EXTRA PORTER

... AND ...

PREMIUM LAGER.

Most Extensive and Complete Brewery and Malshouses in Western Canada.

CHOICE MALT FOR SALE.

Manufacturer of the Celebrated

Golden Key Brand AERATED WATERS.

Sale One Hundred Millions a year.

R·I·P·A·N·S

THE WONDERFUL MEDICINE

They relieve Distress from Dyspepsia, Indigestion and Too Hearty Eating; are a perfect remedy for Dizziness, Nausea, Drowsiness, Bad Taste in the Mouth, Coated Tongue, Pain in the Side, TORPID LIVER.

They regulate the Bowels. They Cure Sick Headache. A Single One Gives Relief.

WANTED

A case of bad health that R·I·P·A·N·S will not benefit. R·I·P·A·N·S, 10 for 5 cents, or 12 packets for 48 cents, may be had of all druggists who are willing to sell a low-priced medicine at a moderate profit. They banish pain and prolong life. One gives relief. Accept no substitute.

Note the word R·I·P·A·N·S on the packet. Send 5 cents to Ripans Chemical Co., No. 10 Spruce St., New York, for 10 samples and 1,000 testimonials.

Back Numbers for Sale.

THE RAILWAY AND SHIPPING WORLD :

March to December, 1898, price \$1.00

January to December, 1899, " 1.25

including postage.

Address

THE RAILWAY AND SHIPPING WORLD,

33 Melinda St., Toronto, Canada.

This is the crowning inspiration of human life, with all its uncertainties, its weaknesses, its disabilities, its seeming discrepancies, that a man cannot fail of his truest & best good if he have but God with him & but do his best. Nowhere, perhaps, do we find a better example of such a character than in the life of the late Cornelius Vanderbilt, as expressed in the words of his pastor, the Rev. D. H. Greer: "Mr. Vanderbilt, as we all know, was a man of many & varied interests, & yet I think I am stating the exact truth when I say that there was one interest which pervaded & dominated all his other interests, & that was his interest in religion. He was a business man, he was a railway man, he was a rich man, & in these several aspects & relations of his life he was well & widely known. But above all these, or rather in all these, he was a Christian man. That was the distinctive trait & characteristic of him for which he was respected most while he was

General Passenger Agents' Meeting.

The annual meeting of the American Association of General Passenger & Ticket Agents was held at Buffalo, Oct. 16 & 17. The principal address was delivered by J. R. Wood, of the Pennsylvania. H. C. Townsend, of the Missouri Pacific, was elected President for the ensuing year, & it was voted that the next meeting be held at Asheville, N.C.

President G. H. Daniels, in opening the first session, made a happy address, alluding particularly to the good work which general passenger agents are doing in advertising American railroads throughout the world. He was presented with a gavel made of wood from Palestine, the givers being H. Gaze & Sons, the excursion agents.

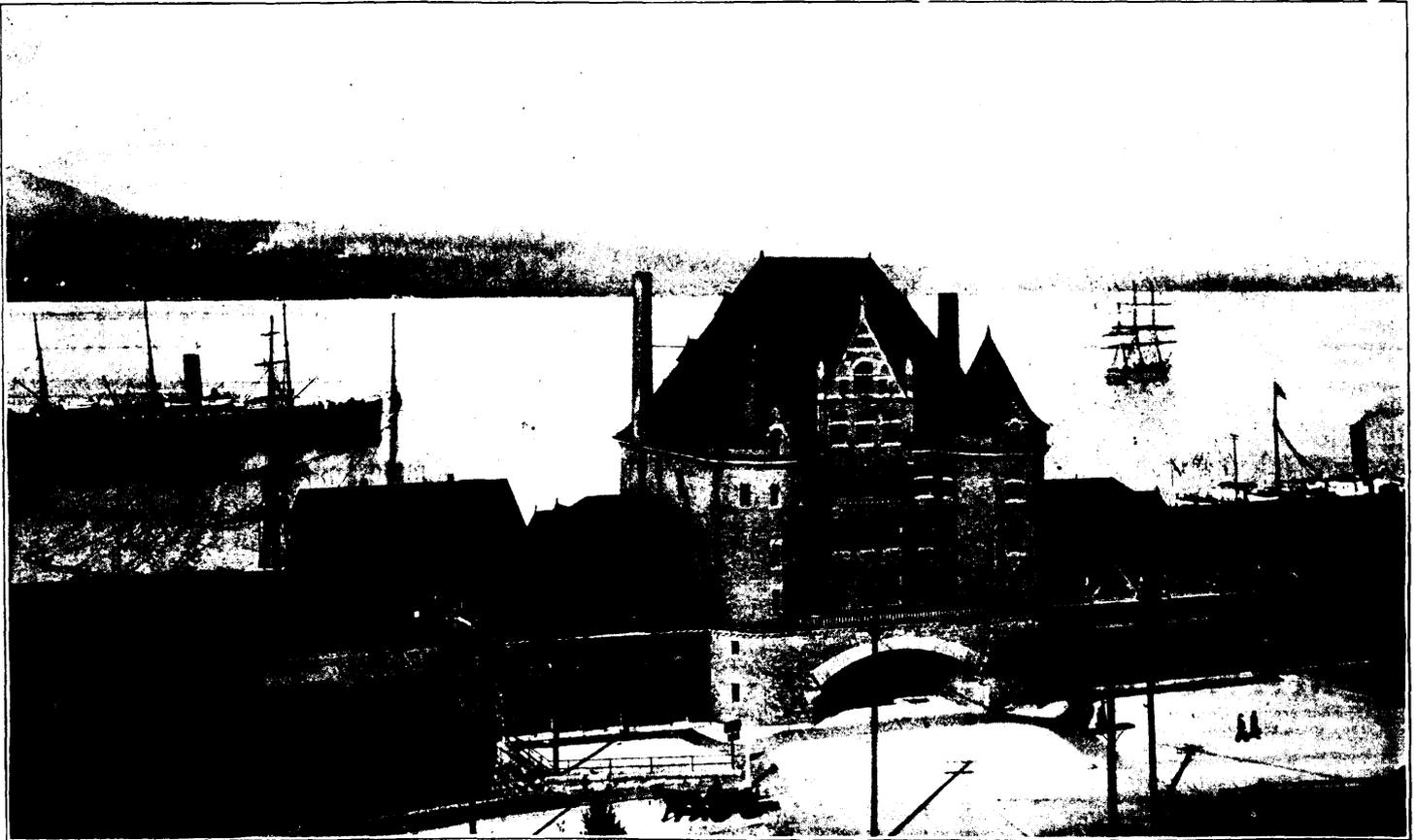
The Committee on Anti-Scalping Legislation made a report recounting several successful prosecutions of ticket forgers during the past year. The committee recommends

E. Davis, G.T.R.; H. G. Elliott, G.T.R.; B. W. Folger, Thousand Islands Steamboat Co.; J. Foy, Niagara Navigation Co.; H. H. Gildersleeve, Lake Ontario & Bay of Quinte Steamboat Co.; A. Hardy, Quebec & Lake St. John Ry.; A. C. Lytle, Orford Mountain Ry.; G. F. Marsh, Huntsville & Lake of Rays Route; C. E. E. Ussher, C.P.R.; J. H. Walsh, Quebec Central Ry.

During the meeting the following from Canada were elected members:—A. L. Baker, Tilsonburg, Lake Erie & Pacific Ry.; T. Henry, Richelieu & Ontario Navigation Co.; H. W. Wilson, Lake Ontario & Bay of Quinte Steamboat Co.

C. E. E. Ussher was elected a member of the Executive Committee.

London & Port Stanley Ry.—On Nov. 8 President Walker & General Manager Woollett, of the Lake Erie & Detroit River Ry.,



CANADIAN PACIFIC RAILWAY STATION, VANCOUVER, B. C.

living, & by which he is remembered best now that he is gone, & will be remembered always. Christianity with him was something else than a creed & something more than a form; it was a life to be lived, & he lived it, or tried at least to live it, & to cause it to appear in every position he occupied, & in every office he filled, in every social duty or task which he undertook to discharge. Of him I think it was literally true that in all the relations of life, no matter what they were, social or commercial, he carried himself—and was not ashamed of it—as a Christian, & sought first the kingdom of righteousness & truth."

Locomotive Tonnage Rating.—The American Railway Engineering & Maintenance of Way Association has issued a bulletin on locomotive tonnage rating on the Southern Pacific Co.'s Pacific System. It can be obtained from the Secretary, L. C. Fritch, 1562 Monnock Block, Chicago, Ill.

the continuance of effort on the part of the railroads to secure anti-scalping legislation by Congress. The meeting again discussed the question of safety paper for joint tickets, & the date on which all roads should use the safety paper prescribed by the Association was changed to Jan., 1902. Over 78% of the railways in the Association are already using this paper or have determined to use it.

The proposition to have an insurance department in the Association was laid over until next year, as were the questions of selling orders for tickets, the discontinuance of brass baggage checks, the issuance of rate sheets on May 1 & Nov. 1, standard method of printing time limits in round trip tickets, & several other subjects.

The following members were present from Canada:—F. F. Backus, Toronto, Hamilton & Buffalo Ry.; C. Cameron, Northern Navigation Co. of Ontario; A. P. Cockburn, Muskoka & Georgian Bay Navigation Co.; W.

met a committee of the London city council, representing the board of the L. & P. S. R. respecting the renewal of the lease of that line by the L. E. & D. R. R. After considerable discussion the representatives of the L. E. & D. R. R. revised the Co.'s offer by offering to pay \$17,500 a year for the balance of the present lease for 13 years from Jan. 1, 1901, in lieu of the present rental of \$10,000 a year, with interest on the bridges over the ravines near St. Thomas, & 10% on the gross earnings over \$80,000 a year. After the 13 years the Co. to pay \$20,000 a year for 20 years. (Oct., pg. 312.)

The design of the medals awarded to the C.P.R. & G.T.R. Companies at the Paris Exposition has reached this country. The obverse side of the disk bears the inscription: "Republique Francaise." The reverse shows allegorical figures, a view of the principal structures, the inscription being "Exposition Universelle Internationale, 1900."

A Reminiscent Ode.

Canadian Ticket Agents' Association meeting, Hamilton & Muskoka, Oct. 9 to 12, 1900.

My dear Old Tom! regret doth strong possess me,
That fate decreed your absence from the meeting
Where sages wisely talk of ticket matters,
And yearly join in warm and social greetings.

Beneath the snow-capped peak of Teetzel's mountain,
The wigwams of the braves were soon erected,
While October's dreamy face and smile expansive
Beamed on privilege and kindness unexpected.

Each want of inner man and maid looked after,
The landscape, bay and harbor then were seen,
After which, strains of music most enchanting
Sent the ladies to repose and happy dreams.

Our mundane sphere whirls round again—'tis morning;
The pipe of peace, the jest and hearty laughter
All combined to shorten time allowed for business,
Thank you, no! soda straight I'll leave till after.

Ere long the delegation and their sweethearts,
Pictured where the whitecaps splashed and curled;
Assembled for the banquet and reception
'Neath Union Jack and Stars and Stripes unfurled.

Perchance my lady fair who sat in state there,
And favored cavalier with glance and smile,
Had influence and added to the vigor
Of speech and song rendered in good style.

The new and handsome train at our disposal
Offered comforts and a luxury or two.
By the time the party lunched on Lake Muskoka
Maybe those who missed the cars were feeling blue.

At Monteith's we had a scramble and some Rugby
In an effort to get booked throughout the night,
The way that old and young sailed into victuals,
You bet, my jolly chap, it was a sight.

They sang with lusty lungs, "They're decent fellows,"
When the trio got the sunshade, cane and grip.
And Hie'land Mary (for the moment fancy called her)
The light fantastic toe did gaily trip.

In the morning every soul was gently wakened
By six thumps with a tough and healthy stick,
Through fog, cried the king who ruled that city,
"I'd like to know for why you trowed dat brick."

'Mid vocal serenade from Reeve and people,
We sailed away with music from the band;
You should have seen the "hoot mon" in his bonnet,
Oh! the silent speaker's antics, they were grand.

Homeward bound, bright sunshine gave us glimpses
Of scenery to inspire a painter's dream;
E'en now methinks I see the Port and Sandfield
In a setting—lake and hills and verdure green.

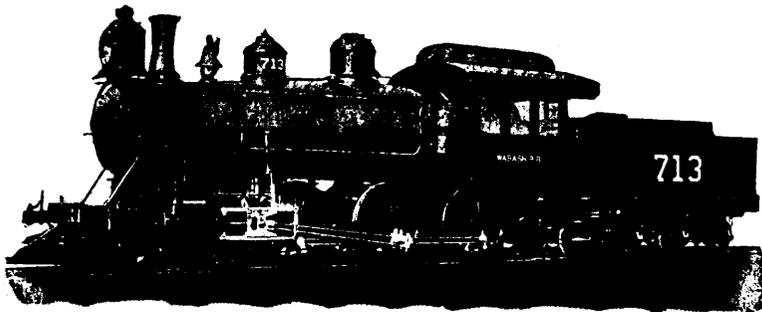
Then here's to all our gracious entertainers,
Their goodness on our jaunt we'll oft recall,
Let's drink their health and clasp each hand while singing
"Auld Lang Syne," and next year at Montreal.

J. M. COPELAND.

A Fast Freight Train.—The C.P.R. by running a train of 22 cars of beef for export, from Detroit to Newport, 660 miles, in 32 hours, claims to have made a record for fast freights. The time was 12½ hours under the schedule.

Canadian Roadmasters' Association. In the report of the discussion on the creeping of rails, on pg. 347 of this issue, J. Drinkwater is reported to have said:—"Have you noticed, Mr. Holloway, where the track creeps one way & the other the joint ties travel with the rail?" It should have been reported, "Have you noticed, Mr. Holloway, where the track creeps more on one side than the other, the joint ties travel with the rail?"

Fast Running on the C.P.R.—A fast run was made Nov. 12 with a special train carrying Lord Strathcona from Montreal to Ottawa. It left Windsor St. station at 8.37 a.m. & reached Ottawa at 10.27 a.m., a distance of 111.4 miles, in 110 minutes. At least 10 minutes should be deducted from this, however, for slow running through Windsor St. station yard at Montreal & the Central station yard at Ottawa, & for reducing speed at four interlocked grade crossings, & at St. Annes & Vaudreuil, to receive & deliver electric train staff. The train, consisting of Atlantic type locomotive 210, with Driver J. Smith at the throttle, one coach & the private car Metape-dia, was in charge of Conductor A. Chapman.



Richmond Locomotive and Machine Works,

RICHMOND, VIRGINIA, U.S.A.

BUILDERS OF

Simple and Compound

LOCOMOTIVES

Adapted to every variety of service.

MANITOBA

The Government Crop Bulletin issued Dec. 12th, 1899, gives the following statistics for the year:

CROPS.

	ACRES.	AVERAGE YIELD.	TOTAL.
Wheat	1,629,995	17.13 bus.	27,922,230 bus.
Oats	575,136	38.80 "	22,318,378 "
Barley	182,912	29.4 "	5,379,156 "
Potatoes	19,151	168.5 "	3,226,395 "

STOCK.

Beef Cattle exported during the year	12,000
Stockers exported	35,000
Total value dairy products	\$470,559 09

10,500 FARM LABORERS

Came from Eastern Canada to assist in the harvest fields of Manitoba in 1899—and the demand was not fully satisfied.

MANITOBA FARMERS ARE PROSPEROUS.

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

MANITOBA LANDS—For sale by the Provincial Government. Over 1,600,000 acres of choice land in all parts of the Province are now offered at from \$2.00 to \$5.00 per acre. Payments extend over eight years. **Special Attention** is directed to 500,000 acres along the line of the Manitoba and Northwestern Railway at \$3.00 and \$3.50 per acre.

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

For full information, maps, etc., FREE, address J. A. DAVIDSON, Minister of Agriculture and Immigration, Winnipeg, Manitoba.
Or JAMES HARTNEY, Manitoba Emigration Agt., Union Station, Toronto, Ont.

THE FAVORITE ROUTE

To **New York** and
.....**Philadelphia**

GRAND TRUNK RAILWAY

in connection with the

LEHIGH VALLEY RAILROAD

Route of the "Black Diamond Express," handsomest train in the world.

Leaving **Toronto** daily (except Sunday) at 9 a.m., **Hamilton** 9.55 a.m., arrive **New York** 10.08 p.m.

Fast Night **New York** and **Philadelphia** Express, leaving **Toronto** 6.15 p.m. daily, arrive **New York** 9.38 a.m., **Philadelphia** 8.56 a.m.

Pullman Sleepers from **Toronto**, **Hamilton** and **London** to **New York** and **Buffalo** to **Philadelphia**.

Call on Grand Trunk Ticket Agents for tickets and further information, or address

Robt. S. Lewis,

Canadian Passg'r Agt., 33 Yonge St., Toronto.

Geo. R. Chesbrough,

West'n Passg'r Agt., Buffalo, N.Y.

Chas. S. Lee,

Gen'l Passg'r Agt.,
New York.

A. A. Heard,

Asst' Gen'l Passg'r Agt.,
New York.

All C.P.R. Agents in

**MANITOBA,
ASSINIBOIA,
ALBERTA and
BRITISH COLUMBIA**

sell through tickets to the Old Country, cheaper than if passengers bought railway tickets to New York or Montreal, and then re-booked.

They also sell prepaid tickets to passengers coming from the old country, cheaper than the rate obtainable in Europe, and on favorable terms.

Apply to any agent Port Arthur and west, or to

W. P. F. CUMMINGS,

C.P.R. Offices,
WINNIPEG.

Chicago & Grand Trunk Railway.

The receivers, E. W. Meddaugh & H. B. Joy, issued the following circular Nov. 30:—"In accordance with a decree of the U. S. Circuit Court for the eastern district of Michigan, the undersigned will, at 1 minute after midnight of Nov. 30th, transfer to the Grand Trunk Western Ry. Co., possession of the railway & property of the C. & G. T. R. Co. On & after 1 minute after midnight of Nov. 30, 1900, all persons employed by the undersigned as receivers in said cause in or about the operation of the property embraced in said decree are relieved from duty to said receivers, & after that date will cease to be in the service of the said receivers. The liability & obligation of the receivers in respect to said property, to the persons employed thereon, & to the public, terminate absolutely at 1 minute after midnight of Nov. 30, 1900."

President Hays, of the Grand Trunk Western Ry. Co., issued the two following circulars on the same date:—"The G. T. W. R. Co. has, by virtue of sale & purchase under decree of foreclosure against the Chicago & G. T. R. Co., rendered by the U. S. Circuit Court for the eastern district of Michigan, & subject only to the obligations imposed by such decree, become the owner of all the property described in said decree. Notice is given that at 1 minute after 12 o'clock midnight, on Nov. 30, the G. T. W. R. Co. will take possession of & operate the said property."

"At a meeting of the board of directors of the G. T. W. R. Co., held Nov. 22, the following officers were elected:—C. M. Hays, President; J. H. Muir, Treasurer; C. Percy, Secretary. All other persons in the service of the receivers of the C. & G. T. R. are authorised to act in their respective positions & capacities for this Co. until further notice."

Display, etc., of Transportation Folders.

The Railway & Steamship Folder Display Co. has recently been organized to carry on the display of folders in racks in the leading stations, ticket offices & hotels, & to distribute folders & other printed matter to coupon & exchange ticket offices.

The Co. has bought the business of the Railway & Steamship Advertising Agency heretofore carried on by Jos. Simpson, of Toronto, who died recently, & has also secured the franchises, &c., of the National Railway & Steamship Advertising Co. of Canada, & of the Railway Folder Advertising Co. of Ontario, Ltd.

A number of the Co.'s racks are already located at the most important points in Ontario, & this branch of the service will be extended to the other provinces. The distribution branch, already in thorough operation in Ontario, is also being extended, so as to embrace the rest of the Dominion, & the Co.

is thoroughly equipped to render excellent service.

Great care is being taken to perfect the details of organization, & there is no doubt that the work will be carried on in a thoroughly systematic & up-to-date manner, the management being in capable & experienced hands.

Already a number of leading lines, including, among others, the Canadian Pacific, Grand Trunk, Intercolonial, Lehigh Valley, Dominion Atlantic, Mexican National, Delaware, Lackawanna & Western, Canada Atlantic, Illinois Central, Chicago, Milwaukee & St. Paul, Lake Erie & Detroit River, Wabash, Ottawa & Gatineau, Quebec & Lake St. John, Florida East Coast, Cleveland & Buffalo Transit Co., Northwest Transportation Co., Richelieu & Ontario Navigation Co., Northern Navigation Co., & Canada Atlantic & Plant Steamship Co., have placed their business in the Co.'s hands.

The head office of the Co. is at 16, Manchester Building, Melinda St., Toronto, with a branch & distributing office at 111, Union Station, Toronto.



GUELPH STATION, CANADIAN PACIFIC RAILWAY.
The oldest building in Canada used as a railway station.

Station, not Depot.—R. Luce, in his excellent little work "Writing for the Press," says:—"Depot." Avoid this mischief-making French word by substituting station. Every railway depot is a station, but very few stations are depots."

The Oldest Station in Canada.—On this page is an illustration of what we believe to be the oldest building in Canada used as a railway station. Guelph was founded on April 23rd, 1827, when the first clearing was made in the forest under the direction of John Galt, the first Commissioner of the Canada Company. The first building put up on the town-site was the Priory, which was built of logs, & finished in 1828 as an official residence for Mr. Galt. Afterwards it passed into the hands of the late David Allan, who lived in it for many years, & when the Guelph Junction railway was built it was secured as the passenger station at the Guelph terminus, & is still used for that purpose by the C. P. R. Co. which leases the line.

The use of hoops to deliver train orders to an engineman or conductor without stopping the train has been introduced on the Pittsburgh division of the Pittsburgh Cincinnati, Chicago & St. Louis.

Electric Car Brake Tests.

Early in 1899 the Board of Railroad Commissioners of the State of New York authorized a public competitive test of brakes for street surface cars, the action being prompted by the alarming increase in the number of serious accidents happening on electric railways throughout the State, which the Board believed to be due, to a large extent, to the inefficient brakes in use.

The tests were made in Aug., 1899, on the Lennox Avenue line between 135th & 146th streets, New York City, on cars furnished for the purpose by the Metropolitan St. Ry. Co. Between the points mentioned the track is of 90 lb. girder rail, 2 inch head, double-track underground electric construction. The distance between the streets named is 2,750 ft., & there is a descending grade northward from 135th St. of 8.8 ft., nearly uniform between the points.

The cars furnished had 8 wheels, with maxim traction trucks, fitted with G. E. 1,000 motors, with non-suspension driving wheels 30 ins., tread wheels 20 ins. in diameter,

length of car body over all 28 ft., outside measurement of wheel base 17 ft. 6 ins.

The test was made by C. R. Barnes, electrical expert of the Board, assisted by W. A. Pierson, electrical engineer of the Metropolitan St. Ry., who designed & constructed a device that automatically recorded the result of each stop, in the form of curves, which showed the number of feet that the car had run after "stop" signal had been given & the time consumed in bringing the car to a standstill.

It was the intention to make the test at initial speeds of 20, 16,

12 & 8 miles an hour, but it was found that the higher speeds could not be attained with the motor equipment used, so the tests were made at 16, 15, 12 & 8 miles an hour. These tests were made without sand; & 2 additional stops, at 16 miles, were made with sand.

In an elaborate report of the result of the tests, Mr. Barnes says: "The reliability of the air brake has been thoroughly established by its use on steam roads. A large number of them are now used on electric cars, & with proper inspection & care, the air brake, as applied to electric cars, is a reliable, powerful, quick & easily controlled means of applying the braking power to a car wheel. Four systems of air brakes were submitted & tested. All were similar, so far as relates to the use of air under compression in a cylinder, to operate a piston from which, through levers, the power was transmitted to the brake shoes. They differed in the method of compressing the air & applying it to the piston.

"The G. P. Magann Air Brake Co. presented what is known as a storage air system, in which there is an air compressor & reservoir located at the power house or some central point on the street car system. This reservoir is charged with air usually compressed to 300 lbs. pressure. The car is equipped

with 2 storage reservoirs, which are charged in a few seconds from the stationary reservoir at 300 lbs. pressure. By means of a reducing valve this pressure is reduced to 50 lbs., at which pressure the air enters an auxiliary reservoir, from which it is controlled, to the brake cylinder by means of the engineer's valve, in the usual manner. There are some special features in the construction & operation of this valve. The storage equipment of cars is calculated for 300 stops, which is sufficient for ordinary car operation: when necessary this capacity can be increased."

In the "conclusions" of the Board of Railroad Commissioners, which wind up the report, the Board says: "After careful consideration of the whole subject of brakes for electric cars, the Board has determined that, except in special cases, where the liability to accident is very remote, the ordinary single chain & spindle hand brakes now generally used should be replaced by the brakes made by one of the following manufacturers, or any other which in the judgment of the Board is hereafter shown to be equally efficient."

The list given by the Commissioners is divided in the following order: air brakes, electric brakes, friction brakes, hand power brakes, & the list is headed in order of merit by the air brake made by the G. P. Magann Air Brake Co. of Toronto & Detroit, Mich.

The G. P. Magann Air Brake Co. had a stand at the recent convention of the American Street Railway Association at Kansas City, in charge of E. C. Rutherford, but did not make an extended exhibit. By invitation a number of delegates rode over the new Kansas City-

Leavenworth electric line, all the cars of which are equipped with the Magann brake. The freedom from complicated parts in this braking system, & its quick & accurate operation won for it many words of commendation.

Montreal Street Railway Company.

The following report was presented at the 40th annual meeting Nov. 7:

The business for the year ended Sep. 30 shows a net profit of \$647,246.64, against \$630,870.61 for the previous year. Out of this four quarterly dividends of 2½% each have been declared, amounting in all to \$512,500, leaving a surplus of \$134,746.64, of which \$50,000.00 has been added to contingent account & the balance—\$84,746.64—to surplus account. \$27,091.91, expended during the year on special renewals, has been charged against contingent account. The roadbed, rolling stock, buildings & other property have been efficiently maintained. The increase in the business during the year has been most satisfactory.

The operating expenses show an increase of 1.11% as compared with last year. This is due to the cost of the more frequent & extended car service demanded by the City; increased expenditure for snow clearing, occasioned by the extraordinary storms during March; increased cost of fuel & general supplies, as well as increased wages.

A car-shed, to accommodate the additional rolling-stock built during the year, has been erected on the Co.'s property at St. Henri; local offices, public waiting-room & rooms for

conductors & motormen have been erected at Hochelaga. A fireproof addition has been built to the William St. power-house, to accommodate a portion of the new electrically-driven plant required in connection with the contract entered into with the Chambly Mfg. Co. for additional power. The car-shops & machine-shops erected last year, as well as the new running-sheds at Hochelaga & St. Denis St., have proved most convenient & satisfactory, & have enabled the Co. to attend to its increased business with advantage.

The rolling-stock has been increased during the past year by the addition of 56 closed motor cars, 45 open motor-cars, 1 stores-car with equipment, 7 supply-cars & 80 trucks, & the electrical equipments for the cars have been increased by 128 motors & 83 controllers. There are at present under construction in the Co.'s shops 6 extra long closed motor-cars, mounted on double trucks, making in all 25 cars of this new type, which will be available for service during the coming winter. The feeder wire system, for the purpose of distributing power from the power-house to the different sections of the line, has been largely added to & increased in capacity, & the results obtained have been most beneficial. The system of cast-welding rail-joints has been continued & extended, the experience obtained during the past two years fully justifying the expense incurred.

During the past year the Co. has paid to the City of Montreal the following amounts: tax on earnings & other taxes, \$84,423.71; on account of snow-clearing, \$84,256.22; total, \$168,679.93. The question between the City

WIRE ROPES, MARION STEAM SHOVELS, BALLAST UNLOADERS.



Columbus Pressed Bowl Wheel and Drag Scrapers.

.....Wheelbarrows, Picks, Shovels, Mattocks, Etc.

Contractors Rails and Dumping Cars.

Saddle Tank Locomotives.

JAMES COOPER, 299 ST. JAMES ST., MONTREAL.

Established 1831.

Annual Capacity, 1,000.

BALDWIN LOCOMOTIVE WORKS.

SINGLE EXPANSION AND COMPOUND LOCOMOTIVES.



Built for the Great Northern Railway.

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

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

Electric Locomotives and Electric Car Trucks with Westinghouse Motors.

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

Established 1849

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

BRADSTREET'S

Capital and Surplus \$1,500,000

OFFICES THROUGHOUT THE CIVILIZED WORLD
EXECUTIVE OFFICES

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

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

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

CORRESPONDENCE INVITED

OFFICES IN CANADA:

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

THOS. C. IRVING,

Gen. Man. Western Canada, Toronto.

JOHN A. FULTON,

Gen. Man. Eastern Canada, Montreal.

& the Co., with reference to the interpretation of the section of the contract respecting snow clearing, has been referred to the courts & a decision is expected at an early date.

The following figures are extracted from the tables accompanying the report: Gross receipts, \$1,769,904.78, increase over 1899 6.57%; operating expenses, \$992,925.11, increase 8.76%; operating expenses per cent. of car earnings, 56.34 against 55.23; net earnings, \$776,979.67, increase 3.90%; net income per cent. of capital, 12.63, against 13.19; passengers carried, 43,362,262, increase 7.92%; transfers, 13,194,974.

ASSETS.

Cost of construction, etc.	\$3,162,843 41	
" equipment, etc.	2,555,365 02	\$5,718,208 43
Real estate & buildings		1,557,785 47
Stores		48,255 71
Accounts receivable		43,397 82
Cash in bank & in hand	178,317 20	
Cash on deposit with City of Montreal	25,000 00	20,317 20
		<u>\$7,570,964 63</u>

LIABILITIES.

Capital stock, paid up	\$5,497,055 00	
Bonds—5% payable Mar., 1908	\$292,000 00	
4½% payable Aug., 1922	681,333 33	973,333 33
Mortgages		6,034 51
Accounts & wages payable		69,587 79
Accrued fixed charges—		
Interest on bonds	5,150 00	
Tax on earnings	85,081 62	90,231 62
Employees' securities		7,118 60
Unclaimed dividends		1,956 57
Unredeemed tickets		16,942 35
Suspense accounts		49,053 07
Dividend payable Nov. 2, 1900		135,000 00
Contingent account		164,333 09
Surplus		560,318 70
		<u>\$7,570,964 63</u>

INCOME ACCOUNTS.

	1900.	1899.
Dividends	\$512,500 00	\$478,333 33
Transferred to contingent act	50,000 00	50,000 00
Transferred to surplus account	84,746 64	102,537 28
Income over & above expenses & fixed charges, exclusive of dividends	<u>\$647,236 64</u>	<u>\$630,870 61</u>

Electric Railway Statistics.

The following has been furnished by the Dominion Government Statistician, Geo. Johnson, F.S.S.

During the year 1899, the 632 miles of track in Canada were so used that the total number of miles run by cars was 29,646,847.

The number of passengers carried was 104,032,659, which is equal to carrying every man, woman & child in the country 20 times.

The mileage run & the passengers carried show that for each mile run the electrics carried 3½ passengers.

Compared with the previous year, the number of passengers carried increased nearly 9,500,000, & the number of miles run by over 1,000,000; the passengers carried per mile run increased from 3¼ to 3½.

The number of transfers given in Toronto was over 10,500,000. These are not included in the total of passengers carried.

The paid-up capital invested in electric railways is \$21,700,000.

The electric railways have a bonded debt of \$12,800,322.

The number of cars in active service was 1,544, & of employees 4,329.

The increase in cars over 1898 was 165, & of employees 325.

The steam railways in 1899 carried 16,168,191 passengers, running a train mileage of 25,292,859, thus making an average of 1½ passengers per mile. The electric cars travelled over 4,300,000 more miles than the passenger & mixed trains of the steam railways.

Together the steam & electric railways carried over 120,000,000 passengers, & the proportion was about 13 by steam to 87 by electricity.

General Telephone Matters.

The Inverness & Victoria Telephone Co. is running a line to Sydney, C.B.

The Bell Co. recently declared a quarterly dividend of 2% payable Oct. 15.

The New Brunswick Telephone Co. has increased its capital stock to \$250,000.

The Gloucester County Telephone Co. is putting in a local exchange at Bathurst, N.B.

The Nova Scotia Telephone Co. is reported to be about to put a number of its Halifax wires under ground.

The Nova Scotia Telephone Co. has replaced all its wires in New Glasgow, which were formerly iron, with copper.

A long-distance line is talked of between Winnipeg & St. Paul, Minn., which would give through connection to Chicago.

The New Brunswick Telephone Co. is reported to have bought a lot on Chipman Hill, St. John, to build an exchange on.

President Sise, of the Bell Co., denies any knowledge of the rumored purchase of the Merchants Telephone Co. by his Co.

The Bell Co. has constructed a cable between Calumet, Que., & Hawkesbury, Ont., giving Calumet connection with Montreal & Ottawa.

Under a new agreement between the Bell Co. & the American Telephone & Telegraph Co. of the U.S., the Bell Co. has been able to make a reduction on rates from Canada to U.S. points.

The town of Neepawa, Man., which operates a municipal telephone system, has recently installed a central exchange switch board with a capacity for 150 subscribers & 150 long-distance telephones.

The Manitoulin & North Shore Telephone & Telegraph Co. operates about 150 miles of telephone lines between Little Current & 17 offices on Manitoulin Island, & 40 miles of telegraph lines from Little Current to the C.P.R. Co.'s telegraph system.

The Western Telephone & Telegraph Co., recently incorporated in B.C., will, it is said, build lines through the Nelson & Slovan districts & to connect the Boundary district with the Pacific coast. The lines will probably be operated in connection with those of the Columbia Telephone Co., which is extending its lines 125 miles to Brewster, Wash.

The Canadian Western Telegraph & Telephone Co.'s line, which was established a few years ago between Fort Steele & Swansea, B.C., but abandoned, is to be rebuilt, with a view of extending it, when business warrants, to Moyie & then to Nelson, where through communication will be obtained with Southwest B.C. & with the Northwestern States.

The Bellechasse Telephone Co., which amalgamated some time ago with similar companies in the Quebec district, is said to have concluded a new amalgamation with the Merchants Telephone Co. of Montreal. It is said that the Merchants Co. will extend its line to Three Rivers, while the Bellechasse Co. will stretch its wires down to Rimouski, where it will join the Metis Co., whose line is to extend as far as Campbellton.

The Bell Co.'s stock is ranging at about 170 now. The calls on the new shares have all been paid. The Co. is doing a big business both by its long-distance lines & through exchanges, & should show a large surplus in its next report. The stock is pretty much all in the hands of investors & outside the pale of speculative influences. At the present price the stock yields 4.70 on investment. A year ago it was selling at 189.

The Vernon & Nelson Telegraph Co. has a contract from the Miner-Graves smelter owners for the construction of a 30-mile metallic circuit private telephone system between Greenwood & Grand Forks, B.C., via Phoenix, including connections at the offices of the Knob Hill & Old Ironsides mines there, & at White's camp with connections at the City of Paris & Lincoln mines, thence on to Grand Forks with a branch to the Granby smelter.

The Bell Co. has built about 200 miles of long-distance lines in Manitoba this year. The main line runs from Winnipeg to Brandon, with a branch from Carberry to Minnedosa. On the main line there are offices at Portage la Prairie, Carberry, McGregor, Sydney & Brandon, & on the branch at Franklin, Neepawa & Minnedosa. The lines are built of no. 12 standard gauge copper wire. Arrangements are being made to rebuild the line between Winnipeg & Selkirk. A night rate is to be put in force. Next year it is expected the Co. will build from Winnipeg to Carman & Morden.

British Columbia and Washington Telephones.

At our request, W. B. Davey, President of the Columbia Telephone & Telegraph Co., Spokane & British Columbia Telephone & Telegraph Co., & the Northwestern Telephone & Telegraph Co., has furnished the following information:

There are three companies under my management, two in the State of Washington & one in British Columbia, all connected into one system.

The Columbia Telephone & Telegraph Co., incorporated by the Dominion Parliament in 1896, has franchises in Rossland, Grand Forks, Greenwood, Phoenix, Midway, Eholt & Columbia. Operates exchanges in these towns. Number of phones in exchanges: Rossland, 117; Grand Forks, 75; Greenwood, 150; Phoenix, 65; Midway, 15; Eholt, 4. Has the following toll lines:

From Rossland to Butte Mills	10 miles
From Cascade to Grand Forks	16 "
From Grand Forks to Greenwood, via Columbia, Lime Creek & Eholt	24 "
From Greenwood, via Anaconda, Boundary Falls, Midway, Rock Creek to Camp McKinney	40 "
From Greenwood to surrounding camps & mines, including Deadwood, Morrison Mine, Mother Lode, Buckhorn	20 "
From Greenwood to Phoenix & surrounding mines	10 "
From Eholt to B.C. Mine, Oro Den Oro Mine, Rathmullen mine & Summit City	10 "
From Grand Forks to White's Camp & City Paris Mine, Lone Star via Columbia & Nelson, Wash.	18 "
From Rock Creek to International boundary	4 "
Total long distance lines	152 "

Our exchanges in each town have telephones in every mine of importance & industrial plants of every description. The long distance is constructed of no. 10 hard drawn copper wire throughout & is metallized. Our exchanges are the metallic or two-wire system. About 400 miles of iron wire has been used in the exchanges in the various towns.

Our toll line offices are: Rossland, Grand Forks, Greenwood, Columbia, Cascade City, Phoenix, Midway, Rock Creek, Nelson (Wash.), Eholt, Bolster (Wash.), White's Camp, Lone Star, Camp McKinney, Butte Mills, Lime Creek, Gilpins.

Our wires are the only telephone & telegraph wires into Camp McKinney & the Okanagan Country in Washington.

The Spokane & British Columbia Telephone & Telegraph Co. Capital stock \$500,000. Incorporated under the laws of the State of Washington six years ago. System in the

State of Washington. Owned & operated by the Columbia Telephone & Telegraph Co., of B.C., with head office at Grand Forks, B.C. The head office of the Spokane & B. C. T. & T. Co. is also at Grand Forks. The Co. has the following long distance toll lines :

From Spokane to International Boundary near Butte Mills, B.C., & connecting there with the Columbia.....	142 miles
From Bossburg, via Halls, to the International boundary line near Cascade, B.C., & connecting there with the Columbia system.....	30 "
From Bossburg, via Myers' Falls to Republic, Wash., connecting Republic exchange.....	37 "

Total long distance.....209 "

The capacity of Republic switchboard is 300 'phones, & 130 'phones are installed at varying rates. The long distance line is constructed of no. 10 hard drawn copper.

The toll offices are Spokane, Republic, Myers' Falls (also a switching station), Kettle Falls, Marcus, Colville, Bossburg (also a switching station), Northport, Chewelah, Loon Lake, Deer Park, Hall's Ferry, Pelkies, Harts, Sherman's, Springdale, Kaylor's, Dartford, Ryan, Wayside.

We have no exchange in Spokane, but have a small switchboard with capacity of 100 phones, & all the principal business houses near our office have our instruments for the long distance business use. Work on a large local exchange in Spokane will be commenced at an early date, as soon as the weather is more favorable.

The Northwestern Telephone & Telegraph Co. Head office N. W. T. & T. Co., Grand Forks, B.C.

Distance of long distance toll lines of hard drawn no. 10 copper-wire, from the International boundary near Rock Creek, B.C., to Brewster (Wash.) southerly is 127 miles. We

have a 12 drop switchboard operating in Loomis, Wash.

Long distance offices: Brewster, Davis, Clover, Mallotts, Conconnully, Riverside, Loomis, Gold Hill, Golden, Oro, Molson, Chesaw, Review Mine.

Every telephone on the three entire systems is fitted with long distance transmitters.

The Northwestern line opened for business Oct. 25, 1900. The Columbia was first operated July, 1899. The Spokane & B.C. first operated about July 1, 1897.

During the last session of the B.C. Legislature we were granted a charter to operate telephone exchanges & lines & telegraph lines in every municipality (including cities) within the Province. The name of the new incorporation with these powers is the "Western Telephone Co." It is the intention to immediately construct & extend our line to the coast of B.C., connecting there with the other lines from out of Portland, &c.

Canadian Roadmasters' Association.

The fourth annual convention was held in the club rooms of the Windsor Hotel, Montreal, on October 18th. President Jno. Graham, in taking the chair, made a few introductory remarks. Referring to the small attendance, he said that he believed this would be remedied as soon as the practical nature of the meetings & the great benefit to be derived from them became more generally known.

The Secretary-Treasurer, J. Drinkwater, reported that since the previous convention two members had died, W. Cooper, of Three Rivers, Que., & R. Watters, of Portage la

Prairie, Man., & five additional members had joined, making a net increase of three, & a present membership of 44. The financial statement showed \$81 on hand, against \$63.58 a year ago.

The Secretary then called the roll as follows. Those before whose name an asterisk is placed were present:—J. Shanks, C.P.R., Montreal; R. Shanks, Algoma Central, Sault Ste. Marie; W. Shanks, Canadian Northern, Winnipeg; *J. Drinkwater, C.P.R., Winchester; F. W. Green, C.P.R., Fort William; *J. Jelly, C.P.R., Carleton Junction; W. Kelly, C.P.R., Sudbury; James Yeo, Riviere du Loup; J. Hennessy, C.P.R., Three Rivers; *Thomas Graham, C.A.R., Depot Harbor; Thomas Landers, C.P.R., Farnham; Wm. Moe, C.P.R., Sherbrooke; *J. R. Brennan, O. & G.R., Ottawa; G. Munro, C.P.R., Kamloops; P. McCarty, C.P.R., Montreal; D. Jelly, C.P.R., Nepigon; J. Telfer, C.P.R., Calgary; *J. Graham, C.A.R., Ottawa; J. Leslie, C.A.R.; *A. McAuley, C.P.R., Toronto; J. Malloy, C.P.R., Smith's Falls; E. Murphy, C.P.R., Woodstock; R. H. Lowe, C.P.R., Regina, N.W.T.; Thomas Hickey, M.C.R., St. Thomas; M. Keefe, N.Y. & O.R., Ottawa; A. Black, C.P.R., Pogomasing; M. Morin, C.P.R., St. Therese; E. Myers, C.P.R., Smith's Falls; *F. J. Holloway, C.P.R., Parkdale; George Seaman, I.C.R., Moncton; H. L. Johnston, C.P.R., Nakusp; J. Coughlin, C.P.R., White River; A. Gordon, C.P.R., Parkdale; Wm. Rose, C.P.R., London; A. N. McLennan, S. & L.R., Glace Bay, N.S.; W. O'Donnell, C.P.R., Chapleau; G. Shanks, C.P.R., Farnham; W. Storms, C.P.R., Field, B.C.; A. J. Megrund, C.P.R., Rat Portage; *N. Delaire, C.P.R., Montreal; *B. Tansley, C.P.R., Orangeville,

C. P. R. LANDS.

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

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

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

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

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

TERMS OF PAYMENT.

The aggregate amount of purchase money and interest is divided into ten instalments, as shown in the table below; the first to be paid at the time of purchase, the remainder annually thereafter, except in the case of the settler who goes into actual residence on the land and breaks up at least one-sixteenth thereof within one year, who is entitled to have second instalment deferred for two years from date of purchase.

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

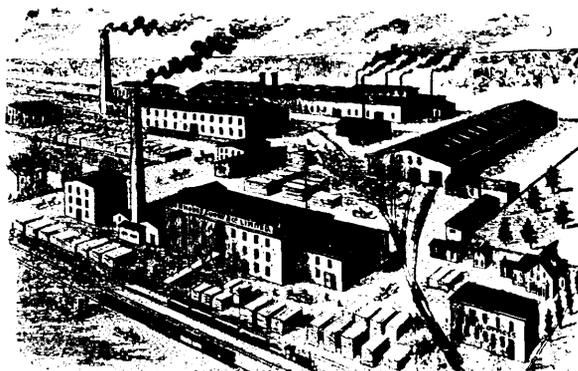
160 acres at \$3.00 per acre, 1st instalment \$71.90, and nine equal instalments of \$60.
160 acres at \$3.50 per acre, 1st instalment \$83.90, and nine equal instalments of \$70.
160 acres at \$4.00 per acre, 1st instalment \$95.85, and nine equal instalments of \$80.
160 acres at \$4.50 per acre, 1st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

DISCOUNT FOR CASH. If land is paid for in full at time of purchase, a reduction from price will be allowed equal to ten per cent. of the amount paid in excess of the usual cash instalment.

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

Write for maps and full particulars.

F. T. GRIFFIN, - Land Commissioner.
WINNIPEG.



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

Rhodes, Curry & Co.,

Ltd.,

Railway and Street Cars

of all descriptions.

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

JOHN S. METCALF CO.,
Engineers, Grain Elevator Builders,
1075 W. FIFTEENTH STREET, CHICAGO, ILL.

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

Burlington Elevator, St. Louis, Mo.....	Capacity.....	1,300,000 Bushels
Grand Trunk Elevator, Portland, Me.....	.....	1,000,000 "
Export Elevator, Buffalo, N.Y.....	.....	1,000,000 "
J. R. Booth Elevator, Depot Harbor, Ontario.....	.....	1,000,000 "
Cleveland Elevator Company's Elevator, Cleveland, O.....	.....	500,000 "
Eric R. R. Transfer & Clipping House, Chicago, Ill.....	.....	100 cars in 10 hrs. "
Manchester Ship Canal Co.'s Elevator, Manchester, Eng.....	.....	1,500,000 "
Burlington Elevator Co., Peoria, Ill.....	.....	500,000 "
Canada Atlantic Railway Elevator, Coteau Landing, Que.....	.....	500,000 "
Northern Grain Co., Manitowoc, Wis.....	.....	1,350,000 "
Union Elevator, East St. Louis, Ill.....	.....	1,100,000 "
Montreal Warehousing Co.'s Belt Conveyer System.....	.....	.....

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

ELECTION OF OFFICERS.

The following were elected:—President, A. McAuley, C.P.R., Toronto Jct.; Vice-President, J. R. Brennan, P. P. Jct. R. & O. & G. R., Ottawa; Secretary-Treasurer, J. Drinkwater, C.P.R., Winchester, Ont.; Executive Committee, the above-mentioned officers, & J. Jelly, C.P.R., Carleton Jct., Ont.; T. Graham, C.A.R., Depot Harbor, Ont.; F. J. Holloway, C.P.R., Toronto Jct.; N. Delaire, C.P.R., Montreal.

THE CREEPING OF RAILS.

The Committee, J. Jelly, J. R. Brennan & T. Hickey, reported as follows:—We beg to report that the best method to prevent creeping of rails on a soft or swampy roadbed is to put on 18 inches of cinders; to lay ties from 10 to 12 ft. long, from 7 to 8 ins. thick, & not more than 8 ins. from bearing to bearing; & block 4 ties on each side of joint, under each rail, with 4x4 scantling, using angle bars on joints.

A. MCAULEY.—I quite agree with the report. When I was on the Havelock section of the C.P.R., 2 or 3 years ago, we adopted the principle of putting in long ties of 12 ft., & they were 8 ins. thick, with a bed of cinders & a long angle bar, & we found that it prevented the rails from creeping, although with a heavy weight of trains & engine it is almost impossible to prevent it altogether. I think the long ties are a great preventative to the creeping of rails.

F. J. HOLLOWAY.—Where the division is a heavy gradient division we had continuous trouble with the creeping of rails, & I relaid the road with 73-lb. rails, with angle bar, & I have had no trouble since. I find that the angle bar has stopped all the creeping.

J. GRAHAM.—With a long angle bar or a short one?

F. J. HOLLOWAY.—A short one.

A. MCAULEY.—The place that I have reference to where the creeping took place, if you stand on the track and a train passes by at the rate of 35 or 40 miles an hour you have to catch the fence to keep yourself up. If an angle bar stops all Mr. Holloway's creeping he cannot have very much soft stuff.

F. J. HOLLOWAY.—I have found the creeping continue for half a mile on one side of the track, & then it will reverse & go the other way. I put the question to our engineer, Mr. Hertzberg, & he saw it himself, but he could not explain it.

J. DRINKWATER.—I quite agree with the report that the long ties are certainly a great help to keep your track in line at those places, & I try to keep the rails tightened up, but there is a danger of their kicking out in very hot weather. Those are the places that the rails have a tendency to crowd, & of course, these long ties put close together, well spiked & ballasted with cinders, will hold the track in line & admit of rails being put tighter together than you otherwise could. In my experience the extra opening of the joints will allow your rails to creep. I have a track that will travel 8 or 9 ins. both ways the same day in hot weather, & I saw something not long ago stating that the only way to prevent the rail from creeping was to put the anti-creeper on the centre. I do not think the anti-creeper on the centre of the rail would be any more effective than on the joint or any other point; I cannot see how it could be. I think it was an advocate of some patent anti-creeper who made that claim, & I hope he will be able to satisfy the trackmen of America that his anti-creeper will prevent the track from creeping. If it turns out to be effective I would like to have a few of them, but so far as I know I do not think it would be very much good.

T. GRAHAM.—Of course, why you put cinders on is to keep the swamp from breaking. When the swamp is 15 or 20 ft. deep the best way is to get your bottom & have it solid there. I think the next best plan is the long

tie, & I think a good scantling spiked to every tie would keep them in place.

J. JELLY.—Would not the block keep them in place?

T. GRAHAM.—My experience of this block between the ties is that it is continually shoving up.

J. DRINKWATER.—Have you noticed, Mr. Holloway, where the track creeps one way & the other the joint ties travel with the rail?

F. J. HOLLOWAY.—Yes.

J. DRINKWATER.—It would affect the gauge of your track, would it not?

F. J. HOLLOWAY.—Yes.

A. MCAULEY.—I think that the creeping of the rails on one side or the other largely depends upon the way the bolts are tightened. For instance, we have on the Havelock & Toronto section of the C.P.R. an oval hole of one & one-quarter inches, & the size of the bolt we used on them is a three-quarters bolt. With the last 80-lb. rail that we laid there you cannot get more than one quarter of an inch expansion in any joint, & the holes are round holes, & we use seven-eighth bolts. I think that is the great trouble, one rail is creeping more than the other, because that side is left slackened, the bolts are not so well tightened up & are allowed to pull.

J. GRAHAM.—In my division I have three miles of swamp where the steel creeps on the north side of the track running east & west, & it creeps more than on the south side. I never could make out what the cause of it was. The seven-eighth bolts will snap in two unless you watch them close & keep them driven back.

J. DRINKWATER.—The rail raises on account of rolling the tie at the joints?

J. GRAHAM.—Yes, & takes the spikes with it. When the ties cannot move the spikes will draw out of them.

A. MCAULEY.—The creeping is caused altogether by the roadbed. If the roadbed is soft you cannot put anything to prevent it if the train is running at full speed. The only way to prevent it is the long ties & the heavy rails.

J. GRAHAM.—The most of our road, the Canada Atlantic, is all east & west, & we have got as heavy ballast in the swamp, & the track has been laid 19 years this summer. However, I would like to hear from one of the new members, Mr. Delaire, on the subject.

N. DELAIRE.—I have only been about two months in the position, & I do not come here to teach but to learn, so that I do not think anything I could say would interest your Association very much.

A. MCAULEY.—I think the report of the committee is quite agreeable to the members, that the long ties & the cinders on soft bottom are the proper thing, with the heavy rail, & I would move that the report be adopted.

The motion was unanimously adopted.

THE BEST MODE OF HANDLING STEAM SHOVELS.

The Secretary stated that he had no report from the committee on the best mode of handling steam shovels, distributing & unloading ballast, & all work to be done in connection with ballasting, etc., filling trestles, etc. The committee was composed of E. Murphy, A. McCauley & T. Graham, & the two latter were present.

A. MCAULEY.—About 8 or 9 days ago I saw Mr. Murphy, & he told me to write a report & send it down to him, if I wished to make it, but I felt that the time was too short, & so I did not do so. The only report I have to make is that I think the Barnhardt shovel is the best shovel we have had put in the market. It will load from 180 to 200 cars a day with good men. As for the unloading, I prefer the Mill car myself. I think it is one of the grandest things we ever had. I have had 18 or 20 years' experience in ballasting, & I think the Mill car is one of the finest things for unloading I ever saw. It has given every

roadmaster that I know of great satisfaction. The Mill car pulls your cable to the car & strings it over the train of 40 cars in three minutes, so that a great deal of time is saved. Mr. Leonard, our Superintendent, was very anxious to try it up in Toronto this year, & we got sufficient cable to load 40 cars, & after 2 or 3 days I would not be without it at all.

J. DRINKWATER.—How would it be if you tried to unload with the train moving?

A. MCAULEY.—I think that could be done with satisfaction.

T. GRAHAM.—In going into the pit you should always try to lay it out so that the engine can spot & pull out the train. Every time you shunt you lose 10 minutes. About working the pit, if you are not around yourself, or have a man there to look after the train, as a rule there are a good many minutes lost. Every conductor has to report to me every day his arrival at the pit & departure from it for every train that he pulls out of the pit. The steam shovel engineer has also to fill out a form giving me the time the train arrives at the steam shovel & the time of departure. In this way you can follow them up very closely. If there is any delay you can find it out & the cause. I also make the conductors report how many minutes they have to wait for orders, & in this way I find out if they have not given the train the proper orders. At the end of every month I send each pit the report of the daily average of the shovels for that month, & men do not like to be beaten. They are all working under the same conditions, & it spurs them up a little. They get all they can out of each pit. We sometimes have three shovels going night & day.

J. DRINKWATER.—How do you load your cable?

A. MCAULEY.—It is necessary to put up mill posts at every station.

J. JELLY.—We put up posts on each side with a pulley & block, & one, of course, is on top of the other, hitched on to the plough or back, & of course the one on the opposite side would swing across to go on top of the car, & in that way we would have only about a car length of cable to handle.

T. GRAHAM.—You pulled straight over your trestle; you were not snubbing.

J. JELLY.—We would be pulling over, yes. We always snub with the tongs right to the rail & the block just across the top of the rail. It is quite safe.

A. MCAULEY.—If you ever used it you would never be without it. If you want to pull 5, 6, 7 or 8 cars you do not have to wait to pull the cable out of the road.

T. GRAHAM.—With a long train your cable would fly off.

J. DRINKWATER.—I am sorry to say that I have not had much experience lately in ballasting. The best way to get your division ballasted, I think I understand pretty well. If there is an appropriation granted covering 3 or 4 divisions & you get started on it in the spring, & you get to the steam shovels, that is the best way to get your division ballasted. Of course, I have not been able to put that into practice this year, & in that way I have not had any experience with the Mill car & shovels, but the Barnhardt shovel, as Mr. McAuley says, has always done good work. I certainly think that wherever it is possible to get a ballast-pit with lots of room in it & in such a shape that the engine will handle a full train it is a great advantage & a great saving.

A. MCAULEY.—It is not always possible to do that.

J. DRINKWATER.—Yes, that is so. The form which Mr. Graham spoke about having filled up, giving the time of the arrival of the train at the pit & the departure therefrom, is certainly an advantage in itself. I am of opinion that it always pays to have a good foreman in the ballast-pit. I think it is money well spent, irrespective of the trainmen and the steam

shovel engineer. In some pits you have to put your shovel back every few days; therefore, I think it is always best to have a good foreman. I have never used the Mill car, but I am pretty well satisfied that it is a great improvement on pulling the cable over the train with the engine. I see with some roads that they have aprons on the cars, but most of them are flimsy affairs. On the Grand Trunk & on the New York & Ottawa, every here & there they were lying alongside the road pulled off.

J. JELLY.—With reference to unloading ballast, I am of the opinion, from my experience, that there is about as much time lost with the unloading as anything else in connection with the handling of ballast. We have a spider plough up west, built during the winter season. Previous to that we always had an awful lot of bother with the ploughs. We had a plough that ran on the centre rail, & the Barnhardt plough, & these ploughs were continually giving out & there you were. You would have to take your plough away to the shops. After we built the spider plough & put good material into it we never had any trouble. I have seen us unload 25 cars there in 12 minutes. I think there is nothing that I have used that is equal to the spider plough, & I think there is as much time saved with the plough as in the pit. Of course I like a good pit, but I think more attention should be given to the plough than anything else.

J. DRINKWATER.—How did you fix the side of your cars?

J. JELLY.—We put 4-inch planks on between stake-pockets & bolted them.

J. DRINKWATER.—You did not spike them?

J. JELLY.—No, we used bolts & put them where they were required.

J. DRINKWATER.—What sized bolts?

J. JELLY.—Three-quarter bolts & 4-in. planks. Of course, it goes a little outside of the pocket. It saves the pocket from being damaged in any way.

F. J. HOLLOWAY.—I have used the Barnhardt shovel & have always found it give satisfaction, & I have always used the Barnhardt plough, which goes around very short curves. It was at all times a great success.

J. JELLY.—Perhaps your ballast would be fine.

F. J. HOLLOWAY.—No.

J. DRINKWATER.—Does the Barnhardt plough clear the cars of coarse gravel?

F. J. HOLLOWAY.—Not coarse gravel. It would leave 2 or 3 ins. on the bottom.

J. DRINKWATER.—That has been my experience with the ploughs that we have had.

J. JELLY.—That is mine, too.

T. GRAHAM.—I think in working the pit a man should always have two ploughs at the pit in case anything happens. In this way you will many a time save a load or two. Then, again, there is something about moving back the shovel. Suppose you have a little pit gang of 3, 4 or 5 to start the track & have it right up close to the shovel, & five minutes after your shovel is there you are on your way back. It saves time.

A. MCAULEY.—You have a double track?

T. GRAHAM.—Yes.

A. MCAULEY.—How do you get your track over the top of the other? Do you throw your track in?

T. GRAHAM.—Yes.

A. MCAULEY.—We do not.

T. GRAHAM.—With this pit gang your work would be right through the minute your shovel is out. I think in putting your shovel in the pit you should have ties & rails enough for a double track. Another thing in favor of a double track is, that without it when the shovel is out your track is away; you have thrown it more or less out of shape, & you have trouble.

A. MCAULEY.—I never have more than 6 to 8 men around the shovel at the pit, & when we go to move the tracks I generally do it after 6 o'clock, so that we are all right the next morning at 7 o'clock.

T. GRAHAM.—If I can get my shovel out I do so, & have her back ready for next morning.

J. DRINKWATER.—I do not remember missing a train of ballast in the last 7 or 8 years on account of moving the shovel. I do not remember having a break in a day's work on account of moving the shovel, that would not have occurred had we not moved it. There are some times that your shovel is idle where you are hauling 60 or 70 miles. With the short hauls it is altogether different. It is difficult to handle trains on a road where there is any considerable amount of traffic on a long haul & have regularity.

J. JELLY.—Circumstances alter cases.

J. DRINKWATER.—I have worked 3 trains on the long haul.

J. GRAHAM.—I used to, when handling ballast pits, shift the track, as Mr. McAuley says. I used to take a gang at 6 or 7 o'clock in the evening, & perhaps work till 12 o'clock at night. But if you do this you do not get as much work out of your lifting gang the next day. Now I follow the shovel right up with a track, that is the best way, & you have better tracks always in the pit. I have just one extra track.

A. MCAULEY.—A double track.

J. GRAHAM.—Yes, you have one to hold your empties, & the other to hold your loads.

T. GRAHAM.—It is not necessary to put in a switch; I never did.

J. GRAHAM.—I always put a switch in.

A. MCAULEY.—I think your shovel men have always got more or less time, & they can always keep the track behind the shovel right along—keep with it, & as occasion will admit they can keep pulling it over.

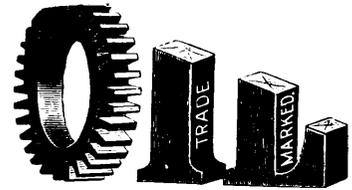
J. JELLY.—There is something I would like to mention, & that is for spotting the train we never use anything except a team of horses. We have used two teams for spotting the cars. We use one engine for hauling, & one team of horses for spotting. You can spot your cars better than with an engine, because you require only one man there, & once he gets up to do his business there is no trouble. It saves a crew & an engine. There

are very few pits but what you can place them so that you can spot your cars all right.

J. DRINKWATER.—How then do you do for your water?

J. JELLY.—One horse.

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J. DRINKWATER.—The horse draws the water on top of the pit.

J. JELLY.—Yes. We take our empties & ship them back to where they were. It means about 10 minutes.

J. DRINKWATER.—How do you set your loads out?

T. GRAHAM. We spot them all.

J. DRINKWATER.—You let your empties come in on outer track?

J. JELLY.—Yes.

J. DRINKWATER.—I like the train to come in on inner track at the pit.

J. JELLY.—Where it can be spotted with horses there is a lot of money saved. It is wonderful what a team of horses will spot.

J. DRINKWATER.—Will they move 40 loaded cars?

J. GRAHAM.—This year we have all our ballast cars equipped with air-brakes. It makes quite a difference.

J. DRINKWATER.—One advantage of the Mill car is that you do not use brakes at all.

J. GRAHAM.—We have no ballast cars at all on the ballast trains that are not equipped with air.

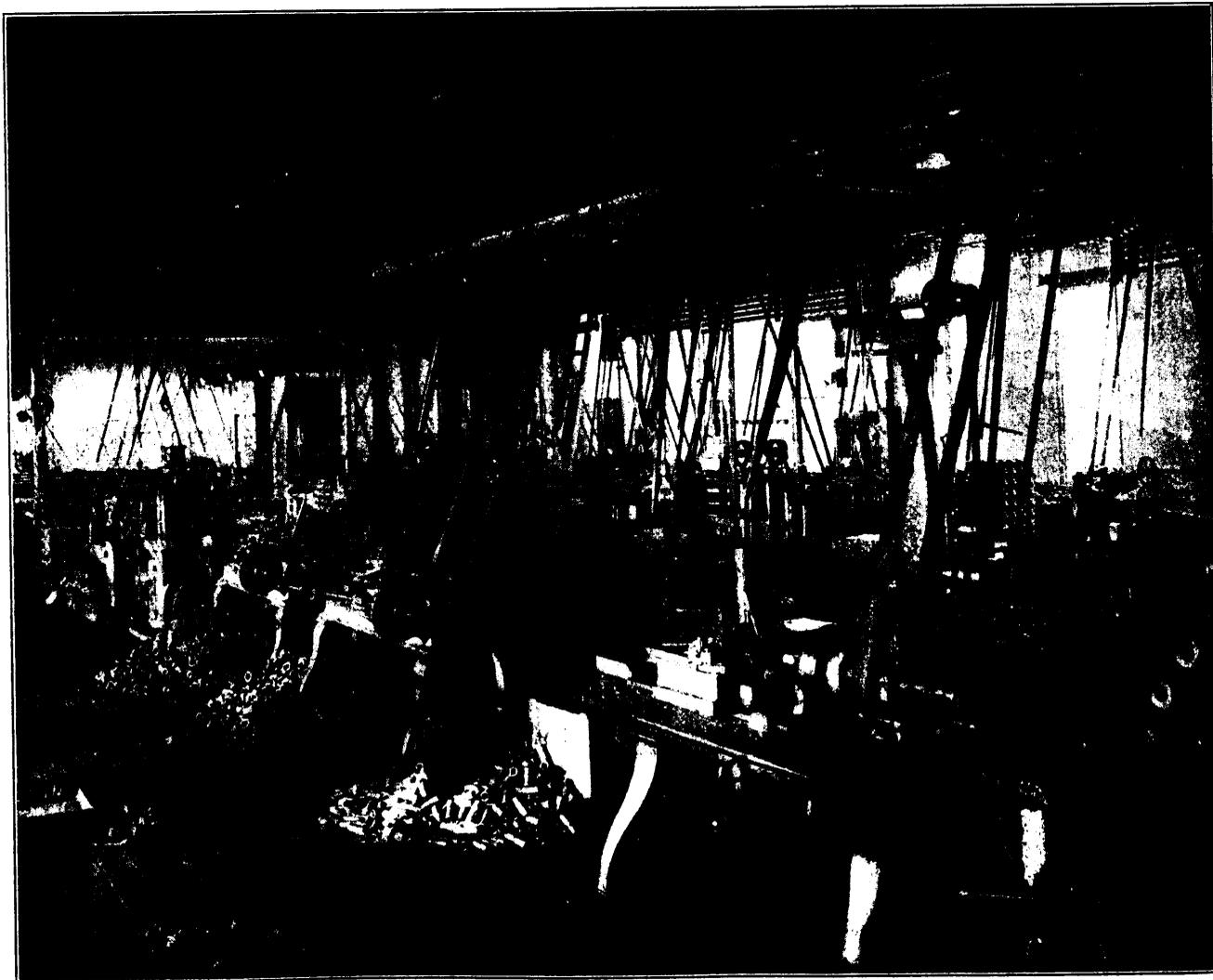
THE RENEWAL OF TIES.

The committee, J. R. Brennan, J. Leslie & J. Drinkwater, reported as follows:—

“In our opinion new ties should be distributed the fall previous, if possible (in order to peel easily), or as early in the spring as circumstances will permit. Each section foreman should accompany the tie train when distributing, & should know wherever a tie is

ly & unexpectedly, the best & safest way is to dig them out, particularly on curves. As to the cost per tie, in sand ballast they can be put in track for from 5 to 8 cts., & in coarse gravel for from 8 to 13 cts. Old ties should be piled up daily & burned.”

J. JELLY.—I think that covers everything in connection with it. I think the report has been studied out pretty well, & I do not know that I can say very much in connection with it. I like what the report says; I do not like these box cars at all. I am satisfied that it costs three times as much on box cars as on flats. I think we should have, at least, half of our ties distributed every fall; we should have them out before the spring, particularly in the section of country where we get our ties in by water. If we do not get any in until the



TRIPLE-VALVE ROOM IN THE WESTINGHOUSE MANUFACTURING COMPANY'S SHOP, HAMILTON, ONT.

J. JELLY.—It depends upon the location of the pit.

J. DRINKWATER.—If it is level?

J. JELLY.—If it is level, yes. Sometimes in a certain part of the pit we may put two teams. We have taken out 150 cars a day & spotted them with a team, one engine & crew. Of course, the hauls were a little long; we were hauling about 10 miles, & we left at 6 in the morning & got in at 8 or 9 in the evening. If you put on another engine you might take out 175, perhaps 200, cars. I think that spotting with horses saves money.

A. MCAULEY.—150 cars to the shovel for 3 or 4 months is pretty good work.

J. GRAHAM.—You would require to have a pretty good pit.

A. MCAULEY.—Yes.

wanted, & get the required number put off, which, of course, is a rather difficult thing to do from box cars. The next thing in order would be to go along with the lorry & put them just where they are wanted, marking in advance of the lorry the ties that are to come out, being careful not to damage a tie that would not have to be taken out. As to the best method of putting them in, where 5 or 6 are required to a rail length, it would be best to dig them out. Any more than this number to a rail length, it would be well to raise up the rail to allow them to be pulled out, or if there is sufficient ballast to give a lift of 1½ inches. This would allow old ones to come out easily, & new ones to go in with little or no deepening. This, of course, would depend on circumstances. Where trains are running thick-

spring we are liable to have them coming in in Aug. & Sept., & in fact we are getting them yet. If you get ties as late as this you never get a good surface. I think that ties should all be in early in June every year, & by that time it is time to start surfacing & have it all done by the end of July. In that way you have a pretty good track, whereas in the fall you cannot get a good track. I think it would be a great saving. Our Company got a few ties last year, but most of them have been coming all summer. I suppose in some places they have not got them yet.

J. GRAHAM.—I am sorry to say that the C. P.R. is not the only road in getting ties out late this season. This is the first season we were so late. We generally had our ties scattered in May & there might be a few in

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Certificate fee.....	1 00
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Total minimum cost.....	\$4 50

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

Cost to take \$2,000 Mort. Benefit.....	\$6 00
" " \$3,000 " ".....	7 00
" " \$4,000 " ".....	9 00
" " \$5,000 " ".....	10 00
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- 10.—**Social and Fraternal Privileges** of the Court Room.

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Year.	Total Membership.	Benefits Paid.	Total Surplus.	Surplus per Capita.	Death Rate per 1,000.
1881	1,019	\$ 1,300 00	\$ 4,568 55	\$ 4 48	4.50
1882	1,134	12,058 86	2,967 93	2 61	11.00
1883	2,210	9,493 68	10,857 65	4 91	4.73
1884	2,558	13,914 31	23,081 85	9 01	4.23
1885	3,642	26,576 99	29,802 42	8 18	7.76
1886	5,804	28,499 82	53,981 28	9 30	4.85
1887	7,811	59,014 67	81,384 41	10 44	5.78
1888	11,800	89,018 16	117,821 96	9 98	6.43
1889	17,349	116,787 82	188,130 36	10 84	5.85
1890	24,604	181,846 79	283,967 20	11 54	5.18
1891	32,303	261,436 21	408,798 20	12 65	6.40
1892	43,024	344,748 82	580,597 85	13 49	6.25
1893	54,484	392,185 93	858,857 89	15 76	5.47
1894	70,055	511,162 30	1,187,225 11	16 94	5.47
1895	86,521	685,000 18	1,560,733 46	18 03	5.67
1896	102,838	820,941 91	2,015,484 38	19 60	5.50
1897	124,685	992,225 60	2,558,832 78	20 52	5.56
1898	144,000	1,170,125 14	3,186,370 36	22 12	5.67
1899	163,610	1,430,200 33	3,778,543 58	23 09	6.30

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Or Any Officer or Member of the Order.

June. I think ties should be all scattered with an extra train. It is a big expense to the track department to distribute ties on way freights.

J. JELLY.—In Aug. you cannot put more than two-thirds what you can put in in May.

J. GRAHAM.—My opinion is that all ties should be in by the last of July.

T. GRAHAM.—Our company always distributes the ties in the fall, and in that way we get a start early in the season. I think that all ties should be distributed in April, if possible, or earlier if you can. The plan of having ties coming in every month of the year, or perhaps in Sept. or Oct. getting more ties than in May or June, I believe, leaves a poor track. About loading cars in boxes, I think if the officials were put into box cars & had to unload a few cars there would be an opportunity of having flats, & then again, I think they ought to be put on an extra train. Most of our ties this year were chucked out with way freights, & it has delayed the train & always delayed the men, & it is a loss of time.

F. J. HOLLOWAY.—All I can say is that it would be impossible to burn the ties every day.

J. DRINKWATER.—I added that myself to the report after I had received it from Messrs. Leslie & Brennan. It is a part of the report that I have had considerable experience in the last year, & so far as I have been able to establish the facts, the ties will burn better the day you pile them up than they will a month afterwards. If the ties are left a couple of weeks just as you pile them they will not burn so well as when first piled.

J. JELLY.—You think the earlier part of the season, in the summer, the best time?

J. DRINKWATER.—It depends upon the weather. The ties that come out to-day should be burnt to-morrow; I think you should insist on the men doing it. If you are going to have the right of way nice & tidy you cannot do it without time & labor. I think that ties can be taken out to-day & burned to-morrow: I am pretty well satisfied that it can be done.

J. JELLY.—I think that will apply all right in dry weather.

J. DRINKWATER.—My experience is that if you leave them for ten days or a week they are not burnt at all. You have to lay down some rule, & it has to be pretty nearly cast-iron to get the ties burned & out of the way.

T. GRAHAM.—I think old ties should not be left more than 3 or 4 days at most before burning them. If you keep them close together I think you can burn them just as well & even better.

J. JELLY.—Would you make a particular sized pile of ties?

J. DRINKWATER.—A pretty good-sized pile, say 25, or 30 or 40, when you have them on the lories.

T. GRAHAM.—I think it just as well to have 40, or perhaps 50.

J. DRINKWATER.—It will take a man as long to set fire to 5 ties as to 50.

J. GRAHAM.—My experience with old ties is that it is best to pile them up every Saturday afternoon. Take the ties that have been taken out during the week, & take Saturday afternoon to pile them up & then you can burn them without any trouble.

J. JELLY.—My experience is that if you leave them for a week they will not burn. If a person piles them up every night it is a change of work, & I believe that is done with very little extra work.

J. DRINKWATER.—Is piling old ties not the heaviest work we have?

J. JELLY.—Yes, & if it is done every night you do not get so much hard work.

J. DRINKWATER.—At one time.

J. JELLY.—Yes.

T. GRAHAM.—How would it do to pile them up the first thing in the morning & set fire to them?

J. DRINKWATER.—That might do.

T. GRAHAM.—The men are fresh then & not so tired.

J. DRINKWATER.—They might be so tired afterwards that they would be no good all day.

T. GRAHAM.—The Forestry Act in our section is very stringent. We can only burn them at certain times, but I believe the best way is to pile them up every day.

J. DRINKWATER.—There is nothing pretty about an old tie, at any rate. In taking out ties you have to shift the old ties sideways?

T. GRAHAM.—Well, not much.

J. DRINKWATER.—How do you do it, Mr. Jelly?

J. JELLY.—We shift the tie over & use a bar to shift it sideways. We may ease the rail a little bit, but between Ottawa & Carleton Place you cannot take up a rail at all.

J. DRINKWATER.—We never think of raising the rail enough to let old ties out.

J. JELLY.—We never do.

J. DRINKWATER.—This last 5 or 6 years I have been using about a ½ in. shim.

A. MCAULEY.—No matter how little you raise the rail it is hard on the rail.

J. DRINKWATER.—I have never put a new tie in & packed it up to the rail and have it stay right.

J. JELLY.—Some foremen will take out ties that are good for another year, while others will leave in those which should come out this year.

J. DRINKWATER.—The only object of some foremen seems to be to get rid of all the new ties. What does it cost to peel ties?

F. J. HOLLOWAY.—A cent & a half apiece; that is my experience.

J. JELLY.—It depends a great deal upon the season of the year.

F. J. HOLLOWAY.—I had a lot of extra work, something like 100,000 ties, & I put it at a cent & a half.

J. GRAHAM.—Hemlock or cedar?

F. J. HOLLOWAY.—Mixed.

J. JELLY.—I find that if they are peeled after they come out of the water it is the best time, or else after a rain.

A. MCAULEY.—I peeled 50,000, & I found that one man would peel 105 a day, & that cost \$1.25. We used a shovel, which peeled the bark well off; it is better than any axe you can get.

J. JELLY.—When it gets well along in the year you cannot peel them well with a shovel. We use what we call a spud, but I would rather have a shovel.

A. MCAULEY.—I think the ties should be peeled before they are delivered.

J. DRINKWATER.—I think you would get a better class of ties. I think if you peeled 10,000 or 15,000 ties you would be able to go over them & pick out some of them that would be very small looking.

J. R. BRENNAN.—The New York Central have theirs peeled at the mill.

J. GRAHAM.—It will cost more to peel cedar than hemlock?

J. DRINKWATER.—Yes.

J. JELLY.—I think it costs about a quarter more to peel a cedar tie than it does to peel hemlock.

The report was adopted.

HAMILTON CHOSEN FOR 1901.

THE CHAIRMAN.—The next thing is as to where our next meeting will be held & when.

A. MCAULEY.—It seems to me that Montreal is the most central point, certainly as far as the C.P.R. is concerned. For my part, I would like to see it in Toronto. I think our turnout is very small. I think the roadmasters should take more interest in the work, & be able to come here & give us their views. It is a good holiday to meet once a year. I therefore move that the next meeting be held in Toronto.

J. JELLY.—If there was a change of meeting-place to bring in anyone else I think it would be a good idea. If you can move where those that will come will follow you let us meet there. We met last year in Toronto, & the previous year in Ottawa, & now in Montreal.

J. DRINKWATER.—This is the best meeting we have had yet.

THE CHAIRMAN.—I think Hamilton would be a very good place. There are a lot of roadmasters there.

J. JELLY.—I suppose that we will follow them there.

THE CHAIRMAN.—We have no one here from the I.C.R., or from the Grand Trunk. Last year in Toronto we had a general roadmaster of the G.T.R.

A. MCAULEY.—I will amend my motion by moving that we meet in Hamilton on Oct. 16, 1901.

This was seconded by F. J. Holloway, & carried unanimously.

A. McAuley, F. J. Holloway & the Editor of THE RAILWAY AND SHIPPING WORLD were appointed a committee to make the local arrangements for the Hamilton Convention.

J. JELLY.—Roadmaster Kelly told me the other day that circumstances would prevent him from being present with us, & asked me to apologize for him.

SUBJECTS FOR NEXT YEAR.

THE CHAIRMAN.—The meeting is now open for discussion as to the subjects for our next annual meeting. It will be necessary to couple with the suggestion of each subject the names for the committee.

The following subjects were selected:—
The best mode of relaying track, & whether with broken or square joints. Committee, A. McAuley, T. Hickey & N. Delaire.

The creeping of rails, & why the rail travels further on one side than on the other, so as to allow one side to run past the other, making the joints uneven. Committee, F. J. Holloway, J. R. Brennan & J. Malloy.

THE OFFICIAL ORGAN.

A proposition having been submitted from the publisher of THE RAILWAY AND SHIPPING WORLD, it was resolved, on motion of A. McAuley & J. Jelly, that the same be accepted, & that the Secretary be authorized to have the paper supplied regularly to all members of the Association in good standing, & to pay therefor out of the Association's funds.

VOTES OF THANKS.

J. DRINKWATER.—Before we close I would like to move a vote of thanks to our retiring President for the able manner in which he has filled his office since being elected.

J. JELLY.—I have much pleasure in seconding the motion.

THE CHAIRMAN.—I thank you, gentlemen, for the honor conferred upon me as President. However, I am sorry that I could not do more for the Association. I would like to see it grow in numbers, & have a better attendance at our annual meetings. I think that those who have kept away from it are missing a great deal.

J. JELLY.—I wish to move a vote of thanks to our Secretary-Treasurer for the energetic way in which he has worked for the Association since it was started.

T. GRAHAM.—I have great pleasure in seconding the motion.

J. DRINKWATER.—I thank you, gentlemen, for the way in which you have tendered me this vote of thanks. When I first took the Secretaryship of the Association I had great aspirations—I thought I would do great things, but my time is pretty well occupied with my regular work. However, I have given all the time I could without interfering with my work; I have done the best I could, & you have shown your appreciation by re-electing me.

J. JELLY. - I beg to move a vote of thanks to the Track Supply Association for the drive which they propose to give us this afternoon, & also for entertaining us at Her Majesty's Theatre last evening. This was seconded by J. R. Brennan, & carried.

THE CHAIRMAN. - Gentlemen, we have now come to the end of our programme. I trust that not a few of us will be able to turn to practical account some of the valuable suggestions which we have received. I hope that we shall all go away from this convention resolved to do all that we can to benefit our Association, to tell those other roadmasters who are not members of the help to be obtained from our conventions, & I am sure if we all do our best in this respect the coming year, our next convention will even surpass those we have already held.

EXHIBITS OF TRACK SUPPLIES, ETC.

The following exhibits were displayed in a room opening out from the one in which the Association met:

A. O. Norton, Coaticook, Que. Exhibits, ball-bearing bridge jacks & sure-drop track jacks.

The Page Wire Fence Co., Walkerville, Ont., represented by Merton Church. Exhibits, wire fencing, including the Page coiled-spring wire.

F. E. Came, Montreal. Exhibits, Bryant portable rail saw; Servis, Q. & W., & Wolhaupter tie plates; Samson rail bender, continuous rail joints, U. S. car pusher.

The Ramapo Iron Works, Hilburn, N.Y., represented by R. J. Davidson. Exhibit, automatic switch & stand.

Dilworth, Porter & Co., Pittsburg, Pa., represented by A. Morrison. Exhibit, Glendon flange & Goldie tie plates & spikes.

Montreal Rolling Mills Co., Montreal. Exhibit, 100-lbs. rails, connected by Bonzano patent rail joint.

Crozier Lock Washer Co., Roanoke, Va. Exhibit, nut lock.

SOCIAL FEATURES OF THE CONVENTION.

On the evening of Oct. 17, the members of the Association, several of whom were accompanied by their wives, were the guests of the

Track Supply Association at Her Majesty's theatre, where "Jane Eyre" was put on the boards. On the afternoon of Oct. 18, they were entertained to a drive around the city, visiting some of the noted churches & other buildings & also Mount Royal.

TRACK SUPPLY ASSOCIATION.

The second annual meeting of the Track

Supply Association was held at the Windsor Hotel, Montreal, Oct 18.

The following officers were unanimously elected: President, F. E. Came, Montreal; First Vice-President, R. J. Davidson, Hilburn, N.Y.; Second Vice-President, A. O. Norton, Coaticook, Que.; Honorary Secretary-Treasurer, Acton Burrows, 33 Melinda St. Toronto.

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Express Office.	General Waiting Room.
Freight Office.	Ladies' Waiting Room.
General Offices.	Men's Waiting Room.
Private Office.	Dining Room.
Ticket Office.	Lunch Room.
Telegraph Office.	Restaurant.
Baggage Room.	Ladies' Toilet.
Smoking Room.	Men's Toilet.
Smoking Prohibited.	No Admittance.
	Trespassers Prosecuted.

NO ADMITTANCE

Size 10 x 2 1/2 inches. Oblong, oval ends, white ground, blue letters, lined & tipped, hollowed:

Bar Room.	Men.
Luggage Room.	Private.
Office.	No Admittance.
Refreshments.	No Road.
Exit.	Boarding House.
Fire Escape.	Private Board.
Lavatory.	Dressmaking.
Ladies.	Fresh to Day.
Women.	Teas Provided.
Gentlemen.	Please Shut the Gate.

Size 14 x 3 inches. Oblong, oval ends, white ground, blue letters, lined and tipped.

No Admittance.

STICK NO BILLS

Size 18 x 3 1/2 inches. Oblong, square ends, white ground, blue letters, lined & tipped.

Furnished Apartments. Stick no Bills. Please Shut the Door.

PUSH PULL

Oval, size 2 x 3 inches, white ground, blue letters, tipped, hollowed, lettered **Push, Pull**, as above.

Oblong, square ends, size 3 x 1 1/2 inches, white ground, blue letters, tipped, lettered **Push, Pull**, as above.

Perpendicular, square ends, size 12 x 3 inches, white ground, blue letters, lined & tipped, lettered perpendicularly, **Push, Pull**.

Oblong, square ends, size 12 x 3 inches, white ground, blue letters, lined and tipped, lettered horizontally, **Push, Pull**.

Oblong, fancy ends, size 3 x 1 3/8 inches, white ground, blue letters, lined and tipped, lettered **Push, Pull**.

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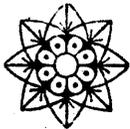
The Purchasing Agents' Guide

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