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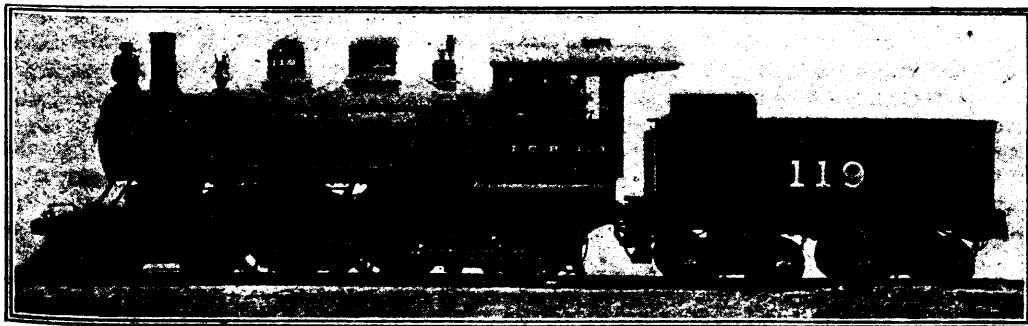
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RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Alaska Central Ry.—A recent report states that 30 miles of track had been laid from Port Shiard, and that grading had been completed for 20 miles beyond track end. Contracts are being arranged for further construction. The line is projected to the Yukon River, a distance of about 500 miles. The company proposes to inaugurate a steamer service from Port Shiard to Vancouver, B.C.; Seattle, Wash., and San Francisco, Cal.

Alberta Ry. and Irrigation Co.—Application will be made at the current session of the Dominion Parliament for an act authorizing the company to amalgamate with the Western Alberta Ry., or to acquire its franchises and property.

The Algoma Central and Hudson Bay Ry. is being operated from Sault Ste. Marie to Mekatina, Ont., 64 miles. Beyond this point to the junction with the Michipicoten branch, grading for which had been completed prior to the reorganization, two miles of track has been laid, and it is understood that during the year work will be resumed and the line completed. Although the Lake Superior Corporation is under contract with the Ontario Government to construct the line to the C.P.R. it is not expected that anything will be done in that direction this year. (Sept., 1904, pg. 311.)

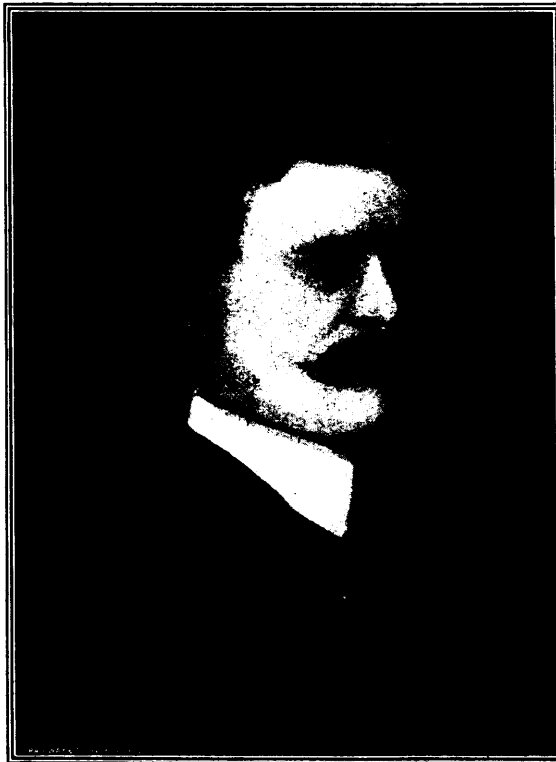
Algoma Copper Range Ry.—Application will be made during the current session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from Batchawaung Bay, easterly to the Superior Copper Mines, thence easterly for about fifty miles to Aubrey Falls, Ont. Power is also sought to operate steam and other vessels on the navigable waters touched by the line. Hearst, McKay and Darling are solicitors for the promoters.

Athabasca and Northern Ry.—The Dominion Parliament will be asked at its current session for the incorporation of a company with this title to construct a railway from Edmonton, northerly to Athabasca Landing, Alta., and to carry on a general navigation business, on the Athabasca River. Smith, Markey, Montgomery and Skinner, Montreal, are solicitors for the promoters.

Athabasca Ry. and Oil Co.—Application will be made at the current session of the Dominion Parliament for an act incorporating a company with this title, to construct a railway from Edmonton, Alta., north-easterly parallel to the course of the North Saskatche-

wan River, to the Athabasca River at the junction of the Clear Water River with it; to own and operate steamers and to carry on a business in oil, petroleum and asphalt and their by-products. Short, Cross, Biggar and Ewing, solicitors, Edmonton, Alta., represent the promoters.

Battleford and Lake Lenore Ry.—The Dominion Parliament will be asked at its current session to pass an act confirming the act incorporating the company, and authorizing a change of location, so that the projected railway may run through Saskatoon, Sask.



W. G. ROSS,
Managing Director Montreal Street Ry. Co. and President
Canadian Street Ry. Association.

Buffalo Union Station.—A report has been prepared by the Fifth Vice-President, New York Central and Hudson River Rd., on the proposed union station terminal at Buffalo, N.Y. There are 12 railway lines entering Buffalo, of which seven run into the N.Y.C. and H.R. Rd. station, three into the Erie Rd. station, and the other three have their own lines; a thirteenth line does not yet enter the city, but is interested in the project. The Canadian lines interested are the G.T.R. and Toronto, Hamilton and Buffalo Ry., which run in over the Michigan Central tracks; while the Michigan Central, the Wabash, and the Pere

Marquette railroads run through Ontario from the Detroit River to the Niagara River, and secure an entrance to Buffalo by various routes. The suggested site for the union station to accommodate these lines is in Genesee St., and the proposed plan, if carried out, would do away with every grade crossing remaining in the city from Main St. to Fort Porter. The site covers an area of 107 acres, on which it is proposed to lay 34 miles of track.

Calgary and Battleford Ry.—Application will be made at the current session of the Dominion Parliament for an act incorporating a company with this title to construct a railway from or near Calgary, Alta., north-easterly to Battleford, Sask., and thence to Prince Albert, Sask. T. L. Metcalfe, Winnipeg, is solicitor for the promoters.

Calgary and Edmonton Ry.—It is proposed to apply at the current session of the Dominion Parliament for power to enable the company to issue bonds to the extent of \$1,000,000 in respect of the proposed bridge over the Saskatchewan River between Strathcona and Edmonton, Alta., to permit the company to make agreements for the use of the bridge by other railway companies, and to charge tolls for the use of the same, in the event of its being constructed so as to permit foot passengers and carriages to pass over it. Power is also asked to enable the company to lease the bridge to the C.P.R.

Cape Breton Ry.—Although traffic has been suspended on this line, which extends from Port Hawkesbury to St. Peters, N.S., the company is endeavoring to make arrangements to secure subsidies for the projected extension from St. Peters to Louisburg, N.S., 65 miles. When the running of trains was suspended in Sept., 1904, it was stated that the company had lost several thousand dollars in operating the line, and that the failure to secure a subsidy for the extension to Louisburg had rendered it necessary to close down.

Chignecto Coal and Ry. Co.—Surveys have been completed for the construction of a railway from the company's mines near Chignecto to Northport, N.S., on the Northumberland Strait, where it is proposed to establish a shipping pier. D. Mitchell, Chignecto, is General Manager.

Colchester Coal and Ry. Co.—The company's mines at Debert have been fully developed, and are ready to ship coal. It is, therefore, proposed to go on with the construction of the proposed line from the mines to the Debert, N.S., station on the Intercolonial Ry. The officers and directors for the current year are:—President, Dr. S. Win-

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Z. A. LASH,

Solicitor for the applicants.

Dated at Toronto, this 4th day of Janu-
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RAILWAY DEVELOPMENT.

(Continued from page 45.)

ters, Moncton, N.B.; Vice-President, Hon. F. A. Laurence, Truro, N.S.; other directors: Dr. Jos. Hayes, Parrsboro, N.S.; D. J. Thomas, Truro, N.S.; E. J. Ward, Kentville, N.S.; and Capt. J. Flemming, Halifax, N.S.

Edmonton, Yukon and Pacific Ry.—Application will be made during the current session of the Dominion Parliament for an act extending the time within which the company's projected lines may be constructed.

Fording Valley Ry.—The British Columbia Legislature will be asked at its next session for an act incorporating a company with this title to construct a railway to be operated by steam or electricity, from a point on the B.C. Southern Ry. near the confluence of the Elk River and Michel Creek, along the Elk River valley, then along the Fording River valley, and other rivers, to the Alberta boundary at Henrietta Creek, at the northern limit of the properties of the Imperial Coal and Coke Co. Power is asked to construct branch lines along Grace, Erwin, Smith, Lewis and Henrietta Creeks, also other branches, not exceeding 20 miles long in any one case; to connect with the C.P.R. or any other railway near the projected route. Harvey and McCarter, Victoria, B.C., are solicitors for the promoters, who are the Imperial Coal and Coke Co. (Ltd.), the head offices of which are in Montreal. We are advised that nothing definite has been decided as to construction.

Grand Trunk Pacific Ry.—Application will be made at the current session of the Dominion Parliament for an act ratifying the forms, terms and conditions of the mortgages and securities to be created and issued in aid of the construction of the Prairie section and of the Lake Superior branch or division of the projected line. (Jan., pg. 11).

Great North-Western Transit Co. of Canada.—Application will be made at the current session of the Dominion Parliament for an act confirming a deed of amalgamation entered into between the Hudson's Bay and North-West Rys. Co. and the Manitoba and Keewatin Ry. Co., and giving this title to the consolidated company.

The Hudson's Bay and Yukon Rys. and Navigation Co. was incorporated by the Dominion Parliament in 1897, to construct a railway from Chesterfield Inlet, Hudson's Bay, to Great Slave Lake, and from the Mackenzie River to the Yukon River, with power to carry on a general navigation business on the lakes and rivers touched by the line. The provisional directors were C. T. Harvey, J. W. Langmuir, R. Kilgour, J. K. Kerr, and Jas. Scott, of Toronto. In 1899 an act was obtained changing the name to the Hudson's Bay and North-West Rys. Co., and authorizing amalgamation with other companies, and to construct telephone and telegraph lines.

The Manitoba and Keewatin Ry. Co. was incorporated by the Dominion Parliament in 1902, to construct a railway from Winnipeg or Selkirk, Man., northerly to tide-water on the west coast of James Bay or Hudson's Bay, with branch lines to various points. The provisional directors were: D. W. Bole, F. W. Stobart, H. H. Chown, R. J. Whitla, R. T. Riley, G. D. Wood, D. C. Cameron, and H. M. Howell of Winnipeg, Man.

Halifax and Southwestern Ry.—The line between Halifax and the junction with the old Nova Scotia Central Ry., at Mahone, 68 miles, has been completed, and track has been laid on the section from Bridgewater to Liverpool, 31 miles, but this latter section has not been ballasted. With the nine miles of the old Nova Scotia Central Ry., run over between Mahone and Bridgewater, trains are

being run over 108 miles of line on the eastern coast of the province. At present a tri-weekly service is being operated. Ballasting will be gone on with on the Bridgewater-Liverpool section in the spring. No decision has been reached respecting the location of the remaining section of the line from Liverpool to Barrington Passage or Yarmouth. (Dec., 1904, pg. 421.)

Hamilton Terminal Ry.—Application will be made next session of the Ontario Legislature for an act with this title to construct and operate a railway in Wentworth county, and the city of Hamilton, Ont. Stanton and O'Heir, Hamilton, are solicitors for the promoters.

Hudson's Bay and North-West Ry.—See the Great North-Western Transit Co. of Canada.

International Terminal and Bridge Co.—Application will be made at the current session of the Dominion Parliament for an act incorporating a company with this title for the purpose of constructing a bridge across the Rainy River, at or near Fort Frances, Ont., to carry steam and electric railway tracks, and to provide for vehicles and pedestrians, and to operate terminal and other facilities at Fort Frances. A charter of incorporation will be applied for in the United States for the purpose of constructing the portion of the bridge in the United States, and the railway connections into Koochiching, Minn., to which point the Duluth, Virginia and Rainy Lake Ry. is under construction. Kerr, Davidson, Paterson, and Grant, Toronto, are solicitors for the promoters.

Interprovincial and James Bay Ry.—Application will be made at the current session of the Dominion Parliament for an act granting an extension of time for the commencement and completion of the projected line.

James Bay Ry.—Grading is being pushed on this line in the Don Valley, north of Toronto, and considerable progress is expected to be made before spring. There will be seven or eight bridges to be constructed over the Don within a few miles. Between Washago and Parry Sound good progress is being made. Surveys for the continuation of the line from Parry Sound to Sudbury are progressing, H. T. Hazen, C.E., Toronto, being Division Engineer in charge. (Jan., pg. 13.)

Joliette and Lake Manuan Ry.—The Dominion Parliament will be asked during the current session to pass an act authorizing an extension of time for the construction of the projected railway from Joliette, northerly to Lake Manuan, Que.

Kettle Valley Lines.—The Kettle River Valley Ry. Co. will apply during the current session of the Dominion Parliament for an act authorizing it to construct the following additional lines of railway:—From near Vernon, B.C., on the proposed line to Quilchena, southerly to the International boundary, between British Columbia and the State of Washington; and from a point on the projected line between Fire Valley to Quilchena westerly and northerly to the C.P.R. Power will also be asked to amalgamate with any other railway company, the lines of which cross or parallel those of the Kettle Valley Lines, and to increase the capital stock and bonding powers of the company. (Dec., 1904, pg. 429.)

A correspondent of the Globe, writing of the Kettle River district of British Columbia, says that the valley of the north fork of the Kettle River is very rich in lumber and other resources, and when opened up for settlement will be a fine fruit-growing country. This is the district through which the K.V. lines has surveyed an extension of its line from Grand Forks, B.C. (Dec., 1904, pg. 429.)

Kingston and Dominion Central Ry.—Application will be made during the current session of the Dominion Parliament for an act authorizing the company to construct a line from its projected line between Brockville and Westport, Ont., to Montreal, and from Newboro or Westport to Ottawa. Power is also asked to change the name of the company to the Montreal, Ottawa, Kingston and Georgian Bay Ry. Co.

Kootenay, Caribou and Pacific Ry.—At the current session of the Dominion Parliament application will be made for an act amending the company's act of incorporation, and extending the time for the commencement and completion of the projected main line and branches. The company was incorporated in 1903 to construct a railway from Golden, B.C., to a junction with any railway coming through the Yellowhead Pass, thence to Fort George, on the Fraser River.

Lebonk and Thunder Bay Ry.—Power will be asked at the current session of the Dominion Parliament for the incorporation of a company with this title, to construct a railway from a point on Thunder Bay, following the course of the Blende River, generally northerly to Lebonk Mine, in McTavish township, thence northerly to Loon Lake. T. L. Metcalfe, Winnipeg, Man., is solicitor for the promoters.

Lethbridge, Alta.—Application will be made at the current session of the Dominion Parliament for an act incorporating a company to construct a railway from near the coal deposits in townships 18 and 19, ranges seven and eight, west of the fifth meridian, to Lethbridge, Alta. T. Allen, Lethbridge, is solicitor for the applicants.

Macleod, Cardston and Montana Ry.—The Dominion Parliament will be asked at its current session for an act granting an extension of time for the construction of the company's authorized line in Alberta.

Manitoba and Keewatin Ry.—See the Great North-Western Transit Co. of Canada.

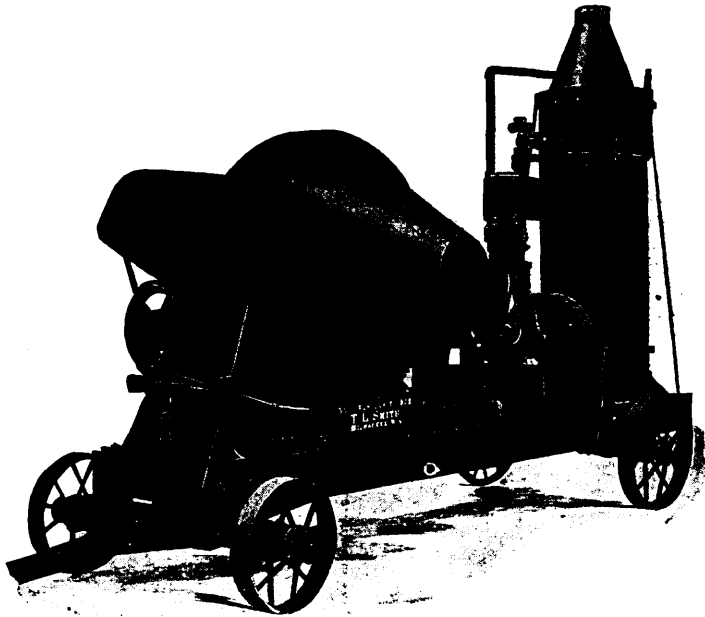
Medicine Hat and Northern Alberta Ry.—The Dominion Parliament will be asked during the current session for an act extending the time for the commencement of and completion of the company's authorized line from Medicine Hat, Assa., to the international boundary for a further period of three years. R. C. Macdonald, Winnipeg, is secretary of the company.

Michigan Central Rd.—A new tool shop has been completed at the car and locomotive shops at St. Thomas, Ont. The company is employing 325 hands at these shops. (Dec., 1904, pg. 429.)

Montreal Bridge Co.—Application will be made at the current session of the Dominion Parliament for an act authorizing this company to purchase the property, rights and franchises of the Montreal and Longueuil Bridge Co., or to amalgamate therewith; to authorize a change in the proposed site of the bridge; to rearrange the share capital, and to increase its bonding powers.

Montreal, Quebec and Southern Ry.—Application will be made at the current session of the Dominion Parliament for an act to incorporate a company with this title to construct a railway from St. Guillaume station of the Montreal and Atlantic Ry. to Sorel, Que., with power to acquire the charter rights and lines of the South Shore Ry., the Quebec Southern Ry., the East Richelieu Valley Ry., and the Montreal-Longueuil Bridge Co. It is also asked that the time fixed for the completion of the various lines proposed to be acquired be extended.

Moose Jaw and Edmonton Ry.—The Dominion Parliament will be asked at its current session to incorporate a company with this title to construct a railway from the C.P.R. at Moose Jaw, Assa., to the elbow of the South



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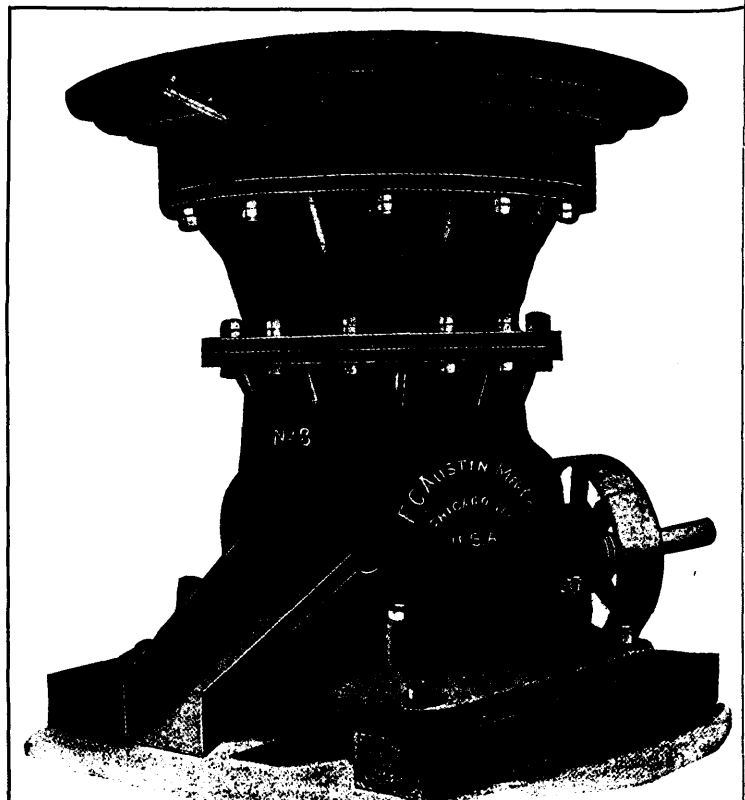
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Saskatchewan River, thence to Edmonton, Sask. McGiverin and Haydon, Ottawa, are solicitors for the applicants.

Nicola, Kamloops and Similkameen Ry.—Negotiations are in progress with the Provincial Government respecting a subsidy for the construction of this line from Nicola into the Similkameen Valley, and if a satisfactory arrangement is made construction will be commenced early in the year. (Jan., pg. 13.)

Ottawa River Co.—Application will be made next session of the Dominion Parliament for an act authorizing it to purchase or amalgamate with the Ottawa River Ry. (Ontario), and other railway lines, and to build branches from the projected main line at or near St. Genevieve, Terrebonne, St. Thomas, and Radnor Mine, and also for an extension of time with which the main line may be constructed.

Prince Edward Island Ry.—We are advised that when work was suspended for the winter on the Hillsboro River Bridge, at the end of 1904, all the work on pier 5 had been completed, and all the work under Mr. J. Haney's contract had been done, with the exception of rip rapping the approaches, which will be done in the spring. On the superstructure the ironwork of six spans only has been placed on the piers. The material for flooring has been delivered, and the ironwork of the remaining five fixed spans is on the spot. (Jan., pg. 13.)

Quebec and Lake Huron Ry.—The project of constructing a railway from Quebec to the Georgian Bay at the mouth of French River has again been revived, and the directors at a recent meeting in Quebec, decided to have a preliminary survey of the route made. The projected route is as near as possible in a straight line from Quebec to the mouth of the French River, a distance of about 600 miles, and will open up a large area of forest and mineral lands at present undeveloped. R. J. Campbell, who was one of the principal promoters of the Dominion Securities Co., New York, a corporation which failed, and which was endeavoring to work a big amalgamation of Canadian lines, including the Canada Atlantic Ry., the Quebec Southern Ry., and the South Shore Ry., besides promoting the construction of other lines to couple them up into one system, is the principal promoter of the company.

Quebec and Saguenay Ry.—Application is being made at the current session of the Quebec Legislature for an act incorporating a company with this title to construct a railway to be operated by steam or electricity from the terminus of Quebec Ry., Light and Power Co.'s line at St. Joachim, following the shore of the St. Lawrence River to the mouth of the Saguenay River, with power to construct branch lines. The applicants are: R. Forget, W. McL. Walbank, W. G. Ross, of Montreal; A. Girard, K.C., Marieville, Que.; Jas. McCarthy, W. Price, Hon. P. A. Choquette, Hon. C. Langelier, Hon. E. B. Garneau, G. Tanquay, N. Rioux, J. Cameron, and L. A. Taschereau, of Quebec City.

Quebec Southern and South Shore Ry.—See Montreal, Quebec and Southern Ry.

Regina and Hudson's Bay Ry.—Application will be made next session of the Dominion Parliament for an act extending the time for the commencement and completion of this projected railway.

Schomberg and Aurora Ry.—Arrangements are being completed for effecting a junction of the tracks of the S. and A. Ry. with those of the G.T.R. at King, Ont. (June, 1904, pg. 189.)

Temiskaming and Northern Ontario Ry.—The Ontario Government Commissioners having in charge the construction of this line took over the completed portion of the line from

North Bay to New Liskeard, Ont., 112 miles, from the contractors, Jan. 14. For some time past the line has been operated by the contractors, a regular freight and passenger service being maintained. The C.P.R. terminals at North Bay are being used under agreement, but the line has its own freight yard. Beyond New Liskeard the line has been located for 65 miles; grading has been completed for about 40 miles, and track has been laid for 22 miles, or eight miles beyond Tomstown. Surveys are being carried on beyond the 65 mile point to Lake Abitibi, near which it is expected the Moncton-Winnipeg line, which the Dominion Government is about to construct in connection with the Grand Trunk Pacific Ry. project, will pass. (Jan., pg. 15.)

Toronto Union Station.—The question of the expropriation of a portion of the burned-out district of Toronto for the purposes of erecting a new union station thereon has been again before the Board of Railway Commissioners. The general question of expropriation of the property was settled, but a difficulty arose as to the compensation to be paid to the lessees, and who it was to be fixed by. Hon. M. E. Bernier, Deputy Chief Commissioner, expressed an opinion that the amount of compensation to be paid would be the amount the persons interested would be entitled to at common law, namely, the value of the property on the date when notice of expropriation was given; whilst Commissioner Mills was of opinion that compensation should be awarded for the eight months during which the matter has been hanging fire. Upon the question of whether the Commissioners have power to decide the amount of compensation, or whether it has to go before a special court there is also a divergence of opinion. Until the appointment of a chairman to succeed Hon. A. G. Blair, nothing further is likely to be done. (Jan., pg. 15.)

United Nickel Co. of Canada (Ltd.).—Application will be made next session of the Ontario Legislature for an act incorporating a company with this title for the purpose, among other things, of taking over the franchises, assets, etc., of the Huronian Co. (Ltd.), which has power to construct railway lines in connection with its mines near Sudbury, Ont. Beatty, Blackstock, Fasken and Riddell, Toronto, are solicitors for the promoters.

Vancouver and Coast Kootenay Ry.—Application will be made at the current session of the Dominion Parliament for an act authorizing the extension of its projected railway from near Nicola Lake, via Kamloops B.C., to near Pine River Pass, and to build branch lines from its main line to near Penticton, on Okanagan Lake. (Jan., pg. 15.)

Vancouver and Lillooet Ry.—Application will be made next session of the B.C. Legislature for an act incorporating a railway, standard or narrow gauge, to be operated by steam or other motive power, from Vancouver to the mouth of Upper Slave River, thence north-westerly to Lillooet Lake, with power to construct branches. The company also desires power to conduct a general navigation business on the lakes and rivers touched by the projected line. Robertson and Robertson, Vancouver, B.C., are solicitors for the promoters.

Yonge Street Bridge, Toronto.—The claim filed by the C.P.R. in connection with the application to set aside the order for the construction of a bridge across the railway tracks at the foot of Yonge St., Toronto, asks the court to declare that the order is invalid because the Esplanade agreement is the subject of special legislation; and for other reasons, the most important being that the railway does not cross Yonge St.; that the G.T.R. having been given the power to run on the level of the Esplanade, there is no power to order another street to be carried

across the Esplanade; and further that the Railway Committee had no jurisdiction to order damages to be paid by the railway companies. (Jan., pg. 15.)

Locomotive and Machine Co. of Montreal.—At a meeting of the stockholders held in Montreal, Jan. 11, the following were elected directors:—A. J. Pitkin, P. Fisk, W. M. Barnum, G. R. Sheldon, D. W. Morrow, of New York; K. W. Blackwell and J. R. Wilson, of Montreal. The officials for the current year are:—President, A. J. Pitkin; Vice-President, J. E. Sague; Second Vice-President, R. J. Gross; Secretary, Leigh Best; Treasurer, C. B. Denny; Comptroller, C. E. Patterson; Manager, S. T. Callaway; General Superintendent, Gurry.

Canadian Railway Club.—Following are the officers and committees for the current year, elected Jan. 3:—President, S. King, Montreal; First Vice-President, W. E. Fowler, Montreal; Second Vice-President, W. D. Robb, Montreal; Executive Committee: J. Powell, L. R. Johnson, H. H. Vaughan, A. A. Maver, and C. F. Rydberg. Finance Committee: H. Osborne, W. S. Blyth and M. C. Manning. At a subsequent meeting of the Executive Committee, Jas. Powell, Chief Draughtsman, G.T.R. Motive Power Department, Montreal, was appointed Secretary-Treasurer, owing to the removal of W. H. Rosevear, Jr., from Montreal to Toronto. The annual report showed that there were 371 members on the roll, 76 new names having been added during the year, and 36 having withdrawn. The treasurer's report showed a satisfactory balance on hand. A committee consisting of the members of the Executive and the Past Presidents was appointed to look over the constitution and by-laws, which require amending in some particulars. This committee will report at the March meeting. A smoker was subsequently held, and arrangements made for holding the annual dinner Jan. 26.

The Algoma Steel Co. began at the new year to manufacture 80-lb. steel rails to fill an order from the C.P.R. for 25,000 tons.

The next biennial convention of the International Brotherhood of Maintenance of Way Employes will be held in Toronto. A. B. Lowe, of Kingston, Ont., is First Vice-President, and C. Boyle, of Merrickville, Ont., Grand Secretary.

At a recent meeting of the Atlantic Steamship Conference and the Trunk Line Passenger Association, the question of the \$2 head tax levied by the U.S. was discussed, and it was decided to make representations to the Government with a view of having the regulations for the collection of this tax amended. It is alleged that the operation of the tax is to prevent alien residents of Canada, and foreign visitors to Canada from entering the U.S., either for pleasure, or to take steamers for Europe at Boston or New York.

The Canadian Westinghouse Co. has sold to the Hamilton Cataract Power, Light & Traction Co., for use in its Victoria sub-station at Hamilton, Ont., two motor-generator sets, each consisting of a synchronous motor and a direct current generator. The motor-generator sets will be of the two-bearing type, the generators delivering direct current at 550 volts to the railway system, and each being rated at 750 k.w. The synchronous motors will take two-phase current at 8,000 alternations and 2,400 volts, and will be rated at 1,380 h.p. The excess of capacity in the motors is provided so that they may be used for raising the power factor of the transmission system. Power is taken through lowering transformers from the high tension transmission line from the De Cew Falls station of the company.

Orders by the Railway Commissioners.

The following orders have been issued by the Board:—

Authorizing the Vancouver, Westminster and Yukon Ry. to acquire certain lands in Vancouver, B.C., for its tracks. (Dec. 9.)

Approving of the location of the James Bay Ry. from the northern boundary of Toronto to the eastern boundary of Georgina township, mileage 3.10 to mileage 44.18, and from mileage 47.66 to mileage 57.44. (Dec. 12.)

Removing the restriction as to speed of trains on the C.P.R. Arcola-Regina line, between mileages 80 and 93, and 96 and 99 from Arcola, ordered Nov. 9. (Dec. 14.)

Authorizing the C.P.R. to open for traffic the grade revision from Nord, mileage 18.7, to a point west of Secretan, at mileage 49.5 from Moose Jaw, Assa. (Dec. 14.)

Authorizing the temporary use of the crossing of the Dominion Atlantic Ry. line at Middleton, N.S., by the Middleton and Victoria Beach section of the Halifax and South-western Ry. (Dec. 15.)

Granting permission to the North American Telegraph Co. to carry its lines across the C.P.R. at two points in Norwood, Ont. (Dec. 16.)

Granting permission to the Bell Telephone Co. to carry its lines across the tracks of the Toronto, Hamilton and Buffalo Ry. in Barton township, Ont. (Dec. 19.)

Approving a by-law of the Quebec Railway, Light and Power Co., authorizing the General Manager and Superintendent to prepare and issue tariffs of tolls. (Dec. 19.)

Authorizing the Montreal Terminal Ry. to cross the tracks of the Montreal Street Ry., on Davidson St., Montreal, and Letourneau Ave., Maisonneuve. (Dec. 20.)

Granting the Bell Telephone Co. permission to carry its wires across the tracks of the Tillsonburg, Lake Erie and Pacific Ry., at Port Burwell, Ont. (Dec. 20.)

Sanctioning the leasing of the Guelph and Goderich Ry. to the C.P.R., according to the terms of the lease dated Oct. 6, 1904. (Dec. 23.)

Sanctioning the leasing of the Tillsonburg, Lake Erie and Pacific Ry. to the C.P.R., according to the terms of the lease dated Oct. 6, 1904. (Dec. 23.)

Sanctioning the leasing of the Northern Colonization Ry. to the C.P.R., from about three miles north of Labelle to Nominigue, Que., according to the terms of the lease dated Oct. 6, 1904. (Dec. 23.)

Approving a by-law of the Bay of Quinte Ry., Oshawa Ry. and Thousand Islands Ry., authorizing J. F. Chapman, General Freight and Passenger Agent, to make tariffs of tolls. (Dec. 23 and 30.)

Authorizing the Orillia, Ont., Town Council to lay a water main under the G.T.R. tracks at Andrew St. (Dec. 23.)

Approving the plans for the construction of a spur line by the G.T.R. from near Victoria Ave. to Welland Ave., Niagara Falls, Ont. (Dec. 23.)

Authorizing the operation of trains over

the C.P.R.'s new track, constructed near Clanwilliam, B.C., to replace the old line where there was a heavy gradient. (Dec. 29.)

Granting the Bell Telephone Co. permis-

sion to carry its lines across the C.P.R. tracks at Avenue Road, Toronto. (Dec. 29.)

Authorizing the General Manager of the Alberta Ry. and Irrigation Co. to make tariffs of tolls for the company. (Dec. 29.)

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Authorizing the G.T.R. to carry an industrial siding in Berlin, Ont., across the tracks of the Berlin and Bridgeport St. Ry. (Jan. 5.)

Approving the location of an industrial siding for the G.T.R. in Lindsay, Ont. (Jan. 5.)

Approving of the plans for a bridge over the South Saskatchewan River, near Prince Albert, Sask., for the Canadian Northern Ry. (Jan. 5.)

Approving plans for the construction by the G.T.R. of extensions to sidings to brick-yards and paper works, etc., in York township, Ont. (Jan. 5.)

Approving plans for the construction of an industrial siding by the G.T.R. at Sundridge, Ont. (Jan. 5.)

A Freight Rate Decision.

The Board of Railway Commissioners gave the following decision on Dec. 29, 1904:—
"The complaint of the Canadian Manufacturers' Association, on behalf of the milling interests of the Association, and other millers and grain merchants, against the G.T.R. and the C.P.R. companies, for advancing the rates on grain and grain products from Ontario to the Maritime Provinces, in contravention of the Railway Act, 1903. On Nov. 30 and Dec. 1, the companies named respectively issued supplements 3 to G.T.R. Tariff C.R.C. no. E 177 and no. 4 to C.P.R. Tariff C.R.C. no. E 177, increasing the rates on grain and grain products, which supplements they declared were to become operative Dec. 5. The issue of said tariffs by said companies to take effect at the time stated being clearly contrary to the terms of sec. 262, sub-sec. 2, of the Act, it is ordered that the rates imposed prior to the issue of said unauthorized supplementary tariffs shall be deemed to have been in force until Dec. 10, 1904; and that the supplementary tariffs issued on Nov. 30 and Dec. 1, advancing the rates on grain and grain products, shall be deemed and are hereby declared to have come into effect and become operative on Dec. 10 instant; but subject to and upon the condition that the said companies shall, without delay, refund to the shippers affected, individually and respectively, the amount or amounts charged and collected by them, or either of them, in excess of the amount properly chargeable under the previous tariffs, between Dec. 5 and 10."

The Intercolonial Ry. has issued its calendar for 1905. The background is of birdseye maple, and in the centre the moosehead—the design of the Government lines—reproduced in the form of a brass medallion.

The Hamilton Cataract, Power, Light and Traction Co. has recently started the two 5,000-kilowatt Westinghouse generators in its power station at De Cew Falls, Ont. Power is supplied from Welland canal feeders, tapped in about 14 miles above the power station, and at the station the water has a head of 267 ft. The Westinghouse generators are of the two-bearing type, direct connected to Escher-Wyss water-wheels, and run at a speed of 286 r.p.m. They generate 3-phase current at a frequency of 66 cycles, and a pressure of 2,400 volts. The power is transmitted to Hamilton, Ont., where it is used for lighting, street railway and manufacturing purposes. A reserve steam-driven station is located at Hamilton, which contains two 1,000-kilowatt Westinghouse generators. The entire station and high tension apparatus are of Westinghouse design. The company has two separate three-phase transmission lines to Hamilton, a distance of about 35 miles. The high tension apparatus is designed for a pressure of 40,000 volts, but will be operated for a time at 20,000 volts.

February Birthdays.

Many happy returns of the day to—
B. H. Bennett, General Agent Chicago and North-Western Ry. at Toronto, born at Cobourg, Ont., Feb. 6, 1858.

H. J. Colvin, District Passenger Agent C.P.R. at Boston, Mass., born at Macedon, N.Y., Feb. 26, 1856.

H. R. Charlton, Advertising Agent G.T.R. at Montreal, born at St. John's, Que., Feb. 9, 1866.

R. Crawford, Northwest Agent Northern Navigation Co. at Winnipeg, Man., born at Kingston, Ont., Feb. 21, 1870.

F. P. Dwyer, Eastern Passenger Agent G.T.R. at New York, born at Chicago, Ill., Feb. 20, 1853.

E. A. Evans, General Manager and Chief Engineer Quebec Ry., Light and Power Co. at Quebec, born at Kensington, London, Eng., Feb. 26, 1855.

E. H. Fitzhugh, Third Vice-President G.T.R. and Vice-President Central Vermont Ry., Montreal, Que., born in Montgomery County, Mo., Feb. 1, 1853.

C. W. Gardner, Auditor Minneapolis, St. Paul and Sault Ste. Marie Ry. at Minneapolis, Minn., born at Rushville, N.Y., Feb. 17, 1861.

J. A. Johnson, Mechanical Foreman I.C.R. at Campbellton, N.B., born at St. John, N.B., Feb., 1848.

R. S. Logan, Assistant to 2nd Vice-President and General Manager G.T.R., Montreal, born at St. Louis, Mo., Feb. 13, 1864.

C. S. Maharg, Trainmaster district I C.P.R., Ontario Division, at Havelock, born in Dufferin County, Ont., Feb., 1867.

T. McNabb, Master Mechanic Alberta Ry. and Irrigation Co. at Lethbridge, Alta., born in Scotland, Feb. 16, 1849.

D. MacPherson, Division Engineer C.P.R. at Montreal, born Feb. 2, 1858.

C. W. Milestone, ex-Superintendent C.P.R. at Moose Jaw, Assa., born at Medina, Ohio, Feb. 24, 1857.

C. Percy, Auditor G.T.R., Montreal, born in Kent, Eng., Feb. 12, 1845.

R. D. Pinneo, Assistant General Freight and Passenger Agent, White Pass and Yukon Route, Skagway, Alaska, born at Princeton, Ia., Feb. 9, 1873.

A. H. Robinson, Superintendent Elgin and Havelock Ry. at Petittcodiac, N.B., born at Elgin, N.B., Feb. 2, 1862.

A. E. Rosevear, Freight Claim Agent G.T.R. at Montreal, born Feb. 20, 1863.

J. G. Scott, General Manager Quebec and Lake St. John Ry. at Quebec, born there Feb. 13, 1847.

J. W. Troup, Superintendent C.P.R. Pacific Coast Steamships at Vancouver, born Feb. 5, 1855.

Sir Wm. C. Van Horne, K.C.M.G., Chairman C.P.R. and President Cuba Co., Montreal, born in Will County, Ill., Feb., 1843.

H. W. Walker, General Auditor G.T.R. at Montreal, born at Brantford, Ont., Feb. 12, 1839.

The Pere Marquette in Canada.

The Pere Marquette Rd. purchased the Lake Erie and Detroit River Rd. in 1903, and in 1904 arrangements were completed with the Michigan Central Rd. for the running of trains over portions of its line, and particularly between St. Thomas, Ont., and Buffalo, N.Y. The object of the P.M. Rd. in entering Canada was to obtain a connection with Buffalo, so as to compete for through traffic from Chicago, and the Canadian portion of the company's business in operation as the Buffalo Division. Ever since the new order of things came into force complaints have been frequent that the local traffic on the old Lake Erie and Detroit River Ry. was being sacrificed to enable the through traffic to be carried on. The complaints of freight

being left behind, of passenger trains being cancelled, and of the general unreliability of the trains became so frequent that the Board of Railway Commissioners sent A. Lalonde, one of its inspectors, to investigate matters. He reported that the complaints made were well founded, and that the company's officers stated there was not motive power to handle the traffic, and that rolling stock also was short. During the time the inquiry was going on, a number of the municipalities through which the line passes threatened to cut off the company's water supply if things were not remedied, and the city of London discussed the possibility of cancelling the lease of the London and Port Stanley Ry., if a better service was not provided. The Railway Commissioners notified the company that unless the switching was done properly, and trains run on time, and not be given full loads at initial points, the Board would forthwith put the law in motion to the limit of its jurisdiction and powers. Since the beginning of the year the service generally has been improved, and the causes of complaint removed.

J. S. Pyeatt, Superintendent at St. Thomas, Ont., stated that the causes leading to the complaints were to be found in the fact that the locomotives were not in a condition to handle the traffic, owing to lack of repairs; the water tanks were too small and too far apart. The company had removed its shops from Walkerville to St. Thomas, where the locomotives would be repaired. The fact, however, remains that the Lake Erie and Detroit River Ry. handled the traffic satisfactorily, and there is no doubt that under the new ownership, Canadian business has been sacrificed for through U.S. business. The company has, since these difficulties have arisen, voted \$4,500,000 for additional equipment, a portion of which will be provided for its traffic in Canada.

International Railway Congress.

The seventh session of the International Railway Congress will be held in Washington, D.C., during May. The Association exists for the promotion of the progress and development of railways, and is composed of railway administrations, either state or private, which have formally declared their adherence to this organization, and who either own or work lines for public traffic. In addition, governments are represented by delegates. Its meetings were formerly held at intervals of two or three years, but in later years they have been held every five years. In the interim the affairs of the body are conducted by a permanent commission consisting of 48 elected members, one-third of whom retire and are replaced at each session. The permanent officials consist of a president, two vice-presidents, former presidents of the Congress ex officio, a secretary-general, secretary-treasurer, etc.; these officials constituting the permanent staff for continuing the work one session to the next, and for publishing the record of the proceedings.

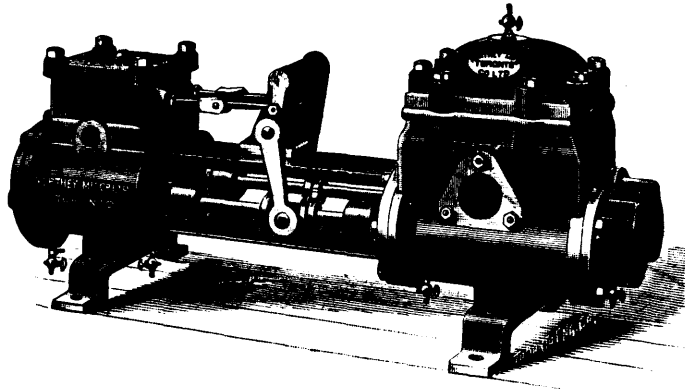
The work of the Congress is divided into sections as follows:—Way and works, motive power and rolling stock, operation, general, light railways. In its practical operation the work of each of these sections is subdivided in conformity with a programme consisting of a certain number of questions determined upon by the permanent commission, and for the treatment of which reporters in one or several countries are appointed. The reports will be presented and then discussed.

In conformity with the usual practice of adding a section representative of the country in which the Congress is held, an American section has been added. It includes D. McNicholl, Vice-President C.P.R., and C.M.

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poses.

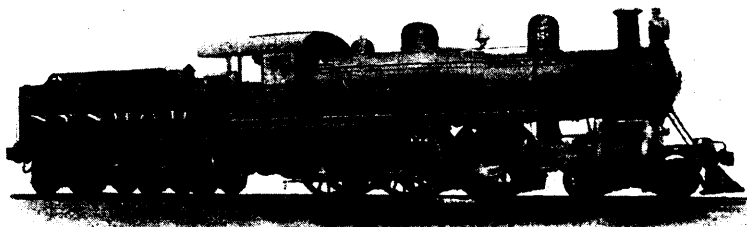
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DURABLE ————— **RELIABLE** ————— **SIMPLE**

DISTRICT OFFICES

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BROAD AND NARROW GAUGE SINGLE EXPANSION AND COMPOUND

LOCOMOTIVES

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

Grand Prize and Gold Medals awarded by the Louisiana Purchase Exposition.

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"America's Greatest Railroad."

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& HUDSON RIVER R. R.
THE SIX-TRACK TRUNK LINE.

In connection with the
Canadian Pacific Ry.,
Toronto, Hamilton & Buffalo Ry.,
and Michigan Central R.R.,

operates the quickest and best trains
between Toronto, Hamilton and New
York.

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

"EMPIRE STATE EXPRESS"
(except Sunday)

Arrives in New York 10 p.m.

Night Train with dining and sleep-
ing cars leaves Toronto 5.20 p.m., Hamil-
ton 6.20 p.m., arrives New York 7.50
next morning at

GRAND CENTRAL STATION

This is the **only station** in New York
city, and it is reached only by the trains of
the New York Central and Hudson River
Railroad.

Connections at Suspension Bridge with
the Grand Trunk Railway.

L. DRAGO,

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

Hays, Second Vice-President and General Manager G.T.R., Montreal, representing Canadian lines.

In connection with the Congress there will be held an exhibition of railway appliances, under the charge of a committee of which the following are among the members: L. F. Brame, General Manager Continuous Rail Joint Co. of America, Newark, N.J.; O. H. Cutler, President American Brake Shoe and Foundry Co., New York; A. B. Johnson, Baldwin Locomotive Works, Philadelphia, Pa.; W. V. Kelly, President Simplex Railway Appliance Co., Chicago, Ill.; E. B. Leigh, Vice-President Chicago Railway Equipment Co., Chicago, Ill.; General Charles Miller, Galena-Signal Oil Co., Franklin, Pa.; A. J. Pitkin, President American Locomotive Co.; W. W. Salmon, President General Railway Signal Co., New York; H. H. Westinghouse.

The First Traffic Passenger Manager.

At the last annual meeting of the American Association of General Passenger and Ticket Agents, in the course of a paper read by S. H. Hardwick, Passenger Traffic Manager Southern Ry., on "The Evolution and Compositiveness of the General Passenger Agent," a letter from Lucius Tuttle, President Maine Central Ry., was quoted, which contained the following paragraph:—"I think you wanted to know something about the origin of the title Passenger Traffic Manager. I am quite certain that I was the first to be given that title. When I was employed by President Van Horne of the C.P.R., Jan. 1, 1887, the road already possessed a full outfit of passenger department officers, including a General Passenger and Ticket Agent. President Van Horne desired to create a new position for me that should not interfere with the rank or title of officers already employed, and as the C.P.R. was largely owned in England, where railway officials' titles are different from those in America, he desired to make my place one that would be better understood by the English owners and customers of the C.P.R. He, therefore, suggested that the title be Passenger Traffic Manager. The suggestion was wholly President Van Horne's, and I think was, in a way, a stroke of genius, and I am very glad that the title is being generally adopted by the large systems throughout the United States."

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

Gross earnings, working expenses, net profits, increases or decreases over 1903, from July 1, 1904:			
Earnings.	Expenses.	Net Profits.	Increase or Decrease.
July \$4,398,833.95	\$2,949,181.81	\$1,449,652.14	\$131,125.02+
Aug. 4,474,237.64	2,946,307.21	1,527,930.43	93,827.93+
Sept. 4,290,876.03	2,952,068.47	1,268,807.56	66,541.75+
Oct. 4,743,961.93	3,177,848.02	1,566,113.91	87,913.10+
Nov. 4,751,970.43	3,062,395.69	1,689,574.74	191,593.56+
Dec. 5,289,879.98	3,107,801.22	2,182,078.76	\$395,175.16+

Approximate earnings for Dec., \$4,517,000 against \$4,221,000 for Dec., 1903.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross earnings for Nov., \$210,944.67; net earnings, \$61,559.14, against \$189,343.44 gross and \$44,676.64 net for Nov., 1903. Net earnings for five months ended Nov. 30, \$397,604.62, against \$409,001.89, for same period, 1903. Approximate earnings for Dec., \$191,913 against \$197,363 for Dec., 1903.

MINERAL RANGE RY.—Approximate earnings for Dec., \$32,885, against \$45,964 for Dec., 1903.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for Nov., \$942,186.06; net earnings \$358,986.59, against \$770,391.22 gross and \$445,723.48 net for Nov., 1903. Net earnings for five months ended Nov. 30, \$2,101,313.87, against \$1,900,738.36 for same period 1903. Approximate earnings for Dec., \$700,577, against \$584,127 for Dec., 1903.

Canadian Pacific Railway Land Sales.

	Acres.		Amount.	
	1904-05	1903-04	1904-05	1903-04
July	36,425.75	207,647.32	\$177,473.94	\$1,020,404.70
Aug.	15,669.90	203,339.45	88,735.88	1,217,529.81
Sept.	16,470.02	60,441.12	73,642.96	268,757.99
Oct.	23,792.84	15,950.07	104,843.47	236,611.59
Nov.	23,392.84	22,563.95	112,261.70	187,365.21
Dec.	32,196.59	30,146.00	142,583.40	125,676.00
	147,947.94	590,646.79	\$899,541.35	\$2,761,587.38

Grand Trunk Ry. Earnings, Expenses, &c.

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

	1904.	1903.	Increase.	Decrease.
July	\$3,013,149	\$3,192,608	....	\$179,459
Aug.	3,108,137	3,201,511	....	93,374
Sept.	3,182,972	3,274,245	....	91,273
Oct.	3,174,437	3,222,750	....	48,313
Nov.	3,044,324	2,925,000	119,324	....
Dec.	3,053,246	2,956,382	96,864	....
	\$18,576,265	\$18,772,496	....	\$196,231

TRAFFIC RECEIPTS OF THE SYSTEM.

The following figures relate to the individual lines, and are made out in sterling:

GRAND TRUNK RY. CO.

Revenue for Nov.:				
	1904.	1903.	Increase. Decrease.	
Gross receipts	£503,000	£480,400	£22,600	....
Working expenses	345,000	326,200	18,800	....
Net profit	£158,000	£154,200	£3,800	....

Aggregate from July 1 to Nov. 30:				
	1904.	1903.	Increase. Decrease.	
Gross receipts	£2,611,500	£2,628,800	....	£17,300
Working expen.	1,750,800	1,772,500	£21,700	....
Net profit	£860,700	£856,300	£4,400	....

GRAND TRUNK WESTERN RY. CO.

Revenue for Nov.:				
	1904.	1903.	Increase. Decrease.	
Gross receipts	£99,300	£100,400	....	£1,100
Working exp's	76,600	82,400	....	5,800
Net profit	£22,700	£18,000	£4,700	....

Aggregate from July 1 to Nov. 30:				
	1904.	1903.	Increase. Decrease.	
Gross receipts	£448,100	£500,800	....	£52,700
Working expenses	391,800	442,500	....	50,700
Net profit	£56,300	£58,300	....	£2,000

DETROIT, GRAND HAVEN & MILWAUKEE RY. CO.

Revenue for Nov.:				
	1904.	1903.	Increase. Decrease.	
Gross receipts	£23,200	£20,200	£3,000	....
Working expenses	16,200	17,000	....	800
Net profit	£7,000	£3,200	£3,800	....

Aggregate from July 1 to Nov. 30:				
	1904.	1903.	Increase. Decrease.	
Gross receipts	£133,700	£116,600	£14,100	....
Working expenses	93,800	87,400	6,400	....
Net profit	£39,900	£32,200	£7,700	....

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from July 1 to Dec. 31:				
	1904.	1903.	Increase. Decrease.	
Grand Trunk	£3,131,205	£3,134,988	....	£3,783
G. T. Western	525,671	579,463	....	53,792
D. G. H. & M.	160,162	142,911	£17,251	....
Total	£3,817,038	£3,857,362	....	£40,324

McCaskill, Dougall & Co., Montreal, supplied the varnish for the sleeping cars which have recently been built for the Intercolonial Ry. by the Pullman Co.

The executive committee of the Canadian Ticket Agents' Association will be held at the King Edward hotel, Toronto, on Feb. 7 at 2 p.m., when the time and place of the next annual meeting will probably be decided; to consider, and, if favorable, to appoint representatives to the annual convention of the American Association of General Passenger and Ticket Agents to be held at Mexico City in Oct.; and to appoint a member of the executive committee to succeed J. W. Ryder, Toronto, who has retired.

The Light Traffic Co. has been incorporated under the B.C. Companies' Act, with offices in Victoria, B.C., to work a new mono-rail portable railway system, recently patented in Great Britain and Ireland, and various other countries. Application is being made at the current session of the Dominion Parliament for an act authorizing the issue of a Canadian patent for the invention, notwithstanding the fact that a year has elapsed from the issue of the British' patents. The inventor resides in London, Eng., and Cassidy, Dumbleton and Solomon, Victoria, B.C., are solicitors for the company.

Railway Equipment Notes.

The Dominion Coal Co. has completed a large snow plow for use in its railway yards, Glace Bay, N.S.

The C.P.R. has placed an order with Rhodes, Curry & Co., Amherst, N.S., for 2,000 car axles.

The Baldwin Locomotive Works Record of Construction, no. 49, deals with balanced compound locomotives.

The Inverness Ry. and Coal Co. has added a snow plow from Rhodes, Curry & Co., Amherst, N.S., to its equipment.

The Halifax and South-Western Ry. has received its passenger equipment from Rhodes, Curry & Co., Amherst, N.S.

The Canadian Northern Ry. has ordered 200 box cars, 60,000 lbs. capacity, from the Crossen Car Manufacturing Co., Cobourg, Ont.

The Temiskaming and Northern Ontario Ry. has placed an order for 25 flat cars, two vans and one snow plow with Rhodes, Curry & Co., Amherst, N.S.

The G.T.R.'s contract with the Canada Car Co. includes all classes of freight and passenger equipment for both the G.T.R. and the Grand Trunk Pacific Ry.

The C.P.R. is about to build 3,000 box cars of its standard 30 ton capacity, at its Angus shops, Montreal, and we are advised that the press reports that it is in the market for from 1,000 to 2,000 box cars of 60,000 lbs. capacity is incorrect.

The Safety Car Heating and Lighting Co. at the end of 1904 was supplying over 45,000 cubic feet of Pintsch gas a month for lighting railway cars. Up to the same date it had supplied over 3,800 gas lighting equipments and over 3,900 heating equipments for sleeping ears.

During 1904, there was a decrease of about \$900,000 in the duty collected at the port of Montreal, as compared with 1903, and of this amount about \$500,000 is due to the decreased importation of locomotives. In 1903 locomotives were being imported from the Saxon Engine Works, Chemnitz, Germany, and from Scotland, as well as from the U.S.

The Safety Car Heating and Lighting Co. has been given a contract to supply the necessary equipment and furnish Pintsch gas for lighting all the passenger equipment of the G.T.R. and the Grand Trunk Pacific Ry. In connection with this contract, plants for the manufacture of the gas will be established at any points where the G.T.R. may deem them to be required.

The C.P.R., between Dec. 13 and Jan. 17, received the following additional equipment: three freight locomotives from the Canada Foundry Co., Toronto; four switching locomotives, four sleeping cars, two first-class cars, five snow plows, one flanger and 309 box cars from its Angus shops; 13 vans from its Farnham, Que., shops; and 32 standard ore cars from the U.S.

The Pattee and Lett Co. (Ltd.) has been incorporated under the Dominion Companies' Act for the purpose, among other things, of operating refrigerator and other cars for the carriage of fruit, flowers, etc., throughout Canada. C. B., H. G., and L. G. Pattee, C. B. Powell, F. W. Carling, Ottawa, and W. P. Lett, of San Francisco, Cal., are the provisional directors. The capital is \$100,000, and the offices are at Ottawa.

The C.P.R., between Dec. 13 and Jan. 17, placed the following orders for equipment:— 10 freight locomotives with the Canadian Locomotive Co., Kingston, Ont.; two switching locomotives, one first-class car, one tourist car, one baggage car, one mail car, two snow plows, 102 box cars, 17 stock cars and

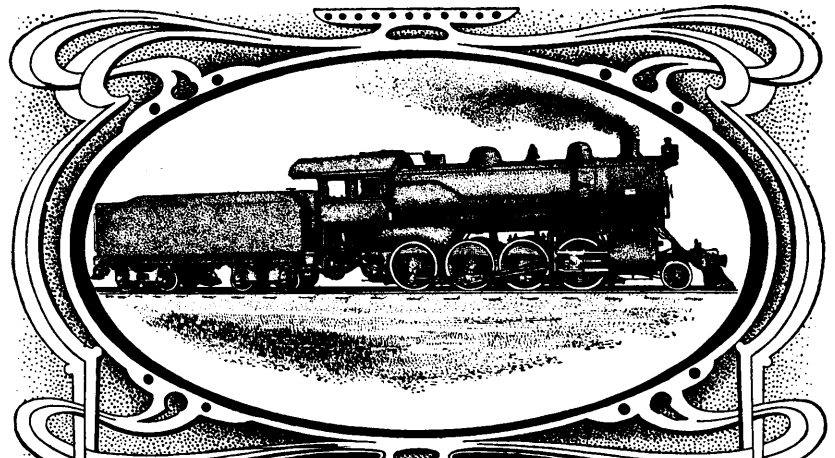
200 flat cars, at its Angus shops, and 12 vans at its Farnham, Que., shops. With the exception of the 10 freight locomotives the orders placed are for rolling stock on replacement account.

The 10 freight locomotives which the C.P.R. has ordered from the Canadian Locomotive Co., Kingston, Ont., will have the following general dimensions:—

Type of engine 10 wheel
 Weight in working order, drivers 142,000 lbs.
 " " total 190,000 lbs.
 Wheel base of engine, rigid 14 ft. 10 ins.
 " " total 26 ft. 1 ins.
 " " and tender 54 ft. 6 ins.
 Diameter of driving wheels 63 in.
 Material of driving wheel centres cast steel,
 56 in. centre.
 Diameter and length of driving journals main,
 9½ in. x 12 in.; F. & B. 9 in. x 12 in.
 " of cylinders 21 in.
 Stroke of cylinders 28 in.
 Type of boiler radial stayed, wide firebox.
 Working pressure of boiler 200 lbs.
 Number and diameter of tubes 248, 2 in. dia. &
 22, 5 in. dia.
 Length of tube 14 ft. 8 in.
 Brakes Westinghouse American.
 Weight of tender, loaded 126,000 lbs.
 Capacity of tank in imp. gallons 5,000 lbs.
 Style of tank Hopper bottom
 Coal capacity 10 tons
 Style of truck 4 wheels, Simplex bolster
 Diameter of wheel 14 ins.
 Kind of wheel wrought iron centre, steel tires
 Diameter and length of journal 5½ in. x 10 in., M. & C. B.
 Brake beam Simplex.
 Side bearing Susemihl.

Following are the general dimensions of the four 10-wheel locomotives which the Temiskaming and Northern Ontario Ry. Co. has ordered from the Canadian Locomotive Co., Kingston, Ont.:—

Weight in working order, drivers 100,000 lbs.
 " " total 122,000 lbs.
 Wheel base of engine, rigid 12 ft. 3 in.
 " " total 21 ft. 8½ in.
 " " and tender 47 ft. 4½ in.
 Diameter of driving wheels 62 ins.
 Material of driving wheels, centres cast iron, 56 in.
 centre.
 Diameter and length of driving journals 7½ in. x 8 in.
 Diameter of cylinders 18 in.
 Stroke of cylinders 24 in.
 Type of boiler radial stayed, wide fire-box.
 Working pressure of boiler 180 lbs.
 Number of tubes 200 lbs.
 Diameter of tubes 2 in.
 Length of tubes 12 ft. 3 in.
 Brakes Westinghouse American
 Weight of tender, loaded 90,000 lbs.
 Capacity of tank 4,000 imp. gals.
 Style of tank U shape
 Coal capacity 8 tons
 Style of truck 4 wheel, steel bolster.
 Diameter of wheel 33 in.
 Kind of wheel cast iron, double plate.
 Diameter and length of journal 4½ in. x 8 in.
 Brake beam steel



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**OUR
 AUTOMATIC LOCOMOTIVE BOILER WASHER**
 FOR CHANGING WATER, WASHING AND FILLING LOCOMOTIVES
 WE USE THE WASTE STEAM AND WATER
 FIVE TO SEVEN HOURS SAVED OVER PRESENT METHODS

WRITE FOR SPECIAL CATALOGUE
 WE ALSO MANUFACTURE
ENGINES, BOILERS, PUMPS, ETC.
 CORRESPONDENCE SOLICITED

ERIE HEATING COMPANY
 225 RAILWAY EXCHANGE
CHICAGO.

WIRES AND CABLES

OF EVERY DESCRIPTION FOR

Telephone, Telegraph, Electric Railway
 and Power Purposes.

THE WIRE AND CABLE COMPANY, - MONTREAL

TRANSPORTATION APPOINTMENTS.

Canadian Pacific Ry.—The President's circular announcing the new appointment of Hayter Reed, heretofore Manager of the Chateau Frontenac, Quebec, designates him as Manager in Chief of the company's Hotel Department, with office at Montreal.

A. A. Goodchild, heretofore auditor of Statistics, has been appointed Auditor of Mechanical Accounts, and will have charge of all store and shop accounts. Office, Montreal.

J. H. Callaghan, heretofore assistant to the General Storekeeper, has been appointed General Storekeeper lines east of Fort William. Office, Montreal.

The Special Service Department heretofore carried on has been abolished, and the work done by it will, in the future, be carried on by other means.

G. E. Burns, heretofore Chief of the Special Service, has been appointed Freight Claims Agent, lines east of Fort William, Ont. Office, Montreal.

C. W. Carey has been appointed Assistant Air Brake Inspector. Headquarters, Montreal.

T. A. Riddell, heretofore Freight Claims Agent at Montreal, has been appointed Assistant Freight Claims Agent, in charge of the Ontario Division. Office, Toronto.

L. A. W. Doherty, heretofore chief clerk general freight department, Toronto, has been appointed chief clerk in the Assistant Freight Traffic Manager's office, Toronto, succeeding J. R. Marlow, resigned.

L. Mulkern, heretofore city canvassing agent, Toronto, has been appointed chief clerk in the District Freight Agent's office, there, succeeding L. A. W. Doherty, promoted.

A. O. Secord has been appointed city canvassing agent, Toronto, succeeding L. Mulkern, promoted.

S. S. Buchanan has been appointed Superintendent of Terminals and Ferries with office at Windsor, Ont. His duties will include the supervision of the movement of this company's traffic both at Windsor and at Detroit, and of the car ferries between these points. He will continue to act as station agent at Windsor.

W. H. D'Arcy has been appointed General Claims Agent, Western Lines, with office at Winnipeg. The Claims Department, Western Lines, will hereafter be under his general supervision. He will be assisted by a Freight Claims Agent at Winnipeg who will have full charge of all claims for lost or damaged freight on the Central and Western Divisions, and by a Freight Claims Agent at Vancouver who will deal with all claims for lost or damaged freight and such other matters as may be assigned to him for the Pacific Division. The General Claims Agent will deal directly with all claims arising out of personal injuries, fire and live stock killed or injured on the company's right-of-way.

L. O. Genest, for many years in charge of the stores at Winnipeg, has been appointed General Storekeeper for Western Lines. Office, Winnipeg.

C. H. Temple, heretofore Master Mechanic at Revelstoke, B.C., has been appointed Master Mechanic, Central Division, succeeding J. Cardell, transferred.

C. E. Cartwright, heretofore Assistant Division Engineer, Pacific Division, has been appointed Division Engineer, succeeding G. H. Webster, resigned.

C. S. Richards, heretofore contracting freight agent at New York, has been appointed travelling freight agent at Buffalo, for New York state and part of Pennsylvania, vice F. J. Goodman, appointed travelling freight agent for Philadelphia, Eastern Pennsylvania, Maryland, Delaware and south.

Central Vermont Ry.—E. H. Fitzhugh, heretofore Vice-President and General Man-

ager, retains his office of Vice-President C. V. Ry., on his appointment as Third Vice-President G.T.R.

G. C. Jones, heretofore Superintendent Middle Division G.T.R., Toronto, and latterly appointed General Manager C.V. Ry., with general supervision and direction of the maintenance and operation of the property. Office, St. Albans, Vt.

Chicago Great Western Ry.—Staunton Baker, formerly chief clerk in the Western Passenger Agents' Office, Richelieu and Ontario Navigation Co., Toronto, and latterly secretary to the General Manager, R. and O. N. Co., at Montreal, has been appointed Travelling Freight and Passenger Agent, C.G.W. Ry., with headquarters at Toronto.

Intercolonial Ry.—The press report that A. B. Copp, of Sackville, N.B., had been appointed solicitor, to succeed Hon. F. J. Sweeney, we are advised is not correct.

J. J. Walker, heretofore chief clerk in the Treasurer's office, has been appointed accountant in the mechanical department, succeeding the late J. J. Sutton.

C. F. Burns, heretofore travelling auditor, has been appointed chief clerk in the Treasurer's office, succeeding J. J. Walker, promoted.

F. L. Schwartz has been appointed travelling auditor, succeeding C. F. Burns, promoted.

F. Chapman has been appointed chief clerk in the Division Freight office, Halifax N.S., succeeding J. A. Weldon, appointed Secretary Halifax Board of Trade.

Moncton and Buctouche Ry.—F. N. Hall, heretofore General Freight and Passenger Agent, has been appointed Superintendent. Office, Moncton, N.B. This is a new position.

Niagara, St. Catharines and Toronto Ry.—John Paul, heretofore Michigan Central Rd. at London, Ont., press reports state has been appointed Freight Agent, N., St. C. and T. Ry. Office, St. Catharines, Ont.

Pere Marquette Rd.—E. E. Cain has been appointed Trainmaster, Buffalo Division, succeeding K. R. Cameron, resigned. Office, St. Thomas, Ont.

Jno. Gilhula has been appointed Chief Train Dispatcher, Buffalo Division. Office, St. Thomas.

W. L. Kellogg has been appointed Master Mechanic in charge of motive power and equipment, succeeding W. K. Christie, assigned to other duties. Office, Grand Rapids, Mich.

N. B. Whitless, heretofore Master Mechanic, Northern Division G.T.R., Allandale, Ont., has been appointed Assistant Master Mechanic in charge of shops, motive power and cars of the Grand Rapids District, P.M. Rd. Headquarters, Grand Rapids, Mich.

Quebec Central Ry.—A Sherbrooke, Que., press report recently stated that F. Grundy, now Vice-President and General Manager, was to be appointed President; J. H. Walsh, now General Freight, Passenger and Baggage Agent, was to be appointed General Manager, and E. O. Grundy was to succeed J. H. Walsh. We are officially informed that there is nothing in the report.

C. R. Hosmer, director C.P.R., and family, left Montreal early in Jan. for a visit to Egypt.

E. B. Kenrick who was appointed Water Analyst for C.P.R. Western Lines in Nov., 1904, at Winnipeg, Man., died there Jan. 26, of typhoid pneumonia, aged 41. He was educated at Upper Canada College, Toronto; at one time he was Lecturer in Chemistry at St. John's College, Winnipeg, and afterwards Professor of Chemistry at the University of Manitoba, there

MAINLY ABOUT PEOPLE.

Lady Boswall, sister of Sir H. M. Allan, Montreal, died at Edinburgh, Scotland, recently.

Joseph Navin, G.T.R. Yardmaster, London, Ont., was killed in the yards there recently.

Mrs. Mason, wife of G. Mason, formerly paymaster G.T.R., died at Vancouver, B.C., Dec. 29.

The late G. M. Clarke, formerly chief counsel for the C.P.R., left an estate valued at about \$200,000.

Lord Mountstephen has made a donation of \$1,000,000 to the King's Hospital Fund, in London, Eng.

T. A. Hunt, of the C.P.R. solicitor's department, Winnipeg, has resigned and resumed private practice.

C. B. Hibbard, General Manager Quebec Southern Ry., Montreal, has recovered from an attack of peritonitis.

Randolph Macdonald, railway and general contractor, Toronto, has been elected President of the Sovereign Bank.

T. D. Rogers, son of B. Rogers, President of the Charlottetown Steam Navigation Co., died at Charlottetown, P.E.I., recently.

A. Burns, who died at Dawson, Yukon, recently, operated a tramway on Chilkoot Pass, in 1897, during the first rush to the Klondike.

A. W. Lindsay, of the I.C.R. advertising department, Moncton, N.B., was married at Halifax, N.S., Dec. 29, to Miss Vial, of Sussex, N.B.

Major V. Sankey, city surveyor of Toronto, has resigned to take a position on the surveying staff of the Grand Trunk Pacific Ry., at Winnipeg.

R. H. Easson, son of R. E. Easson, press agent G.N.W. Telegraph Co., Toronto, was married to Miss Winnifred Garvin, at Toronto, Dec. 28.

E. L. Drewry, of Winnipeg, has given \$1,000 to the funds of the Winnipeg General Hospital, to be used for building and furnishing purposes.

R. Jackson, I.C.R. station agent, North Sydney, N.S., was presented with a set of drawing-room and dining-room furniture by the employees there, Dec. 30.

E. B. Osler, M.P., director C.P.R. and President Niagara Navigation Co., has taken up his residence at Crichton lodge, Ottawa, for the parliamentary season.

G. H. Dobson, for many years Secretary of the Sydney Board of Trade, and author of pamphlets dealing with transportation problems, died at Sydney, N.S., Jan. 3.

Angus Sinclair, contractor James Bay Ry., has bought a house on Crescent Road, Rosedale, Toronto, and with Mrs. Sinclair and family has taken up his residence there.

H. H. Vaughan, Superintendent of Motive Power, C.P.R. lines east, has been given a gold medal in connection with the locomotive tests at the recent St. Louis Exhibition.

N. Brownell, C.P.R. live stock agent, Winnipeg, was presented with a silver service by shippers of live stock, Dec. 29, on the completion of 20 years' service in that position.

The value of the estate of the late C. Shields, General Manager of the Lake Superior Corporation, Sault Ste. Marie, Ont., has been placed for probate at \$115,413.48.

T. Driscoll, Superintendent B.C. Electric Ry. car shops at New Westminster, B.C., was presented recently with a gold-headed umbrella and an address by the shop employees.

C. W. Babbitt, train dispatcher Michigan Central Rd., at Jackson, Mich., who died there recently, was brother of G. W. Babbitt,

RAILWAY AND STEAMBOAT RUBBER GOODS of the Highest Grade

HOSE

For Air Brakes, Steam, Gas,
Water, Pneumatic Tools,
Fire Protection.



PACKINGS

IN GREAT VARIETY.

Special Valves and Gaskets.
Mats, Matting and Stair
Treads.

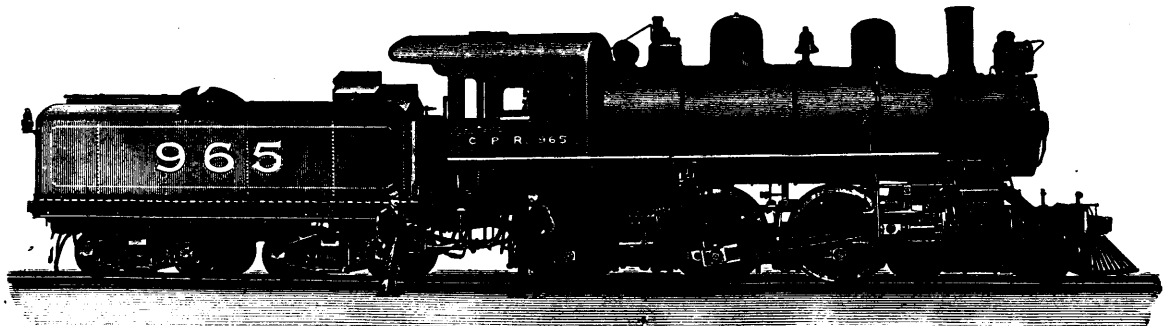
Superior in Quality.

Satisfactory in Service.

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THE GUTTA PERCHA & RUBBER MFG. CO. OF TORONTO LIMITED

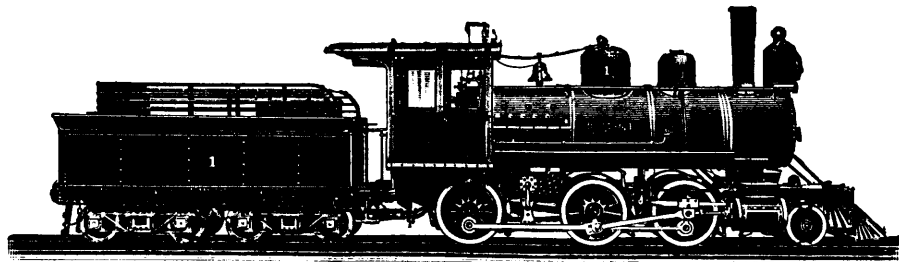
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The Saxon Engine Works, late Rich. Hartmann, Limited
CHEMNITZ (Germany),

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

Number
of
Workmen,
5,200.



Capital,
\$3,000,000.

GENERAL RAILWAY SIGNAL CO.

General Office, Buffalo, N. Y.

Works, Buffalo, N. Y., and Rochester, N. Y.

New York Office, Broad Exchange Building. Chicago Office, Monadnock Block. St. Louis Office, Frisco Building.

The General Railway Signal Company has acquired the American assets and properties of the Taylor Signal Company, of Buffalo, N. Y., and of the Pneumatic Signal Company, of Rochester, N. Y., and is prepared to furnish and install approved forms of mechanical, pneumatic, electro-pneumatic and electric interlocking devices, track circuit appliances, motor signals, railway gates, etc.

Chief Train Dispatcher, Michigan Central Rd., St. Thomas, Ont.

Mrs. H. D. Lumsden and family have removed from Toronto to take up their residence at Ottawa, where Mr. Lumsden, Chief Engineer to the Transcontinental Ry. Commission, has to reside.

John Barrow, son of the City Engineer of Hamilton, Ont., died there recently. Prior to his illness he was on the G.T.R. engineering staff on the double-track work between Hamilton and Brantford.

W. T. Hackett, who died at Kansas City, Mo., recently, aged 83, took the first locomotive into Toronto, in 1853, and also took the first locomotive into Kansas City, where he has resided since 1865.

J. Whitebread, Secretary-Treasurer of the Kingston and Pembroke Ry., at Kingston, Ont., has resigned, and will remove at an early date to Calgary, Alta., where he will go into the lumber business.

W. B. Dawson, engineer in charge of the tidal and current survey of Canada, has been awarded the Gay prize of 1,500 francs, by the Academy of Sciences of France, for work done on the coast of Canada.

The B.C. Electric Ry. Co., at Christmas, sent Mrs. F. R. Glover, of New Westminster, B.C., a diamond ring as a memento of her action which saved an accident on the company's line there in May, 1904.

Train Dispatcher Philpot, of the Sydney and Louisburg Ry., accidentally received an electric shock of 2,000 volts, while in his office recently. He was rendered unconscious, but was not seriously affected by the shock.

J. J. Brignall, chief clerk District Passenger Agents' office, C.P.R., Toronto, was presented with a handsome umbrella Jan. 1, by a number of newspaper friends in connection with his return to his office, after a lengthened absence through illness.

R. McColl, Provincial Engineer, Halifax, N.S., and Mrs. McColl, who were in the collision on the Wabash Rd., at Decatur, Ill., Nov. 29, 1904, were sufficiently recovered from their injuries to leave the hospital at Decatur, and return home Dec. 23.

E. F. Osler, son of E. B. Osler, M.P., director C.P.R., was married in Rochester Cathedral, Eng., recently. W. Harty, son of Hon. W. Harty, President Canadian Locomotive Works, Kingston, Ont., where E. F. Osler is engaged, was the best man.

Hayter Reed, who has been appointed Manager in Chief C.P.R. hotels, was presented with an illuminated address by the Chateau Frontenac Snowshoe Club, of which he was the founder, on the occasion of his leaving Quebec to take up his new duties.

A proposal was recently made to present a residence in Ottawa to the Minister of Railways, but Hon. H. R. Emmerson declined it. The residence, however, will be purchased and maintained for the use of the New Brunswick representative in the Dominion Cabinet.

R. J. Fleming, General Manager Toronto Ry., in his letter to the Toronto City Council resigning his position as Assessment Commissioner, said the offer of \$10,000 a year was such an inducement that in justice to his family he had no other course than to accept.

A. O. Secord, who has been appointed city canvassing agent, C.P.R. Toronto, was born at Goderich, Ont., May 23, 1874, and entered railway service in 1899 as junior clerk, and at the date of his present appointment was chief clerk in the C.P.R. local freight office, Toronto.

J. Gilhula, who has been appointed Chief Train Dispatcher Pere Marquette Rd., at St. Thomas, Ont., was born at South Buxton, Ont., and was for some time with the Michi-

gan Central Rd., being its agent at Fargo. He was subsequently with the Missouri Pacific Rd., and the Wabash Rd.

G. A. Simpson, C.E., who died in Winnipeg, Jan. 8, after a lengthened illness, was engaged on survey work for the C.P.R. in the Rocky Mountains; from 1892 to 1898 he was Resident Engineer at Winnipeg for the Northern Pacific Ry., and from 1898 to the date of his death was successively Chief Clerk, Chief Engineer and Deputy Minister of the Department of Public Works for the province.

R. L. Whyte, who died at Hamilton, Ont., Jan. 11, aged 84, was at one time chief draughtsman at the locomotive works of Robert Stevenson & Co., Newcastle-on-Tyne, Eng., and after a varied career with locomotive and machine shops in France and the United States, finally settled in Canada, where he was appointed to a position in the customs house at Hamilton, retiring on a pension in 1896.

J. H. Ashdown, who has been appointed a member of the Transportation Commission, to fill the vacancy caused by the death of John Bertram, of Toronto, who was chair-



C. B. FOSTER,

District Passenger Agent C.P.R. at Toronto.

man, was born in London, Ont., Mar. 31, 1844, and has been a resident of Winnipeg since 1868. He has been engaged in the hardware business since 1869, and is now President of the Ashdown Hardware Co. He was an unsuccessful candidate for the Dominion Parliament in 1896.

A. A. Goodchild, who has been appointed Auditor of Stores and Mechanical Accounts C.P.R. at Montreal, was born at Peckham, Eng., June 3, 1866. He came to Canada in July, 1886, and entered the service of the G.T.R. the same month. After service in the Audit and Accountant's office for 18 months, he entered the service of the C.P.R. Jan. 1, 1888, in the Comptroller's office. He was appointed Assistant Auditor of Disbursements Oct. 1, 1899, and Auditor of Statistics, Jan., 1900.

G. C. Jones, who has been appointed General Manager Central Vermont Ry., at St. Albans, Vt., has been in the railway service since 1874, his record being as follows:—1874 to 1883, car checker, operator and dispatcher, Atlantic and Great Western Rd. (now Erie Rd.); 1883 to 1887, dispatcher, Cleveland, Cincinnati, Chicago and St. Louis Rd.; 1887 to 1896, train dispatcher and Chief Train Dis-

patcher, Wabash Rd.; July, 1896, to March, 1898, Superintendent G.T.R. at London, Ont.; Mar., 1898, to May, 1899, Superintendent G.T.R. and Wabash at St. Thomas, Ont.; May, 1899, to Dec. 31, 1904, Superintendent Middle Division G.T.R. at Toronto.

V. G. R. Vickers, who has been appointed Superintendent Atlantic Division Dominion Express Co., was born at Toronto, Jan. 1, 1866, and entered the service of the Vickers Express Co. as clerk, May, 1884, and was subsequently money clerk and cashier until it withdrew from business Jan. 1, 1899. His subsequent record has been: April, 1899, to June, 1899, city freight solicitor, Dominion Express Co., at Toronto; June, 1889, to May, 1891, agent same company at St. John, N.B., becoming joint agent when the New England Despatch Express Co. was taken in; May, 1891, to Nov., 1901, agent same company, Montreal; Nov., 1901, to Dec., 31, 1904, General Agent same company, Montreal.

F. H. McGuigan, who has been appointed Fourth Vice-President G.T.R., with office at Montreal, was born at Cleveland, Ohio, 1850, and entered railway service 1863 as water-boy, Erie and Pittsburg division Pennsylvania Rd., since which he has been consecutively to 1874 in various minor positions, same road; 1874 to 1880, roadmaster same road; April to July, 1880, foreman construction train, St. Louis and Omaha division Wabash Rd.; July, 1880, to Jan., 1885, division roadmaster same road; Jan., 1885, to 1888, General Roadmaster lines west of Mississippi River; 1888 to Dec., 1895, Superintendent Western division same road at Kansas City, Mo.; Feb., 1896, to March, 1902, General Superintendent G.T.R. at Montreal; Mar., 1902, to Dec. 31, 1904, Manager G.T.R.

E. H. Fitzhugh, who has been appointed Third Vice-President, G.T.R., Montreal, was born in Montgomery County, Missouri, in Feb., 1853. He entered railway service in 1873 as clerk in the office of the Master Car Builder, St. Louis, Kansas City and Northern Ry., now a part of the Wabash system. He remained with the Wabash continuously until 1896, having in the meantime risen through the various grades of promotion to the position of Master of Transportation. In 1896 he was appointed Superintendent of the Middle Division of the G.T.R., and in 1899 he became Vice-President and General Manager of the Central Vermont Ry., which position he resigned to go to the Southern Pacific Co. with C. M. Hays, returning to the Central Vermont as Vice-President and General Manager when Mr. Hays came back to the G.T.R. in 1902.

W. G. Brownlee, who has been appointed Superintendent of the G.T.R. Middle Division, at Toronto, was born at Lawrenceville, Ill., Sept. 9, 1858, and entered railway service in 1877, since which he has been consecutively to 1879, operator, Ohio, Mississippi Ry.; 1879 to 1881, operator and train dispatcher, Union Pacific Ry.; 1881 to 1884, train dispatcher and Trainmaster, Denver and Rio Grande Rd.; 1884 to 1887, train dispatcher, Union Pacific Ry., at Laramie, Wyo.; 1887 to 1889, train dispatcher, Missouri Pacific Ry., at Sedalia, Mo.; 1889 to 1892, Chief Dispatcher, same road, at St. Louis, Mo.; 1892 to Feb., 1900, Division Superintendent, same Road, at St. Louis, Mo.; Feb., 1900, to May, 1901, Assistant Superintendent, Eastern Division, G.T.R., at Belleville, Ont.; June, 1901, to March, 1902, Superintendent, Eastern Division, same road, at Montreal; Mar., 1902, to Dec. 31, 1904, Superintendent, Western Division, G.T.R., Detroit, Mich.

W. G. Ross, who has been elected President of the Canadian Street Railway Association, and whose portrait appears on the first page of this issue, was born in Montreal, Aug. 6, 1863. He was engaged in auditing and

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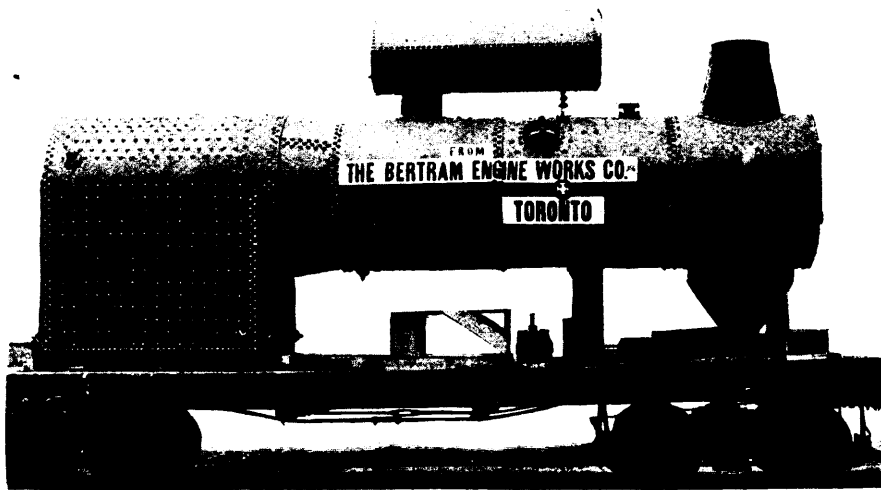
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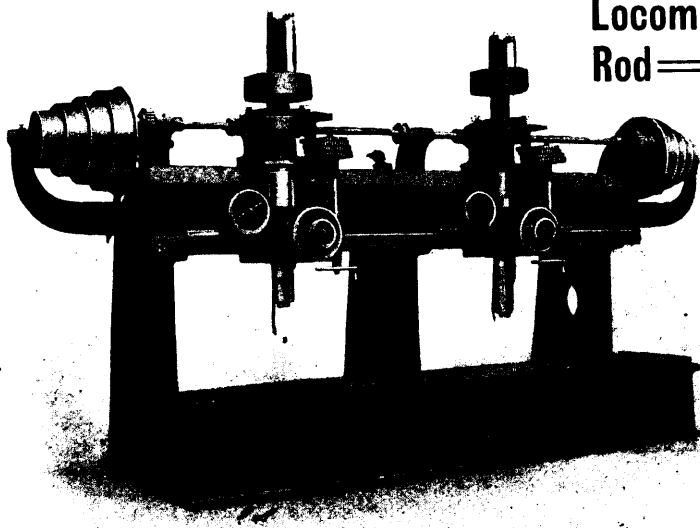
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Railway Track Laid in 1904.

In accordance with our custom, circulars were sent out, Dec. 31, to all steam and electric railways in Canada, asking particulars of track laid during 1904. Below is a compilation of the figures received, together with approximated figures for lines from which returns have not been received. The approximated figures are subject to revision.

The total length of new track, exclusive of double-tracking and sidings, laid during 1904, actually reported and approximated is:—Steam railways, 859.00 miles; electric railways, 50.35 miles; total 909.35 miles. The greatest length of track was laid on the Canadian Northern Ry., 441 miles; the C.P.R. being second with 101 miles and the Halifax and South-Western Ry. third with 91.61 miles. Including in the Canadian Northern Ry. mileage the track laid on other Mackenzie, Mann & Co.'s lines, there was a total of 532.61 miles laid by C.N.Ry. interests during the year, against 352.30 miles laid in 1903. The Great Northern Ry., U.S., laid 39.89 miles of additional track on its Canadian lines. New track was laid on 19 different lines of steam railway. The Minneapolis, St. Paul and Sault Ste. Marie Ry., a subsidiary line of the C.P.R. in the U.S., laid during 1904, track from Ottetail, Minn., to the International boundary at Emerson, Man., 209 miles.

STEAM RAILWAYS.

	Miles.	Miles.
ALBERTA RY. AND IRRIGATION CO.—From St. Mary's River to Cardston	5.00	12.00
Raley Jct. towards Kimball.....	7.00	
ALGOMA CENTRAL AND HUDSON BAY RY.—From mileage 64 to mileage 66.....		2.00
BRUCE MINES AND ALGOMA RY.—From Bruce to Coal Docks.....		3.00

CANADIAN NORTHERN RY.

Rosburn branch.....	44.00
Ridgeville branch.....	12.00
Arizona branch.....	21.00
Carberry branch.....	5.00
Greenway branch.....	52.00
Oak Point branch.....	17.00
Carberry-Brandon branch.....	2.00
Springfield branch.....	9.00

Grand View extension, from mileage 92.50 beyond Grand View to near the elbow of the South Saskatchewan River..... 215.00

Prince Albert extension, from mileage 67.78 to the crossing of the South Saskatchewan River..... 64.00

CANADIAN PACIFIC RY.—Pheasant Hills branch from Abernethy to Lip-ton, Assa..... 29.00

Arcola branch, from Francis, Assa., to Arcola, Man..... 72.00

CROW'S NEST SOUTHERN RY.—From Swinton to Fernie, B.C. (approximate)..... 9.82

HALIFAX AND SOUTH-WESTERN RY.—From Halifax towards Mahone, N.S. From Bridgewater to Bristol, N.S..... 30.33

From Middleton to Victoria Beach (approximate)..... 2.87

INTERNATIONAL RY OF NEW BRUNSWICK.—From track end, 1903 to Upsalquitch River (approximate) 14.00

JAMES BAY RY.—From main line to Parry Sound Harbor, Ont..... 1.50

LINDSAY, BOBCAYGEON AND PONTYPOOL RY.—From Burketon to Bobcaygeon, Ont..... 39.00

MORRISSEY, FERNIE AND MICHEL RY.—From Crow's Nest Southern Ry to coke ovens at Fernie, B.C..... 1.07

NEW BRUNSWICK COAL AND RY. Co.—Spur to reach coal mines, Minto, N.B..... 1.00

ORFORD MOUNTAIN RY.—From Eastman to Potton Springs, Que... 12.00

From Kingsbury to Windsor Mills, Que..... 2.00

PRINCE EDWARD ISLAND RY.—From Murray River to Murray Harbor (approximate)..... 5.50

QUEBEC AND LAKE ST. JOHN RY.—From Valcartier to Gosford, Que... 3.00

From La Tuque Jct. towards La Tuque, Que..... 1.00

	Miles.	Miles.
QUEBEC BRIDGE AND RY. Co.—From Intercolonial Ry. towards Bridge, Que.....		1.00
SYDNEY AND LOUISBURG RY.—From Caledonia Jct. to Colliery 6..	5.50	6.50
From main line to Marconi station	1.00	
TEMISKAMING AND NORTHERN ONTARIO RY.—From Redwater Lake to New Liskeard.....	56.00	82.00
From New Liskeard northerly....	26.00	
VANCOUVER, VICTORIA AND EASTERN RY.—From Grand Forks to Phoenix, B.C.....	23.80	29.00
From Grand Forks to Granby Smelter, B.C.....	5.20	

Following are the figures for the ELECTRIC RAILWAYS.

	Miles.	Miles.
EGERTON TRAMWAY CO.—From Westville to New Glasgow N.S. (approximate).....	8.50	
GRAND VALLEY RY.—From Paris to Galt, Ont. (approximate).....		13.00
LONDON STREET RY.—South street belt line.....		1.00
MONTREAL STREET RY.—Various extensions.....		4.35
PRESTON AND BERLIN ELECTRIC RY.—From Berlin to Waterloo, Ont.		2.00
SARNIA STREET RY.—From Sarnia to Lake Huron Park, Ont.....		3.50
SOUTHWESTERN TRACTION CO.—From London to St. Thomas, Ont..		16.00
TORONTO AND YORK RADIAL RY.—Scarboro Division.....		2.00

SUMMARY BY PROVINCES.

	Steam.	Electric
Northwest Territories.....	392.00	
Manitoba.....	162.00	
Ontario.....	127.50	39.85
Nova Scotia.....	98.11	8.50
British Columbia.....	39.89	
Quebec.....	19.00	
New Brunswick.....	15.00	
Prince Edward Island.....	5.50	
	<u>859.00</u>	<u>50.35</u>

Total Steam and Electric..... 909.35

COMPARATIVE TOTALS FOR YEARS 1901 TO 1904 INCLUSIVE

	Steam.	Electric.	Total.
1901.....	473.99	23.86	497.85
1902.....	501.72	78.59	510.30
1903.....	656.67	79.00	726.67
1904.....	859.00	50.35	909.35

Canadian Northern Ry. Earnings.—Gross earnings for Dec., \$384,600; net earnings, \$135,100; against \$279,200 gross and \$95,300 net for Dec., 1903. The mileage was increased to 1,579 miles in Dec., an increase of 229 miles when compared with Dec., 1903. The gross earnings for the six months ended Dec. 31 amounted to \$2,098,700 and the net earnings to \$722,900, against \$1,728,000 gross and \$597,600 net for same period, 1903.

Ottawa and New York Ry.—The officers and directors of the O. and N.Y.Ry., and the New York and Ottawa Rd., appointed on the reorganization of the companies, on the transfer to New York Central and Hudson River Ry. interests are: President, W. H. Newman; First Vice-President, E. V. W. Rossiter; Second Vice-President, W. C. Brown; Third Vice-President, J. Carstensen; Fourth Vice-President, W. J. Wilgus; Treasurer, E. L. Rossiter. H. W. Gays, who was President and Receiver under the old organization, has been appointed General Manager.

The Canadian Westinghouse Co. has issued a circular on oil switches and oil circuit breakers.

The Canadian General Electric Co. has issued sec. 2 of its supply catalogue, which deals with cabinet panels, fuse blocks, cut-outs, fuses, etc.

The B. Greening Wire Co., Hamilton, Ont., has issued a wire rope catalogue which deals very fully with every kind of wire rope likely to be called for, for contractors, power and general uses. The breaking strains and proper working loads are given, with other valuable information for users of rope.

accountancy work with his father as early as 1880, and was subsequently successively Secretary, Treasurer and Assistant Manager of the Windsor Hotel Co., Montreal. He became associated, in 1892, with Jas. Ross, who was then developing street railways in Canada, and in organizing the finances of the same. He has been Comptroller and Secretary-Treasurer of the Montreal Street Ry. Co., but is now Managing Director of the same. He is also Managing Director of the Montreal Park and Island Ry., General Manager of the Suburban Tramway and Power Co., Treasurer of the Mexican Light, Heat and Power Co., and director of a number of other companies in which the same financial interests are concerned. He is President for the current year of the Street Railway Accountants' Association of America.

Frank W. Morse, who has been appointed Vice-President and General Manager G.T. Pacific Ry., has resigned his position as Third Vice-President of the G.T.R. He graduated in 1885, and at once entered railway service with the Wabash Rd., at Springfield, Ill. Promotions from time to time took him to Quincy, Ill.; Des Moines, Iowa, and St. Louis, Mo. In 1887 he severed his connection with the Wabash and entered the service of the Pan Handle Rd., which was composed of the Denver, Texas and Gulf; Denver, Texas and Fort Worth and Fort Worth and Denver City railroads, at that time being under construction. After it had been completed and successfully operated, Mr. Morse, at the solicitation of C. M. Hays, at the time of the consolidation of the Wabash Western and Wabash railroads into the present Wabash System, returned to that company, and was located at Fort Wayne, Ind., remaining until Mr. Hays called him to Canada in 1896, to become Superintendent of Motive Power of the G.T.R. He was appointed Third Vice-President in 1902, and went over the route of the projected G.T.P. Ry. in 1902-03. He was elected Vice-President on the organization of the G.T.P. Ry. Co. in Aug., 1904.

The Bank of Montreal has opened a branch at the C.P.R. Angus shops, Montreal.

B. W. Folger, Manager of the Niagara Navigation Co., has gone to England, where he will look into the latest developments in passenger steamboats. It is altogether likely that the company may decide to add another boat to its fleet in the near future.

In political circles in Quebec it is stated that the Dominion Government will ask for power during the current session to increase the number of members of the Transcontinental Railway Commission to five, and that one of the new members will be from that city.

G. H. Webster, heretofore Division Engineer C.P.R. at Vancouver, B. C., has been appointed President of the B. C. General Contract Co. (Ltd.), a company which is at present engaged in constructing the foundations of the new C.P.R. hotel at Victoria, B.C.

The Westinghouse Co.'s Publishing Department has issued a useful pocket calendar and diary for 1905. Among the miscellaneous information contained in it are 40 pages of facts and figures of value to electricians, engineers and those who have to do with other manufacturing plants. There is also a good deal of information of use to the general reader.

Towne—They ought to run more trolley cars. Do you know, I stood on the corner last night while five cars went by and I couldn't get on.

Browne—Why not?

Towne—Too full.

Browne—You were? Well, they're very strict about that.

Northern Navigation Co.'s Report.

The President of the Northern Navigation Co. of Ontario, H. C. Hammond, has set a commendable example by sending the annual report for the year 1904 to the shareholders some days in advance of the annual meeting. It is as follows:—

"On Feb. 2, 1904, E. B. Osler resigned from the board and H. C. Hammond was elected a director and also President. C. T. Long, Manager, having resigned, the board engaged H. H. Gildersleeve in his stead, and C. H. Nicholson as Traffic Manager. Navigation opened on May 7, a month later than the preceding year, and during the year all business offered was handled in a satisfactory manner, with the exception that, owing to the heavy fogs prevailing in the Georgian Bay Division during the first six weeks, the time of the steamers was rather irregular. The Germanic did not begin running until May 21, and the Majestic on June 28, while the Britannic was only required for a single trip. Owing to the coolness during the earlier portion of the season, and the diversion of travel due to the St. Louis Exposition, 1904 was an off year for passenger traffic on the lakes. The shrinkage in revenue as compared with 1903 was, roundly:—Passenger, \$39,000; freight, \$50,000. Against this, however, the cost of operating compared with last year was \$102,500 less, of which a considerable amount was saved owing to there being two steamers less in commission, owing to the Majestic not starting until June 28, and also

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SOUTHAMPTON.

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

PHILADELPHIA—LIVERPOOL.

Sailing from Philadelphia on Saturdays.

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Sailing from New York on Saturdays.

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(Bristol and Antwerp.)

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Sailing from Boston on Saturdays.

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Calling at Dover for London and Paris.

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urdays, at 10.30 a.m.

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Regular Weekly Service.

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Passenger Agent for Ontario,

41 King St. East, Toronto.

N. CURRY, President.

N. A. RHODES, Vice-President.

J. M. CURRY, Sec.-Treas

CAPITAL, \$1,000,000.

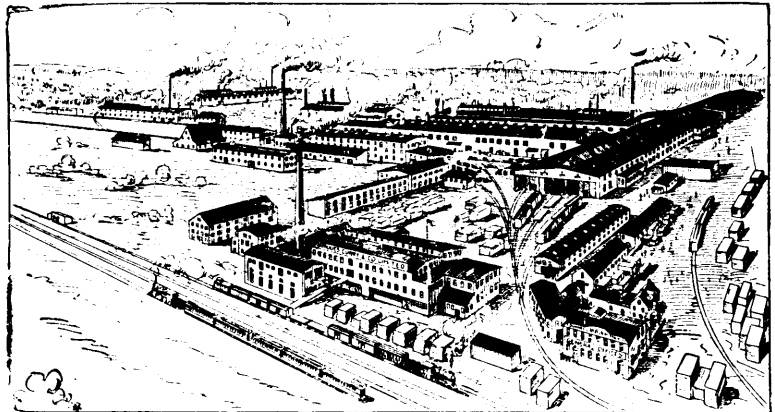
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**Car Wheels, Axles, Forgings, Castings, Etc.**

—————CAPACITY PER MONTH—————

300 Freight Cars	4 Passenger Cars	4 Snow Plows	3,000 Car Wheels
2,500 Car Axles	500 tons Castings	1,000 tons Forgings	

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HEAD OF LAKE SUPERIOR, TO—

**FORT FRANCES
WINNIPEG
PORTAGE LA PRAIRIE
BRANDON**

**MORRIS
EMERSON
OARMAN
HARTNEY**

**GLADSTONE
NEEPAWA
DAUPHIN
SWAN RIVER**

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

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

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MONTREAL, QUE.

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

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

in consequence of the later opening of navigation and a general saving in the operating expenses of the steamers, leaving the net receipts for 1904 \$46,001.23, against \$26,397.60 for 1903.

"On looking into the claim department the management found a very large number of claims which had accumulated for several years without payment, and after thorough investigation they have paid for claims originating in 1903 and earlier years \$25,316.51, which has been charged to profit and loss account, leaving a balance at the credit of that account carried forward \$19,808.01. In the last annual report \$90,000 was shown as a Rest account. Your directors during the past year have expended therefrom \$14,340.78 upon reconstruction and permanent repairs, which they consider should not be charged to the year's operations. Your directors propose to charge this account, \$42,478.28 applied in reduction of the valuation of the fleet, leaving the remaining \$33,180.94 to be applied in further reconstruction and repairs, and it is probable that the greater portion of this amount will be required before the opening of navigation.

"In March last the President became acquainted with the fact that the annual report issued for the year 1902 was not correct as to the earnings of the steamers. Instead of being, as reported, about \$88,000, they were in reality \$30,000 less, this amount having been introduced in some way in transferring the accounts of the North-West Transportation Co. at Sarnia to this company's books at Collingwood. The late J. J. Long, as head of the company, signed that report, and your President wrote to him in Europe asking for particulars as to how the figures were arrived at. Mr. Long replied that it would be explained on his arrival in Canada. He returned to Toronto on Sunday, June 12, and the President had interviews with him on the Monday and Tuesday following, but without any result as to clearing up the discrepancy. The matter subsequently was placed in the hands of solicitors, and on June 30 the solicitors met and arranged for a settlement, by Mr. Long paying to the company an amount in full satisfaction of any liability he might be under. It was understood that the acceptance of this settlement would be recommended by the President to the board, and when approved by them would be submitted to the shareholders for confirmation. Unfortunately Mr. Long died before the transaction could be completed, but your directors were in hopes that the executors of his estate would carry out the settlement arranged by the solicitors on his account before his death. The executors declined to do so, and Barwick, Aylesworth, Wright & Moss, the solicitors who are acting for the company in this matter, having advised that the company has a claim against the estate of the late Mr. Long, your directors have instructed that an endeavor be made to collect the amount."

ASSETS.	
Nine steamers.....	\$870,000.00
Building and machin'y parts.....	7,389.01
	<u>\$877,389.01</u>
Fuel and supplies.....	\$ 11,244.82
Insurance unexpired.....	8,730.33
Accounts receivable.....	5,791.21
Stock, Merchants' Dock, Gore Bay.....	13,470.22
Lake Superior Corporation bond.....	500.00
	<u>1,000.00</u>
	<u>\$ 40,736.58</u>
	<u>\$ 918,125.59</u>
LIABILITIES.	
To Shareholders:	
Capital stock.....	\$840,000.00
Steamers' renewal fund.....	33,180.94
Profit and loss.....	19,808.01
	<u>\$892,988.95</u>
To the Public:	
Bank of Toronto.....	\$ 23,366.19
Accounts payable.....	1,770.45
	<u>\$ 25,136.64</u>
	<u>\$918,125.59</u>

PROFIT AND LOSS ACCOUNT.	
Balance from 1903.....	\$ 123.29
Gross earnings.....	\$421,890.61
Total expenditure.....	378,490.62
	<u>43,399.99</u>
Net earnings of steamers.....	43,399.99
Lake Superior Corporation Trust Bond.....	1,000.00
Cash (in settlement of amt. written off in 1903).....	135.64
Sundry receipts.....	1,465.60
	<u>46,001.23</u>
	<u>\$ 46,124.52</u>
Less claims of 1903 and earlier paid in 1904.....	\$ 25,316.51
Estimate of accounts of 1903 unadjusted.....	1,000.00
	<u>26,316.51</u>
	<u>\$ 19,808.01</u>

W. Hendrie, who was opposed to the reelection of J. J. Long on the board at the last annual meeting, and who stated that he would not sit on the board with him, resigned, and Lt.-Col. J. S. Hendrie was elected a director in his place.

The annual meeting was held in Toronto, Jan. 31, too late for the proceedings thereat to be reported in this issue.

Passenger Meetings at Buffalo.

Three important passenger meetings were held in the Transportation Club's rooms, Lafayette Hotel, Buffalo, N.Y., on Jan. 18, 19 and 20. The rate clerks of the lines comprised in the Niagara Frontier Summer Rate Committee met on Jan. 18 and arranged details as far as possible. The committee met on Jan. 19 at 11 a.m. In the absence of the Chairman, H. H. Gildersleeve, Manager of the Northern Navigation Co., C. H. Nicholson, Traffic Manager of that company, called the meeting to order. J. E. Bentley, General Passenger Agent, Central Vermont Ry., was elected Chairman for the current year; G. C. Wells, Assistant General Passenger Agent C.P.R., Montreal, performed his duties as secretary.

The following lines were represented:—Algoma Central S.S. Line, Anchor Line, Big Four Route, Boston and Maine Rd., Buffalo, Rochester and Pittsburg Ry., Canadian Pacific Ry., Cleveland and Buffalo Transit Co., Detroit and Buffalo Steamboat Co., Detroit and Cleveland Steamboat Co., Delaware, Lackawanna and Western Rd., Eastern Steamship Co., Erie Rd., Grand Trunk Ry., Hudson River Day Line, Intercolonial Ry., Lake Ontario and Bay of Quinte Steamboat Co., Lake Erie and Western Ry., Lehigh Valley Rd., Montreal, Rochester and Quebec Transit Co., Michigan Central Rd., Muskoka Lakes Navigation and Hotel Co., New York Central Rd., Northern Navigation Co. of Ontario, Northern Steamship Co., Niagara Navigation Co., Niagara Gorge Rd., Ottawa River Navigation Co., Pennsylvania Rd., Philadelphia and Reading Ry., Richelieu and Ontario Navigation Co., Rutland Rd., Toronto, Hamilton and Buffalo Ry., West Shore Rd., United States and Dominion Transportation Co. The rate sheet as checked over by the rate clerks was adopted, there being no very material change in rates from last year. It was decided to hold next year's meeting at the King Edward Hotel, Toronto, on a date to be decided by the Chairman, with the understanding that hereafter meetings shall be held alternately in Toronto and Buffalo, which are considered the most central points at which a good representation of members can be obtained.

The Great Lakes and St. Lawrence River Rate Committee met on Jan. 19 at 2 p.m., C. E. Markham, G.P.A. Anchor Line, in the chair, and immediately adjourned until the following morning at 10. On resuming, the following lines were represented:—Algoma Central Steamship Line, Anchor Line, Canadian Pacific Ry., Cleveland and Buffalo Transit Co., Detroit and Buffalo Steamboat

Co., Detroit and Cleveland Navigation Co., Goodrich Transportation Co., Grand Trunk Ry., Huntsville, Lake of Bays and Lake Simcoe Navigation Co., Lake Michigan and Lake Superior Transportation Co., Lake Ontario and Bay of Quinte Steamboat Co., Magneta-wan River and Lake Steamboat Co., Manitou Steamship Co., Michigan Steamship Co., Montreal, Rochester and Quebec Transit Co., Muskoka Lakes Navigation and Hotel Co., Niagara Gorge Rd., Niagara Navigation Co., Northern Michigan Transportation Co., Northern Navigation Co. of Ontario, Northern Steamship Co., Ottawa River Navigation Co., Parry Sound and Penetang Navigation Co., Richelieu and Ontario Navigation Co., Rideau Lakes Navigation Co., South Haven Line Steamers, St. Lawrence River Steamboat Co., Thousand Islands Steamboat Co., United States and Dominion Transportation Co., White Line Transportation Co., White Star Line. W. M. Lowrie, G.P.A. Northern Steamship Co., Buffalo, was elected Chairman for the current year, and Jas. Morrison, chief rate clerk, Passenger Department, C.P.R., Montreal, Secretary. The rates and arrangements for the season of 1905, as prepared by the rate clerks, were approved. It was decided to hold the next annual meeting at the King Edward Hotel, Toronto.

The International Water Lines Passenger Association met Jan. 20 at 11 a.m., the following lines being represented:—Albermarle Steam Nav. Co., Algoma Central S.S. Line, Anchor Line, Ashley-Dustin Steamers, Canadian Pacific S.S. Line, Citizens' Steamboat Co., Hudson River, Chicago and Muskegon Trans. Co., Crosby Transportation Co., Detroit, Belle Isle and Windsor Ferry Co., Detroit and Buffalo Steamboat Co., Detroit and Cleveland Navigation Co., Dunkley-Williams Co., Goodrich Transportation Co., Harl Steamboat Line, Hudson River Day Line, Lake Michigan and Lake Superior Trans. Co., Lake Ontario and B. of Q. Steamboat Co., Manitou S.S. Co., Michigan S.S. Co., Montreal, Rochester and Quebec Transit Co., Niagara Navigation Co., Northern Michigan Transportation Co., Northern Navigation Co., Northern Steamship Co., Ottawa River Navigation Co., Pere Marquette Line Steamers, People's Evening Line Steamers, Richelieu and Ontario Navigation Co., Rideau Lakes Navigation Co., St. Louis and Tennessee River Packet Co., Thousand Islands and St. Lawrence River Steamboat Co., United States and Dominion Transportation Co., White Line Transportation Co., White Star Line. A. A. Schank, Genl. Supt. and P.T.M., Detroit and Cleveland Navigation Co., and Detroit and Buffalo Steamboat Co., presided, M. H. Nelson performing his duties as Secretary. The work done by the Association during the past year was warmly commended by several of the representatives, and the Secretary was authorized to make such improvements in the passenger fare book as might be considered necessary. The proposal for uniformity in charges account transfer, receiving line to pay, was agreed to, also the issuing of supplements to the publications. The question of better representation in station list of Official Guide was very fully discussed, and the Assistant Editor, who was present, promised to meet the wishes of the Association. The following subjects which were listed for consideration were not approved:—Uniformity in stop-over regulations on limited tickets, including excursion tickets at authorized points, and allowance of stop-over on return trip at authorized points on excursion tickets ten days within the final limit of the excursions, irrespective of the return transit limit. Uniformity in dealing with tickets lost by passengers, to be bulletined on merits of case. Effect on regular traffic of reduced rates made for large conventions. Abolishment of Sunday excursions. Officers were elected as follows: President, C. E. Markham, G.P.A., Anchor

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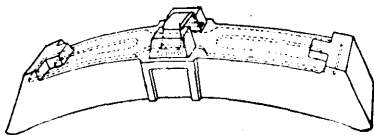
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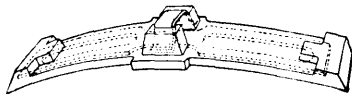
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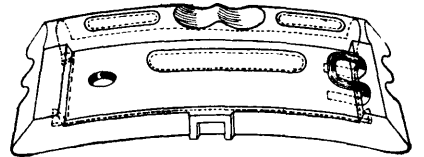
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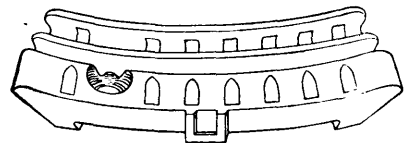
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Line, Buffalo; Vice-President, J. Berolzheimer, G.P.A., Manitow S.S., Chicago; Executive Committee, 1 year, R. F. Church, G.P.A., Northern Michigan Transportation Co., Chicago; 2 years, F. B. Hibbard, G.P.A., Hudson River Day Line, New York; F. C. Reynolds, G.T.M., Pere Marquette Line Steamers, remains on the committee, his term not having expired; Secretary, M. H. Nelson, Buffalo; Auditors, C. E. E. Ussher, G.P.A., Canadian Pacific Ry., Montreal; A. W. Hepburn, G.P.A., Montreal, Rochester and Quebec Transit Co., Picton, Ont.; W. H. Cochrane, Manager, Michigan S.S. Co., Chicago. On behalf of Poole Bros., Chicago, C. H. Nicholson presented the retiring President with a gavel made from an ebony and ivory ornament taken from the captain's cabin of the steamer Walk in the Water, which the donors said they believed to be the first boat on the Great Lakes propelled by steam. She was built at Flat Rock, N.Y., in May, 1818, and left Buffalo on her first trip to Detroit on Aug. 23, and left Detroit on the return trip on Aug. 27. She was wrecked at Buffalo Creek, Buffalo, Nov. 21, 1821. Her captain was Joe Fish, and the material used in the gavel was secured from his nephew, H. S. Fish, now living near Tonawanda, N.Y. It was decided to hold the next annual meeting of the Association at the King Edward Hotel, Toronto, following the meetings of the Niagara Frontier and Great Lakes and St. Lawrence River Rate Committees.

On the afternoon of Jan. 19, a number of the delegates went from Buffalo to Niagara Falls, thence by the Niagara Falls Park and River Ry. to Queenston and up the Gorge Route, as the guests of the International Ry. and the Niagara Gorge Rd., J. E. Stevenson, G.P.A. of the I.R. Co., and B. L. Jones, G.M. of the N.G.R., accompanying them. The Transportation Club of Buffalo placed its rooms at the disposal of the delegates, and the Buffalo Passenger Committee entertained the delegates at a theatre party. Most of the delegates stayed at the Lafayette Hotel, a new and thoroughly up-to-date house, which is an important addition to the list of Buffalo hotels.

At the various meetings resolutions of regret at the death of John Foy were passed.

D. D. Mann, Vice-President Canadian Northern Ry., and family are in Florida.

W. Mackenzie, President Canadian Northern Ry., will leave Toronto for England during the first week in Feb.

F. H. Hopkins & Co., and W. H. C. Musson & Co., Montreal, have sent attractive calendars to their customers, etc.

The Canada Atlantic Ry. continues under the management of its old officials, and we are advised, that it is likely to so continue until the legislation now before the Dominion Parliament concerning the securities of the Canada Atlantic Ry. is completed.

The Ottawa and New York Ry., which was recently acquired in the interests of the New York Central and Hudson River Rd., is issuing mileage books covering 1,000 miles for \$20. These mileage tickets will be available over the New York and Ottawa Rd. from the International boundary to Tupper Lake, N.Y.; and N.Y.C. and H.R. Rd. mileage tickets will be good over the N.Y. and O. Rd. as well as over the O. and N.Y. Rd.

Engineers' Club of Toronto.

At the annual meeting on Jan. 12, reports were presented showing a satisfactory financial condition and an increasing interest in the work of the club. The officers for the current year are:—President, R. F. Tate; Resident Engineer, Canadian Northern Ry.; First Vice-President, F. L. Sommerville; Resident Engineer, G.T.R.; Second Vice-President, C. B. Smith, Consulting Engineer;

Directors: W. H. Patton, Signal Engineer, G.T.R.; G. R. Mickle, School of Practical Science; A. B. Barry, Medical Health Office, Toronto; Treasurer, W. J. Bowers; Secretary, Willis Chipman.

The newly elected President delivered his inaugural address to the members Jan. 19, briefly reviewing the work of the year, the chief events of which were the summer excursion to De Cew Falls, where the Hamilton Cataract Light, Power and Traction Co. had in course of extension large works for power development purposes, and the visit of a delegation of the Institute of Civil Engineers of Great Britain. Referring to the engineering events of the year, he said the electrical power development in Canada will compare favorably with other countries, and that there is at Niagara Falls alone the largest aggregate of electrical power in the world. In steam railway projects Canada is ahead of any other country. The country had a bright future before it, and he felt sure that the club would continue to be more and more successful as years passed by. At the next regular monthly meeting the members would be called upon to consider a proposition from the Canadian Society of Civil Engineers, to form a branch in Toronto, in affiliation with the club.

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

Kaladar Spur.—The surveys for the construction of a spur line from Kaladar to the mining properties of the American Asbestos Co., in Elzevir township, have been suspended, and we are advised that no further action will be taken at present. (Jan., pg. 25.)

Branch Line to Stratford.—A joint committee, representing the Stratford, Ont., City Council and Board of Trade, has recommended to the council terms of an agreement between the city and the C.P.R. for the construction of a branch into Stratford from the Guelph and Goderich Ry., now under construction. It is proposed that the line will branch from the G. and G. Ry. near Conestogo, and will enter the city near Victoria Lake. The city will provide the right of way in the city, and an arrangement will be made with the G.T.R. by which that company's lines will be run over so as to give connection with the factories in the east end of the city. For the present it is proposed that Stratford will be the terminus of the branch, although there is power to extend the line to St. Marys. We were advised Jan. 18, that nothing has been decided in regard to this proposed work. A reconnaissance survey has been made, but nothing further has been done.

Toronto-Sudbury Line.—The right of way is being purchased for this line between Bolton and Craighurst, Ont. The plans of the lands being acquired show that the route to be followed from the southern end will deviate from the Toronto-Owen Sound line at Bolton, and not at Kleinburg, as at first proposed, and will proceed by Alliston to Craighurst, to which point the line has been permanently located. The route between Craighurst and Parry Sound is being located via Coldwater, and it is expected that a route will be laid out without crossing the route of the James Bay Ry. Residents of Barrie are desirous of obtaining a spur line into that town from Midhurst or other suitable point on the line. (Nov., 1904, pg. 401.)

Fort William to Winnipeg Double Track-ing.—Press reports recently stated that a contract for the grading for this work has been let to Foley Bros., but we were advised Jan. 16 that this was not the case, as it had not been definitely decided whether the work would be gone on with this season or not. (Jan., pg. 25.)

Central Division.—During Feb. there will be laid on this division 121 miles of 80-lb. steel, replacing lighter rails. The lighter rails will be used on branch lines, etc.

Gradient Revision Swift Current Section.—The gradient revision on this section has been completed from Nord, mileage 18.7, to west of Secretan, at mileage 49.5 west of Moose Jaw, Assa., and has been passed by the Government Inspecting Engineer for traffic.

Western Division.—There will be laid on the main line in this division during Feb., 82 miles of 80-lb. steel, replacing lighter rails, which will be used on branch lines, etc.

Pacific Division.—The light rail on 86 miles of the main line on the Pacific division will be replaced during Feb. by 80-lb. steel.

Passenger and Freight Tariffs.

A special edition of the Canada Gazette, recently contained partial details of the standard passenger and freight tariffs which had been filed with and approved by the Board of Railway Commissioners under the terms of sec. 264 of the Railway Act. Owing to the fact that the standard tariffs so published showed higher rates for passengers than those actually charged, a number of daily papers published sensational statements about the increase of fares which was about to be made, and reference was made to the efforts made during the last session of the Dominion Parliament to obtain a reduction to a two cent a mile rate. That an increase should be made in the face of an agitation for a decrease from the existing rate was characterized as little short of an outrage. Enquiry, however, elicited the information that neither the G.T.R. nor the C.P.R. had the slightest intention to increase the fares charged on their lines.

G. T. Bell, General Passenger and Ticket Agent, G.T.R., in discussing the matter, said: "The railways are obliged to give such notice, but no increase in rates is contemplated. I may explain that on certain branch or spur lines the maximum rate is exacted and has been for years, while on other parts of the system the rate is much below the maximum."

R. Kerr, Passenger Traffic Manager C.P.R., said in an interview: "If a change is made in passenger rates they will go down, not up. The rates have not been raised one cent, neither is there an increase in the tariff even contemplated. We have two tariffs, the standard tariff, which we are required to publish in the Canada Gazette, and the working tariff, which we file. Passenger rates are charged, generally speaking, according to this special tariff, which we do not publish. The standard tariff is the one which contains the maximum rates, rates which we seldom charge, however, as the special tariff is the one which obtains in most cases."

An official statement was given out Dec. 8, by J. Hardwell, Traffic Officer of the Board of Railway Commissioners, explaining what the tariffs really meant and why they had been published. "There are," said Mr. Hardwell, "three classes of railway tariffs—standard, special, and competitive. Under the amended railway act the standard or maximum tariffs of the Canadian railways have to be approved by the Board of Railway Commissioners and published in the Canada Gazette before Dec. 31. Otherwise the railway companies could not legally charge tolls. It was impossible within the time mentioned to inquire into all the circumstances and conditions under which, at various times, standard tariffs had been prepared. Hence, in order to allow the companies to legally collect tolls, the Board simply approved the rates which had been in force for some years past, under the authority of the Governor-General-in-Council. The special and competitive rates have not to be published. They are used until disallowed. The maximum rates, having been approved, were published in the Canada Gazette. But this approval does not vitiate the right of the Board to rescind, amend or alter any of the maximum tariffs. The

publication of the standard tariffs affords the opportunity to anyone who feels aggrieved to appeal against them to the Board. Then the Board can take such action as it deems fit. I may say that up to the end of Nov. the tariffs and supplements filed with the Commission amounted to close on 7,000 for freight traffic alone. You can see from this fact what an enormous amount of work in the way of supervision is here involved."

The standard tariffs filed by and approved for the various companies were published in subsequent editions of the Gazette, from which the following details are compiled:—

PASSENGER RATES.

Algoma Central and Hudson Bay Ry.—The tables approved include:—Between Sault Ste.

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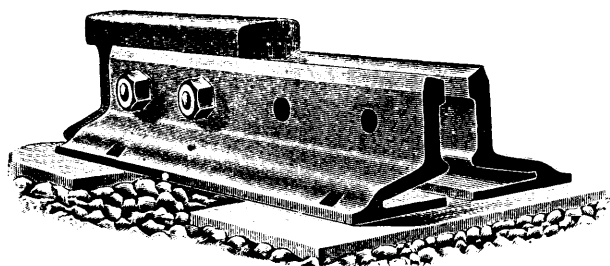
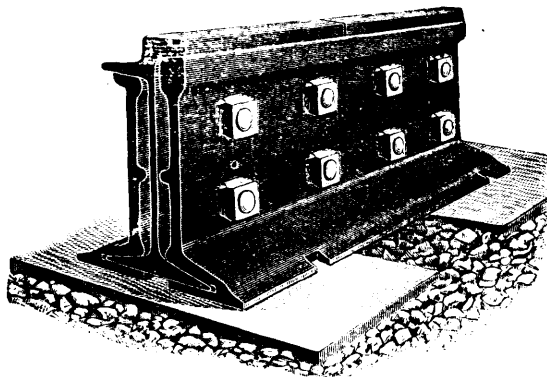
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Marie, Tagona, and Poplar Lake, mileage 63 and intermediate points, issued Oct. 18, 1904; between Sault Ste. Marie, Tagona and Rock Camp, mileage 50 and intermediate points, issued Mar. 1, 1904; between Sault Ste. Marie, Tagona and Beaver Camp, mileage 54 and intermediate points, issued Dec. 17, 1903; local passenger tariff between stations on main line, issued June 8, 1903; Algoma Central Steamship Line, fares on steamers between Sault Ste. Marie and Killarney, Ont., issued Aug. 1, 1904; Algoma Central Steamship Line, fares on steamers between Sault Ste. Marie and Windsor, Ont., and Toledo, Ohio, issued July 19, 1904; A.C. Ry. steamship line, fares between Sault Ste. Marie to Michipicoten, Ont., inclusive, issued May 1, 1901; fares on steamships between Michipicoten Island and Rossport, Ont., issued Sept. 1, 1903; table of fares charged on Michipicoten branch railway between Michipicoten and Helen Mine and Josephine Mine, issued June 8, 1903.

Atlantic and Lake Superior Ry.—The standard passenger tariff is based on a rate of 4c. a mile for first class, 3c. a mile second class; return fare, 3c. a mile first class; and half fare for clergymen and nuns.

Canadian Pacific Ry.—The standard passenger tariff is compiled on the following basis:—15c. per capita between St. John and Fairville, N.B.; 10c. per capita between Fredericton and Gibson, N.B.; 10c. per capita between Castlegar Jct. and West Robson, B.C.; four cents a mile between Megantic Que., and the boundary of the State of Maine; Ste. Therese Jct. and St. Eustache, Que.; Ottawa and Prescott, Ont.; Regina, Assa., and Prince Albert, Sask.; Dunmore Jct. and Kootenay Landing, B.C.; Macleod and Strathcona, Alta.; North Star Jct. to Kimberly, B.C.; Marysville Jct. to Marysville, B.C.; Proctor to Midway, B.C.; Castlegar Jct. to Rossland, B.C.; Smelter Jct. to Trail, B.C.; Slocan Jct. to Slocan City, B.C.; Sandon to Nakusp, B.C.; Lardo to Gerrard, B.C.; Granby Jct. to Granby Smelter, B.C.; Exholt Jct. to Phoenix and spurs, B.C.; Greenwood to Greenwood Smelter and spur, B.C.; Sicamous Jct. to Okanagan Landing, B.C.; Vancouver to Steveston, B.C.; and the following steamer lines:—Kootenay Landing to Nelson, B.C.; Pilot Bay to Argenta, B.C.; Gerrard to Trout Lake City, B.C.; Slocan City to Rosebery, B.C.; West Robson to Arrowhead, B.C. Between the following points at 3½c. a mile:—Fairville, N.B., and Maine boundary; West St. John and Fairville, N.B.; Fredericton Jct. and Fredericton, N.B.; McAdam Jct. and St. Andrew, N.B.; Watt Jct. and St. Stephen, N.B.; McAdam Jct. and Edmundston, N.B.; Debec Jct., N.B., and Maine boundary; Aroostook Jct., N.B., and Maine boundary; Gibson and Newburg Jct., N.B.; Montreal, Que., and Ottawa, Ont. (north shore); Ste. Therese Jct. and Nominique, Que.; St. Lin Jct. and St. Lin, Que.; Hull and Waltham, Que.; Millwood Man., and Shebo, Assa; Kirkella, Man., and 136 mile post, Assa; Antler and Arcola, Assa. Between the following points at 3¼c. a mile:—Perth Jct. and Plaster Rock, N.B.; Megantic and Montreal Jct., Que.; Foster and Sutton Jct., Que.; Foster and Drummondville, Que.; Brigham Jct., Que., and Vermont boundary; Vermont boundary and boundary (Newport branch); Farnham and St. Guillaume, Que.; Farnham and Stanbridge, Que.; Mile End and Montreal Jct., Que.; Montreal and Toronto; Vaudreuil, Que., and Ottawa, Ont.; Rigaud and Point Fortune, Que.; Ottawa and Brockville, Ont.; Burketon Jct. and Bobcaygeon, Ont.; Hull Jct. and Maniwaki, Que.; Carleton Jct. and Pembroke, Ont.; Eganville Jct. and Eganville, Ont.; Toronto and Windsor, Ont.; Leaside Jct. and Toronto Jct., Ont.; Streetsville Jct. and Melville Jct., Ont.; Cataract Jct. and Elora, Ont.; Guelph Jct. and Guelph, Ont.; Woodstock and St. Thomas, Ont.; Toronto and Owen Sound, Ont.; Orangeville and Wingham, Ont.; Glenannan

and Teeswater, Ont. Between the following points at 3c. a mile—St. Martin Jct. and St. Martin, Que.; Joliette Jct. and St. Gabriel, Que.; Berthier Jct. and Berthier, Que.; Piles Jct. and Grandes Piles, Que.; Pembroke and Callander, Ont.; Mattawa, Ont., and Temiskaming Que.; Kipawa Jct. and Kipawa, Que.; Toronto and Hamilton, Ont.; Winnipeg and Souris, Man.; West Selkirk and Winnipeg Beach, Man.; Elm Creek and Carman, Man.; Portage la Prairie and Millwood, Man.; Binscarth and Russell, Man.; Chater and Minnedosa, Man.; Forrest and Lenore, Man.; Rapid City and Mineota, Man.; Wood Bay and Mowbray, Man.; Deloraine and Lyleton, Man.

Central Vermont Ry.—The standard tariff approved has been compiled on a 3c. a mile basis for points between St. Johns, Que., and the Vermont boundary, and S.S.C. Jct. and Waterloo, Que.; 3½c. a mile for points between Farnham and Freilighsburg, Que., and St. Lambert and Farnham, Que.

Grand Trunk Ry.—The standard passenger tariff is compiled on the following basis:—4c. a mile between St. Lambert Jct. and New York State boundary, Rouses Point branch; 3c. a mile between Harrisburg and Tillsonburg Jct., Ont., and between Harrisburg and Guelph, Ont.; and 3½c. a mile between all other points.

Great Northern Ry. of Canada.—The standard passenger tariff for the main line is compiled on a basis of 3c. a mile for the main line and 5c. a mile for the Montford division.

Oshawa Ry.—The standard passenger tariff on this electric railway shows a maximum fare of 25c. from Prospect Park or Oshawa, Ont., to Port Oshawa, with 20c. and 15c. fares for other distances; baggage is carried at a rate of 5c. a piece of 100 lbs. or under, and an additional charge of 5c. per 100 lbs. for any additional weight; but not less than 5c. a piece will be charged.

Thousand Islands Ry.—The standard fare tariff shows a fare of 25c. from Gananoque and Thousand Islands Jct., and 10c. and 15c. between other points.

The Esquimaux and Nanaimo Ry.'s passenger tariff is compiled on a basis of 4c. a mile. Standard tariffs compiled on the basis of 3½c. a mile are approved for the Dominion Atlantic Ry., the Rutland Ry. for its Canadian line, the Temiscouata Ry., (with a table based on 2½c. a mile for second class) and the Wabash Rd.

The standard tariffs of the Halifax and Yarmouth Ry., the Maine Central Rd., for its Canadian line, the Nova Scotia Steel and Coal Co's Ry., Orford Mountain Ry., and the Quebec Central Ry., are compiled on a basis of 3½c. a mile, the latter stipulating for a minimum charge of 10c.

Standard passenger tariffs compiled on a basis of 3c. a mile were approved for the Boston and Maine Rd.; Central Ontario Ry.; Irondale, Bancroft and Ottawa Ry.; Kingston and Pembroke Ry.; New Brunswick Coal and Ry. Co.; and the Pere Marquette Rd., for the Lake Erie and Detroit River Ry.

The Quebec Ry. Light and Power Co.'s passenger tariff is based on a rate of 2c. a mile.

The tariffs approved for the Bay of Quinte Ry., Bedlington and Nelson Ry., British Yukon Ry., and Manitoulin and North Shore Ry. consisted of tables of the fares charged between the different stations on the line, with, in the case of the first named, tables showing mileages, single, return and excursion fares, and commercial travellers' rates, etc.

The notices stating that standard passenger tariffs had been approved for the following lines did not disclose the basis on which they had been compiled: Canada Atlantic Ry., Ottawa and New York Ry., Quebec Southern Ry.

FREIGHT TARIFFS.

The freight tariffs approved and published are described as "Standard Freight Tariff to be applied where no other tariff is in effect,"

and it is set forth that the rates are subject to Canadian freight classification. There is a condition attached to the effect that no single shipment of freight from one consignee to one consignee will be charged less than for 100 lbs. 1st class rate, with a minimum charge of 35c.; the rates are exclusive of cartage.

The tariffs are all given for distances under five miles, for which the charges are per 100 lbs.:

Class.....	1	2	3	4	5	6	7	8	9	10
Cents.....	8	7	6	5	4	4	4	3	3	3

and are calculated for each five miles up to 100 miles, then for 10 mile or 25 mile distances up to the limit of the mileage of the different companies, the C.P.R. having one table calculated to a distance of 3,000 miles. The tariffs on which the figures above quoted form the basis are approved for Algoma Central and Hudson Bay Ry., Bay of Quinte Ry., Brockville, Westport and Northwestern Ry., Canada Atlantic Ry., Central Ontario Ry., Dominion Atlantic Ry., G.T.R.; Irondale, Bancroft and Ottawa Ry.; Kingston and Pembroke Ry.; Manitoulin and North Shore Ry.; Michigan Central Rd., for the Canada Southern Ry.; New York Central and Hudson River Rd., for the St. Lawrence and Adirondack Ry.; Oshawa Ry.; Ottawa and New York Ry.; Quebec Central Ry.; Quebec Southern Ry.; Thousand Islands Ry.; Temiscouata Ry.; Toronto, Hamilton and Buffalo Ry. Standard tariffs differing in a few of their figures from the starting rates above quoted were approved for the Moncton and Buctouche Ry., and for the Maine Central Rd.'s Canadian line.

(To be continued.)

ELECTRIC RAILWAYS.

Handling Express by Electric Suburban Railways.

By E. A. Evans, General Manager, Quebec Ry., Light and Power Co.

The writer had the honor of submitting a paper to the members of the Canadian Electrical Association in 1902, upon Electrical Suburban Railways, in which he took the ground that steam railroads will, in the near future, handle their suburban and short distance interurban passenger traffic and mail, express, baggage and light local freight by electric motive power. In this paper the writer submitted statements showing the results from passenger traffic, of carrying out this theory upon the existing steam railway running between Quebec, Ste. Anne and St. Joachim, a distance of 25½ miles. These results showed that during the year 1889-1890, the first year's operation, 95,563 passengers were carried, and in 1899-1900, 261,175 passengers were carried; this under the old regime of steam railroading. The next year, 1900-01, under the electric motive system, 537,933 passengers were carried, and last year, 1903-04, 877,310 passengers were carried, of which number 155,980 passengers were carried by the steam trains. By way of explanation, it is necessary to mention that the same number of steam trains arriving and departing at the same hour, are being operated now as in 1899-1900. The passenger receipts, which averaged \$38,246.47 a year during the eleven years of steam operation, last year amounted to \$96,943.47. From this it will be noted that the average fare per passenger has decreased from 18.17 cents to 11.05 cents, showing that the more frequent service permits of and encourages the residents along the railway to visit from village to village, which under the old system was not frequent, and, as there has been no apparent increase in population, accounts for the large increase in travel.

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In 1900, the writer issued instructions to all agents to make a report of all parcels, hand valises, baskets, canes, umbrellas, etc., which were handed in to them to be taken charge of, and for which no charge was being made; in other words, the agents were taking charge of these parcels merely as an act of courtesy and without responsibility. The results showed that large numbers of parcels were being left, and an inspection of the reports showed that these parcels at the Quebec office principally consisted of groceries, meat, laundry, etc., whereas at the wayside stations they consisted of vegetables, cut and uncut flowers, fowl, laundry, etc. Consequently, in the spring of 1901, parcel offices were opened at each station and agents were instructed not to accept the care of any packages without making a charge of five cents for each article for the first 24 hours, and a similar charge for each additional day, and a supply of parcel checks was at the same time issued. This movement created considerable opposition from the regular passengers who, by reason of their having had a privilege for over eleven years, now claimed the same as a right; as a consequence, receipts which were anticipated from agents' reports to amount to several hundred dollars a year did not amount to \$100, and a careful watch at the different stations revealed the fact that residents would bring their parcels to the station, wait the arrival of some friend and then request their friend, who was travelling, to take charge of the same and bring it either to or from town. Grocers in town would be telephoned to from say Mrs. B. to meet a certain train and hand her parcel to Mr. H., who would take charge of it, Mrs. B. generally meeting Mr. H. at destination to take the parcel from him. This condition naturally led to the establishment of an express, baggage and light local freight department, thus attempting (perhaps earlier than anticipated) the last theorem laid down in the paper read to the Canadian Electrical Association, previously referred to—the carriage of the mails having been previously arranged for.

Under steam railway rules, it is generally known that freight charges are arrived at according to classification arranged by the Canadian Freight Association, the different railways of course having their own rates, but abiding by the classification made by the Association. Rule 30 provides for such articles which the Quebec Railway, Light and Power Co. are now carrying under their express, baggage and light local freight department, as follows:—Small consignments of one class, or including articles of several classes, will be charged at actual weight, according to the classification of each article, but no single shipment will be taken for less than 100 lbs. 1st class, exclusive of cartage, minimum charge, 35 cents, with an additional charge of ten cents for each cartage performed by the railway company's cartage agents. Thus it will be seen that the company was unable under this tariff to convey any parcel, no matter how small, for a less charge than 35 cents—in many cases more than the value of the package of rhubarb or other vegetables that was being sent to town. It was therefore necessary to make not only new rates suitable to the special requirements of the district, but also to make new rules and regulations regarding this class of traffic; these rules and regulations came into effect on Dec. 1, 1902, the tariff being as follows:—

Any station to any station,—
 For all parcels, small boxes, etc., from 0 to 10 lbs., 5 cents.
 For all parcels, over 10 lbs. to 20 lbs. 10 cts.
 " " " 20 lbs. to 30 lbs. 15 cts.
 " " " 30 lbs. to 50 lbs. 20 cts.
 " " " 50 and not over 100 lbs. 25 cts.
 and the rules governing the same are as follows:—
EXPRESS FREIGHT.—All goods weighing less than 100 lbs. and offered for shipment, will be carried on

any regular passenger or electric train, with all despatch possible

Each parcel, box, etc., must be properly packed and addressed in full before a receipt (Form B. 32) is given to the sender. Fresh fish, fresh meat and any other perishable articles must be prepaid. Any dangerous articles will not be accepted except on special orders from the Superintendent.

Agents will use Form B. 33 when way-billing, which must be made in duplicate; one copy of the way-bill to be given to the driver of the electric train or the baggagemen of the steam train, and the goods must be forwarded by the first train due to leave after the goods have been accepted for shipment, the other copy of the way-bill will be kept by the agent and accounted for in the same manner as regular freight.

Agents receiving express freight will issue Form B. 34 and notify consignee as quickly as possible, and when goods are delivered a receipt must be taken on Form B. 33, opposite article for which receipt is required. Way-bills received will be accounted for in the same manner as regular freight.

Conductors of all regular trains may accept goods for shipment at any flag station, using Form B.31 for billing express freight.

Any article weighing over 100 lbs. to be carried by the regular freight trains only and under Canadian Freight classification rules. These regular freight trains are operated by steam in the usual manner.

Agents were instructed to despatch all parcels under the above regulations by the first passenger car at any time of the day or night, to give them in charge of the motorman on electric cars and the baggageman on steam trains, and informed that no excuse would be accepted for not despatching by the first train.

The public immediately took advantage of the facilities thus offered, and the parcel office, while still open for the accommodation of travellers, is practically not made use of. The receipts from this source of revenue the first year amounted to \$300, and last year practically doubled, and is still meeting the appreciation of the public. Passengers in the villages along the line, instead of purchasing from small stores near their residences, travel to town, purchase goods from different stores, have one parcel made of their purchases and sent to the station, to be forwarded by express to destination, instead of having the same deposited in the parcel office and having the trouble to call for it and transport it themselves; and again, from the villages, vegetables of all kinds, cut flowers, etc., are, during the summer, being daily expressed to town to supply the hotels, boarding houses, etc., in the city.

In conclusion, it is pleasing to be able to state that during the two years in which this business has been in operation, only three complaints of delays have been received and not one single package has been lost or gone astray.

Of course it will be noted that the conditions mentioned are different to most suburban electric railways, by reason of their having no agents at the different stopping-places; this, however, is a subject which in the writer's opinion, can in most cases be overcome by the managers of the different roads interested. It seldom happens that there is not some responsible man or woman residing close to the stopping place or flag station, in which case arrangements could most probably be made whereby these persons would be willing to take charge of the packages for a small consideration or commission.

Relieving Congested Traffic at Rush Hours.

By D. McDonald, Manager Montreal Street Ry. Co.

All that has been said and written in regard to other difficult problems of a like nature, such as congestion of traffic in London, the difficulties of getting quickly through the centre of Paris on a gala day, the irritating slowness of a horse car or cable ride through Broadway, up to recent date, the tedious features of all the best plans or rem-

edies that have been already tried to prevent overcrowding in all public places or vehicles—all this verbal and written information would be a fitting preamble to convey to the ordinary reader a faint idea of the difficulty of the problem that we are endeavoring to solve.

We are requested to deal with a question that is difficult of solution. To enter immediately into the practical discussion of this question we must cite certain figures concerning the growth of street railway business that tend to show how quickly the existing rush hour conditions have been thrust upon us and the practical catering that street railway companies all over this continent have furnished in the last ten years to meet the requirements of traffic.

Statistics prove that from 1892 to 1903, the mileage of street railways on this continent has increased from about 8,000 to 25,000 miles, which means practically, on account of transforming electric, that since 1890, which was about the birth year of electric traction on a large scale, 25,000 miles of track were laid at a cost of \$2,150,000,000, and that said street railway companies are now carrying an average of 5,000,000,000 passengers per annum. Why should it not be crowded?

These ten cipher amounts to which the world has been unaccustomed in the way of increased traffic lead us to believe that street railway companies have not spared their efforts to cater to public comfort, especially when we stop to consider that this phenomenal work has been done by 850 companies, and that perhaps less than 100 companies of this number have to deal with the overcrowding problem which we are now discussing.

If we take the existing conditions in towns of 300,000 or 400,000 inhabitants we find that the working population may be one-half that number, and again, that a quarter of said number (100,000 people) usually work in the business, or down-town section of the city, which section is generally limited to a square of about one mile in length and a quarter or a third of a mile in width; 75,000 persons of this 100,000 would like to get home quickly and all want to board cars in 10 or 15 minutes at six o'clock. The question naturally arises how many cars with a capacity of 50 to 60 passengers (seated or standing) will be required to carry this rush conveniently—75,000 divided by 50, equals 1,300 cars. The answer seems easy, and if companies could afford (in our day of cheap fares and transfers) to furnish that number of cars, to be used for 15 or 20 minutes per day, this remedy would seem excellent.

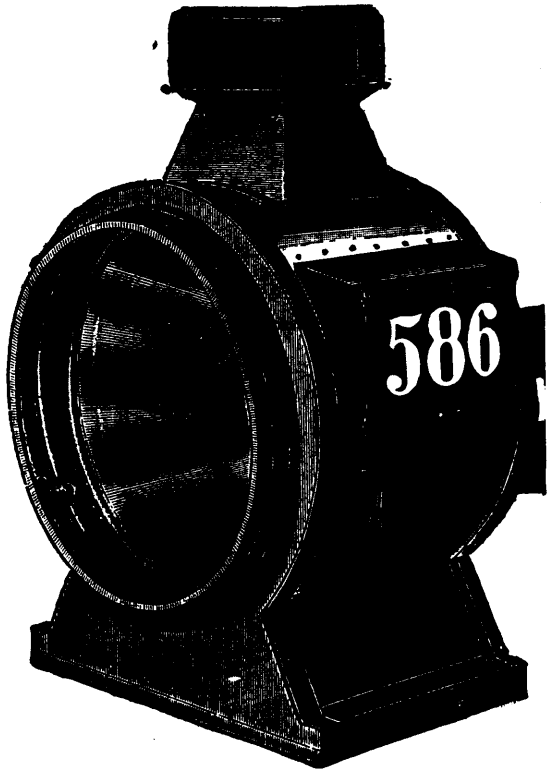
It must not be forgotten that these 1,300 cars are only the rolling stock necessary to provide the desired accommodation for downtown passengers and that at the same hour the rest of the system must be provided for, which might possibly mean 100 or 200 cars more, to provide the same roomy service. But as already stated, the settling of the question would be easy, though impracticable financially for the company, if we did not have to contend with a still greater difficulty, which is time. This time difficulty comes from the natural desire of everybody to rush home at the same hour, which is easier to imagine than to cure. Hence the 1,300 cars above referred to must be rushed through the business centre of the city in 10 or 15 minutes, and this is where the plan becomes impossible.

Said business centre of city is generally provided with two streets at most where this traffic must be taken on, that is to say, two lines going east and two lines going west, or north or south, as the case may be. The closest headway that may be run by cars, at 5 or 6 miles an hour speed, is about 20 seconds, hence we must find a means of running 1,300 cars over four tracks in 15 minutes, or 900 seconds; that is to say, we must run 325 cars

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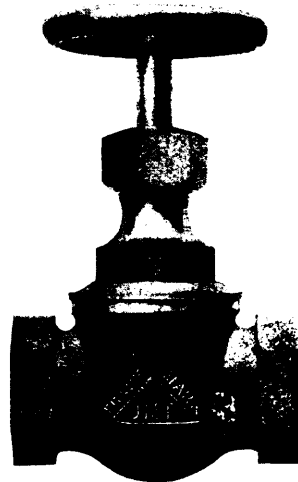
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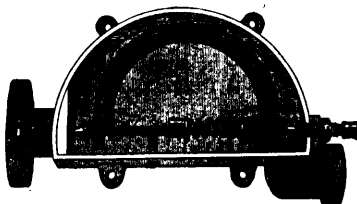
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over each track in 900 seconds, which means that the interval between cars must be less than three seconds. This is a material possibility and if each car must have a headway of 20 seconds, we arrive at a total time space of (325 x 20 equals 6,500 seconds, equals 108 minutes) 1 hour and 48 minutes to let the procession go by.

It is evident from the above figures that the possibility of relieving congestion with an unlimited number of cars, even if it were approved as a commercial venture, cannot be done without sacrificing time and speed, which would probably aggregate a larger general loss than that above-mentioned, and also give rise to greater recrimination that the disagreeable quicker ride that passengers must endure under present conditions.

There is a maximum in all measurements, and the limit of cars that a city street may accommodate is pretty nearly covered by the service that most companies are at present giving in the heart of busy cities.

The European plan of numbering and limiting passengers, which by the way is generally disregarded in most European countries in Sunday and holiday rushes (for they do business calmly and amuse themselves rapidly)—the European plan would not suit our speedier temperament. It would not avail us much to get a roomy seat in a blockade and most of our countrymen would prefer to get there standing. The no seat, no fare plan would certainly cause an irresistible desire with most people to prefer standing room. The limiting of passengers would be a good move in favor of the companies, as it would reduce the actual loss caused by missing fares, but it yet remains to be seen what public favor such a limitation would meet with in this busy country. The first passenger to be refused admittance in such a case takes it very bitterly, and if he happens to be accompanied and there is only room for one, he is forced to give way to another passenger who should have waited. Again, if a car is filled at this corner a would-be passenger must wait, whilst another patron a block further on, who arrived later, on account of somebody getting off, will be served first. All these little intricacies which appear trivial when not in force, are exceedingly aggravating in practice, and to Canadians or Americans, who are constitutionally in a hurry, become intolerable.

Consequently we are forced to the following conclusions:

1. That congestion at rush hours cannot be avoided.
2. That it may be possible to relieve the crush by the addition of a reasonable number

of cars to a limit where speed must not be sacrificed.

3. That with a view to further increasing the maximum number of cars that may be run without loss of time, most cities should consider the advisability of increasing the speed and giving clearer right of way to allow space for more cars and thereby afford greater and better accommodation to the public.

4. We are inclined to think that when the London business man, whether riding in a hansom or seated on the wet or dry top of an omnibus, will be able to ride directly to his office in the business centre, without having to worry about the blockade that he is treated to daily; when the Parisian count or citizen may be able to drive from the opera to the Louvre on a busy afternoon, a distance of a quarter of a mile, without going ten blocks out of his way; when the devout church goer or the impassioned theatre patron can attend service or play, without having to share in the final disagreeable crush which is an integral part of all such meetings; when the camel will go easily through the eye of the needle without ruffling its silken sides; when a large city and a maddening throng will cease to be synonymous, then may it be that the "No seat, no fare missionary," the "Car Passenger Rights Association Crusader" and a small percentage of street car patrons who live eternally in the winter of discontent, may realize their very improbable dreams and then we may all rejoice that the rush hour crush and congestion will have totally disappeared.

Projects, Construction and Betterments.

British Columbia Electric Ry.—The new car shops at New Westminster, B.C., to replace those burned in Sept., 1904, have been completed. The main building is 180 by 75 ft., adjoining which is the mill, 35 by 50 ft.; a lumber shed, store building, boiler room and paint shop. The main building is heated by hot air. The new shops are a great advance on the old ones. (Jan., pg. 9.)

Central Canada Rd. and Power Co.—The Manitoba Legislature is being asked at its current session for an act incorporating a company with this title to construct a line of electric railway from Winnipeg to a point on the Winnipeg River; and to develop electric power on that river. McPherson and Saunderson, Winnipeg, are solicitors for the promoters.

Hamilton, Ancaster and Brantford Ry.—At a meeting of shareholders held in Ancaster, Ont., Jan. 3, permanent directors were

elected, the officers being:—President, C. D. Haines, New York; Vice-President, A. Kennedy, Pittsburg, Pa.; Secretary, E. Kenrick, Ancaster, Ont.; Treasurer, S. Strathy, Hamilton, Ont.; other director: L. Harris, Brantford, Ont. The President has taken up his residence in Hamilton, and will remain there during the construction of the line. The contract for the construction has been let to E. T. Haines, of New York, and I. K. Pierson, of Cleveland, Ohio, has been appointed Chief Engineer. The projected line will be 23 miles in length, and it is expected to have it commenced in the spring and completed within a year. A private right of way has been acquired between Hamilton and Ancaster, and franchises have been secured for the right of way through the townships to Brantford. Negotiations are in progress for running rights over the tracks of the Hamilton Street Ry. within the city limits. The steepest gradient, which will be up the mountain, will not exceed 3% at any point, and it is proposed to construct the line to the highest standard.

The engineers working on the line have surveyed a line from Ancaster to Galt, from which point an extension is projected to Guelph. The line via Galt will be 36½ miles in length, and it is proposed to build it along a private right of way. (Jan., pg. 11.)

Montreal Park and Island Ry.—Application will be made at the current session of the Dominion Parliament for an act authorizing the company to continue the construction of its railway; to authorize such further construction during such time as may be fixed; to authorize the issue of additional bonds, preferred and common stock, and for other purposes.

Montreal Street Ry.—The improvements contemplated to be made during the current year will cost about \$500,000. They will include the construction of three new sub-power stations, at Glen Ave., for the western section of the city; St. Denis St. and Comte Ave., and at Hochelaga, for the lines in those sections of the city, leaving the central station to serve the centre of the city only. Additional car shed room is to be provided at the St. Denis sheds. (Jan., pg. 13.)

Montreal Terminal Ry.—Application will be made at the current session of the Dominion Parliament for an act authorizing the company to construct branch or circuit lines in the counties of Hochelaga, Maisonneuve, Jacques Cartier, Chambly, Vercheres, La Prairie, St. Johns, Iberville, Rouville, and St. Hyacinthe; to develop power and to sell the same for heating, lighting and manufacturing purposes. (June, 1904, pg. 188.)

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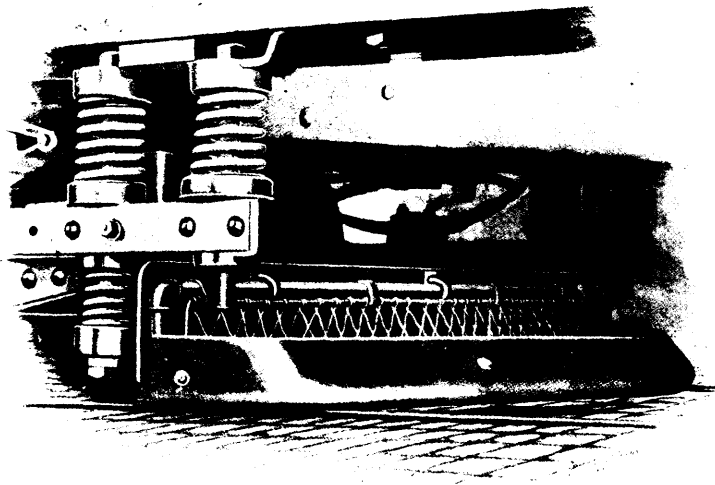
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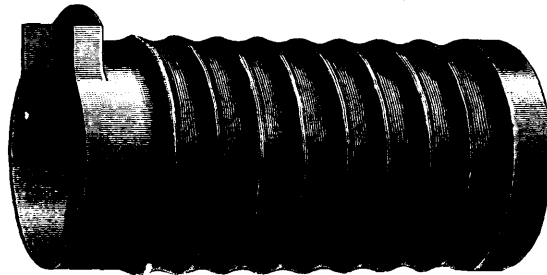
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Niagara, St. Catharines and Toronto Ry.—Application will be made during the current session of the Dominion Parliament for an act authorizing an extension of time for the completion of the projected extension of the company's line to Beamsville, Ont. (June, 1904, pg. 188.)

Niagara, St. Catharines and Toronto Ry.—An extension of time for the commencement and completion of the extensions of the company's authorized lines will be applied for during the current session of the Dominion Parliament.

Riverside Park and Ry.—Application is being made at the current session of the Manitoba Legislature for an act extending the time for the construction of the projected electric railway from Winnipeg to St. Agathe, Man.

The Sarnia Street Ry. Co. is considering a project to construct a pavilion at its park on the shore of Lake Huron, 3½ miles from Sarnia, Ont., to which point the line was completed in 1904. The cost of the building is estimated at \$5,000 (June, 1904, pg. 189.)

Sydney and Glace Bay Ry.—New overhead wire has been strung on the loop; a new

boiler and other apparatus has been installed at the power house at Sydney, N.S.

Three Rivers, St. Maurice, Maskinonge and Champlain Electric Ry.—Application will be made at the current session of the Dominion Parliament for the incorporation of a company with this title, to construct a railway from Three Rivers, westerly to Maskinonge, Que., and easterly from Three Rivers to St. Anne de la Perade, to be operated by electricity, with power to develop electrical power and to dispose of the same to municipalities and factories.

Toronto and Hamilton Ry.—Application will be made during the current session of the Dominion Parliament for an act authorizing the company to issue part of its stock as preference stock.

Toronto and York Radial Ry.—A station has been opened on the Metropolitan Division north of the C.P.R. track, Yonge St., Toronto. It is intended to provide stations at Richmond Hill, Aurora, and Newmarket. A survey for the extension of the line from its present terminus at Newmarket to Jackson's Point on Lake Simcoe is being made by Jas. McDougall.

Track has been laid on the extension of the Scarboro Division from the Halfway House for about two miles, and track on the remaining three miles of the extension will be laid in the spring. The cars are being operated from the Woodbine, Toronto, to the end of the track on the extension. Negotiations which had been in progress with Whitby, Ont., for a franchise have been abandoned, the point of difference being the length of the franchise term, the company asking for a perpetual franchise. (Dec., 1904, pg. 431.)

Finance, Meetings, etc.

British Columbia Electric Ry.—Railway earnings for Nov.: Vancouver, \$18,517; Victoria, \$10,777; New Westminster, \$10,749; total, \$40,043, against \$33,893 for Nov., 1903. Gross earnings: railway and lighting, \$82,025, against \$72,343 for Nov., 1903. Working expenses, \$43,539; renewal fund, \$6,695; net income, \$31,791, against \$40,167, \$4,988 and \$27,188 respectively for Nov., 1903. Aggregate net earnings for five months ended Nov. 30, \$131,813, against \$121,013 for same period, 1903.



DELEGATES AT THE INAUGURAL MEETING OF THE STREET RAILWAY ASSOCIATION AT MONTREAL.

Front row from right to left.—W. G. Ross, Managing Director Montreal Street Ry.; E. A. Evans, General Manager Quebec Ry., Light & Power Co. Second row.—M. Neilson, C.E., Director St. John, N.B., Ry.; W. H. Moore, Assistant to the President, Toronto Ry.; C. E. A. Carr, General Manager London Street Ry.; Dr. S. Ritter Ickes, President Grand Valley Ry.; D. McDonald, Manager Montreal Street Ry. Third row.—N. Graburn, Master Mechanic Montreal Street Ry.; Col. H. H. McLean, K.C., Director St. John, N.B., Ry.; P. Dubee, Secretary Montreal Street Ry.; E. H. White, Cashier Hartford, Ct. Street Ry. Fourth row.—L. Trudeau, Superintendent Montreal Street Ry.; D. Robertson, Montreal Street Ry.; R. J. Fleming, General Manager Toronto Ry.; W. Z. Earl, Manager St. John, N.B., Ry. Back row.—E. A. Smith, Accountant Montreal Street Ry.; A. H. Royce, Vice-President Toronto Suburban Ry.; D. E. Blair, Superintendent Rolling Stock, Montreal Street Ry.; W. B. Brockway, Secretary-Treasurer Street Ry. Accountants' Association of America.

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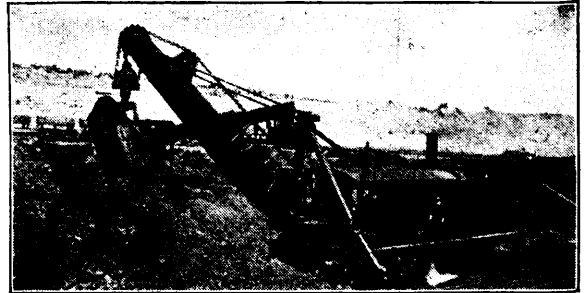
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Transportation by the Company's Steamers, brigades of boats and canoes throughout the Territories not traversed by railways.

Full information at the Company's Offices, Winnipeg, or 1 Lime St., London, E.C.

Gross earnings for year ended June 30, 1904, \$454,508.42; net earnings, \$159,824.11, against \$393,300.63 gross and \$120,808.24 for year ended June 30, 1903. Earnings per car mile, .2378 cents; operating per car mile, .1542 cents; car mileage, 1,911,312 miles; passengers carried, 8,869,486; freight carried, 6,065½ tons.

Halifax Electric Tramway.—Railway receipts for Dec., \$12,163.24, against \$12,160.23 for Dec., 1903, making for twelve months ended Dec. 31, \$157,569.18, against \$150,385.28 for same period, 1903.

The Hamilton Cataract, Power, Light and Traction Co., which controls the electric railways in Hamilton and its vicinity, with the

exception of the Hamilton, Grimsby and Beamsville Ry., declared a dividend at the rate of 5% per annum, for the half year ended Dec. 30, 1904.

Montreal Park and Island Ry.—Length of line, 37.50 miles. Gross earnings: \$160,486.02 for year ended June 30, 1904, deficit \$9,081.14, against \$140,341.52 gross and net earnings of \$7,515.11 for year ended June 30, 1903. Proportion of earnings to working expenses, 105.66%; earnings per car mile, 23.41 cents; operating per car mile, 24.70 cents; car mileage, 675,503; passengers carried, 1,745,598.

Montreal Street Ry.—Length of railway, 63.23 miles. Gross earnings for year ended

June 30, 1904, \$2,412,763.32; net earnings, \$939,561.83, against \$2,162,969.67 gross and \$881,034.07 for year ended June 30, 1903. Proportion of earnings to working expenses, 61.74%; earnings per car mile, 19.75 cents; operating per car mile, 12.19 cents; car mileage, 12,080,791 miles; passengers carried, 59,595,886.

Total earnings for Dec., \$211,283.34; net earnings, \$64,462.53; fixed charges, \$18,474.62; surplus, \$45,987.93, against \$189,266.30 gross, \$61,234.48 net; \$17,273.30 fixed charges and \$45,961.18 surplus for Dec., 1903. Aggregate earnings for three months ended Dec. 31, \$638,114.23; net earnings, \$235,807.69; surplus, \$179,515.17, against \$585,428.11 gross; \$230,078.24 net; \$52,366.83 fixed charges and \$177,711.41 surplus for same period 1903.

Montreal Terminal Ry.—A trust deed in favor of the National Trust Co., to secure the payment of the first mortgage bonds under the first section of the company's undertaking and extensions, has been filed with the Secretary of State at Ottawa.

Application will be made at the current session of the Dominion Parliament for an act authorizing the company to issue preferential shares and to increase its bonding powers.

Nelson Electric Tramway.—Car mileage for year ended June 30, 1904, 34,330 miles; passengers carried, 88,933, against 27,905 and 69,893 respectively for year ended June 30, 1903.

The taxpayers, by a vote, have ratified the agreement leasing the line to the Nelson, B.C., City Council for four years. The city took over the line Jan. 1.

Niagara Falls Park and River Ry.—Length of railway, 13.25 miles. Gross earnings for year ended June 30, 1904, \$124,201.58; net earnings from operation, \$70,583.96; against \$101,348.10 and \$47,507.03 for year ended June 30, 1903. Proportion of earnings to working expenses, 43.17%; earnings per car mile, 38.83 cents; operating per car mile, 16.76; car mileage, 319,838 miles; passengers carried, 1,100,008; freight carried, 77,900 tons.

Niagara, St. Catharines and Toronto Ry.—This electric passenger and freight railway, which extends from Port Dalhousie, Ont., to Niagara Falls, Ont., 19.94 miles, has been purchased by a Toronto syndicate, and the directorate reorganized as follows: President, F. Nicholls; Vice-President, E. R. Wood; other directors: D. D. Mann, H. G. Nicholls, Æ. Jarvis, Z. A. Lash, K. C. The N., St. C. and T. Ry. was originally known as the Niagara Central, a steam railway extending from St. Catharines to Niagara Falls, Ont., 17.79 miles. It got into financial difficulties and was sold in 1900 to its late owners, who organized the N., St. C. and T. Ry. Co., electrified the line and extended it to Port Dalhousie, thereby increasing the mileage to 19.94. The entire line is operated by electricity for passenger traffic, and by steam between St. Catharines and Niagara Falls for freight traffic. The company acquired the steamers Lakeside and Garden City, which have been operated in connection with it, under the title of the N., St. C. and T. Navigation Co. The company subsequently acquired the Port Dalhousie, St. Catharines and Thorold St. Ry., 6.82 miles; and the Wesley Park and Clifton Electric Ry., 4.50 miles, and has power to extend its line to Beamsville, Ont. The total mileage is, therefore, 31.26 miles, excluding sidings, etc.; and this, together with the steamship company, passes to the new owners. The new company, which will assume control at once, is composed of practically the same interests as own the Toronto and Hamilton Ry., which has a charter to construct an electric railway from Toronto to the Niagara frontier.

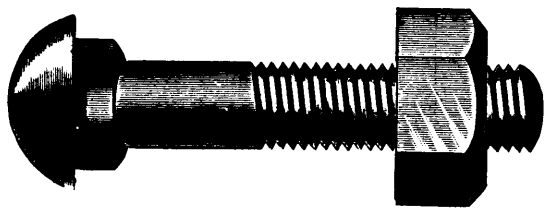
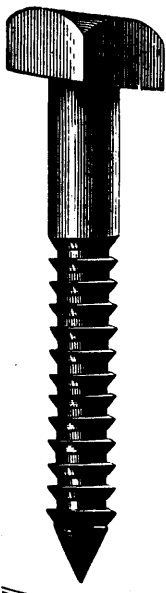
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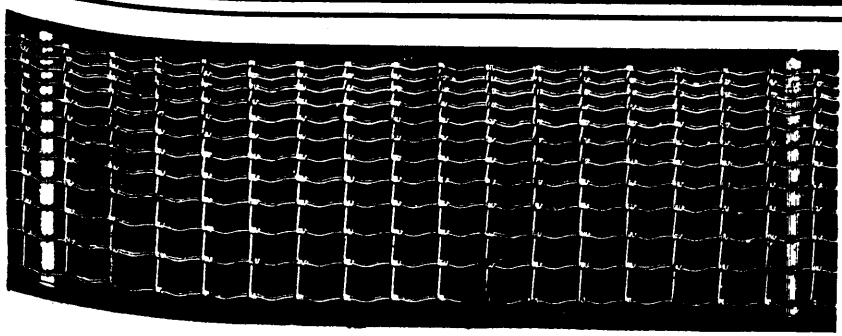
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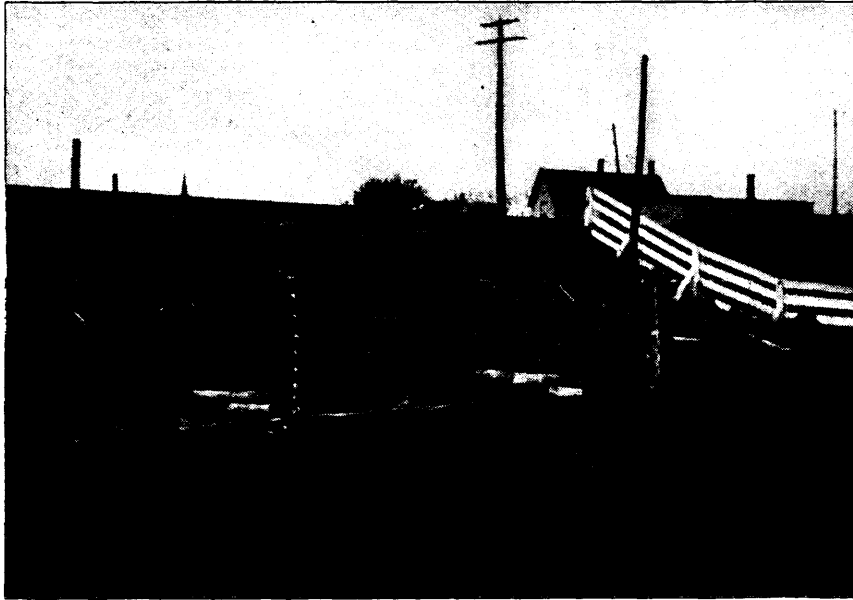
Cyclone Woven Wire Fence Co., - Toronto

Ottawa Electric Ry.—The by-law submitted to the taxpayers at the municipal elections, Jan. 1 to authorize the purchase of the company's line, was defeated, the voting being 819 votes for and 3,557 against. A

project is under discussion for the purpose of amalgamating the whole of the electric companies in Ottawa and Hull, Que. The combined capital of the several companies would be about \$10,000,000. The companies to

be amalgamated would include the O.E. Ry. and the Hull Electric Ry., the latter of which is owned by the C.P.R.

Oshawa Ry.—Length of line, 8.02 miles. Gross earnings for year ended June 30, 1904,



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C. P. R. LANDS

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TERMS OF PAYMENT.

An actual settler may purchase not more than 640 acres, on the ten instalment plan by paying a cash instalment at time of purchase, interest at six per cent. on the unpaid purchase money at the end of the first year, and the balance of the principal with interest in nine equal instalments annually thereafter as shewn in the following table:—

160 Acres at \$3.00 per acre, cash payment	\$71.90,	first year's interest	\$24.49	and nine instalments of	\$60.00
" " 3.50 "	" 83.90,	" " "	" 28.58	" "	70.00
" " 4.00 "	" 95.85,	" " "	" 32.64	" "	80.00
" " 4.50 "	" 107.85,	" " "	" 36.73	" "	90.00
" " 5.00 "	" 119.85,	" " "	" 40.81	" "	100.00
" " 5.50 "	" 131.80,	" " "	" 44.89	" "	110.00
" " 6.00 "	" 143.80,	" " "	" 48.98	" "	120.00

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

DISCOUNT FOR CASH.

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

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

F. T. GRIFFIN,

Land Commissioner C.P.R. Co., Winnipeg.

CANADA NORTH-WEST LAND CO.

This Company has 750,000 acres of selected lands in Manitoba and Assiniboia which offer excellent opportunities to settlers and investors who desire to secure good lands in well-settled districts. These lands are on sale at the Company's Office at Winnipeg, and at the various land agencies of the Canadian Pacific Railway Company.

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PROVINCIAL GOVERNMENT LANDS can still be purchased at from \$3 to \$6 per acre.

IMPROVED FARMS in all districts of the province can be purchased at from \$10 to \$40 per acre. These prices are advancing every year.

A FEW POINTERS.

On arrival at Winnipeg the wisest policy for any new settler to adopt is to remain in Winnipeg for a few days and learn for himself all about the lands offered for sale and to homestead.

There are districts that have been settled for many years in which land can be purchased. Some of this may be unbroken prairie which still possesses all the richness and productive powers of our virgin prairies. Other lands, cultivated and having comfortable farm buildings, are ready for immediate possession.

There are Provincial Government lands, Dominion Government homesteads, and railway lands to be secured.

The price of land varies from \$3 to \$40 per acre.

Location with respect to railways, towns, timber and water determines the price of land.

For information regarding homesteads, apply at the Dominion Land Office.

For purchase of Provincial lands apply at the Provincial Land Office in the Parliament Buildings.

For C.P.R. or C.N.R. lands apply at the land offices of said railway companies.

For lands owned by private individuals apply to the various real estate agents in the city.

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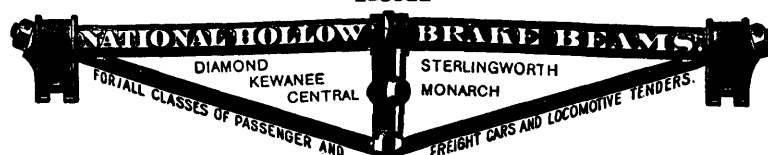
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\$40,183.02; net earnings, \$3,686.45; against \$51,924 gross and \$16,655 net for year ended June 30, 1903. Proportion of earnings to working expenses, 101%; earnings per train mile, 72 cents; operating per car mile, 65.4 cents; miles run by trains, 55,772 miles; passengers carried, 134,228; freight carried, 66,087.

St. Thomas Street Ry.—Gross receipts for eleven months ended Nov. 30, \$16,283.65; expenditure for same period, \$16,215.99. Passengers carried, 367,181, against 343,379 for same period, 1903.

The South-Western Traction Co., which has constructed an electric railway from London to St. Thomas, Ont., has written the City Council offering to lease or purchase the city electric railway.

Toronto and York Radial Ry.—A mortgage to secure bonds or debentures of this company to the extent of \$3,000,000, made to the National Trust Co., Toronto, has been filed with the Provincial Secretary, Toronto.

Toronto Ry.—Car earnings for Dec., \$213,662.31, against \$199,114.55 for Dec., 1903, making for 12 months ended Dec. 31, \$2,411,551.24, against \$2,154,411.83 for same period, 1903.

The City board of control has passed a resolution favoring the expropriation of the Toronto Street Ry., and directing that application be made to the Ontario Legislature, at its next session, for the necessary powers.

Winnipeg Electric Street Ry.—The amalgamation of the W.E.S. Ry. and the Winnipeg General Power Co. has been completed, under the title of the Winnipeg Electric Ry. Co. The new company has a capitalization of \$4,000,000 in shares of \$100 each, and shareholders of each company will receive one share of stock in the new company for each share they held in either company held by them. The new company has issued \$2,000,000 of refunding first mortgage 30 year sinking fund gold bonds, the Royal Trust Co., Montreal, being the trustee. The company is authorized to issue \$3,000,000 of bonds, and the \$2,000,000 now issued are for the purpose of paying, in part, for the development of an hydraulic plant now under construction and for extensions to the street railway and electric lighting systems. The gross earnings for 1904, the earnings for Nov. and Dec., being estimated, were \$800,000, while the expenses, Nov. and Dec. estimated, were \$425,000, leaving net earnings of \$375,000. In 1903, the gross earnings were \$568,225.84; working expenses, \$320,203.15, and the net earnings \$248,022.69. The officers of the new company for the current year are: President, W. Mackenzie, Toronto; Vice-President, W. Whyte, Winnipeg; Secretary-Treasurer, F. Morton Morse, Winnipeg; other directors: Sir Wm. C. Van Horne, Montreal; D. D. Mann, D. B. Hanna, Toronto; A. M. Nanton, Winnipeg. Manager, W. Phillips.

Electric Railway Notes.

A double truck rotary snow plow has been added to the equipment on the Metropolitan Division of the Toronto and York Radial Ry. The British Columbia Electric Ry. is building six cars for its Victoria lines, and two interurban cars for Greer's Beach line, Vancouver.

The Toronto and York Radial Ry. is about to establish an express business on its Metropolitan Division, receiving and delivering parcels from its depot on Yonge St., Toronto, north of the C.P.R. tracks.

The Toronto and York Radial Ry. has put on a theatre car on Thursday nights on each of its three divisions, and is advertising the theatre attractions of the city on these lines by means of posters. The special cars are being well patronised.

The Winnipeg Electric Street Ry. has completed a 58 ft. car of a new pattern. It is provided with vestibules for motormen and conductor, and a separate section for smoking and baggage. The seats are covered with netted cane, and can be turned to face in either direction.

Judgment has been given by Justice Anglin, in the action of the Hamilton City Council against the Hamilton Street Ry., in which the former asked for an order to compel the company to replace the present restricted service with a schedule of cars which was formerly in use. The court decided that the city had not the right, under its agreement with the company, to regulate the service.

Grain Elevator Notes.

We are advised, in respect to the press reports, that the C.P.R. was about to construct a 2,000,000 bush. elevator at Fort William, Ont., that this elevator is yet in the rumor stage.

The contract for the foundations of the elevator which the Dominion Government proposes to erect at Port Colborne, Ont., at the entrance to the Welland Canal, has been let to Larkin and Sangster. The cost of the foundations will be about \$100,000.

S. McNairn & Co. (Ltd.) has been incorporated under the Ontario Companies' Act, with a capital of \$150,000 and offices at Toronto, to carry on business as dealers in agricultural produce, and in connection therewith, to acquire or construct grain elevators. J. K. Stroyan, W. F. Morley, T. L. Carruthers, Mrs. J. McNairn, of Toronto, and A. H. Dixon, of North Toronto, Ont., are the provisional directors.

J. S. Myers, of Listowel, Ont., is a shareholder in the Lucknow, Ont., Elevator Co., and has a suit pending in the Ontario courts against the company, and two of its directors, T. F. Carr and J. G. Murdoch, of Lucknow. He is asking the courts to compel the company to transfer on its books some stock which he asserts he has bought. He asks also for an injunction to prevent the company allotting or issuing any stocks under supplementary letters patent issued to it last November. The action against the two directors is for an accounting of the profits of working the elevator under a lease granted to them.

SHIPPING MATTERS.

Muskoka Lakes Navigation and Hotel Co.

The following financial statements for the season of 1904 were presented at the annual meeting in Toronto, Jan. 26:—

TRANSPORTATION DEPARTMENT.

REVENUE.	
Passenger.....	\$ 44,698 25
Freight	17,554 74
Table	9,403 65
Towing	428 00
Mails	4,595 00
Express	328 25
Refreshment stands.....	450 00
	<u>\$ 77,457 89</u>

EXPENSE.	
Provisions	\$ 10,582 34
Fuel	9,028 36
Running expense	18,156 02
Oil and waste.....	487 16
Laundry	219 52
Painting and repairs.....	8,407 86
Marine railway expense	57 85
Marine shop expense	114 47
Wharf repairs.....	222 86
General expense.....	4,503 96
Office expense.....	2,952 44
Insurance	1,052 21
Surplus revenue	21,672 84
	<u>\$ 77,457 89</u>

ROYAL MUSKOKA HOTEL.

REVENUE.	
Board receipts.....	\$ 19,448 10
Bar receipts	2,857 45
Laundry receipts.....	634 92
Rent.....	583 05
Baggage	94 75
Billiards	4 07
Baths	14 00
	<u>\$ 23,636 34</u>

EXPENSE.	
Provisions and supplies.....	\$ 8,020 73
Wages: dining room, kitchen, steward, housekeeper, porters, and bell-boys.....	5,035 01
Bar supplies.....	1,717 47
" wages	2,244 64
Laundry supplies	62 62
" wages	697 48
Barber shop—net loss.....	19 77
Engine room expense.....	1,727 90
Miscellaneous help and watchman.....	249 25
Maintenance and golf grounds.....	184 60
Fares	635 50
Freight.....	1,375 33
Music	592 88
Stationery and printing.....	247 55
General expense	1,632 81
Advertising	1,058 74
Office	2,982 30
Caretaking.....	745 41
Plant renewals.....	786 38
Insurance.....	3,057 69
Taxes.....	323 00
Discount and bad check	170 23
	<u>\$ 31,567 29</u>

Net loss on hotel operations..... \$ 7,930 95

PROFIT AND LOSS ACCOUNT.

Surplus revenue Transportation.....	\$ 21,672 84	
G.T.R. rent account	7,988 12	\$ 29,660 96
Loss hotel operations.....	\$ 7,930 95	
General expense.....	243 60	
Interest.....	6,453 68	
Oriole accident.....	1,063 59	15,691 82

Net profit, 1904.....	\$ 13,969 14
1903 Disbursements.....	\$ 2,554 39
Loss on sale yacht Royal.....	284 00
Reduction in G.T.R. rent account, 1903.....	527 94
Old accounts written off.....	557 98
	<u>3,924 31</u>

At credit, profit and loss, 1903.....	\$ 12,635 36
	<u>\$ 22,680 19</u>

BALANCE SHEET.

ASSETS.	
Cash on hand.....	\$ 1,013 94
G.T.R. rent account	7,988 12
Accounts receivable	3,726 65
	<u>12,728 71</u>
Inventories, transportation.....	\$ 3,560 49
" Royal.....	825 64
	<u>4,386 13</u>
10 steamers and outfits.....	\$ 98,928 36
6 scows.....	2,124 26
3 dry docks.....	11,054 00
5 wharves and storehouses	2,303 42
Offices and furniture.....	1,311 85
Ice houses.....	297 69
Real estate.....	724 22
	<u>116,743 80</u>
Royal Muskoka construction.....	\$121,777 26
Royal Muskoka furniture and equipment.....	42,170 84
Royal Muskoka site.....	6,073 00
" charter.....	1,034 54
	<u>171,055 64</u>
G.T.R. good-will account.....	14,900 02
Total assets.....	<u>\$319,814 30</u>

LIABILITIES.

Crown Bank.....	\$ 2,177 81
Accounts payable	4,724 22
Canada permanent interest account	4,920 00
	<u>\$ 11,822 03</u>
Mortgage payable.....	\$ 82,000 00
Bills payable.....	16,500 00
	<u>98,500 00</u>
Contingent fund.....	13,177 19
	<u>\$ 123,499 22</u>
Net assets.....	<u>\$196,315 08</u>
Capital stock issued.....	\$173,634 89
At credit, profit and loss.....	22,680 19
	<u>\$196,315 08</u>

The Safety Car Heating and Lighting Co., during 1903, built eleven new plants for the manufacture of Pintsch gas in the U.S. In connection with its exhibit at the St. Louis Exposition it received a grand prize for Pintsch light as the best system of car lighting; a gold medal for its system of car heating, and a gold medal for Pintsch gas buoys and beacons.

The Canadian Westinghouse Co., Hamilton, Ont., has issued descriptive booklets of the Westinghouse no. 12a railway motor, the Westinghouse railway controllers, and of the Baldwin-Westinghouse Electric Locomotives. This latter booklet gives details and specifications of electric locomotives already constructed, showing their adaptability to various uses.

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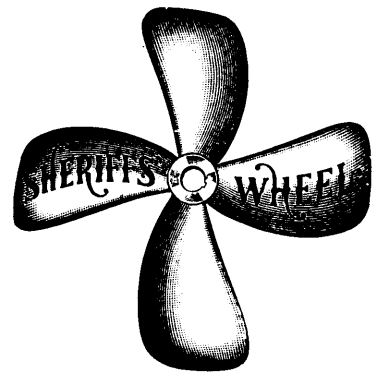
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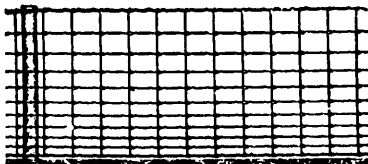
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 of Canada.

William Petersen, Limited.

The winding-up of William Petersen (Ltd.), at Newcastle-on-Tyne, Eng., under the Companies' Acts 1862 to 1900, is of considerable interest to Canadian marine men, as the company's operations were largely carried on in this country. The company was registered Nov. 9, 1900, for the purpose of taking over the business of shipowners and shipbrokers then being carried on under the style of Petersen, Tate & Co. It was under this title that the firm obtained prominence in Canada, on account of its contract with the Government in 1897, to provide a fast freight and passenger service between Canada and Great Britain. It was proposed to employ steamers of the turret deck type for this service, several of which at that time were engaged in carrying coal from Sydney, N.S., to Montreal. The efforts to float the project on the British markets were unsuccessful and the deposit which Petersen, Tate & Co. put up was forfeited by the Dominion Government. The company took over the entire business of Petersen, Tate & Co., the consideration being £16,000 in fully paid-up shares. The firm was managing owner of five steamships, belonging to four companies, one of which was the Dominion Turret Line (Ltd.), which were subsequently sold to the Canadian Ocean and Inland Navigation Co. for £130,000, £100,000 being in cash and £31,000 in shares, which terms were subsequently varied, £65,000 being paid in cash, £35,000 in shares, and a second mortgage of £42,160. In 1902, Mr. Petersen sold £80,000 of the C.O. and I.N. Co.'s shares to the Canadian Lake and Ocean Navigation Co., for £65,000 cash, retaining the management of the Turret Bay and Scottish Hero. The three other steamers, Turret Cape, Turret Chief and Turret Crown, were transferred to the Upper Lakes, where they have since traded. The C.L. and O.N. Co. transferred to Mr. Petersen \$150,000 of shares in that company as a bonus. The company was also interested in the Toronto Trading Co. This company, as well as the C.O. and I.N. Co. are said to be considerably in debt to William Petersen (Ltd.). Since 1902 the company has been engaged in an endeavor to establish a line of steamers between Canada and ports in France and Belgium. Two steamers made several round voyages between Antwerp and Montreal during 1903, and in 1904, special efforts were made to establish a line with France. For this purpose a company—Canadian Lines (Ltd.)—was incorporated in Canada. This was the successor of Les Transports Canadiens, and of a Bordeaux firm's attempt to earn a Dominion subsidy for such a service. The latter firm had a contract, but as its steamers Miquelon, off the Newfoundland coast, the Government cancelled the contract, William Petersen (Ltd.), which had four steamers under charter—Quebec, Halifax, Toronto and Lake Simcoe—ran them from various continental ports to Quebec and Montreal during 1904, carrying passengers and freight. On one of the voyages of the Lake Simcoe, 26 Syrian immigrants, ordered by the authorities to be deported, escaped, and a fine of \$26,000 was imposed by the Minister of the Interior on the vessel. In connection with this branch of the company's operations, negotiations were entered into with Armstrong, Whitworth & Co. (Ltd.), Elswick-on-Tyne, whereby the latter were to build certain vessels and assist the line financially. The Armstrong Co. subsequently withdrew, and an action was instituted for damages. The Official Receiver has taken steps to protect the interests of the creditors in connection with this matter, and also in some wharfage property in the port of London. The cause of the failure is attributed to expenses in-

curred in attempting to establish the line with France.

The gross liabilities amount to £97,816 16s. 7d., of which it is estimated by the Official Receiver that £63,625 1s. 3d., will rank for dividend. Against this the assets, after meeting preferential claims, amount to £22,277 15s. 11d., leaving a deficiency of £41,347 5s. 4d.

Dominion Inspection Regulations.

The Dominion Government has passed an order-in-council giving effect to a new code of regulations for the inspection of steamboats and for the examination of engineers. The new rules are a consolidation of all existing Canadian rules for the inspection of steamboats, and for the examination of engineers, along with all necessary amendments to bring them up-to-date. The order provides that all existing rules and regulations are to be cancelled, with the exception of the rules passed Nov. 12, 1904, for the inspection of passenger vessels propelled by gas, fluid, naphtha, electricity, or any mechanical or chemical power other than steam. The new rules came into force Jan. 1, but they do not contain any material changes from those previously in force.

An order-in-council, dated Dec. 29, cancels the regulations made April 27, 1904, under which vessels carrying freight only, and having a British registry, were exempted from Canadian inspection on engaging in the coasting trade in Canada, provided they had a certificate of inspection for the current year from the British Board of Trade, Lloyds, Bureau Veritas, or the Norwegian Lloyds. The order directs that they shall be subject to the Canadian Steamboat Inspection Act, in the same way as Canadian vessels, and further, that all yachts, tugs and other vessels landing in Canadian ports, registered elsewhere than in Canada, shall be subject to the like inspection. So far as the Upper Lakes are concerned, there are a number of freight steamers and the oil carrying steamer Imperial, of Sarnia, to be inspected. Among the freight steamers are: Theano, Polika, Leafield, and Monkshaven, of the Algoma Central Steamship Line; Turret Cape, Turret Crown, Turret Court, Turret Chief, J. H. Plummer, H. M. Pellatt, and A. E. Ames, owned by the Canadian Lakes and Ocean Navigation Co.; Strathcona, Donnacona, Neepawah and Wacondah, owned in Hamilton, Ont.; Neebing, owned by the Neebing Navigation Co.; Wexford, owned by the Western Lakes Navigation Co., Collingwood, Ont.; Newmount, owned by the Farrar Transportation Co., of Collingwood, Ont. The Fairmount, Westmount and Rosemount of the Montreal Transportation Co.'s fleet will also have to be inspected.

Northern Navigation Co of Ontario.

The article on the affairs of this company, published in our last issue, prepared the public for the action which has since been taken by the directors. On Jan. 17, Barwick, Aylesworth, Wright and Moss, of Toronto, on behalf of the company, issued a writ in the High Court of Justice against T. Long, Toronto, and J. J. Hopkins, Collingwood, executors of the late J. J. Long. The writ states that "the plaintiffs' claim is to enforce payment of \$83,773.84, together with interest from June 30, 1904, being the amount agreed to be paid by the late J. J. Long to the plaintiffs in settlement of the Northern Navigation Co.'s claim against him in respect of false and fraudulent representations made by the said J. J. Long, or in the alternative, to recover \$150,000 damages for the fraud and

deceit and false and fraudulent statements of the said J. J. Long to the Northern Navigation Co., upon which the said company acted to its loss and damage to the said amount."

This action fully justifies the course we have followed in regard to the affairs of this company. In the fall of 1903 the publisher of this paper, having discovered how grossly the affairs of the company had been manipulated in the interest of certain directors, placed his information at the disposal of other directors, resulting in an investigation being made. In January, 1904, we published a series of charges against the management, these charges were sustained at the annual meeting, changes were effected in the board, and when the new officials obtained access to the books they found that matters were even worse than we had charged. Our action was criticized at the time by a clique favorable to the old management, but subsequent events have proved that we were thoroughly justified, and we have the satisfaction of knowing that we performed a public duty, for which we have received the thanks of a large number of shareholders.

Niagara Navigation Company.

In our last issue we gave the annual report, etc., for the year ended Nov. 30, 1904. There were not many important changes in the list of shareholders during the year. At the end of 1903 E. R. C. Clarkson, Toronto, held 200 shares, and H. C. Hammond, Toronto, 100 shares. Neither of them are now on the list of shareholders. At the closing of the books, Dec. 31, 1904, the following held 25 shares or over, the addresses of the shareholders being Toronto unless otherwise stated:—E. B. Osler, 200; W. Hendrie, Hamilton, 200; F. B. Cumberland, 181; Colonial Investment and Loan Co., 170; I. K. Gartshore, Hamilton, executrix, 150; A. Clubb, 110; A. E. Dyment, Thessalon, 100; T. P. Phelan, 100; E. G. Fitzgerald, 60, and in trust, 50; Mrs. Seraphina Cumberland, 75; J. S. Hendrie, Hamilton, 72; W. Hendrie, Jr., Hamilton, 67; H. L. Boulton, 60; S. A. Rowbotham, 55; S. G. Curry, 50; A. J. Small, 50; D. R. Wilkie, 50; Mrs. Peterson, 50; David Walker, 50; H. T. Bailey, 50; E. W. Langley, 45; Rev. G. M. Milligan, 45; A. W. Austin, 30; A. Darling, L. Cooke, and F. M. Fraser, trustees, 30; Mrs. L. M. Hendrie, Hamilton, 30; W. H. Knowlton, 30; Geo. Reedy, 30; Wilson Lumber Co., 30; Æ. Jarvis & Co., 30; A. E. Coulthard, Oshawa, 25; J. S. Kormann, 25; H. Lamport, 25; Mrs. Margaret McArthur, 25; Miss E. A. McMicking, 25; Miss Helen Wardrop, 25; E. W. Atkins, Eglinton, 25; Cawthra Mulock, 25; F. A. Fee, Buffalo, 25; Prof. Shuttleworth, 25. At the same date the following financial institutions held in trust the respective numbers of shares mentioned:—Home Savings and Loan Co., 784; Imperial Bank, 577; Bank of British North America, 460; Bank of Hamilton, 361; Sovereign Bank, 250; Merchants Bank, 185; Canada Permanent Loan and Savings Bank, 143; Dominion Bank, 30; Crown Bank, 25

Notices to Mariners.

The Dominion Department of Marine has issued the following notices to mariners:—

No. 120. Dec. 5.—New Brunswick—318. Bay of Fundy, Gannet rock light, repairs made to revolving apparatus. Nova Scotia—319. Bay of Fundy, Lucher shoal, light-ship replaced on her station.

No. 121. Dec. 6.—Quebec—320. Rivér St. Lawrence, ship channel between Quebec and Montreal, Longue Pointe traverse, pole lights replaced by permanent range light-houses.


No. 122. Dec. 7.—Quebec—321. River St. Lawrence, between Murray Bay and Kamouraska, Morin shoal discovered, located and buoyed.

No. 123. Dec. 12.—New Brunswick—322. South coast L'Etang harbour entrance, Gray Mare ledge, spindle replaced. Labrador—


323. Anaucat Island, Mortimer shoal, reported existence of.

No. 124. Dec. 13.—British Columbia—326. Queen Charlotte Islands, name of southernmost island changed to Kunghit Island.

No. 125. Dec. 16.—Quebec.—330. Gulf of St. Lawrence, Anticosti, general information.




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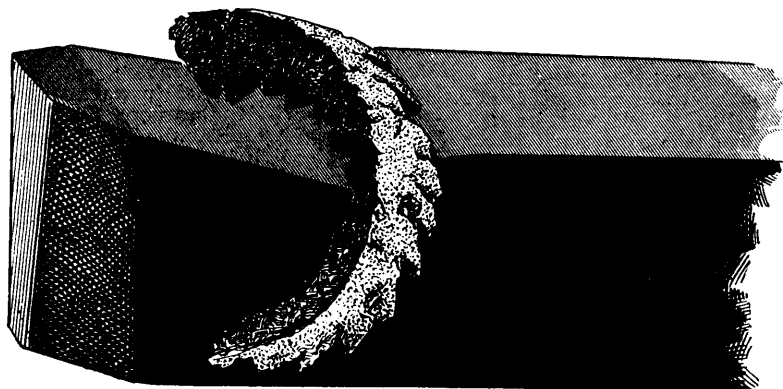


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No. 127. Dec. 21.—British Columbia.—Kootenay Lake, Pilot Bay, lighthouse established.

No. 128. Dec. 27.—British Columbia.—325. Vancouver Island, east coast, Stuart channel, approach to Dodd's Island, shoals located.

Maritime Provinces and Newfoundland.

Capt. Muggah, of the str. Wasis, died suddenly on board the steamer, North Sydney, N.S., Jan. 2.

Capt. Jas. A. Hatfield, formerly a ship-builder at Parrsboro, N.S., died at Port Greenville, N.S., Jan. 6, aged 86.

The Halifax, N.S., pilots are considering a plan to provide a steamer for cruising outside the harbor, in place of the present sailing boats.

The str. Mira, wrecked off Yarmouth, N.S., in 1902, while in the Dominion Coal Co.'s service, has been given a U.S. registration, and is now named Joseph W. Foordney.

The Imperial dockyard at Halifax, N.S., has been closed, a lot of stores have been removed to England, and the remainder sold. The dockyard property, it is reported, will be sold to the Intercolonial Ry.

The Royal Mail Steam Packet Co., of Southampton, Eng., and the Elder-Dempster Co., of Liverpool, Eng., propose to tender for the Halifax-West Indies steamship service now performed by the Pickford & Black steamers. The Elder-Dempster Co. now run steamers from the West Indies to Bristol, Eng.

A company has been formed in Sydney, N.S., of which J. T. Burchell is President, and W. Hayes is Secretary, for the purpose of establishing a steel shipbuilding yard there. It proposes to have a plant capable of turning out one 15,000 ton steamer a year; to establish a dry dock for 8,000 ton vessels, and to keep a wrecking plant at the port. The Sydney City Council offered a bonus of \$250,000 towards the establishment of such a plant, and the Provincial Government offered a bonus of \$100,000 towards the establishment of a shipbuilding plant in the province.

The contract between the Dominion Government and the Charlottetown Steam Navigation Co., for a mail service between the island and the mainland at Summerside, P.E.I., and Pictou, N.S., expires during the current year. The contract heretofore has been a five year one, and an effort is being made to have it renewed for ten years. The directors of the company desire to improve the service, and in order to enable them to do so, desire to have the contract for the longer period. In the event of the company's proposal being agreed to, it is intended to add a new steamer of about the same size as the Northumberland, and capable of making up to 20 miles an hour. The company's engineer recently visited Toronto and Hamilton, to investigate the Turbinia, with a view of reporting on the advisability of placing a similar steamer on the route.

Province of Quebec Shipping.

The Quebec Steamship Co.'s new str. Bermudian made 17 knots an hour on her trial trip at Sunderland, Eng. She has now been placed on her run between New York and Bermuda.

The Lake Champlain and St. Lawrence Ship Canal Co. will apply during the current session of the Dominion Parliament for an act granting an extension of time for the construction of the projected canal.

The Montreal Harbor Commissioners recently sent a deputation of its members to

visit various United States ports, to inspect the permanent sheds in use at them. The deputation returned and reported favorably impressed with the two-story sheds planned for Montreal.

The number of seagoing vessels arriving at Montreal during the season of navigation of 1904 was 365, having a total tonnage of 1,218,369 tons, against 459 vessels of 1,399,621 tons in 1903. The arrivals from lower Canadian ports numbered 366 vessels of 573,843 tons, against 309 vessels of 456,714 tons in 1903. The number of vessels and their tonnage arriving from lake ports has not been published.

The icebreaking steamer Montcalm has been engaged in preventing the formation of the ice bridge at Cape Rouge. On Jan. 5 she cleared the river of packed ice for two miles, extending from St. Romuald to near Levis, and varying from three to 15 ft. thick. The breaking up of the bridge prevents people from crossing the river on the ice, and prevents the regular operation of the ferry between Levis and Quebec, by reason of the broken up ice floating backwards and forwards with the tide. Quebec people are grumbling at this state of affairs. The steamer subsequently broke three blades of her propeller in the ice.

Ontario and the Great Lakes.

Capt. D. O'Hagan, of St. Catharines, Ont., a well-known lake mariner, died there suddenly Jan. 8.

Capt. D. Pace, who died in Hamilton, Ont., Jan. 2, aged 80, was a retired lake captain. He was well known in the old schooner days.

The steam barge Navajo, owned by Richardson Bros., Kingston, Ont., was damaged by fire to the extent of \$10,000 at Prescott, Ont., Dec. 29.

The contract for the removal of the central piers of the bridges over the Welland canal at Allanburg and Marlatt, Ont., has been awarded to Magann & Phin, Toronto.

The survey on the route of the projected ship canal along the Ottawa River to Mattawa, thence to Lake Nipissing and to Georgian Bay, along the French River, are being proceeded with. The nine parties, which are making the survey, comprise 145 men, and it is estimated that it will take two years to complete the work.

The French River and Nipissing Navigation Co. has been incorporated under the Ontario Companies' Act, with a capital of \$25,000 and offices at Sturgeon Falls, Ont., to carry on a general navigation business. The provisional directors are: J. A. Clark, J. W. Hendrie, Sturgeon Falls, Ont.; J. M. Harris, W. Hendrie, Sr., and W. Hendrie, Jr., Hamilton, Ont.

The Turbine Steamship Co.'s annual meeting was held at Hamilton, Jan. 9. The reports presented of the first season's operations were considered satisfactory. The officers and directors for the current year are:—President, Jno. Moodie; Vice-President, C. A. Birge; Secretary-Treasurer, G. Hope; other directors: C. S. Wilcox, W. C. Hawkins, of Hamilton; W. Hyslop and Col. J. I. Davidson, Toronto.

The Hamilton Steamboat Co., at its recent annual meeting, declared a dividend of 10%, and voted \$200 to the Manager. W. B. Bishop, as a special present. The company's steamers carried 43,605 more passengers in 1904 than in any previous season. The following are the officers and directors for the current year:—President, M. Legat; Vice-President, G. T. Tuckett; other directors: F. W. Fearman, S. Jones, J. W. Lamoreaux, H. B. Witton, and T. Ramsay.


The report for 1904 of the Ottawa River Navigation Co., presented at the annual meeting, Jan. 11, showed a very good year's business. The operation of the steamers was interfered with during May and June by the high water in the river, during which period five wharves were under water. The officers and directors for the current year are:—President, H. W. Shepherd; Vice-President, H. Wallis; Managing Director, R. W. Shepherd; other directors: R. Bolton, A. F. Riddell.

The Canadian canal at Sault Ste. Marie was open for 240 days, from April 30 to Dec. 25, or 17 days longer than the U.S. canal was open. There passed through the canals 12,188 steamers, 2,994 sailing vessels, and 938 unregistered vessels, a total of 16,120, against 18,596 vessels for 1903. The total tons of freight carried was 31,546,106, against 34,674,437 in 1903, and 37,695 passengers were on board, against 55,175 in 1903. The tonnage passing through the Canadian canal for Dec. was 970,865 tons, against 497,198 in 1903; making for the season 5,028,190 tons, against 5,502,185 tons for 1903.

Application will be made at the current session of the Dominion Parliament for an act incorporating a company for the purpose of constructing and operating navigable waterways, and portage railways for ships, from a point on Georgian Bay between Waubashene and Port Severn or on Nottawasaga Bay along the valley of the Nottawasaga River to a point on Lake Ontario. *One terminus will be on Lake Ontario at Toronto and the other is to be in the county of York or the county of Ontario. There will be basins and reservoirs for the storage of water and for slack water navigation. G. Bell, Toronto, is solicitor for the applicants. The project is in a very embryonic stage, but the plans as suggested embody the project of an eight-rail track from point to point over the portages. There may be two distinct lines—one with its northern terminal on Georgian Bay between Waubashene and Port Severn, running direct to the terminal in York on Lake Ontario, the other line running from a point on Nottawasaga Bay to Lake Simcoe, thence after a sail across ships would be put on the rails again for the Lake Ontario terminal. The scheme suggested for loading the ships is to run them into a cradle, in which are huge pontoons or bags partially filled with liquid. When the cradle is raised the pontoon so adheres to the shape and sides of the ship as to steady it firmly on the car. H. C. Spaulding, of New York, and a number of associates are behind the enterprise.

The Temiscamingue and Mechiskan Dam Co. (Ltd.) is the title under which Sir A. P. Caron, C. B. Powell, R. J. Devlin, R. V. Sinclair, J. A. Ellis, of Ottawa, Ont.; E. B. Eddy, W. H. Rowley, of Hull, Que., have been incorporated under the Dominion Companies' Act, with a capital of \$100,000 and offices at Ottawa. The company is authorized to construct a dam across the southern outlet of the lake, near the terminus of the C.P.R. branch line from Mattawa, Ont., at which point lake navigation commences; to construct docks, wharves etc., anywhere on the lake or navigable rivers running into it; to operate steamers, ferries and other vessels and barges, and to carry on a shipbuilding business, in addition to a variety of other industries. In addition to the extensive lumbering trade, there is a large freight and passenger business carried on between Temiscamingue, Ville Marie, Que., Haileybury and New Liskeard, Ont., by the Lumsden line of steamers and steamers owned privately; as well as by smaller steamers between New Liskeard and Tomstown, Ont., 20 miles up the Blanche River. The tourist business on the lake has been increasing, the Kippawa Lakes being

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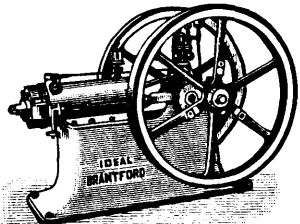
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reached via Temiscamingue, Que., and Lake Temagami from Haileybury, Ont. How the travel to the latter point will be affected by the opening of the Ontario Government railway from North Bay to New Liskeard, Ont., will be known during the summer. There is a station on the line close to the crossing of the Montreal River as it leaves the lake. The route hitherto followed has been from Haileybury and by canoe up the Montreal River.

Manitoba and Northwest Territories.

F. MacLennan, Collector of Customs at Whitehorse, Yukon, has been appointed measuring surveyor of shipping at that port.

A contract has been placed at Edmonton, Alta., for the building of a new stern-steamer for the Saskatchewan River trade, for John Walter. She will be 80 ft. long by 16 ft. beam, and is intended for the coal and lumber trade.

A. P. Low recently delivered a lecture at Ottawa, on the navigability of Hudson's Bay and Straits, basing his observations on the results of his recent explorations. He referred to Fort Churchill as being the most open and accessible fort on Hudson's Bay. This point is 843 miles from Fort William, Ont., and 800 miles from Regina, Assa. From Regina to Liverpool, by Fort William and Quebec, is 4,740 miles, while from Regina to Liverpool by Fort Churchill is 3,730 miles. The navigation of the bay and straits is, he said, free and open from July 1 to Nov. 1, a period of four months. For a year or so the insurance on steamers would be heavy, until the safety of the route was established. Mr. Low said he had no doubt whatever but that the route was as feasible and as safe as the St. Lawrence route.

B.C. and Pacific Coast Shipping.

The str. City of Topeka, has been towed to Victoria, B.C., where she will be repaired and refitted for the Alaskan trade, at a cost of \$100,000.

The new wharf erected by the C.P.R. at Victoria, B.C., has been completed, and the steamers commenced landing freight and passengers there Jan. 1.

The Anglican Church Mission has arranged to purchase or to have built a steamer to visit the mission stations, logging and other camps along the northern coast of British Columbia.

The steamers of the Canadian-Australian Line are to make six calls a year at Fanning Island, the mid-ocean station of the British Trans-Pacific cable, stopping on the northward run to Vancouver, B.C., only.

The Geographic Board has changed the name of the southernmost island of the Queen Charlotte group from Prevost to Kunghit Island, to prevent confusion with Prevost Islands, off the east coast of Vancouver Island.

T. G. Mitchell, who has been appointed Lloyds' engineer surveyor for British Columbia, was recently presented with a case of cutlery, by the engineers of the C.P.R. steamers, on resigning his position as chief engineer of the Princess Victoria.

The Dominion cruiser Canada, with a crew of 70 men, has sailed for the West Indies, for the purpose of training the crew, for gunnery instruction, etc.

The Virginian, the second of the turbine steamers for the Allan Line, has been launched at Glasgow, Scotland. She is expected to leave Liverpool on her first trip to Canada, April 6.

There are over 800 steamers of over 5,000 tons in the world, of which the United States

has 62. The largest vessel borne on the Canadian register is the M.S. Dollar, of Victoria, B.C., which is 4,216 tons gross.

The C.P.R. has renewed the insurance of its Atlantic, Pacific, lake and river steamers with British underwriters, as in former years. The values of some of the steamers have been reduced, but otherwise there is no material alteration in the terms.

The C.P.R. has placed an order with the Fairfield Shipbuilding Co., Glasgow, Scotland, for the construction of two steamers for its Atlantic fleet. The plans show that the new steamers will have a length of 550 ft. between perpendiculars, a breadth of 65 ft., and will have a total capacity of 14,500 tons. The passenger accommodation will provide for 300 first-class, 350 second-class, and from 750 to 1,000 steerage passengers. The vessels will be fitted with quadruple expansion engines, which will develop a speed of 20 knots an hour. The steamers will be the largest and fastest trading between Great Britain and Canada. The contract calls for the placing of the steamers on the run in April or May, 1906.

At a meeting of the steamboat passenger interests of the Atlantic seaboard and Great Lakes, held in Buffalo, N.Y., Jan. 5, the changes in the rules and regulations governing the inspection of steam vessels proposed to be adopted by the U.S. Government were discussed. An association of Passenger Steamboat Lines was formed to look into this matter, and to discuss other matters affecting the interests of owners of passenger steamers. C. F. Gildersleeve, Kingston, Ont., President Dominion Marine Association, was appointed a member of the committee to meet the U.S. authorities and discuss the inspection rules. The Canadian lines represented were: C.P.R. steamship lines, Niagara Navigation Co., Northern Navigation Co., Lake Ontario and Bay of Quinte Steamboat Co., Richelieu and Ontario Navigation Co. C. F. Gildersleeve, President, and F. King, Secretary, represented the Dominion Marine Association.

The Dominion Government has appointed J. P. Mabee, K.C., Toronto; L. Costi, C.E., Montreal, and W. D. King, Dominion Astronomer, Ottawa, to be members of the International Inland Waterway Commission. The U.S. has also appointed three commissioners. The objects of the commission are:—"To investigate and report upon the conditions and uses of the waters adjacent to the boundary lines between Canada and the United States, including all lakes and rivers whose natural outlet is by the River St. Lawrence to the Atlantic Ocean; also upon the maintenance and regulation of suitable levels and also upon the effect upon the shores and upon the interests of navigation of these waters of diversion from or change in their natural flow, and, further, to report upon necessary measures to regulate such diversion and to make such recommendations for improvements and regulations as shall best subserve the interests of navigation in such waters; to report upon the advisability of erecting a dam at the outlet of Lake Erie, with a view to determining whether such dam will benefit navigation, and if such structure is deemed advisable to make recommendations to their respective Governments looking to an agreement or treaty which shall provide for the construction of the same."

Among the Express Companies.

The Dominion Ex. Co.'s office at Brockville, Ont., has been rearranged and modernized, in order to meet the increasing business.

The British American Ex. Co., Sault Ste. Marie, Ont., has passed a by-law increasing the number of its directors from 5 to 12.

The Halifax Board of Trade has passed a resolution asking that the express companies should be placed under the control of the Railway Commissioners.

The Canadian Ex. Co. reports that it handled the carcasses of 2,522 deer shot in Ontario during the season of 1904. The total weight of the deer was 285,847 lbs.

The Maritime Ex. Co. has been incorporated under the Dominion Companies' Act, with a capital of \$15,000 and offices at Ottawa for the purpose of carrying on a general express business in Canada, and elsewhere, with all the powers usually given to express companies. The provisional directors are: F. H. Chrysler, C. J. R. Bethune, N. G. Larmonth, G. G. Chrysler, Ottawa; and P. Giffkins, General Manager Dominion Ry., Kentville, N.S.

W. A. Clark, who has been appointed General Agent of the Dominion Ex. Co. at Montreal, is a native of Woodstock, Ont., and was engaged with the Canadian Ex. Co. at St. Marys, Ont., Toronto, and Montreal, until May, 1885, when he was appointed General Agent Dominion Ex. Co., at Ottawa, which position he held up to Dec. 31, 1904. Prior to leaving Ottawa for his new position he was given a testimonial by the business men of Ottawa.

The Dominion Ex. Co. has divided its territory into five divisions, the new arrangement taking effect Jan. 1. The new divisions are: Atlantic Division, including all lines east and south of the St. Lawrence River, with V. G. R. Vickers in charge as Superintendent; headquarters, Montreal. Eastern Division, includes all lines north and west of the St. Lawrence River and east of, but not including Toronto, up to but not including Port Arthur, Ont., with J. A. Boswell in charge as Superintendent; headquarters at Montreal. Western Division, includes Port Arthur, Ont., and all lines west thereof, up to but not including Swift Current, Assa., with G. Ford in charge as Superintendent; headquarters at Winnipeg. Pacific Division, includes all lines and offices west of Swift Current, Assa., with S. T. Stewart in charge as Superintendent; headquarters at Vancouver, B.C. Southern Division, includes Toronto, and all lines north and west thereof, not north or west of North Bay, and formerly part of the Ontario Division, with W. Walsh, Assistant to the General Manager, in charge; with headquarters at Toronto, Ont.

Telegraph and Cable Matters.

The C.P.R. telegraph department has installed its call-boxes in Ottawa, Ont.

J. Oliver, a C.P.R. telegraph operator at Winnipeg since 1888, died at Selkirk asylum, after a brief illness, Dec. 29, 1904.

W. Rutherford, chief operator C.P.R. telegraphs, Winnipeg, Man., was recently presented with a gold watch and chain by the operating staff.

Telegraph offices have been opened at Temagami, Haileybury and New Liskeard, Ont., on the Temiskaming and Northern Ontario Ry. The rate is 25c. for 10 words from North Bay, Ont.

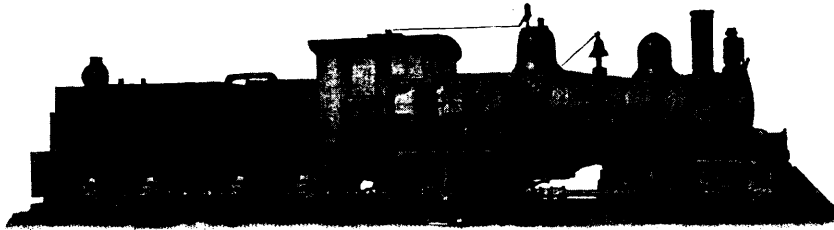
The British Empire League, of Australia, has passed a resolution expressing the opinion that all the self-governing British communities round the world should be united by a continuous chain of state-owned telegraphs.

The arbitration proceedings in connection with the G.T.R. telegraphers' demands for increased wages, shorter hours, etc., were concluded at Toronto, Jan. 7, and the decision is expected to be announced at an early date.

The C.P.R. and the telegraph operators on its eastern lines have come to an agreement

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- "French Government Decrees,"
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CHAS. S. LEE,
General Passenger Agent, New York.
W. B. WHEELER,
General Agent, Pass. Department, Buffalo, N.Y.

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Reserve Fund - - - 3,000,000

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regarding wages and conditions of work. Negotiations are in progress between the company and the operators on its western lines, with a view to an agreement being reached.

A new telegraphic invention will, it is claimed, enable 40,000 words an hour to be transmitted and transcribed in a legible handwriting. The machine which accomplishes this, is the invention of an Austro-Hungarian, and was recently exhibited in London, England.

Experiments recently made in Italy in connection with the actions of radio-telegraphy, show that the electro-magnetic wave message transmitted by this system cannot be diverted from the point for which it is intended. This is the most recent development of wireless telegraphy.

The British Post Office has authorized the acceptance at any post office in Great Britain of messages for transmission by wireless telegraphy to vessels at sea, and will transmit messages received by similar means from vessels at sea. The charge will be 13c. a word for messages going to vessels.

The legal arguments in the arbitration proceedings respecting the Newfoundland telegraphs, in which the Reid Newfoundland Co. is claiming \$3,500,000 from the Newfoundland Government, were concluded in Toronto, Jan. 14. The proceedings were adjourned to Feb. 3, at St. John's, Nfld., when the decision will be given.

The Marconi system of wireless telegraphy is being utilized on the Dominion steamers Stanley and Minto, operating between Pictou, N.S., and Georgetown, P.E.I. The success of the wireless telegraph stations already established in the Gulf of St. Lawrence, has induced the Government to direct the erection of two additional stations along the Gulf route. One of the new stations will probably be erected at Whittle Rocks, Labrador, and the other at Point Rich, Nfld.

The Newfoundland Legislature, at its recent session, passed an act relating to the postal and telegraph services of the colony, in which the telegraph service is declared to be vested in the control of the Postmaster-General. That officer is declared to have the exclusive privilege of erecting and maintaining telegraph lines and of transmitting messages by telegraph within the colony, except along the railway lines, where the Reid Newfoundland Co. may construct the telegraph lines necessary for the working of the railway. The Postmaster-General is authorized to make an arrangement with the Anglo-American Telegraph Co., for taking over that company's land lines; and may also make regulations for the landing of cables, and generally for the management of the lines.

The Dominion Government telegraph service at the end of 1904 operated 6,584 miles of telegraph lines and cables in various parts of Canada. In connection with these lines there are 299 offices, an increase of 343 miles of lines and 40 offices compared with 1903. The government system may be described in a general way as consisting of three blocks. One connects Quebec with a station at the Atlantic end, 80 miles beyond the Canadian boundary in Newfoundland, at Chateau Bay, opposite Belle Isle, in the Straits of Belle Isle; with a cable proceeding southwardly by way of the Island of Anticosti and the Magdalen Islands to Cape Breton, and branches in Nova Scotia and New Brunswick. Another is within the boundaries of Assiniboia and Saskatchewan. The third extends from the southern section of British Columbia north beyond Dawson, Yukon, with a branch from the main line to Port Simpson, on the Pacific coast below the Alaskan strip of the United States, and a spur to Aberdeen, on the coast below Port Simpson.

Montreal Telegraph Company.

At the 58th annual meeting in Montreal, Jan. 12, the balance sheet for the year ended Dec. 31, 1904, was presented as follows:—

ASSETS.	
Telegraph lines in Canada and U.S.	\$1,625,890.00
Telegraph cables in Canada and U.S.	33,487.39
Telegraph offices and equipment of offices in Canada and U.S.	212,500.00
Real estate in Montreal, Ottawa, Quebec and Toronto	279,946.46
	\$2,151,823.85
Cash accounts receivable, bonds and other securities, and real estate (not included in lease to G.N.W.T.Co.	135,975.30
	\$2,287,799.15
LIABILITIES.	
Shareholders' capital	\$2,000,000.00
Excess in value of property operated by G. N. W. T. Co. over shareholders' capital	151,823.85
	\$2,151,823.85
Dividend payable Jan. 15, 1905	\$40,000.00
Unclaimed dividends	566.90
Contingent fund	95,409.40
	\$135,975.30
	\$2,287,799.15

The directors' report said: The dividend guaranteed by the Western Union Telegraph Co. under the terms of the agreement of Aug. 17, 1881, was distributed in the usual manner and on the fixed dates, with a payment of 10c. a share to shareholders of record Sept. 30 last. The company's property, valued at \$2,151,823.85, is operated and maintained by the G.N.W. Telegraph Co., Canada. Its operation and maintenance is also guaranteed by the Western Union Telegraph Co., of New York, under an agreement with this company, for 97 years from July 1, 1881.

The following were elected officers and directors:—President, H. A. Allan; other directors: W. R. Miller, M. Burke, F. O. Lewis, L. M. S. Speckman, G. O. Lynn, R. Archer, W. E. Cheese, W. Wainwright, C. Campbell, A. G. Watson and H. Joseph.

General Telephone Matters.

G. F. Freeman has been appointed manager of the Valley Telephone Co., Middleton, N.S.

The Alberta Telephone Co. is arranging to install a complete system of telephone lines throughout the Crow's Nest Pass district.

The Bell Telephone Co.'s construction staff is preparing to string about 500 miles of long distance lines, to open up various districts in Manitoba and the Northwest Territories.

The St. John, N.B., City Council has passed a resolution against telephone companies being permitted to put up poles or tear up streets without the consent of the municipality interested.

The Bell Telephone Co. has completed a branch office at the corner of Caron and Charest Streets, Quebec, where the business of the St. Sauveur, St. Malo and Limoilon districts will be transacted.

Owing to a break in the telephone cable connecting the Island of Orleans in the St. Lawrence River with the mainland, a temporary line has been constructed by the Bell Telephone Co. along the St. Charles ice bridge.

The estimated damage of recent storms in New Brunswick to the lines of the New Brunswick Telephone Co., is from \$10,000 to \$15,000. The company has completed new brick office buildings at St. Stephens and Moncton.

The B.C. Telephone Co. is negotiating with the Kamloops, B.C., City Council with respect to the annual rental which the company should pay. The city asks \$200 a year, and the company offers \$25 a year and three free instruments.

The Bell Telephone Co. is negotiating for a franchise in Berlin, Ont., and also with the farmers throughout Waterloo county, who have been discussing the desirability of establishing an independent telephone company in the county.

The Manitoba Legislature is being asked at its current session to incorporate two companies, each with the power to establish local and long distance lines in the province. Potts and Hubbard, Winnipeg, are solicitors for the applicants in the one case, and Hough, Campbell and Ferguson, Winnipeg, in the other.

During 1904 there was an increase of over 1,000 in the number of telephone subscribers in Winnipeg, the Bell Telephone Co. having now over 3,500 instruments in use there. The switchboard at the central station is being enlarged to accommodate 1,400 lines, which is expected to provide for the demands of the current year.

The Richibucto-Rexton Telephone Co. (Ltd.) has been incorporated under the New Brunswick Companies' Act, with a capital of \$20,000 and offices at Richibucto, N.B. The objects of the company are set out to be to purchase, lease or otherwise acquire the rights and franchises of the Kent Electric Co. (Ltd.), and of the Kent Telephone Lines Co. (Ltd.), as well as of any other similar company; to construct telephone lines in Kent, Northumberland and Westmoreland, to lay cables in connection with the same, and to carry on a general telephone business.

PURCHASING AGENTS' GUIDE.

(Continued from third page of Cover.)

Cement Machinery	Jas. W. Pyke & Co.	Montreal.
Chains	Rice Lewis & Son	Toronto.
Coal Haulage Ropes	The B. Greening Co.	Hamilton, Ont.
Concrete	Thorn Cement Co.	Buffalo, N.Y.
Concrete Mixers and Rock Crushers	F. H. Hopkins & Co.	Montreal.
	W. H. C. Mussen & Co.	Montreal.
Contractors' Plant	F. H. Hopkins & Co.	Montreal.
	T. A. Morrison & Co.	Montreal.
	W. H. C. Mussen & Co.	Montreal.
Conveyor Belts, Rubber	The Gutta Percha & Rubber Mfg. Co. of Toronto.	
Corrugated Furnaces	Continental Iron Works	Brooklyn, N.Y.
Cross Arms, Top Pins & Side Blocks	Canadian General Electric Co.	Toronto.
	The Firstbrook Box Co.	Toronto.
Cross Arm Braces	Canadian General Electric Co.	Toronto.
	Toronto Bolt and Forging Co.	Toronto.
Crossing Gates	General Railway Signal Co.	Buffalo, N.Y.
	The N. L. Piper Railway Supply Co.	Toronto.
Crowbars	Toronto Bolt and Forging Co.	Toronto.
Culvert Pipe (Cast Iron)	Gartshore-Thompson Pipe & F'dry Co.	Hamilton.
Cuts	Acton Burrows Co.	Toronto.
Derrick Ropes	Dominion Wire Rope Co.	Montreal.
	The B. Greening Co.	Hamilton, Ont.
Derricks	F. H. Hopkins & Co.	Montreal.
Door Signs	Acton Burrows Co.	Toronto.
Drawing Materials	Eugene Dietzgen Co.	New York.
Dredges	The Bertram Engine Works Co.	Toronto.
Drilling Machines	The John Bertram & Sons Co.	Dundas, Ont.
Drills	W. Abbott	Montreal.
Dry Goods	The Hudson's Bay Company	
Dynamo and Electric Castings	American Brake Shoe & F'dry Co., Mahwah, N.J.	
Economizers	Babcock & Wilcox (Ltd.)	Montreal.

(Continued on page 87.)

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SEE AMERICAN MACHINIST, SEPTEMBER NUMBER, PAGE 1149

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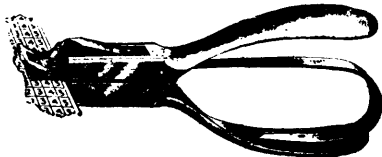
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Toronto, Ont.

PURCHASING AGENTS' GUIDE.

(Continued from page 85.)

Electric Car Route Signs
Acton Burrows Co. Toronto.

Electric Cranes
Canada Foundry Co. Toronto.
Dominion Bridge Co. Montreal.
W. H. C. Mussen & Co. Montreal.

Electric Ry. Brake Shoes
American Brake Shoe & F'dry Co., Mahwah, N. J.

Elevator Belts, Rubber
The Gutta Percha & Rubber Mfg. Co. of Toronto.

Enameled Iron Signs
Acton Burrows Co. Toronto.

Engineers' Supplies
The Gutta Percha & Rubber Mfg. Co. of Toronto.
The James Morrison Brass Mfg. Co. Toronto.
Williams & Wilson Montreal.

Engines, Hoisting
The Bertram Engine Works Co. Toronto.

Engines, Stationary & Marine
The Bertram Engine Works Co. Toronto.
Canada Foundry Co. Toronto.
Polson Iron Works Toronto.

Engines, Steam
Erie Heating Co. Chicago, Ill.
Williams & Wilson Montreal.

Engraving
Toronto Engraving Co. Toronto.

Express Office Signs
Acton Burrows Co. Toronto.

Feedwater Heaters
Babcock & Wilcox (Ltd.) Montreal.
Williams & Wilson Montreal.

Fencing
Canada Foundry Co. Toronto.
Canadian Steel and Wire Co. Hamilton, Ont.
Page Wire Fence Co. Walkerville, Ont.

Fire Brick
Garden Sand Co. Chicago, Ill.

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

Flour
The Hudson's Bay Company Toronto.

Foghorns
Rice Lewis & Son Toronto.

Forgings
Crosden Car Mfg. Co. Cobourg, Ont.
General Railway Signal Co. Buffalo, N. Y.

Furnaces
Continental Iron Works. Brooklyn, N. Y.

Gas and Electric Fixtures
The James Morrison Brass Mfg. Co. Toronto.

Gasoline Engines
Goold, Shapley & Muir Co. Brantford, Ont.

Gas Pipe (Cast Iron)
Gartshore-Thompson Pipe & F'dry Co. Hamilton.

Gates
Canada Foundry Co. Toronto.
Page Wire Fence Co. Walkerville, Ont.

Gauges, Steam and Vacuum, etc.
The James Morrison Brass Mfg. Co. Toronto.

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

Groceries
The Hudson's Bay Company Toronto.

Handcars
Crosden Car Mfg. Co. Cobourg, Ont.

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

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

Headlinings
Crosden Car Mfg. Co. Cobourg, Ont.

Heaters
Erie Heating Co. Chicago, Ill.
Erie Heating Co. Chicago, Ill.

Hose
Rice Lewis & Son Toronto.
The Gutta Percha & Rubber Mfg. Co. of Toronto.

Hose, Air Brake and Steam
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Hose, Fire
The Gutta Percha & Rubber Mfg. Co. of Toronto.

Hose, Suction
The Gutta Percha & Rubber Mfg. Co. of Toronto.

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The James Morrison Brass Mfg. Co. Toronto.

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Eugene Dietzgen Co. New York.

Interlocking and Signalling
General Railway Signal Co. Buffalo, N. Y.

Interlocking Signals
Montreal Steel Works Montreal.

Iron
Rice Lewis & Son Toronto.

Iron and Steel Castings
American Brake Shoe & F'dry Co. Mahwah, N. J.

Iron Signs
Acton Burrows Co. Toronto.

Japans
McCaskill, Dougall & Co. Montreal.

Journal Bearings
Canada Foundry Co. Toronto.
Crosden Car Mfg. Co. Cobourg, Ont.
Jas. W. Pyke & Co. Montreal.
St. Thomas Brass Co. St. Thomas, Ont.

Lager Beer, &c.
E. L. Drewry Winnipeg.

Lamps, Incandescent
Canadian Westinghouse Co. Hamilton, Ont.

Lamps & Lanterns
Continental Heat & Light Co. Montreal.
The Hudson's Bay Company Toronto.
Rice Lewis & Son Toronto.
N. L. Piper Railway Supply Co. Toronto.

Lathes
The John Bertram Sons Co. Dundas, Ont.
Williams & Wilson Montreal.

Launches
The Bertram Engine Works Co. Toronto.
Polson Iron Works Toronto.

Lights, Contractors and Wrecking
Continental Heat & Light Co. Montreal.
F. H. Hopkins & Co. Montreal.
W. H. C. Mussen & Co. Montreal.

Lights, Dock
Continental Heat & Light Co. Montreal.

Lights, Portable
Continental Heat & Light Co. Montreal.

Locomotive Boiler Washer, Automatic
Erie Heating Co. Chicago, Ill.

Locomotive Brass Works
The James Morrison Brass Mfg. Co. Toronto.

Locomotive Driver Brake Shoe
American Brake Shoe & F'dry Co. Mahwah, N. J.

Locomotives (Compressed Air)
Baldwin Locomotive Works Philadelphia, Pa.
Locomotive and Machine Co. of Montreal

Locomotives (Electric)
Baldwin Locomotive Works Philadelphia, Pa.
Canada Foundry Co. Toronto.
Locomotive and Machine Co. of Montreal.

Locomotives (Logging)
Lima Locomotive and Mach. Co. Lima, Ohio.

Locomotives (Rack)
Baldwin Locomotive Works Philadelphia, Pa.
Locomotive and Machine Co. of Montreal.

Locomotives (Steam)
Baldwin Locomotive Works Philadelphia, Pa.
Canada Foundry Co. Toronto.
Canadian Locomotive Co. Kingston, Ont.
F. M. Hicks & Co. Chicago, Ill.
F. H. Hopkins & Co. Montreal.
Lima Locomotive and Machine Co. Lima, Ohio.
Locomotive and Machine Co. of Montreal
The Saxon Engine Works Chemnitz, Germany.

Locomotive Ile
Garden City Sand Co. Chicago, Ill.

Machine Tools
W. Abbott Montreal.
The Saxon Engine Works Chemnitz, Germany.
Williams & Wilson Montreal.

Machine Screws, Set, Cap and Planer
John Morrow Machine Screw Co. Ingersoll.

Machinery, Marine
Sheriffs Mfg. Co. Milwaukee, Wis.

Machinery, Mining
The Bertram Engine Works Co. Toronto.

Machinery Repairs
The Bertram Engine Works Co. Toronto.

Machinery Repairs, Marine
Sheriffs Mfg. Co. Milwaukee, Wis.

Manganese Steel Castings
Montreal Steel Works Montreal.

Manhole Frames and Covers
American Brake Shoe & F'dry Co. Mahwah, N. J.

Mats and Matting
The Gutta Percha & Rubber Mfg. Co. of Toronto.

Mechanical Drait Fans
Babcock & Wilcox (Ltd.) Montreal.

Milepost Numbers
Acton Burrows Co. Toronto.

Milling Cutters
W. Abbott Montreal.
Williams & Wilson Montreal.

Milling Machines
The John Bertram Sons Co. Dundas, Ont.

Mills, Boring and Turning
The John Bertram Sons Co. Dundas, Ont.

Moulding Sand
Garden City Sand Co. Chicago, Ill.

Nickel
The Orford Copper Co. New York.

Nickel for Nickel Steel
The Orford Copper Co. New York.

Numbers
Acton Burrows Co. Toronto.

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John Morrow Machine Screw Co. Ingersoll.

Nuts, Square and Hexagon
Canada Foundry Co. Toronto.
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Oakum
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The Hudson's Bay Company Toronto.

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

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The Queen City Oil Company Toronto.

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Williams & Wilson Montreal.

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The Gutta Percha & Rubber Mfg. Co. of Toronto.

Packing, Piston
The Gutta Percha & Rubber Mfg. Co. of Toronto.

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American Asphaltum & Rubber Co. Chicago, Ill.

Paints, Asphaltum
American Asphaltum & Rubber Co. Chicago, Ill.

Paints, Bridge
American Asphaltum & Rubber Co. Chicago, Ill.

Paints, Locomotive Front end
American Asphaltum & Rubber Co. Chicago, Ill.

Paints, Mineral Rubber
American Asphaltum & Rubber Co. Chicago, Ill.

Paints, Structural Iron
American Asphaltum & Rubber Co. Chicago, Ill.

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

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Erie Heating Co. Chicago, Ill.

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Mica Boiler Covering Co. Montreal.

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Thorn Cement Co. Buffalo, N. Y.

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Montreal Steel Works Montreal.

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General Railway Signal Co. Buffalo, N. Y.

Railway Signalling
General Railway Signal Co. Buffalo, N. Y.

Railway Supplies
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American Asphaltum & Rubber Co. Chicago, Ill.

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American Asphaltum & Rubber Co. Chicago, Ill.

Roofs, Car
American Asphaltum & Rubber Co. Chicago, Ill.

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The Hudson's Bay Company Toronto.

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N. L. Piper Railway Supply Co. Toronto.

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Wire, Electric
Canadian General Electric Co. Toronto.
E. F. Phillips Electrical Works, Ltd. Montreal.
The Wire and Cable Co Montreal.

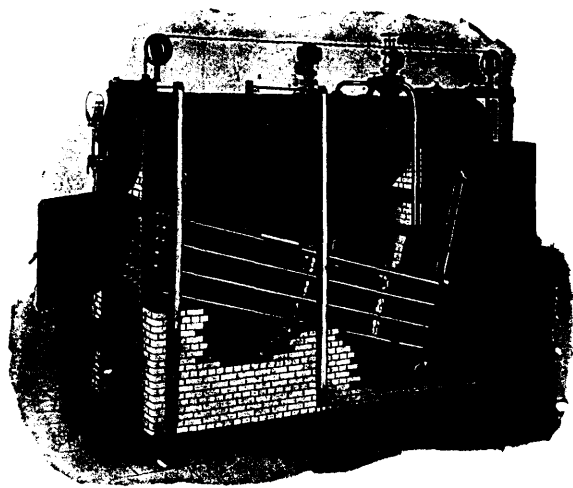
Wire, Insulated Copper
Canadian General Electric Co. Toronto.
E. F. Phillips Electrical Works, Ltd. Montreal.
The Wire and Cable Co Montreal.

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

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Rice Lewis & Son, Toronto.

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General Railway Signal Co., Buffalo, N.Y.

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Rice Lewis & Son, Toronto.

Boats, Steel and Composite

The Bertram Engine Works Co., Toronto.

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Mica Boiler Covering Co., Montreal.

Boilers

Canada Foundry Co., Toronto.
Polson Iron Works, Toronto.
Williams & Wilson, Montreal.

Boilers, Locomotive

The Bertram Engine Works Co., Toronto.

Boilers, Stationary and Marine

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Boilers, Steam

Eric Heating Co., Chicago, Ill.

Boilers, Water Tube

Eric Heating Co., Chicago, Ill.

Boiler Tubes

Jas. W. Pyke & Co., Montreal.

Bolsters

Simplex Railway Appliance Co., Montreal.

Bolts, Bridge

Canada Foundry Co., Toronto.
Toronto Bolt and Forging Co., Toronto.

Bolts, Carriage and Machine

Toronto Bolt and Forging Co., Toronto.

Bolts, Track

Canada Foundry Co., Toronto.
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United Typewriter Co., Toronto.

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Chicago Railway Equipment Co., Chicago, Ill.
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Allen & Morrison Brake Shoe Mfg. Co., Chicago.

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Brass Castings

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Buoy Lighting

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

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(Continued on page 85.)

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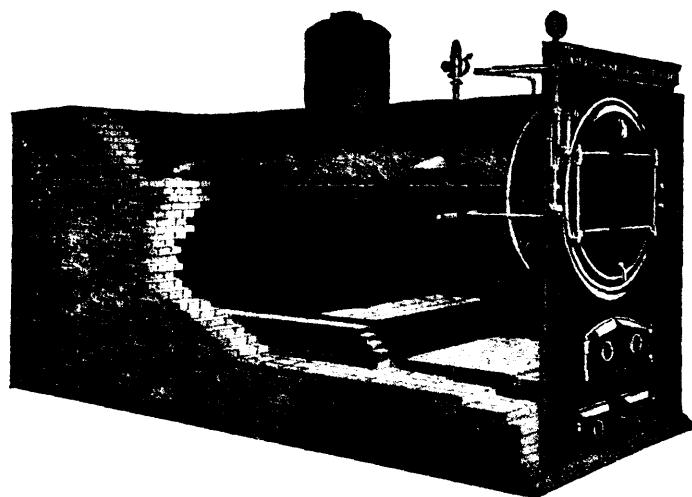
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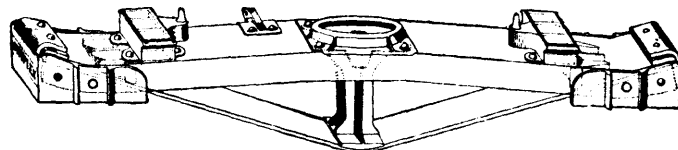
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